



micro**MAX R**  
/ **MAX3000**

Register Reference



# Register Reference

## Overview

This document outlines all the available registers that are on the microMAX R and MAX3000 motion controllers.

## Registers

### Category - A2D

#### A2D 1 Filter Coefficient A1

<b>Description:</b>			
Specifies the A/D filter A1 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> A2D			
<b>MAXCLib:</b> A_A2D_1_Filter_Coefficient_A1_			
<b>Register ID:</b> 2128	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-1	0.999996948242187		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### A2D 1 Filter Coefficient A2

<b>Description:</b>			
Specifies the A/D filter A2 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> A2D			
<b>MAXCLib:</b> A_A2D_1_Filter_Coefficient_A2_			
<b>Register ID:</b> 2127	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-1	0.999996948242187		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### A2D 1 Filter Coefficient A3

<b>Description:</b>			
Specifies the A/D filter A3 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> A2D			
<b>MAXCLib:</b> A_A2D_1_Filter_Coefficient_A3_			
<b>Register ID:</b> 2126	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-1	0.999996948242187		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### A2D 1 Filter Coefficient B0

<b>Description:</b>			
Specifies the A/D filter B0 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> A2D			
<b>MAXCLib:</b> A_A2D_1_Filter_Coefficient_B0_			
<b>Register ID:</b> 2125	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-1	0.999996948242187		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### A2D 1 Filter Coefficient B1

<b>Description:</b>			
Specifies the A/D filter B1 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> A2D			
<b>MAXCLib:</b> A_A2D_1_Filter_Coefficient_B1_			
<b>Register ID:</b> 2124	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-1	0.999996948242187		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### A2D 1 Filter Coefficient B2

<b>Description:</b>			
Specifies the A/D filter B2 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> A2D			
<b>MAXCLib:</b> A_A2D_1_Filter_Coefficient_B2_			
<b>Register ID:</b> 2123	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-1	0.999996948242187		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### A2D 1 Filter Coefficient B3

<b>Description:</b>			
Specifies the A/D filter B3 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> A2D			
<b>MAXCLib:</b> A_A2D_1_Filter_Coefficient_B3_			

<b>Register ID:</b> 2122	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
-1	0.999996948242187		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### A2D 1 Filter Exponent

<b>Description:</b>			
Specifies the A/D filter exponent. This register contains the value that the A/D filter coefficients were shifted by to store them in 1:15 format. This value must determined by the absolute maximum coefficient value.			
<b>Category:</b> A2D			
<b>MAXCLib:</b> A_A2D_1_Filter_Exponent_			
<b>Register ID:</b> 2121	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
-15	15		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### A2D 1 Filter Multiplier

<b>Description:</b>			
Specifies in the number that is multiplied by the level on the analog to digital channel. There is one analog input per axis.			
<b>Category:</b> A2D			
<b>MAXCLib:</b> A_A2D_1_Filter_Multiplier_			
<b>Register ID:</b> 2118	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
-32768	32767		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### A2D 1 Filter Offset

<b>Description:</b>			
Specifies the offset to be added to the a/d value before it has been multiplied by the multiplier.			
<b>Category:</b> A2D			
<b>MAXCLib:</b> A_A2D_1_Filter_Offset_			
<b>Register ID:</b> 2120	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
-32768	32767	A/D Counts	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### A2D 2 Filter Coefficient A1

<b>Description:</b>			
Specifies the A/D filter A1 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N]$			

+ A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1].			
Category: A2D			
MAXCLib: A_A2D_2_Filter_Coefficient_A1_			
Register ID: 2139	Writable: Yes	Appears in Map file: Yes	Level: Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-1	0.999996948242187		
Minimum firmware version supported: 7.93		Maximum firmware version supported: 11.00	

#### A2D 2 Filter Coefficient A2

<b>Description:</b>			
Specifies the A/D filter A2 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
Category: A2D			
MAXCLib: A_A2D_2_Filter_Coefficient_A2_			
Register ID: 2138	Writable: Yes	Appears in Map file: Yes	Level: Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-1	0.999996948242187		
Minimum firmware version supported: 7.93		Maximum firmware version supported: 11.00	

#### A2D 2 Filter Coefficient A3

<b>Description:</b>			
Specifies the A/D filter A3 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
Category: A2D			
MAXCLib: A_A2D_2_Filter_Coefficient_A3_			
Register ID: 2137	Writable: Yes	Appears in Map file: Yes	Level: Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-1	0.999996948242187		
Minimum firmware version supported: 7.93		Maximum firmware version supported: 11.00	

#### A2D 2 Filter Coefficient B0

<b>Description:</b>			
Specifies the A/D filter B0 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
Category: A2D			
MAXCLib: A_A2D_2_Filter_Coefficient_B0_			
Register ID: 2136	Writable: Yes	Appears in Map file: Yes	Level: Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-1	0.999996948242187		
Minimum firmware version supported: 7.93		Maximum firmware version supported: 11.00	

### A2D 2 Filter Coefficient B1

<b>Description:</b>			
Specifies the A/D filter B1 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> A2D			
<b>MAXCLib:</b> A_A2D_2_Filter_Coefficient_B1_			
<b>Register ID:</b> 2135	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-1	0.999996948242187		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### A2D 2 Filter Coefficient B2

<b>Description:</b>			
Specifies the A/D filter B2 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> A2D			
<b>MAXCLib:</b> A_A2D_2_Filter_Coefficient_B2_			
<b>Register ID:</b> 2134	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-1	0.999996948242187		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### A2D 2 Filter Coefficient B3

<b>Description:</b>			
Specifies the A/D filter B3 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> A2D			
<b>MAXCLib:</b> A_A2D_2_Filter_Coefficient_B3_			
<b>Register ID:</b> 2133	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-1	0.999996948242187		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### A2D 2 Filter Exponent

<b>Description:</b>			
Specifies the A/D filter exponent. This register contains the value that the A/D filter coefficients were shifted by to store them in 1:15 format. This value must determined by the absolute maximum coefficient value.			
<b>Category:</b> A2D			
<b>MAXCLib:</b> A_A2D_2_Filter_Exponent_			
<b>Register ID:</b> 2132	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller

<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>
-15	15	
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>

#### A2D 2 Filter Multiplier

<b>Description:</b>			
Specifies in the number that is multiplied by the level on the analog to digital channel. There is one analog input per axis.			
<b>Category:</b> A2D			
<b>MAXCLib:</b> A_A2D_2_Filter_Multiplier_			
<b>Register ID:</b> 2129	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-32768	32767		
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### A2D 2 Filter Offset

<b>Description:</b>			
Specifies the offset to be added to the a/d value before it has been multiplied by the multiplier.			
<b>Category:</b> A2D			
<b>MAXCLib:</b> A_A2D_2_Filter_Offset_			
<b>Register ID:</b> 2131	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-32768	32767	A/D Counts	
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### A2D 3 Filter Coefficient A1

<b>Description:</b>			
Specifies the A/D filter A1 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> A2D			
<b>MAXCLib:</b> A_A2D_3_Filter_Coefficient_A1_			
<b>Register ID:</b> 2150	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-1	0.999996948242187		
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### A2D 3 Filter Coefficient A2

<b>Description:</b>			
Specifies the A/D filter A2 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			

<b>Category:</b> A2D			
<b>MAXCLib:</b> A_A2D_3_Filter_Coefficient_A2_			
<b>Register ID:</b> 2149	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-1	0.999996948242187		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### A2D 3 Filter Coefficient A3

<b>Description:</b>			
Specifies the A/D filter A3 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> A2D			
<b>MAXCLib:</b> A_A2D_3_Filter_Coefficient_A3_			
<b>Register ID:</b> 2148	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-1	0.999996948242187		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### A2D 3 Filter Coefficient B0

<b>Description:</b>			
Specifies the A/D filter B0 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> A2D			
<b>MAXCLib:</b> A_A2D_3_Filter_Coefficient_B0_			
<b>Register ID:</b> 2147	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-1	0.999996948242187		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### A2D 3 Filter Coefficient B1

<b>Description:</b>			
Specifies the A/D filter B1 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> A2D			
<b>MAXCLib:</b> A_A2D_3_Filter_Coefficient_B1_			
<b>Register ID:</b> 2146	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-1	0.999996948242187		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### A2D 3 Filter Coefficient B2

<b>Description:</b>			
Specifies the A/D filter B2 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> A2D			
<b>MAXCLib:</b> A_A2D_3_Filter_Coefficient_B2_			
<b>Register ID:</b> 2145	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-1	0.999996948242187		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### A2D 3 Filter Coefficient B3

<b>Description:</b>			
Specifies the A/D filter B3 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> A2D			
<b>MAXCLib:</b> A_A2D_3_Filter_Coefficient_B3_			
<b>Register ID:</b> 2144	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-1	0.999996948242187		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### A2D 3 Filter Exponent

<b>Description:</b>			
Specifies the A/D filter exponent. This register contains the value that the A/D filter coefficients were shifted by to store them in 1:15 format. This value must determined by the absolute maximum coefficient value.			
<b>Category:</b> A2D			
<b>MAXCLib:</b> A_A2D_3_Filter_Exponent_			
<b>Register ID:</b> 2143	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-15	15		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### A2D 3 Filter Multiplier

<b>Description:</b>			
Specifies in the number that is multiplied by the level on the analog to digital channel. There is one analog input per axis.			
<b>Category:</b> A2D			
<b>MAXCLib:</b> A_A2D_3_Filter_Multiplier_			
<b>Register ID:</b> 2140	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-32768	32767		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### A2D 3 Filter Offset

<b>Description:</b>			
Specifies the offset to be added to the a/d value before it has been multiplied by the multiplier.			
<b>Category:</b> A2D			
<b>MAXCLib:</b> A_A2D_3_Filter_Offset			
<b>Register ID:</b> 2142	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-32768	32767	A/D Counts	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### A2D 4 Filter Coefficient A1

<b>Description:</b>			
Specifies the A/D filter A1 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> A2D			
<b>MAXCLib:</b> A_A2D_4_Filter_Coefficient_A1			
<b>Register ID:</b> 2161	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-1	0.999996948242187		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### A2D 4 Filter Coefficient A2

<b>Description:</b>			
Specifies the A/D filter A2 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> A2D			
<b>MAXCLib:</b> A_A2D_4_Filter_Coefficient_A2			
<b>Register ID:</b> 2160	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-1	0.999996948242187		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### A2D 4 Filter Coefficient A3

<b>Description:</b>			
Specifies the A/D filter A3 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> A2D			
<b>MAXCLib:</b> A_A2D_4_Filter_Coefficient_A3			
<b>Register ID:</b> 2159	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller

<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>
-1	0.999996948242187	
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>

#### A2D 4 Filter Coefficient B0

<b>Description:</b>			
Specifies the A/D filter B0 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
Category: A2D			
MAXCLib: A_A2D_4_Filter_Coefficient_B0_			
Register ID: 2158	Writable: Yes	Appears in Map file: Yes	Level: Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-1	0.999996948242187		
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### A2D 4 Filter Coefficient B1

<b>Description:</b>			
Specifies the A/D filter B1 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
Category: A2D			
MAXCLib: A_A2D_4_Filter_Coefficient_B1_			
Register ID: 2157	Writable: Yes	Appears in Map file: Yes	Level: Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-1	0.999996948242187		
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### A2D 4 Filter Coefficient B2

<b>Description:</b>			
Specifies the A/D filter B2 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
Category: A2D			
MAXCLib: A_A2D_4_Filter_Coefficient_B2_			
Register ID: 2156	Writable: Yes	Appears in Map file: Yes	Level: Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-1	0.999996948242187		
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### A2D 4 Filter Coefficient B3

<b>Description:</b>			
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Specifies the A/D filter B3 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> A2D			
<b>MAXCLib:</b> A_A2D_4_Filter_Coefficient_B3_			
<b>Register ID:</b> 2155	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-1	0.999996948242187		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### A2D 4 Filter Exponent

<b>Description:</b>			
Specifies the A/D filter exponent. This register contains the value that the A/D filter coefficients were shifted by to store them in 1:15 format. This value must be determined by the absolute maximum coefficient value.			
<b>Category:</b> A2D			
<b>MAXCLib:</b> A_A2D_4_Filter_Exponent_			
<b>Register ID:</b> 2154	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-15	15		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### A2D 4 Filter Multiplier

<b>Description:</b>			
Specifies in the number that is multiplied by the level on the analog to digital channel. There is one analog input per axis.			
<b>Category:</b> A2D			
<b>MAXCLib:</b> A_A2D_4_Filter_Multiplier_			
<b>Register ID:</b> 2151	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-32768	32767		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### A2D 4 Filter Offset

<b>Description:</b>			
Specifies the offset to be added to the a/d value before it has been multiplied by the multiplier.			
<b>Category:</b> A2D			
<b>MAXCLib:</b> A_A2D_4_Filter_Offset_			
<b>Register ID:</b> 2153	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-32768	32767	A/D Counts	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### A2D Channel Routing

<b>Description:</b>			
Allows A/D fine adjustment to be routed to either modify the position or modify the velocity.			
<b>Category:</b> A2D			
<b>MAXCLib:</b> A_A2D_Channel_Routing_			
<b>Register ID:</b> 211	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Bit</b>	<b>Bit Name</b>	<b>Bit Description</b>	
0	A_A2D_Routing_Add_To_Position	Setting this bit allows the user to add the output of the A/D to position for fine adjustment.	
1	A_A2D_Routing_Add_To_Velocity	Setting this bit allows the user to add the output of the A/D to velocity for fine adjustment.	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

## Category - Brake

### Enable Auto Brake

<b>Description:</b>			
To be implemented.			
<b>Category:</b> Brake			
<b>MAXCLib:</b> A_Enable_Auto_Brake_			
<b>Register ID:</b> 71	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

## Category - Command

### Autostart Flash Commands

<b>Description:</b>			
When this register is set to 1 the controller will load the program stored at instruction pointer 0 on power up.			
<b>Category:</b> Command			
<b>MAXCLib:</b> A_Autostart_Flash_Commands_			
<b>Register ID:</b> 2162	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b>Value</b>	<b>Name</b>	<b>Description</b>	
0	A_Off	Boolean Off.	
1	A_On	Boolean On.	
<b>Minimum firmware version supported:</b> 8.51		<b>Maximum firmware version supported:</b> 11.00	

### Flash Status

<b>Description:</b>			
Flash Status.			
<b>Category:</b> Command			
<b>MAXCLib:</b> A_Flash_Status_			
<b>Register ID:</b> 2457	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller

<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>
0	65535	
<b>Minimum firmware version supported: 8.50</b>		<b>Maximum firmware version supported: 11.00</b>

#### Instruction Pointer

<b>Description:</b>			
Instruction Pointer.			
<b>Category:</b> Command			
<b>MAXCLib:</b> A_Instruction_Pointer_			
<b>Register ID:</b> 2458	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 8.50</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Run Code

<b>Description:</b>			
Run Code.			
<b>Category:</b> Command			
<b>MAXCLib:</b> A_Run_Code_			
<b>Register ID:</b> 2459	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 8.50</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Stack Pointer

<b>Description:</b>			
Stack pointer of the code. Starts at 0 and increments each time a call is made.			
<b>Category:</b> Command			
<b>MAXCLib:</b> A_Stack_Pointer_			
<b>Register ID:</b> 2461	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 9.90</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Category - Commutation

##### Alignment Bp

<b>Description:</b>			
Damping scale of 0 degree alignment algorithm			
<b>Category:</b> Commutation			
MAXCLib: A_Alignment_Bp_			
<b>Register ID:</b> 236	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	32767		
<b>Minimum firmware version supported:</b> 7.99		<b>Maximum firmware version supported:</b> 11.00	

#### Alignment Complete

<b>Description:</b>			
Motor was aligned successfully at least once			
<b>Category:</b> Commutation			
MAXCLib: A_Alignment_Complete_			
<b>Register ID:</b> 330	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Bit</u>	<u>Bit Name</u>	<u>Bit Description</u>	
0	A_Alignment_Completed	The motor was enabled and aligned at least once. If this bit is set the motor will use the initial alignment and will not require to re-align. If you want to force a re-align clear this bit before enabling the motor.	
<b>Minimum firmware version supported:</b> 9.90		<b>Maximum firmware version supported:</b> 11.00	

#### Alignment Time

<b>Description:</b>			
Specifies the ramp time to achieve peak current for the stator alignment algorithm. The peak current is set in the Current limit register.			
<b>Category:</b> Commutation			
MAXCLib: A_Alignment_Time_			
<b>Register ID:</b> 26	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535	s	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Alignment Type

<b>Description:</b>			
Specifies the alignment method to use when servoing a motor.			
<b>Category:</b> Commutation			
MAXCLib: A_Alignment_Type_			
<b>Register ID:</b> 245	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Value</u>	<u>Name</u>	<u>Description</u>	
0	A_Align_Already_Aligned	Already aligned mode. Use when brushed or halled motor is connected or once a motor is aligned with one of the other methods.	
1	A_Align_60_Degrees	60 degree alignment.	
2	A_Align_0_Degrees	0 degree alignment.	

3	A_Align_180_Degrees	180 degree alignment.
4	A_Align_Disable	Disable alignment. Use for enabling the motor in closed current control mode.
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00

### Commutation Sequence

<b>Description:</b>			
Allows the user vary the motor phase, torque and encoder direction.			
<b>Category:</b> Commutation			
<b>MAXCLib:</b> A_Commuation_Sequence_			
<b>Register ID:</b> 5	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Bit</b>	<b>Bit Name</b>	<b>Bit Description</b>	
0	A_Reverse_Torque_Direction	Reverses the motor torque direction. Effectivly this reverses the current through the motor winding.	
1	A_Reverse_Encoder_Direction	Reverses the motor encoder direction. If the motor encoder was counting up when it is rotated clockwise it will now count down when this bit is set. When reversing the encoder direction make sure to reverse the torque and phase direction as well.	
2	A_Reverse_Phase_Direction	Reverses the motor phase direction. Effectivly this reverses the magnetic field in the motor.	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Electrical Angle

<b>Description:</b>			
Electrical position of stator excitation			
<b>Category:</b> Commutation			
<b>MAXCLib:</b> A_Electrical_Angle_			
<b>Register ID:</b> 329	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-32768	32767	Fang	
<b>Minimum firmware version supported:</b> 9.90		<b>Maximum firmware version supported:</b> 11.00	

### Hall Average Offset

<b>Description:</b>			
Hall average offset used to determine electrical angle when using halled sinusoidal commutation			
<b>Category:</b> Commutation			
<b>MAXCLib:</b> A_Hall_Average_Offset_			
<b>Register ID:</b> 243	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-32768	32767	Fang	
<b>Minimum firmware version supported:</b> 9.90		<b>Maximum firmware version supported:</b> 11.00	

### Hall Table Selector

<b>Description:</b>			
Maps hall sequence to electrical angle. Used during autophasing			
<b>Category:</b> Commutation			
<b>MAXCLib:</b> A_Hall_Table_Selector_			
<b>Register ID:</b> 242	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	7		
<b>Minimum firmware version supported:</b> 9.90		<b>Maximum firmware version supported:</b> 11.00	

#### Hall Value

<b>Description:</b>			
The state of the hall inputs.			
<b>Category:</b> Commutation			
<b>MAXCLib:</b> A_Hall_Value_			
<b>Register ID:</b> 281	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	7		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Stator Alignment Done

<b>Description:</b>			
A 1 in this register represents the completion of aligning the stator. This register is cleared when stator alignment starts.			
<b>Category:</b> Commutation			
<b>MAXCLib:</b> A_Stator_Alignment_Done_			
<b>Register ID:</b> 289	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	1		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Stator Alignment Field Weakening

<b>Description:</b>			
N/A			
<b>Category:</b> Commutation			
<b>MAXCLib:</b> A_Stator_Alignment_Field_Weakening_			
<b>Register ID:</b> 238	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	32767		
<b>Minimum firmware version supported:</b> 7.99		<b>Maximum firmware version supported:</b> 11.00	

### Stator Alignment Gain

<b>Description:</b>			
Proportional scale of 0 degree alignment algorithm.			
<b>Category:</b> Commutation			
<b>MAXCLib:</b> A_Stator_Alignment_Gain_			
<b>Register ID:</b> 37	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-32768	32767.9999984741		
<b>Minimum firmware version supported:</b> 7.97		<b>Maximum firmware version supported:</b> 11.00	

### Stator Alignment Integral Gain

<b>Description:</b>			
Integral scale of 0 degree alignment algorithm.			
<b>Category:</b> Commutation			
<b>MAXCLib:</b> A_Stator_Alignment_Integral_Gain_			
<b>Register ID:</b> 200	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-32768	32767.9999984741		
<b>Minimum firmware version supported:</b> 10.54		<b>Maximum firmware version supported:</b> 11.00	

### Stator Alignment Starting Current

<b>Description:</b>			
Specifies the current that will be used during stator alignment. Current is ramped from this value to the maximum when the stator is being aligned.			
<b>Category:</b> Commutation			
<b>MAXCLib:</b> A_Stator_Alignment_Starting_Current_			
<b>Register ID:</b> 199	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	100	%	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

## Category - Configuration

### Base Temperature

<b>Description:</b>			
Base temperature of the amplifier.			
<b>Category:</b> Configuration			
<b>MAXCLib:</b> A_Base_Temperature_			
<b>Register ID:</b> 290	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis

<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>
0	94	°C
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>

#### Rated Voltage

<b>Description:</b>			
Rated voltage of the amplifier.			
<b>Category:</b> Configuration			
<b>MAXCLib:</b> A_Rated_Voltage_			
<b>Register ID:</b> 292	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535	Volts	
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Serial Number

<b>Description:</b>			
Holds the serial number for the motion controller.			
<b>Category:</b> Configuration			
<b>MAXCLib:</b> A_Serial_Number_			
<b>Register ID:</b> 2345	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-2147483648	2147483647		
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Category - Current

##### Current Pulse Magnitude 1

<b>Description:</b>			
Magnitude of first level of Current Pulse.			
<b>Category:</b> Current			
<b>MAXCLib:</b> A_Current_Pulse_Magnitude_1_			
<b>Register ID:</b> 344	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-100	100	%	
<b>Minimum firmware version supported: 8.50</b>		<b>Maximum firmware version supported: 11.00</b>	

##### Current Pulse Magnitude 2

<b>Description:</b>			
Magnitude of second level of Current Pulse.			
<b>Category:</b> Current			
MAXCLib: A_Current_Pulse_Magnitude_2_			
<b>Register ID:</b> 345	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-100	100	%	
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

#### Current Pulse Period

<b>Description:</b>			
Period of Current pulse in ms.			
<b>Category:</b> Current			
MAXCLib: A_Current_Pulse_Period_			
<b>Register ID:</b> 346	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

#### Current Pulse Thread Enable

<b>Description:</b>			
N/A			
<b>Category:</b> Current			
MAXCLib: A_Current_Pulse_Thread_Enable_			
<b>Register ID:</b> 6	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	1		
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

#### Current Setpoint

<b>Description:</b>			
Commanded current.			
<b>Category:</b> Current			
MAXCLib: A_Current_Setpoint_			
<b>Register ID:</b> 256	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-100	100	%	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Rated Current**

<b>Description:</b>			
Rated current of the amplifier.			
<b>Category:</b> Current			
<b>MAXCLib:</b> A_Rated_Current_			
<b>Register ID:</b> 291	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	15	Amps	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Category - Datalog**

**Datalog Channel A**

<b>Description:</b>			
Specifies the register index that is to be datalogged in channel A of the datalogger. Include the axis index as the most significant nibble if an axis register is identified.			
<b>Category:</b> Datalog			
<b>MAXCLib:</b> A_Datalog_Channel_A_			
<b>Register ID:</b> 2057	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Datalog Channel B**

<b>Description:</b>			
Specifies the register index that is to be datalogged in channel B of the datalogger. Include the axis index as the most significant nibble if an axis register is identified.			
<b>Category:</b> Datalog			
<b>MAXCLib:</b> A_Datalog_Channel_B_			
<b>Register ID:</b> 2060	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Datalog Channel C**

<b>Description:</b>			
Specifies the register index that is to be datalogged in channel C of the datalogger. Include the axis index as the most significant nibble if an axis register is identified.			
<b>Category:</b> Datalog			
<b>MAXCLib:</b> A_Datalog_Channel_C_			

<b>Register ID:</b> 2063	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Datalog Channel D

<b>Description:</b>			
Specifies the register index that is to be datalogged in channel D of the datalogger. Include the axis index as the most significant nibble if an axis register is identified.			
<b>Category:</b> Datalog			
<b>MAXCLib:</b> A_Datalog_Channel_D_			
<b>Register ID:</b> 2066	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Datalog Complete

<b>Description:</b>			
When this register is a 1 it signifies that the datalogger has finished logging all points that the user has specified in the number of samples.			
<b>Category:</b> Datalog			
<b>MAXCLib:</b> A_Datalog_Complete_			
<b>Register ID:</b> 2336	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	1		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Datalog Enable

<b>Description:</b>			
When this register is set to 1 the datalog sampler is turned on and when set to 0 it is turned off.			
<b>Category:</b> Datalog			
<b>MAXCLib:</b> A_Datalog_Enable_			
<b>Register ID:</b> 2052	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<u>Value</u>	<u>Name</u>	<u>Description</u>	
0	A_Off	Boolean Off.	
1	A_On	Boolean On.	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Datalog Number of Channels

<b>Description:</b>
---------------------

Specifies the number of active datalog channels (A to D). (i.e. 1 means A only; 2 means A and B; 3 means A, B and C; 4 means A, B, C and D are used).			
<b>Category:</b> Datalog			
<b>MAXCLib:</b> A_Datalog_Number_of_Channels_			
<b>Register ID:</b> 2070	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Datalog Number of Samples

<b>Description:</b>			
Specifies the number of samples that the datalog is to log before waiting for another trigger. This value determines when the Datalog Complete register is set to 1.			
<b>Category:</b> Datalog			
<b>MAXCLib:</b> A_Datalog_Number_of_Samples_			
<b>Register ID:</b> 2069	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	2000		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Datalog Sample Index

<b>Description:</b>			
Specifies the sample that the datalogger is presently logging. This value will go upto a maximum of Datalog Number of Samples.			
<b>Category:</b> Datalog			
<b>MAXCLib:</b> A_Datalog_Sample_Index_			
<b>Register ID:</b> 2342	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Datalog Sample Input Bitmask

<b>Description:</b>			
The register bit mask of the input register that specifies which input to sample on. Used only when input based datalog sampling is used.			
<b>Category:</b> Datalog			
<b>MAXCLib:</b> A_Datalog_Sample_Input_Bitmask_			
<b>Register ID:</b> 2082	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Datalog Sample Input Initial State

<b>Description:</b>			
N/A			
<b>Category:</b> Datalog			
<b>MAXCLib:</b> A_Datalog_Sample_Input_Initial_State_			
<b>Register ID:</b> 2403	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.95		<b>Maximum firmware version supported:</b> 11.00	

### Datalog Sample Input Level Sense Mask

<b>Description:</b>			
When a 1 is set in the same location as the bit mask then datalog is sampled on a 0->1 transition. If it is a 0 then the datalog is sampled on a 1->0 transition. The Datalog Sample Input Transition register will override this operation when a 1 is set in the same bit location as the bit mask. Used only when input based datalog sampling is used.			
<b>Category:</b> Datalog			
<b>MAXCLib:</b> A_Datalog_Sample_Input_Level_Sense_Mask_			
<b>Register ID:</b> 2084	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Datalog Sample Input Register

<b>Description:</b>			
The register index of the input register that specifies which input to sample on. Used only when input based datalog sampling is used.			
<b>Category:</b> Datalog			
<b>MAXCLib:</b> A_Datalog_Sample_Input_Register_			
<b>Register ID:</b> 2083	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Datalog Sample Input Transition

<b>Description:</b>			
When a 1 is set in the same location as the bit mask then datalog is sampled on a any transition. The level sense mask for the datalog sample is ignored when this bit is set. Used only when input based datalog sampling is used.			
<b>Category:</b> Datalog			
<b>MAXCLib:</b> A_Datalog_Sample_Input_Transition_			
<b>Register ID:</b> 2085	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller

<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>
0	65535	
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>

### Datalog Sample Mode

<b>Description:</b>			
Sets the mode of the datalogger.			
<b>Category:</b> Datalog			
<b>MAXCLib:</b> A_Datalog_Sample_Mode_			
<b>Register ID:</b> 2081	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<u>Value</u>	<u>Name</u>	<u>Description</u>	
0	A_Datalog_Timed_Sample	Set the datalogger to sample at regular time intervals when it is enabled by setting the Datalog Enable register to 1. The time between samples is set in the Datalog Sample Time register.	
1	A_Datalog_Input_Event_Sample	Set the datalogger to sample when the digital input specified by the Datalog Sample Input Mask register and the io register value in the the Datalog Sample Input Register transitions to the state specified in the Datalog Sample Input Sense Mask register.	
2	A_Datalog_Timed_Sample_Manual_Arm	Set the datalogger to sample at regular time intervals when it is enabled by setting the Datalog Enable register to 1. The time between samples is set in the Datalog Sample Time register. After datalog is sampled requires a DatalogArm command to start datalog at the next trigger point.	
3	A_Datalog_Input_Event_Sample_Manual_Arm	Set the datalogger to sample when the digital input specified by the Datalog Sample Input Mask register and the io register value in the the Datalog Sample Input Register transitions to the state specified in the Datalog Sample Input Sense Mask register. After datalog is sampled requires a DatalogArm command to start datalog at the next trigger point.	
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

### Datalog Sample Time

<b>Description:</b>			
Specifies the time between datalog samples in 50us ticks. A value of 1 in this register would mean the datalogger takes one sample every 50us; 2 every 100us and so on. This register is used when datalog sample mode is set to timed sample.			
<b>Category:</b> Datalog			
<b>MAXCLib:</b> A_Datalog_Sample_Time_			
<b>Register ID:</b> 2056	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535	x 50us	
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

### Datalog Trigger Channel

<b>Description:</b>
When the datalogger is set up to be triggered by an axis event this register specifies the axis channel.

<b>Category:</b> Datalog			
<b>MAXCLib:</b> A_Datalog_Trigger_Channel_			
<b>Register ID:</b> 2054	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	3		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Datalog Trigger Position

<b>Description:</b>			
Specifies the trigger position in sample counts.			
<b>Category:</b> Datalog			
<b>MAXCLib:</b> A_Datalog_Trigger_Position_			
<b>Register ID:</b> 2087	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535	x 50us	
<b>Minimum firmware version supported:</b> 10.01		<b>Maximum firmware version supported:</b> 11.00	

#### Datalog Trigger Type

<b>Description:</b>			
Switches the datalog sampler to trigger for different types of events.			
<b>Category:</b> Datalog			
<b>MAXCLib:</b> A_Datalog_Trigger_Type_			
<b>Register ID:</b> 2053	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<u>Value</u>	<u>Name</u>	<u>Description</u>	
0	A_Trigger_Disable_Auto	Sets the datalog sampler to only trigger when the MAX series controller sees the DatalogTrigger command.	
1	A_Trigger_Move_Go	Sets the datalog sampler to only trigger when a motion has started in any direction.	
2	A_Trigger_Move_Positive_Go	Sets the datalog sampler to trigger when a positive motion has started.	
3	A_Trigger_Move_Negative_Go	Sets the datalog sampler to trigger when a negative motion has started.	
4	A_Trigger_Profile_Start	Sets the datalog sampler to trigger when the PVT or PT has begun.	
5	A_Trigger_Motor_Enable	Sets the datalog sampler to trigger when the motor is enabled.	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Category - Diagnostic

##### Command Queue Overrun Count

<b>Description:</b>
Number of times since boot the command queue has overrun.
<b>Category:</b> Diagnostic

<b>MAXCLib:</b> A_Command_Queue_Overrun_Count_			
<b>Register ID:</b> 2401	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.95		<b>Maximum firmware version supported:</b> 11.00	

#### Condition Status

<b>Description:</b>			
Condition Status (Zero=0x0001, Negative=0x0002, Overflow=0x0004).			
<b>Category:</b> Diagnostic			
<b>MAXCLib:</b> A_Condition_Status_			
<b>Register ID:</b> 2460	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

#### Control 50us Tick

<b>Description:</b>			
Holds a counter that increments every 50us.			
<b>Category:</b> Diagnostic			
<b>MAXCLib:</b> A_Control_50us_Tick_			
<b>Register ID:</b> 2351	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535	50us ticks	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Control Loop Average Count 0

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
<b>MAXCLib:</b> A_Control_Loop_Average_Count_0_			
<b>Register ID:</b> 2354	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Control Loop Average Count 1

<b>Description:</b>			
For internal use only.			

<b>Category:</b> Diagnostic			
MAXCLib: A_Control_Loop_Average_Count_1_			
<b>Register ID:</b> 2355	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Control Loop Average Count 10**

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
MAXCLib: A_Control_Loop_Average_Count_10_			
<b>Register ID:</b> 2364	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Control Loop Average Count 11**

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
MAXCLib: A_Control_Loop_Average_Count_11_			
<b>Register ID:</b> 2365	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Control Loop Average Count 12**

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
MAXCLib: A_Control_Loop_Average_Count_12_			
<b>Register ID:</b> 2366	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Control Loop Average Count 13**

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
MAXCLib: A_Control_Loop_Average_Count_13_			
<b>Register ID:</b> 2367	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Control Loop Average Count 14**

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
MAXCLib: A_Control_Loop_Average_Count_14_			
<b>Register ID:</b> 2368	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Control Loop Average Count 15**

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
MAXCLib: A_Control_Loop_Average_Count_15_			
<b>Register ID:</b> 2369	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Control Loop Average Count 16**

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
MAXCLib: A_Control_Loop_Average_Count_16_			
<b>Register ID:</b> 2370	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Control Loop Average Count 17**

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
<b>MAXCLib:</b> A_Control_Loop_Average_Count_17_			
<b>Register ID:</b> 2371	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Control Loop Average Count 18**

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
<b>MAXCLib:</b> A_Control_Loop_Average_Count_18_			
<b>Register ID:</b> 2372	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Control Loop Average Count 19**

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
<b>MAXCLib:</b> A_Control_Loop_Average_Count_19_			
<b>Register ID:</b> 2373	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Control Loop Average Count 2**

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
<b>MAXCLib:</b> A_Control_Loop_Average_Count_2_			
<b>Register ID:</b> 2356	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Control Loop Average Count 3**

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
<b>MAXCLib:</b> A_Control_Loop_Average_Count_3_			
<b>Register ID:</b> 2357	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Control Loop Average Count 4**

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
<b>MAXCLib:</b> A_Control_Loop_Average_Count_4_			
<b>Register ID:</b> 2358	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Control Loop Average Count 5**

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
<b>MAXCLib:</b> A_Control_Loop_Average_Count_5_			
<b>Register ID:</b> 2359	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Control Loop Average Count 6**

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
<b>MAXCLib:</b> A_Control_Loop_Average_Count_6_			
<b>Register ID:</b> 2360	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		

<b>Minimum firmware version supported:</b> 7.93	<b>Maximum firmware version supported:</b> 11.00
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**Control Loop Average Count 7**

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
<b>MAXCLib:</b> A_Control_Loop_Average_Count_7_			
<b>Register ID:</b> 2361	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Control Loop Average Count 8**

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
<b>MAXCLib:</b> A_Control_Loop_Average_Count_8_			
<b>Register ID:</b> 2362	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Control Loop Average Count 9**

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
<b>MAXCLib:</b> A_Control_Loop_Average_Count_9_			
<b>Register ID:</b> 2363	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Control Loop Count 0**

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
<b>MAXCLib:</b> A_Control_Loop_Count_0_			
<b>Register ID:</b> 2405	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller

<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>
0	65535	
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>

#### Control Loop Count 1

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
<b>MAXCLib:</b> A_Control_Loop_Count_1_			
<b>Register ID:</b> 2406	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Control Loop Count 10

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
<b>MAXCLib:</b> A_Control_Loop_Count_10_			
<b>Register ID:</b> 2415	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Control Loop Count 11

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
<b>MAXCLib:</b> A_Control_Loop_Count_11_			
<b>Register ID:</b> 2416	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Control Loop Count 12

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			

<b>MAXCLib: A_Control_Loop_Count_12_</b>			
<b>Register ID:</b> 2417	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Control Loop Count 13

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
<b>MAXCLib: A_Control_Loop_Count_13_</b>			
<b>Register ID:</b> 2418	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Control Loop Count 14

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
<b>MAXCLib: A_Control_Loop_Count_14_</b>			
<b>Register ID:</b> 2419	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Control Loop Count 15

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
<b>MAXCLib: A_Control_Loop_Count_15_</b>			
<b>Register ID:</b> 2420	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Control Loop Count 16

<b>Description:</b>			
For internal use only.			

<b>Category:</b> Diagnostic			
MAXCLib: A_Control_Loop_Count_16_			
<b>Register ID:</b> 2421	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Control Loop Count 17

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
MAXCLib: A_Control_Loop_Count_17_			
<b>Register ID:</b> 2422	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Control Loop Count 18

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
MAXCLib: A_Control_Loop_Count_18_			
<b>Register ID:</b> 2423	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Control Loop Count 19

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
MAXCLib: A_Control_Loop_Count_19_			
<b>Register ID:</b> 2424	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Control Loop Count 2

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
MAXCLib: A_Control_Loop_Count_2_			
<b>Register ID:</b> 2407	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Control Loop Count 3

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
MAXCLib: A_Control_Loop_Count_3_			
<b>Register ID:</b> 2408	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Control Loop Count 4

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
MAXCLib: A_Control_Loop_Count_4_			
<b>Register ID:</b> 2409	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Control Loop Count 5

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
MAXCLib: A_Control_Loop_Count_5_			
<b>Register ID:</b> 2410	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Control Loop Count 6**

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
<b>MAXCLib:</b> A_Control_Loop_Count_6_			
<b>Register ID:</b> 2411	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Control Loop Count 7**

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
<b>MAXCLib:</b> A_Control_Loop_Count_7_			
<b>Register ID:</b> 2412	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Control Loop Count 8**

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
<b>MAXCLib:</b> A_Control_Loop_Count_8_			
<b>Register ID:</b> 2413	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Control Loop Count 9**

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
<b>MAXCLib:</b> A_Control_Loop_Count_9_			
<b>Register ID:</b> 2414	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Control Loop Maximum Count 0**

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
<b>MAXCLib:</b> A_Control_Loop_Maximum_Count_0_			
<b>Register ID:</b> 2374	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Control Loop Maximum Count 1**

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
<b>MAXCLib:</b> A_Control_Loop_Maximum_Count_1_			
<b>Register ID:</b> 2375	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Control Loop Maximum Count 10**

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
<b>MAXCLib:</b> A_Control_Loop_Maximum_Count_10_			
<b>Register ID:</b> 2384	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Control Loop Maximum Count 11**

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
<b>MAXCLib:</b> A_Control_Loop_Maximum_Count_11_			
<b>Register ID:</b> 2385	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	65535		

<b>Minimum firmware version supported:</b> 7.93	<b>Maximum firmware version supported:</b> 11.00
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#### Control Loop Maximum Count 12

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
<b>MAXCLib:</b> A_Control_Loop_Maximum_Count_12_			
<b>Register ID:</b> 2386	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Control Loop Maximum Count 13

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
<b>MAXCLib:</b> A_Control_Loop_Maximum_Count_13_			
<b>Register ID:</b> 2387	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Control Loop Maximum Count 14

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
<b>MAXCLib:</b> A_Control_Loop_Maximum_Count_14_			
<b>Register ID:</b> 2388	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Control Loop Maximum Count 15

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
<b>MAXCLib:</b> A_Control_Loop_Maximum_Count_15_			
<b>Register ID:</b> 2389	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller

<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>
0	65535	
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>

**Control Loop Maximum Count 16**

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
<b>MAXCLib:</b> A_Control_Loop_Maximum_Count_16_			
<b>Register ID:</b> 2390	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

**Control Loop Maximum Count 17**

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
<b>MAXCLib:</b> A_Control_Loop_Maximum_Count_17_			
<b>Register ID:</b> 2391	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

**Control Loop Maximum Count 18**

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
<b>MAXCLib:</b> A_Control_Loop_Maximum_Count_18_			
<b>Register ID:</b> 2392	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

**Control Loop Maximum Count 19**

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			

<b>MAXCLib: A_Control_Loop_Maximum_Count_19_</b>			
<b>Register ID:</b> 2393	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Control Loop Maximum Count 2

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
<b>MAXCLib: A_Control_Loop_Maximum_Count_2_</b>			
<b>Register ID:</b> 2376	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Control Loop Maximum Count 3

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
<b>MAXCLib: A_Control_Loop_Maximum_Count_3_</b>			
<b>Register ID:</b> 2377	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Control Loop Maximum Count 4

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
<b>MAXCLib: A_Control_Loop_Maximum_Count_4_</b>			
<b>Register ID:</b> 2378	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Control Loop Maximum Count 5

<b>Description:</b>			
For internal use only.			

<b>Category:</b> Diagnostic			
MAXCLib: A_Control_Loop_Maximum_Count_5_			
<b>Register ID:</b> 2379	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Control Loop Maximum Count 6

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
MAXCLib: A_Control_Loop_Maximum_Count_6_			
<b>Register ID:</b> 2380	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Control Loop Maximum Count 7

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
MAXCLib: A_Control_Loop_Maximum_Count_7_			
<b>Register ID:</b> 2381	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Control Loop Maximum Count 8

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
MAXCLib: A_Control_Loop_Maximum_Count_8_			
<b>Register ID:</b> 2382	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Control Loop Maximum Count 9

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Diagnostic			
<b>MAXCLib:</b> A_Control_Loop_Maximum_Count_9_			
<b>Register ID:</b> 2383	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Control Unique Value

<b>Description:</b>			
Unique Value of 0xAA55 for use to check communication.			
<b>Category:</b> Diagnostic			
<b>MAXCLib:</b> A_Control_Unique_Value_			
<b>Register ID:</b> 2448	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

#### Main 1ms Tick

<b>Description:</b>			
Holds a counter that increments every 1ms.			
<b>Category:</b> Diagnostic			
<b>MAXCLib:</b> A_Main_1ms_Tick_			
<b>Register ID:</b> 2352	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535	ms tick	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Category - DPB

##### Amplifier A2D Calibration Status

<b>Description:</b>			
A2D calibration result			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_A2D_Calibration_Status_			
<b>Register ID:</b> 1244	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		

<b>Minimum firmware version supported:</b> 14.00	<b>Maximum firmware version supported:</b> 11.00
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**Amplifier Actual Zero Cross Count**

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Actual_Zero_Cross_Count_			
<b>Register ID:</b> 1202	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-32768	32767		
<b>Minimum firmware version supported:</b> 16.01		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier ADC1 Current Sense B-phase**

<b>Description:</b>			
Raw ADC1 value			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_ADC1_Current_Sense_B-phase_			
<b>Register ID:</b> 1248	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier ADC2 Current Sense A-phase**

<b>Description:</b>			
Raw ADC2 value			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_ADC2_Current_Sense_A-phase_			
<b>Register ID:</b> 1250	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier ADC3 Reference Count**

<b>Description:</b>			
Reference voltage used for A2D calibration			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_ADC3_Reference_Count_			
<b>Register ID:</b> 1252	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	

0	65535
<b>Minimum firmware version supported: 14.00</b>	
<b>Maximum firmware version supported: 11.00</b>	

**Amplifier ADCAUX0**

<b>Description:</b>			
Raw AUX0 value			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_ADCAUX0_			
<b>Register ID:</b> 1254	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 14.00</b>		<b>Maximum firmware version supported: 11.00</b>	

**Amplifier ADCAUX1**

<b>Description:</b>			
Raw AUX1 value			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_ADCAUX1_			
<b>Register ID:</b> 1256	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 14.00</b>		<b>Maximum firmware version supported: 11.00</b>	

**Amplifier ADCAUX2**

<b>Description:</b>			
Raw AUX2 value			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_ADCAUX2_			
<b>Register ID:</b> 1258	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 14.00</b>		<b>Maximum firmware version supported: 11.00</b>	

**Amplifier Analog Input**

<b>Description:</b>			
Analog Input level			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Analog_Input_			
<b>Register ID:</b> 1037	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis

<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>
0	65535	
<b>Minimum firmware version supported: 14.00</b>		<b>Maximum firmware version supported: 11.00</b>

#### Amplifier Analog Input Selector

<b>Description:</b>			
Derives Control SetpointC from analog input			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Analog_Input_Selector_			
<b>Register ID:</b> 1051	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 14.00</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Amplifier Angle Current

<b>Description:</b>			
Current feedback for trapezoidal commutation			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Angle_Current_			
<b>Register ID:</b> 1240	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-199	199	%	
<b>Minimum firmware version supported: 14.00</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Amplifier Angle Sector

<b>Description:</b>			
Sector to energize for trapezoidal commutation			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Angle_Sector_			
<b>Register ID:</b> 1205	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 14.00</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Amplifier Angle Velocity Selector

<b>Description:</b>			
Internal=0, External=1			
<b>Category:</b> DPB			

<u>MAXCLib: A_Amplifier_Angle_Velocity_Selector_</u>			
<b>Register ID:</b> 1125	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Angle Velocity Time High

<b>Description:</b>			
Integral of angle velocity			
<b>Category:</b> DPB			
<u>MAXCLib: A_Amplifier_Angle_Velocity_Time_High_</u>			
<b>Register ID:</b> 1272	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Angular Velocity

<b>Description:</b>			
Fractional angle per 50us			
<b>Category:</b> DPB			
<u>MAXCLib: A_Amplifier_Angular_Velocity_</u>			
<b>Register ID:</b> 1046	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	65535	%/sec	
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier BEMF A

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<u>MAXCLib: A_Amplifier_BEMF_A_</u>			
<b>Register ID:</b> 1298	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
-32768	32767		
<b>Minimum firmware version supported:</b> 16.01		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier BEMF B

<b>Description:</b>
N/A

<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_BEMF_B_			
<b>Register ID:</b> 1320	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-32768	32767		
<b>Minimum firmware version supported:</b> 16.01		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier BEMF Deadband

<b>Description:</b>			
Zone where BackEMF set to zero			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_BEMF_Deadband			
<b>Register ID:</b> 1047	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier BEMF Integral

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_BEMF_Integral_			
<b>Register ID:</b> 1324	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-32768	32767		
<b>Minimum firmware version supported:</b> 16.01		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Blanking Down Count

<b>Description:</b>			
Timer to block Back EMF after commutation			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Blanking_Down_Count_			
<b>Register ID:</b> 1211	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Blanking Time

<b>Description:</b>			
Number of 50us ticks BEMF is not sensed			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Blanking_Time_			
<b>Register ID:</b> 1033	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Build Date Time Hi

<b>Description:</b>			
Time of build HI word			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Build_Date_Time_Hi_			
<b>Register ID:</b> 1310	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Build Date Time Lo

<b>Description:</b>			
Time of build LO word			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Build_Date_Time_Lo_			
<b>Register ID:</b> 1312	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Clear Status Communication Error

<b>Description:</b>			
Used to communication error register			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Clear_Status_Communication_Error_			
<b>Register ID:</b> 1071	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Clear Status Fatal Error**

<b>Description:</b>			
Used to clear fatal error register			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Clear_Status_Fatal_Error_			
<b>Register ID:</b> 1069	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Clear Status Warning**

<b>Description:</b>			
Used to clear warning register			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Clear_Status_Warning_			
<b>Register ID:</b> 1067	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Communication Error**

<b>Description:</b>			
Status communication bits			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Communication_Error_			
<b>Register ID:</b> 1247	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Communication Timeout**

<b>Description:</b>			
CommTimeout down counter			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Communication_Timeout_			
<b>Register ID:</b> 1268	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Communication Timeout Limit**

<b>Description:</b>			
Number of interrupts without a valid packet			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Communication_Timeout_Limit_			
<b>Register ID:</b> 1160	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Communication XOR Error Count**

<b>Description:</b>			
Number of XOR checks failed			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Communication_XOR_Error_Count_			
<b>Register ID:</b> 1238	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Commutate Flag**

<b>Description:</b>			
Indicates time to switch sectors in sensorless			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Commutate_Flag_			
<b>Register ID:</b> 1209	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Control Loop A Coefficient A1**

<b>Description:</b>			
Fixed at 0			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Control_Loop_A_Coefficient_A1_			
<b>Register ID:</b> 1126	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		

<b>Minimum firmware version supported:</b> 14.00	<b>Maximum firmware version supported:</b> 11.00
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#### Amplifier Control Loop A Coefficient A2

<b>Description:</b>			
Fixed at 1			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Control_Loop_A_Coefficient_A2_			
<b>Register ID:</b> 1128	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Control Loop A Coefficient B0

<b>Description:</b>			
Bi-Quad A-phase $K_p+K_i+K_d$			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Control_Loop_A_Coefficient_B0_			
<b>Register ID:</b> 1120	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Control Loop A Coefficient B1

<b>Description:</b>			
Bi-Quad A-phase $-(K_p + 2*K_d)$			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Control_Loop_A_Coefficient_B1_			
<b>Register ID:</b> 1122	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Control Loop A Coefficient B2

<b>Description:</b>			
Bi-Quad A-phase $K_d$			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Control_Loop_A_Coefficient_B2_			
<b>Register ID:</b> 1124	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis

<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>
0	65535	
<b>Minimum firmware version supported: 14.00</b>		<b>Maximum firmware version supported: 11.00</b>

#### Amplifier Control Loop A Exponent

<b>Description:</b>			
Bi-Quad A-phase Shift value			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Control_Loop_A_Exponent_			
<b>Register ID:</b> 1130	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 14.00</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Amplifier Control Loop A Feedback Selector

<b>Description:</b>			
Feedback Source for Biquad A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Control_Loop_A_Feedback_Selector_			
<b>Register ID:</b> 1059	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 14.00</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Amplifier Control Loop B Coefficient A1

<b>Description:</b>			
Fixed at 0			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Control_Loop_B_Coefficient_A1_			
<b>Register ID:</b> 1138	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 14.00</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Amplifier Control Loop B Coefficient A2

<b>Description:</b>			
Fixed at 1			
<b>Category:</b> DPB			

<b>MAXCLib:</b> A_Amplifier_Control_Loop_B_Coefficient_A2_			
<b>Register ID:</b> 1140	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Control Loop B Coefficient B0

<b>Description:</b>			
Bi-Quad B-phase $K_p+K_i+K_d$			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Control_Loop_B_Coefficient_B0_			
<b>Register ID:</b> 1132	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Control Loop B Coefficient B1

<b>Description:</b>			
Bi-Quad B-phase $-(K_p + 2*K_d)$			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Control_Loop_B_Coefficient_B1_			
<b>Register ID:</b> 1134	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Control Loop B Coefficient B2

<b>Description:</b>			
Bi-Quad B-phase $K_d$			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Control_Loop_B_Coefficient_B2_			
<b>Register ID:</b> 1136	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Control Loop B Exponent

<b>Description:</b>
Bi-Quad B-phase Shift value

<b>Category:</b> DPB			
MAXCLib: A_Amplifier_Control_Loop_B_Exponent_			
<b>Register ID:</b> 1142	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Control Loop B Feedback Selector

<b>Description:</b>			
Feedback Source for Biquad B			
<b>Category:</b> DPB			
MAXCLib: A_Amplifier_Control_Loop_B_Feedback_Selector_			
<b>Register ID:</b> 1061	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Control Loop Frequency

<b>Description:</b>			
Frequency in KHz			
<b>Category:</b> DPB			
MAXCLib: A_Amplifier_Control_Loop_Frequency_			
<b>Register ID:</b> 1029	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Control Loop Time

<b>Description:</b>			
Number of microseconds per loop			
<b>Category:</b> DPB			
MAXCLib: A_Amplifier_Control_Loop_Time_			
<b>Register ID:</b> 1270	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Control Setpoint A-phase

<b>Description:</b>			
User controllable input A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Control_Setpoint_A-phase_			
<b>Register ID:</b> 1048	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-199	199	%	
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Control Setpoint B-phase**

<b>Description:</b>			
User controllable input B			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Control_Setpoint_B-phase_			
<b>Register ID:</b> 1050	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-199	199	%	
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Control Setpoint C-phase**

<b>Description:</b>			
User controllable input B			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Control_Setpoint_C-phase_			
<b>Register ID:</b> 1058	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-199	199	%	
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Current A-phase**

<b>Description:</b>			
Phase A current			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Current_A-phase_			
<b>Register ID:</b> 1218	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-199	199	%	
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Current B-phase**

<b>Description:</b>			
Phase B current			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Current_B-phase_			
<b>Register ID:</b> 1224	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-199	199	%	
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Current C-phase**

<b>Description:</b>			
Phase C current			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Current_C-phase_			
<b>Register ID:</b> 1230	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-199	199	%	
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Current Id**

<b>Description:</b>			
Id current			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Current_Id_			
<b>Register ID:</b> 1290	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-199	199	%	
<b>Minimum firmware version supported:</b> 14.30		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Current Iq**

<b>Description:</b>			
Iq current			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Current_Iq_			
<b>Register ID:</b> 1292	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-199	199	%	
<b>Minimum firmware version supported:</b> 14.30		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Current Sense B-phase Scale**

<b>Description:</b>			
Scale factor for channel B current sense			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Current_Sense_B-phase_Scale_			
<b>Register ID:</b> 1062	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Current Sense Zero A**

<b>Description:</b>			
Zero point of Isense A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Current_Sense_Zero_A_			
<b>Register ID:</b> 1274	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Current Sense Zero B**

<b>Description:</b>			
Zero point of Isense A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Current_Sense_Zero_B_			
<b>Register ID:</b> 1276	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Current Setpoint Limit**

<b>Description:</b>			
Max current setpoint in velocity loop mode			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Current_Setpoint_Limit_			
<b>Register ID:</b> 1082	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-199	199	%	

<b>Minimum firmware version supported:</b> 14.00	<b>Maximum firmware version supported:</b> 11.00
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#### Amplifier Datalog Buffer Pointer

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Datalog_Buffer_Pointer_			
<b>Register ID:</b> 1060	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Datalog Feedback Index

<b>Description:</b>			
Index of datalog buffer location to return			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Datalog_Feedback_Index_			
<b>Register ID:</b> 1054	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Datalog Index 1

<b>Description:</b>			
Word Index in SPI table of datalog variable 1			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Datalog_Index_1_			
<b>Register ID:</b> 1024	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Datalog Index 2

<b>Description:</b>			
Word Index in SPI table of datalog variable 2			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Datalog_Index_2_			
<b>Register ID:</b> 1028	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis

<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>
0	65535	
<b>Minimum firmware version supported: 14.00</b>		<b>Maximum firmware version supported: 11.00</b>

### Amplifier Datalog Index 3

<b>Description:</b>			
Word Index in SPI table of datalog variable 3			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Datalog_Index_3_			
<b>Register ID:</b> 1030	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 14.00</b>		<b>Maximum firmware version supported: 11.00</b>	

### Amplifier Datalog Index 4

<b>Description:</b>			
Word Index in SPI table of datalog variable 4			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Datalog_Index_4_			
<b>Register ID:</b> 1038	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 14.00</b>		<b>Maximum firmware version supported: 11.00</b>	

### Amplifier Datalog Number of Channels

<b>Description:</b>			
Number of channels to sample			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Datalog_Number_of_Channels_			
<b>Register ID:</b> 1043	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 14.00</b>		<b>Maximum firmware version supported: 11.00</b>	

### Amplifier Datalog Reading

<b>Description:</b>			
Datalog feedback value			
<b>Category:</b> DPB			

<b>MAXCLib:</b> A_Amplifier_Datalog_Reading_			
<b>Register ID:</b> 1236	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Datalog Sample Time

<b>Description:</b>			
Datalog sample rate, increments of 50us			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Datalog_Sample_Time_			
<b>Register ID:</b> 1041	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Datalog Trigger Position Invert

<b>Description:</b>			
Datalog intervals to sample after trigger			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Datalog_Trigger_Position_Invert_			
<b>Register ID:</b> 1036	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Delay After Tx

<b>Description:</b>			
Internal variable used for timing			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Delay_After_Tx_			
<b>Register ID:</b> 1222	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Digital Input 0

<b>Description:</b>
N/A

<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Digital_Input_0_			
<b>Register ID:</b> 1313	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Digital Output Duty Cycle

<b>Description:</b>			
Digout duty cycle			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Digital_Output_Duty_Cycle_			
<b>Register ID:</b> 1266	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Digital Output Mode

<b>Description:</b>			
Digout Mode			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Digital_Output_Mode_			
<b>Register ID:</b> 1040	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Digital PWM Setpoint

<b>Description:</b>			
Digout PWM setpoint			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Digital_PWM_Setpoint_			
<b>Register ID:</b> 1042	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Direction Switch

<b>Description:</b>			
Toggles direction of motor rotation			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Direction_Switch_			
<b>Register ID:</b> 1049	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Dummy Byte

<b>Description:</b>			
Placeholder byte			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Dummy_Byte_			
<b>Register ID:</b> 1199	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Dummy Word

<b>Description:</b>			
Placeholder word			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Dummy_Word_			
<b>Register ID:</b> 1198	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Electrical Angle

<b>Description:</b>			
Electrical position of stator excitation			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Electrical_Angle_			
<b>Register ID:</b> 1044	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-32768	32767	Fang	
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

### Amplifier Electrical Angle Extrapolate Enable

<b>Description:</b>			
Enable=1, Disable=0			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Electrical_Angle_Extrapolate_Enable_			
<b>Register ID:</b> 1121	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

### Amplifier Equalizer Factor

<b>Description:</b>			
DPB analog equalization factor			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Equalizer_Factor_			
<b>Register ID:</b> 1242	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

### Amplifier External Inverse Time kHz

<b>Description:</b>			
Frequency of external timer			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_External_Inverse_Time_kHz_			
<b>Register ID:</b> 1080	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

### Amplifier Extrapolated Electrical Angle

<b>Description:</b>			
Extrapolated Electrical Angle			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Extrapolated_Electrical_Angle_			
<b>Register ID:</b> 1212	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-32768	32767	Fang	
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Extrapolated Electrical Angle Observed**

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Extrapolated_Electrical_Angle_Observed_			
<b>Register ID:</b> 1322	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 16.01		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Fatal Error**

<b>Description:</b>			
Status fatal bits			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Fatal_Error_			
<b>Register ID:</b> 1245	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Feedback Index 0**

<b>Description:</b>			
Word Index for feedback value			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Feedback_Index_0_			
<b>Register ID:</b> 1104	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Feedback Index 1**

<b>Description:</b>			
Word Index for feedback value			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Feedback_Index_1_			
<b>Register ID:</b> 1106	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		

<b>Minimum firmware version supported:</b> 14.00	<b>Maximum firmware version supported:</b> 11.00
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#### Amplifier Feedback Index 2

<b>Description:</b>			
Word Index for feedback value			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Feedback_Index_2_			
<b>Register ID:</b> 1108	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Feedback Index 3

<b>Description:</b>			
Word Index for feedback value			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Feedback_Index_3_			
<b>Register ID:</b> 1110	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Feedback Index 4

<b>Description:</b>			
Word Index for feedback value			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Feedback_Index_4_			
<b>Register ID:</b> 1112	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Feedback Index 5

<b>Description:</b>			
Word Index for feedback value			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Feedback_Index_5_			
<b>Register ID:</b> 1114	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis

<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>
0	65535	
<b>Minimum firmware version supported: 14.00</b>		<b>Maximum firmware version supported: 11.00</b>

#### Amplifier Feedback Index 6

<b>Description:</b>			
Word Index for feedback value			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Feedback_Index_6_			
<b>Register ID:</b> 1116	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 14.00</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Amplifier Feedback Index 7

<b>Description:</b>			
Word Index for feedback value			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Feedback_Index_7_			
<b>Register ID:</b> 1118	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 14.00</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Amplifier Field Weakening Constant

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Field_Weakening_Constant_			
<b>Register ID:</b> 1056	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65536		
<b>Minimum firmware version supported: 16.01</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Amplifier Field Weakening Threshold Speed

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			

<b>MAXCLib: A_Amplifier_Field_Weakening_Threshold_Speed_</b>			
<b>Register ID:</b> 1178	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65536		
<b>Minimum firmware version supported:</b> 16.01		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Filtered BEMF

<b>Description:</b>			
Motor Back EMF sensed on off phase			
<b>Category:</b> DPB			
<b>MAXCLib: A_Amplifier_Filtered_BEMF_</b>			
<b>Register ID:</b> 1228	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-32768	32767		
<b>Minimum firmware version supported:</b> 16.01		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Filtered Step Velocity

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib: A_Amplifier_Filtered_Step_Velocity_</b>			
<b>Register ID:</b> 1302	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-32768	32767		
<b>Minimum firmware version supported:</b> 16.01		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Filtered Velocity

<b>Description:</b>			
Velocity estimate			
<b>Category:</b> DPB			
<b>MAXCLib: A_Amplifier_Filtered_Velocity_</b>			
<b>Register ID:</b> 1280	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-199	199	%	
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Flux A

<b>Description:</b>			
N/A			

<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Flux_A_			
<b>Register ID:</b> 1326	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-32768	32767		
<b>Minimum firmware version supported:</b> 16.01		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Flux B

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Flux_B_			
<b>Register ID:</b> 1304	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-32768	32767		
<b>Minimum firmware version supported:</b> 16.01		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Fractional Angle Change

<b>Description:</b>			
Change in electrical angle			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Fractional_Angle_Change_			
<b>Register ID:</b> 1246	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier High Current Fault Limit

<b>Description:</b>			
Level when high current fault bit set			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_High_Current_Fault_Limit_			
<b>Register ID:</b> 1172	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	100	%	
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier High Current Warning Limit

<b>Description:</b>			
Level when high current warning bit set			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_High_Current_Warning_Limit_			
<b>Register ID:</b> 1158	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	100	%	
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier High Voltage Fault Limit

<b>Description:</b>			
Level when high voltage fault bit set			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_High_Voltage_Fault_Limit_			
<b>Register ID:</b> 1170	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	100	%	
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier High Voltage Warning Limit

<b>Description:</b>			
Level when high voltage warning bit set			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_High_Voltage_Warning_Limit_			
<b>Register ID:</b> 1154	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	100	%	
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Initialize Flash

<b>Description:</b>			
Erase flash			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Initialize_Flash_			
<b>Register ID:</b> 1278	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Inverse Velocity Selector**

<b>Description:</b>			
Internal=0, External=1			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Inverse_Velocity_Selector_			
<b>Register ID:</b> 1123	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Local Setpoint 3**

<b>Description:</b>			
Phase AB differential			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Local_Setpoint_3_			
<b>Register ID:</b> 1200	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-32768	32767		
<b>Minimum firmware version supported:</b> 16.01		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Low Voltage Warning Limit**

<b>Description:</b>			
Level when low voltage warning bit set			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Low_Voltage_Warning_Limit_			
<b>Register ID:</b> 1156	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	100	%	
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Lower Threshold Speed**

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Lower_Threshold_Speed_			
<b>Register ID:</b> 1232	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65536		
<b>Minimum firmware version supported:</b> 16.01		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Major Minor Version**

<b>Description:</b>			
Agile Version control stamp			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Major_Minor_Version_			
<b>Register ID:</b> 1308	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Maximum Controller Supply Voltage**

<b>Description:</b>			
Voltage rating			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Maximum_Controller_Supply_Voltage_			
<b>Register ID:</b> 1283	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535	V	
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Maximum Current Rating**

<b>Description:</b>			
Max allowable current			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Maximum_Current_Rating_			
<b>Register ID:</b> 1286	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	100	A	
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Maximum Motor Voltage**

<b>Description:</b>			
Max motor voltage			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Maximum_Motor_Voltage_			
<b>Register ID:</b> 1306	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		

<b>Minimum firmware version supported:</b> 14.00	<b>Maximum firmware version supported:</b> 11.00
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#### Amplifier Maximum Operating Temperature

<b>Description:</b>			
Max heat sink temperature			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Maximum_Operating_Temperature_			
<b>Register ID:</b> 1289	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	200	°C	
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Maximum PWM Frequency

<b>Description:</b>			
Max switching frequency			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Maximum_PWM_Frequency_			
<b>Register ID:</b> 1293	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Minimum Operating Temperature

<b>Description:</b>			
Minimum operating temperature			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Minimum_Operating_Temperature_			
<b>Register ID:</b> 1291	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	200	°C	
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Minimum Phase Advance

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Minimum_Phase_Advance_			
<b>Register ID:</b> 1131	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis

<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>
0	255	
<b>Minimum firmware version supported: 14.00</b>		<b>Maximum firmware version supported: 11.00</b>

#### Amplifier Minimum PWM Frequency

<b>Description:</b>			
Min switching frequency			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Minimum_PWM_Frequency_			
<b>Register ID:</b> 1295	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 14.00</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Amplifier Motor Max Velocity

<b>Description:</b>			
Motor Max Velocity for DPDLite			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Motor_Max_Velocity_			
<b>Register ID:</b> 1068	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535	RPM	
<b>Minimum firmware version supported: 14.00</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Amplifier Neutral Point Scale

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Neutral_Point_Scale_			
<b>Register ID:</b> 1162	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 14.00</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Amplifier Nominal Inductance

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			

<b>MAXCLib: A_Amplifier_Nominal_Inductance_</b>			
<b>Register ID:</b> 1074	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 16.01		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Number of Phases

<b>Description:</b>			
Number of half bridges			
<b>Category:</b> DPB			
<b>MAXCLib: A_Amplifier_Number_of_Phases_</b>			
<b>Register ID:</b> 1281	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	3		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Observed Step Velocity

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib: A_Amplifier_Observed_Step_Velocity_</b>			
<b>Register ID:</b> 1318	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-32768	32767		
<b>Minimum firmware version supported:</b> 16.01		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Peak Flux Value

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib: A_Amplifier_Peak_Flux_Value_</b>			
<b>Register ID:</b> 1194	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65536		
<b>Minimum firmware version supported:</b> 16.01		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Phase Lock Loop Enable

<b>Description:</b>
Enable=1, Disable=0

<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Phase_Lock_Loop_Enable_			
<b>Register ID:</b> 1184	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Phase Voltage

<b>Description:</b>			
Motor phase voltage used for Back EMF			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Phase_Voltage_			
<b>Register ID:</b> 1210	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	100	%	
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Phasing Mode

<b>Description:</b>			
PWM Phasing mode			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Phasing_Mode_			
<b>Register ID:</b> 1055	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Ping Sector

<b>Description:</b>			
Sector resulting from inductance sense			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Ping_Sector_			
<b>Register ID:</b> 1223	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier PLL Reg 1

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_PLL_Reg_1_			
<b>Register ID:</b> 1073	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-128	127		
<b>Minimum firmware version supported:</b> 16.01		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier PLL Reg 2**

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_PLL_Reg_2_			
<b>Register ID:</b> 1190	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-32768	32767.9999984741		
<b>Minimum firmware version supported:</b> 16.01		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier PLL Reg 3**

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_PLL_Reg_3_			
<b>Register ID:</b> 1063	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-128	127		
<b>Minimum firmware version supported:</b> 16.01		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier PLL Reg 4**

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_PLL_Reg_4_			
<b>Register ID:</b> 1144	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-32768	32767		
<b>Minimum firmware version supported:</b> 16.01		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier PLL Reg 5**

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_PLL_Reg_5_			
<b>Register ID:</b> 1146	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-32768	32767		
<b>Minimum firmware version supported:</b> 16.01		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier PLL Reg 6**

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_PLL_Reg_6_			
<b>Register ID:</b> 1164	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-32768	32767		
<b>Minimum firmware version supported:</b> 16.01		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier PLL Reg 7**

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_PLL_Reg_7_			
<b>Register ID:</b> 1166	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-32768	32767		
<b>Minimum firmware version supported:</b> 16.01		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Pole Slips**

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Pole_Slips_			
<b>Register ID:</b> 1300	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-32768	32767		
<b>Minimum firmware version supported:</b> 16.01		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Position Loop Contribution**

<b>Description:</b>			
Time between sector changes (hall transitions)			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Position_Loop_Contribution_			
<b>Register ID:</b> 1288	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-32768	32767		
<b>Minimum firmware version supported:</b> 16.01		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier PWM A-phase Setpoint**

<b>Description:</b>			
Phase A duty cycle			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_PWM_A-phase_Setpoint_			
<b>Register ID:</b> 1220	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-100	100	%	
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier PWM B-phase Setpoint**

<b>Description:</b>			
Phase A duty cycle			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_PWM_B-phase_Setpoint_			
<b>Register ID:</b> 1226	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-100	100	%	
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier PWM C-phase Setpoint**

<b>Description:</b>			
Phase C PWM value (independent mode use)			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_PWM_C-phase_Setpoint_			
<b>Register ID:</b> 1052	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-100	100	%	

<b>Minimum firmware version supported:</b> 14.00	<b>Maximum firmware version supported:</b> 11.00
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#### Amplifier PWM to FS Offset

<b>Description:</b>			
Number of 50 ns ticks between FS and PWM			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_PWM_to_FS_Offset_			
<b>Register ID:</b> 1186	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier PWM Trip Count

<b>Description:</b>			
Number of PWM trips counted			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_PWM_Trip_Count_			
<b>Register ID:</b> 1237	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier PWM1 DC

<b>Description:</b>			
Raw PWM 1 value			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_PWM1_DC_			
<b>Register ID:</b> 1260	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier PWM2 DC

<b>Description:</b>			
Raw PWM 2 value			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_PWM2_DC_			
<b>Register ID:</b> 1262	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis

<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>
0	65535	
<b>Minimum firmware version supported: 14.00</b>		<b>Maximum firmware version supported: 11.00</b>

#### Amplifier PWM3 DC

<b>Description:</b>			
Raw PWM 3 value			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_PWM3_DC_			
<b>Register ID:</b> 1264	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 14.00</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Amplifier Read Byte1 Register

<b>Description:</b>			
Lower 8 bits are rated axis temperature. Upper 8 bits are for Agile internal use.			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Read_Byte1_Register_			
<b>Register ID:</b> 285	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Amplifier Read Word2 Register

<b>Description:</b>			
Rated axis voltage.			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Read_Word2_Register_			
<b>Register ID:</b> 286	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535	Volts	
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Amplifier Read Word3 Register

<b>Description:</b>			
Rated axis current.			
<b>Category:</b> DPB			

<b>MAXCLib:</b> A_Amplifier_Read_Word3_Register_			
<b>Register ID:</b> 287	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Read Word4 Register

<b>Description:</b>			
Software version of DSP code on the axis.			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Read_Word4_Register_			
<b>Register ID:</b> 288	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Rerverse Clark Transform Selector

<b>Description:</b>			
RCT selector			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Rerverse_Clark_Transform_Selector_			
<b>Register ID:</b> 1057	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Resistance A

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Resistance_A_			
<b>Register ID:</b> 1078	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 16.01		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Resistance B

<b>Description:</b>
N/A

<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Resistance_B_			
<b>Register ID:</b> 1072	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 16.01		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Rx Tx Buffer Length

<b>Description:</b>			
Number of bytes in SPI RxTx buffers			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Rx_Tx_Buffer_Length_			
<b>Register ID:</b> 1031	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Sensorless Commutation Selector

<b>Description:</b>			
Commutation BEMF=1, Disable=0			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Sensorless_Commutation_Selector_			
<b>Register ID:</b> 1039	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Sensorless Mode

<b>Description:</b>			
Enable=1, Disable = 0			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Sensorless_Mode_			
<b>Register ID:</b> 1065	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Setpoint A-phase

<b>Description:</b>			
Input to Biquad A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Setpoint_A-phase_			
<b>Register ID:</b> 1214	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-199	199	%	
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Setpoint B-phase**

<b>Description:</b>			
Input to Biquad B			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Setpoint_B-phase_			
<b>Register ID:</b> 1216	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-199	199	%	
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Setpoint C-phase**

<b>Description:</b>			
Input to Biquad C			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Setpoint_C-phase_			
<b>Register ID:</b> 1206	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Setpoint Index 0**

<b>Description:</b>			
Setpoint byte Index for go packets			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Setpoint_Index_0_			
<b>Register ID:</b> 1089	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Setpoint Index 1**

<b>Description:</b>			
Setpoint byte Index for go packets			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Setpoint_Index_1_			
<b>Register ID:</b> 1091	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Setpoint Index 2**

<b>Description:</b>			
Setpoint byte Index for go packets			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Setpoint_Index_2_			
<b>Register ID:</b> 1093	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Setpoint Index 3**

<b>Description:</b>			
Setpoint byte Index for go packets			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Setpoint_Index_3_			
<b>Register ID:</b> 1095	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Setpoint Index 4**

<b>Description:</b>			
Setpoint byte Index for go packets			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Setpoint_Index_4_			
<b>Register ID:</b> 1097	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Setpoint Index 5**

<b>Description:</b>			
Setpoint byte Index for go packets			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Setpoint_Index_5_			
<b>Register ID:</b> 1099	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Setpoint Index 6**

<b>Description:</b>			
Setpoint byte Index for go packets			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Setpoint_Index_6_			
<b>Register ID:</b> 1101	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Setpoint Index 7**

<b>Description:</b>			
Setpoint byte Index for go packets			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Setpoint_Index_7_			
<b>Register ID:</b> 1103	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

**Amplifier Setpoint Zero Cross Count**

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Setpoint_Zero_Cross_Count_			
<b>Register ID:</b> 1204	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-32768	32767		

<b>Minimum firmware version supported:</b> 16.01	<b>Maximum firmware version supported:</b> 11.00
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#### Amplifier SilentStep Servo Enable

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_SilentStep_Servo_Enable_			
<b>Register ID:</b> 1207	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 16.01		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Sine of Extrapolated Electrical Angle

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Sine_of_Extrapolated_Electrical_Angle_			
<b>Register ID:</b> 1174	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-32768	32767		
<b>Minimum firmware version supported:</b> 16.01		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Spi Receive Command Type

<b>Description:</b>			
Last received SPI command			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Spi_Receive_Command_Type_			
<b>Register ID:</b> 1203	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Starting Current

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Starting_Current_			
<b>Register ID:</b> 1066	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis

<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>
-199	199	%
<b>Minimum firmware version supported: 14.00</b>		<b>Maximum firmware version supported: 11.00</b>

#### Amplifier Startup Deadband

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Startup_Deadband_			
<b>Register ID:</b> 1079	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	255		
<b>Minimum firmware version supported: 14.00</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Amplifier Status 0

<b>Description:</b>			
Status byte			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Status_0_			
<b>Register ID:</b> 1201	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 14.00</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Amplifier Supply Voltage

<b>Description:</b>			
Voltage across bridge			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Supply_Voltage_			
<b>Register ID:</b> 1208	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	100	%	
<b>Minimum firmware version supported: 14.00</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Amplifier Temperature

<b>Description:</b>			
Heat sink temperature			
<b>Category:</b> DPB			

<b>MAXCLib:</b> A_Amplifier_Temperature_			
<b>Register ID:</b> 1234	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	100	%	
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Temperature Fault Limit

<b>Description:</b>			
Level when temp fault bit set			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Temperature_Fault_Limit_			
<b>Register ID:</b> 1168	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	100	%	
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Temperature Warning Limit

<b>Description:</b>			
Level when temp warning bit set			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Temperature_Warning_Limit_			
<b>Register ID:</b> 1152	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	100	%	
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Transition Iq

<b>Description:</b>			
Commutation Flux Threshold			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Transition_Iq_			
<b>Register ID:</b> 1032	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-32768	32767		
<b>Minimum firmware version supported:</b> 16.01		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Trigger Armed

<b>Description:</b>
Datalog trigger arm register

<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Trigger_Armed_			
<b>Register ID:</b> 1035	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Type

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Type_			
<b>Register ID:</b> 150	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.94		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Update States

<b>Description:</b>			
Force update of Biquad Values DM->PM			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Update_States_			
<b>Register ID:</b> 1025	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Velocity Loop Mode

<b>Description:</b>			
Enable=1, Disable=0			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Velocity_Loop_Mode_			
<b>Register ID:</b> 1053	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Version

<b>Description:</b>			
Amplifier software version. The high byte of the word holds the major version and the low byte of the word holds the minor version.			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Version_			
<b>Register ID:</b> 293	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Voltage Vd

<b>Description:</b>			
Vd voltage			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Voltage_Vd_			
<b>Register ID:</b> 1294	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-199	199	%	
<b>Minimum firmware version supported:</b> 14.30		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Voltage Vq

<b>Description:</b>			
Vq voltage			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Voltage_Vq_			
<b>Register ID:</b> 1296	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-199	199	%	
<b>Minimum firmware version supported:</b> 14.30		<b>Maximum firmware version supported:</b> 11.00	

#### Amplifier Warning

<b>Description:</b>			
Staus warning bits			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Amplifier_Warning_			
<b>Register ID:</b> 1243	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 14.00		<b>Maximum firmware version supported:</b> 11.00	

### Initial Amplifier BEMF A

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Initial_Amplifier_BEMF_A_			
<b>Register ID:</b> 17	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-32768	32767.9999984741		
<b>Minimum firmware version supported:</b> 10.81		<b>Maximum firmware version supported:</b> 11.00	

### Initial Amplifier BEMF B

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Initial_Amplifier_BEMF_B_			
<b>Register ID:</b> 18	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-32768	32767.9999984741		
<b>Minimum firmware version supported:</b> 10.81		<b>Maximum firmware version supported:</b> 11.00	

### Initial Amplifier Communication Timeout

<b>Description:</b>			
Axis is disabled if the DPB does not receive a packet for the time specified in this register.			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Initial_Amplifier_Communication_Timeout_			
<b>Register ID:</b> 127	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	32767	x 50us	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Initial Amplifier Control Loop A Coefficient B0

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Initial_Amplifier_Control_Loop_A_Coefficient_B0_			
<b>Register ID:</b> 117	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Initial Amplifier Control Loop A Coefficient B1**

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Initial_Amplifier_Control_Loop_A_Coefficient_B1_			
<b>Register ID:</b> 118	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Initial Amplifier Control Loop A Coefficient B2**

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Initial_Amplifier_Control_Loop_A_Coefficient_B2_			
<b>Register ID:</b> 124	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Initial Amplifier Control Loop A Exponent**

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Initial_Amplifier_Control_Loop_A_Exponent_			
<b>Register ID:</b> 119	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Initial Amplifier Control Loop A Feedback Selector**

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Initial_Amplifier_Control_Loop_A_Feedback_Selector_			
<b>Register ID:</b> 114	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		

<b>Minimum firmware version supported:</b> 7.93	<b>Maximum firmware version supported:</b> 11.00
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**Initial Amplifier Control Loop B Coefficient B0**

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Initial_Amplifier_Control_Loop_B_Coefficient_B0_			
<b>Register ID:</b> 120	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Initial Amplifier Control Loop B Coefficient B1**

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Initial_Amplifier_Control_Loop_B_Coefficient_B1_			
<b>Register ID:</b> 121	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Initial Amplifier Control Loop B Coefficient B2**

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Initial_Amplifier_Control_Loop_B_Coefficient_B2_			
<b>Register ID:</b> 125	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Initial Amplifier Control Loop B Exponent**

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Initial_Amplifier_Control_Loop_B_Exponent_			
<b>Register ID:</b> 122	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis

<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>
0	65535	
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>

#### Initial Amplifier Control Loop B Feedback Selector

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Initial_Amplifier_Control_Loop_B_Feedback_Selector_			
<b>Register ID:</b> 115	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Initial Amplifier Current Sense B-phase Scale

<b>Description:</b>			
Must be 32768.			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Initial_Amplifier_Current_Sense_B-phase_Scale_			
<b>Register ID:</b> 126	<b>Writable:</b> No	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
32768	32768		
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Initial Amplifier Extrapolated Electrical Angle Observed

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Initial_Amplifier_Extrapolated_Electrical_Angle_Observed_			
<b>Register ID:</b> 19	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-1	0.999996948242187		
<b>Minimum firmware version supported: 10.81</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Initial Amplifier Field Weakening Constant

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			

<b>MAXCLib: A_Initial_Amplifier_Field_Weakening_Constant</b>			
<b>Register ID:</b> 207	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	65536		
<b>Minimum firmware version supported:</b> 10.81		<b>Maximum firmware version supported:</b> 11.00	

#### Initial Amplifier Field Weakening Threshold Speed

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib: A_Initial_Amplifier_Field_Weakening_Threshold_Speed</b>			
<b>Register ID:</b> 209	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	65536		
<b>Minimum firmware version supported:</b> 10.81		<b>Maximum firmware version supported:</b> 11.00	

#### Initial Amplifier Filtered Step Velocity

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib: A_Initial_Amplifier_Filtered_Step_Velocity</b>			
<b>Register ID:</b> 20	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
-32768	32767.9999984741		
<b>Minimum firmware version supported:</b> 10.81		<b>Maximum firmware version supported:</b> 11.00	

#### Initial Amplifier Flux A

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib: A_Initial_Amplifier_Flux_A</b>			
<b>Register ID:</b> 21	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	65535		
<b>Minimum firmware version supported:</b> 10.81		<b>Maximum firmware version supported:</b> 11.00	

#### Initial Amplifier Flux B

<b>Description:</b>			
N/A			

<b>Category:</b> DPB			
MAXCLib: A_Initial_Amplifier_Flux_B_			
<b>Register ID:</b> 22	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 10.81		<b>Maximum firmware version supported:</b> 11.00	

#### Initial Amplifier Go Feedback Data Byte1 Index

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
MAXCLib: A_Initial_Amplifier_Go_Feedback_Data_Byte1_Index_			
<b>Register ID:</b> 110	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Initial Amplifier Go Feedback Data Word2 Index

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
MAXCLib: A_Initial_Amplifier_Go_Feedback_Data_Word2_Index_			
<b>Register ID:</b> 111	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Initial Amplifier Go Feedback Data Word3 Index

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
MAXCLib: A_Initial_Amplifier_Go_Feedback_Data_Word3_Index_			
<b>Register ID:</b> 112	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Initial Amplifier Go Feedback Data Word4 Index

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Initial_Amplifier_Go_Feedback_Data_Word4_Index_			
<b>Register ID:</b> 113	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Initial Amplifier Go Send Data Byte1 Index**

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Initial_Amplifier_Go_Send_Data_Byte1_Index_			
<b>Register ID:</b> 106	<b>Writable:</b> No	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Initial Amplifier Go Send Data Word2 Index**

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Initial_Amplifier_Go_Send_Data_Word2_Index_			
<b>Register ID:</b> 107	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Initial Amplifier Go Send Data Word3 Index**

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Initial_Amplifier_Go_Send_Data_Word3_Index_			
<b>Register ID:</b> 108	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Initial Amplifier Go Send Data Word4 Index**

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Initial_Amplifier_Go_Send_Data_Word4_Index_			
<b>Register ID:</b> 109	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Initial Amplifier Lower Threshold Speed**

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Initial_Amplifier_Lower_Threshold_Speed_			
<b>Register ID:</b> 210	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65536		
<b>Minimum firmware version supported:</b> 10.81		<b>Maximum firmware version supported:</b> 11.00	

**Initial Amplifier Nominal Inductance**

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Initial_Amplifier_Nominal_Inductance_			
<b>Register ID:</b> 39	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 10.81		<b>Maximum firmware version supported:</b> 11.00	

**Initial Amplifier Nominal Inductance Exponent**

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Initial_Amplifier_Nominal_Inductance_Exponent_			
<b>Register ID:</b> 40	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-128	127		
<b>Minimum firmware version supported:</b> 10.81		<b>Maximum firmware version supported:</b> 11.00	

**Initial Amplifier Peak Flux Value**

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Initial_Amplifier_Peak_Flux_Value_			
<b>Register ID:</b> 208	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65536		
<b>Minimum firmware version supported:</b> 10.81		<b>Maximum firmware version supported:</b> 11.00	

**Initial Amplifier Phasing Mode**

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Initial_Amplifier_Phasing_Mode_			
<b>Register ID:</b> 116	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Initial Amplifier PLL Reg 1**

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Initial_Amplifier_PLL_Reg_1_			
<b>Register ID:</b> 200	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-32768	32767.9999984741		
<b>Minimum firmware version supported:</b> 10.81		<b>Maximum firmware version supported:</b> 11.00	

**Initial Amplifier PLL Reg 2**

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Initial_Amplifier_PLL_Reg_2_			
<b>Register ID:</b> 201	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-32768	32767.9999984741		

<b>Minimum firmware version supported:</b> 10.81	<b>Maximum firmware version supported:</b> 11.00
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**Initial Amplifier PLL Reg 3**

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Initial_Amplifier_PLL_Reg_3			
<b>Register ID:</b> 202	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
-32768	32767.9999984741		
<b>Minimum firmware version supported:</b> 10.81		<b>Maximum firmware version supported:</b> 11.00	

**Initial Amplifier PLL Reg 4**

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Initial_Amplifier_PLL_Reg_4			
<b>Register ID:</b> 203	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
-32768	32767.9999984741		
<b>Minimum firmware version supported:</b> 10.81		<b>Maximum firmware version supported:</b> 11.00	

**Initial Amplifier PLL Reg 5**

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Initial_Amplifier_PLL_Reg_5			
<b>Register ID:</b> 204	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
-32768	32767.9999984741		
<b>Minimum firmware version supported:</b> 10.81		<b>Maximum firmware version supported:</b> 11.00	

**Initial Amplifier PLL Reg 6**

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Initial_Amplifier_PLL_Reg_6			
<b>Register ID:</b> 205	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis

<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>
-32768	32767.9999984741	
<b>Minimum firmware version supported: 10.81</b>		<b>Maximum firmware version supported: 11.00</b>

#### Initial Amplifier PLL Reg 7

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Initial_Amplifier_PLL_Reg_7_			
<b>Register ID:</b> 206	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-32768	32767.9999984741		
<b>Minimum firmware version supported: 10.81</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Initial Amplifier Resistance A

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Initial_Amplifier_Resistance_A_			
<b>Register ID:</b> 14	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 10.81</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Initial Amplifier Resistance B

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Initial_Amplifier_Resistance_B_			
<b>Register ID:</b> 15	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 10.81</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Initial Amplifier Reverse Clark Transform Selector

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			

<b>MAXCLib:</b> A_Initial_Amplifier_Reverse_Clark_Transform_Selector_			
<b>Register ID:</b> 123	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Initial Amplifier SilentStep Servo Enable

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Initial_Amplifier_SilentStep_Servo_Enable_			
<b>Register ID:</b> 16	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 10.81		<b>Maximum firmware version supported:</b> 11.00	

#### Initialize Amplifier Flash

<b>Description:</b>			
N/A			
<b>Category:</b> DPB			
<b>MAXCLib:</b> A_Initialize_Amplifier_Flash_			
<b>Register ID:</b> 3	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	61946		
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

### Category - Encoder

#### Absolute Alignment Offset

<b>Description:</b>			
Position added to absolute encoder value to adjust Electrical Angle to 0.			
<b>Category:</b> Encoder			
<b>MAXCLib:</b> A_Absolute_Alignment_Offset_			
<b>Register ID:</b> 85	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-2147483647	2147483647	enc counts	
<b>Minimum firmware version supported:</b> 7.94		<b>Maximum firmware version supported:</b> 11.00	

#### Absolute Encoder Status

<b>Description:</b>			
Status bits for absolute encoder.			
<b>Category:</b> Encoder			
<b>MAXCLib:</b> A_Absolute_Encoder_Status_			
<b>Register ID:</b> 296	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Bit</b>	<b>Bit Name</b>	<b>Bit Description</b>	
0	A_Battery_Error_and_Overspeed	The power down position or internal counter is wrong	
1	A_Counter_Overflow	The maximum internal encoder position counter has wrapped	
2	A_Over_Speed	The maximum internal encoder speed has exceeded it limits and position may be lost	
3	A_Battery_Alarm	The internal battery of the encoder has failed and position may be lost	
4	A_Pre-Load_Status	The internal functions of the encoder are still in reset	
5	A_Counter_Error_Status	Need Description	
11	A_Absolute_Encoder_Communication_Error	A serial encoder has not updated the position variable for one position loop interval	
14	A_Reset_State	The encoder is in a reset state generated by the controller	
15	A_Encoder_not_present	No encoder serial data was detected on power-up	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Absolute Position Offset

<b>Description:</b>			
Position added to absolute encoder value.			
<b>Category:</b> Encoder			
<b>MAXCLib:</b> A_Absolute_Position_Offset_			
<b>Register ID:</b> 83	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-2147483647	2147483647	enc counts	
<b>Minimum firmware version supported:</b> 7.94		<b>Maximum firmware version supported:</b> 11.00	

#### Analog Encoder Angle

<b>Description:</b>			
This is the full 16 bit interpolation of analog encoder sin cos angle independent of interpolation level.			
<b>Category:</b> Encoder			
<b>MAXCLib:</b> A_Analog_Encoder_Angle_			
<b>Register ID:</b> 392	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-32768	32767	Fangs	
<b>Minimum firmware version supported:</b> 10.94		<b>Maximum firmware version supported:</b> 11.00	

#### Analog Encoder Angle Bit Resolution

<b>Description:</b>
Specifies the angle bit resolution which can be from 2 bit to 16 bit. According to the specified bit, it has the resolution of 2 to

the power of n bit resolution per 1 cycle of sine or cosine signal. For example, if the angle bit resolution is 12 bit, it has 4096 resolutions per 1 cycle of sine or cosine signal.			
<b>Category:</b> Encoder			
<b>MAXCLib:</b> A_Analog_Encoder_Angle_Bit_Resolution_			
<b>Register ID:</b> 248	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
2	16		
<b>Minimum firmware version supported:</b> 10.53		<b>Maximum firmware version supported:</b> 11.00	

#### Analog Encoder Cosine A2D Value

<b>Description:</b>			
Holds the A2D channel 3 value for cosine signal of analog encoder			
<b>Category:</b> Encoder			
<b>MAXCLib:</b> A_Analog_Encoder_Cosine_A2D_Value_			
<b>Register ID:</b> 337	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	16384		
<b>Minimum firmware version supported:</b> 10.53		<b>Maximum firmware version supported:</b> 11.00	

#### Analog Encoder Cosine Offset

<b>Description:</b>			
Specify the offset of cosine signal of analog encoder. This value is the center offset of cosine signal of analog encoder. Since each analog encoder hardware and ADC converter can have a small amount of different offset, offset should be compensated.			
<b>Category:</b> Encoder			
<b>MAXCLib:</b> A_Analog_Encoder_Cosine_Offset_			
<b>Register ID:</b> 250	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	16384		
<b>Minimum firmware version supported:</b> 10.53		<b>Maximum firmware version supported:</b> 11.00	

#### Analog Encoder Cosine Value

<b>Description:</b>			
Holds the value of analog input 0. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> Encoder			
<b>MAXCLib:</b> A_Analog_Encoder_Cosine_Value_			
<b>Register ID:</b> 335	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-8192	8192		
<b>Minimum firmware version supported:</b> 10.53		<b>Maximum firmware version supported:</b> 11.00	

### Analog Encoder Scale Coefficient

<b>Description:</b>			
Specifies the scaling gain of sine or cosine signal. Since the controller scales the signal which is smaller magnitude between sine signal and cosine signal, it is equal to or greater than 1. This scaling compensates the magnitude of sine/cosine signal of analog encoder.			
<b>Category:</b> Encoder			
<b>MAXCLib:</b> A_Analog_Encoder_Scale_Coefficient_			
<b>Register ID:</b> 247	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-1	0.999996948242187		
<b>Minimum firmware version supported:</b> 10.53		<b>Maximum firmware version supported:</b> 11.00	

### Analog Encoder Select SinCos

<b>Description:</b>			
Specify the signal which should be scaled. Since the controller scales the signal which is smaller magnitude between sine signal and cosine signal, this value represents the smaller magnitude of signal between sine and cosine. The value of 1 represents sine signal and the value of 0 represents cosine, respectively.			
<b>Category:</b> Encoder			
<b>MAXCLib:</b> A_Analog_Encoder_Select_SinCos_			
<b>Register ID:</b> 251	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	1		
<b>Minimum firmware version supported:</b> 10.53		<b>Maximum firmware version supported:</b> 11.00	

### Analog Encoder Sine A2D Value

<b>Description:</b>			
Holds the A2D channel 2 value for sine signal of analog encoder			
<b>Category:</b> Encoder			
<b>MAXCLib:</b> A_Analog_Encoder_Sine_A2D_Value_			
<b>Register ID:</b> 336	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	16384		
<b>Minimum firmware version supported:</b> 10.53		<b>Maximum firmware version supported:</b> 11.00	

### Analog Encoder Sine Offset

<b>Description:</b>			
Specify the offset of sine signal of analog encoder. This value is the center offset of sine signal of analog encoder. Since each analog encoder hardware and ADC converter can have a small amount of different offset, offset should be compensated.			
<b>Category:</b> Encoder			
<b>MAXCLib:</b> A_Analog_Encoder_Sine_Offset_			
<b>Register ID:</b> 249	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis

<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>
0	16384	
<b>Minimum firmware version supported: 10.53</b>		<b>Maximum firmware version supported: 11.00</b>

#### Analog Encoder Sine Value

<b>Description:</b>			
Holds the sine signal values of analog encoder after calculation of sine offset and scale			
<b>Category:</b> Encoder			
<b>MAXCLib:</b> A_Analog_Encoder_Sine_Value_			
<b>Register ID:</b> 334	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-8192	8192		
<b>Minimum firmware version supported: 10.53</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Encoder Counts

<b>Description:</b>			
Specifies the the number of encoder counts per one motor shaft revolution.			
<b>Category:</b> Encoder			
<b>MAXCLib:</b> A_Encoder_Counts_			
<b>Register ID:</b> 62	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-2147483648	2147483647	enc counts	
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Encoder Modulus

<b>Description:</b>			
If the Encoder modulus enable register is set to ON this register is used to specify when the encoder should wrap to zero to allow the MAX3000 series device to calculate the shortest distance in encoder counts when doing a move absolute.			
<b>Category:</b> Encoder			
<b>MAXCLib:</b> A_Encoder_Modulus_			
<b>Register ID:</b> 66	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-2147483648	2147483647	enc counts	
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Encoder Modulus Enable

<b>Description:</b>			
Used in a rotary system to allow the user to set when the encoder will wrap to zero using the Encoder Modulus register so that the MAX3000 series device can calculate the shortest distance in encoder counts when doing an absolute move.			

<b>Category:</b> Encoder			
<b>MAXCLib:</b> A_Encoder_Modulus_Enable_			
<b>Register ID:</b> 65	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Encoder Resolution Shift Value

<b>Description:</b>			
Used to perform a right shift to restore the correct resolution for absolute encoders after the sign has been generated (used in conjunction with reg. 88)			
<b>Category:</b> Encoder			
<b>MAXCLib:</b> A_Encoder_Resolution_Shift_Value_			
<b>Register ID:</b> 89	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.94		<b>Maximum firmware version supported:</b> 11.00	

#### Encoder Sign Shift Value

<b>Description:</b>			
Used to perform a left shift to generate the sign for absolute encoders (used in conjunction with reg. 89)			
<b>Category:</b> Encoder			
<b>MAXCLib:</b> A_Encoder_Sign_Shift_Value_			
<b>Register ID:</b> 88	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.94		<b>Maximum firmware version supported:</b> 11.00	

#### Encoder Type

<b>Description:</b>			
Type of encoder connected. 0 represents a standard incremental with A,B,Z differential input pairs			
<b>Category:</b> Encoder			
<b>MAXCLib:</b> A_Encoder_Type_			
<b>Register ID:</b> 87	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Value</u>	<u>Name</u>	<u>Description</u>	
0	A_Incremental	Standard incremental encoder	
1	A_Analog_Sin/Cos	A 1V peak analog encoder	
2	A_Heidenhain_Absolute_(13_bit)	Absolute encoder (13 bit)	
2	A_Heidenhain_or_Tamagawa_Absolute_(25_bit)	Absolute encoder (25 bit)	
3	A_Heidenhain_Absolute_Analog_(13_bit)	Heidenhain absolute analog encoder (13 bit)	
3	A_Heidenhain_Absolute_Analog_(25_bit)	Heidenhain absolute analog encoder (25 bit)	
8	A_Yaskawa_with_embedded_hall	Incremental encoder with the index signal used to decode halls information on A and B signals	
16	A_Sanyo_Denki_with_power_up_hall_signal	Incremental encoder with hall signals on A,B and I during power up reset	

32	A_Halls_as_encoder	Hall signals as an extremely coarse encoder (used for velocity control usually)
64	A_Analog_3_as_1V_linear	A 1V potentiometer type input used as encoder
128	A_Analog_3_as_10V_linear	A 10V potentiometer type input used as encoder
32768	A_None	No encoder
<b>Minimum firmware version supported: 7.94</b>		<b>Maximum firmware version supported: 11.00</b>

### Refresh Encoder

<b>Description:</b>			
N/A			
<b>Category:</b> Encoder			
<b>MAXCLib:</b> A_Refresh_Encoder_			
<b>Register ID:</b> 2	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	1		
<b>Minimum firmware version supported: 8.50</b>		<b>Maximum firmware version supported: 11.00</b>	

### Category - Event

#### Action

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Action_			
<b>Register ID:</b> 298	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Event1 Input Bitmask

<b>Description:</b>			
Specifies the input to be used for Event 1. The IO register is set in the Event1 Input Register.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Event1_Input_Bitmask_			
<b>Register ID:</b> 174	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Event1 Input Level Sense Mask

<b>Description:</b>			
Specifies the bit mask that determines whether the input is to be sensed high or low.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Event1_Input_Level_Sense_Mask_			
<b>Register ID:</b> 175	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Event1 Input Limit Option

<b>Description:</b>			
Specifies whether event 1 is a limit in the positive, a limit in the negative direction or not at all.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Event1_Input_Limit_Option_			
<b>Register ID:</b> 189	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Value</u>	<u>Name</u>	<u>Description</u>	
0	A_Input_Event_Standard	Input event is a standard input event.	
1	A_Input_Event_Positive_Limit	Input event is a positive limit.	
2	A_Input_Event_Negative_Limit	Input event is a negative limit.	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Event1 Input Register

<b>Description:</b>			
Specifies the IO register to be used for event 1. Which input in this register is set in the Event1 Input BitMask register.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Event1_Input_Register_			
<b>Register ID:</b> 173	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Event1 Input Transition

<b>Description:</b>			
Specifies the input activity that will cause this event. A 1 in this register causes the event to be posted when there is a edge change on the input set by the Event1 Input Register and the Event 1 Input BitMask register.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Event1_Input_Transition_			
<b>Register ID:</b> 176	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	1		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Event13 Input Bitmask

<b>Description:</b>			
Specifies the input to be used for event 13. The IO register is set in the Event3 Input Register. If the Event3 Input Register is set to be an analog input this register is ignored.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Event13_Input_Bitmask_			
<b>Register ID:</b> 2095	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Event13 Input Level Sense Mask

<b>Description:</b>			
Specifies the threshold for the event 13 input if it is set up as an analog. If it is set up as digital the value in this register is a bit mask that determines whether the input is to be sensed high or low.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Event13_Input_Level_Sense_Mask_			
<b>Register ID:</b> 2096	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Event13 Input Register

<b>Description:</b>			
Specifies the IO register to be used for event 13. Which input in this register is set in the Event3 Input BitMask register.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Event13_Input_Register_			
<b>Register ID:</b> 2094	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Event13 Input Transition

<b>Description:</b>			
Specifies the input activity that will cause this event. If the input is set up as digital this value is boolean and if set to 1, this event is generated when a transition of the input specified by the Event 3 Input Register.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Event13_Input_Transition_			
<b>Register ID:</b> 2097	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	

0	65535
<b>Minimum firmware version supported: 7.93</b>	
<b>Maximum firmware version supported: 11.00</b>	

#### Event14 Digital Input Register 0 Mask

<b>Description:</b>			
Bitmask applied to Digital Input Register 1. If the result is not 0, event 14 is raised.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Event14_Digital_Input_Register_0_Mask_			
<b>Register ID:</b> 2098	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Event14 Digital Input Register 1 Mask

<b>Description:</b>			
Bitmask applied to Digital Input Register 2. If the result is not 0, event 14 is raised.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Event14_Digital_Input_Register_1_Mask_			
<b>Register ID:</b> 2099	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Event14 Digital Input Register 2 Mask

<b>Description:</b>			
Bitmask applied to Digital Input Register 3. If the result is not 0, event 14 is raised.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Event14_Digital_Input_Register_2_Mask_			
<b>Register ID:</b> 2100	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Event14 Digital Input Register 3 Mask

<b>Description:</b>			
Bitmask applied to Digital Input Register 4. If the result is not 0, event 14 is raised.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Event14_Digital_Input_Register_3_Mask_			
<b>Register ID:</b> 2101	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller

<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>
0	65535	
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>

#### Event14 Digital Input Register 4 Mask

<b>Description:</b>			
Bitmask applied to Digital Input Register 5. If the result is not 0, event 14 is raised.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Event14_Digital_Input_Register_4_Mask_			
<b>Register ID:</b> 2102	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Event14 Digital Input Register 5 Mask

<b>Description:</b>			
Bitmask applied to Digital Input Register 6. If the result is not 0, event 14 is raised.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Event14_Digital_Input_Register_5_Mask_			
<b>Register ID:</b> 2103	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Event14 Digital Input Register 6 Mask

<b>Description:</b>			
Bitmask applied to Digital Input Register 7. If the result is not 0, event 14 is raised.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Event14_Digital_Input_Register_6_Mask_			
<b>Register ID:</b> 2104	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Event14 Digital Input Register 7 Mask

<b>Description:</b>			
Bitmask applied to Digital Input Register 8. If the result is not 0, event 14 is raised.			
<b>Category:</b> Event			

<b>MAXCLib:</b> A_Event14_Digital_Input_Register_7_Mask_			
<b>Register ID:</b> 2105	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Event15 Input Bitmask

<b>Description:</b>			
Specifies the input to be used for event 15. The IO register is set in the Event3 Input Register. If the Event3 Input Register is set to be an analog input this register is ignored.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Event15_Input_Bitmask_			
<b>Register ID:</b> 2107	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Event15 Input Level Sense Mask

<b>Description:</b>			
Specifies the threshold for the event 15 input if it is set up as an analog. If it is set up as digital the value in this register is a bit mask that determines whether the input is to be sensed high or low.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Event15_Input_Level_Sense_Mask_			
<b>Register ID:</b> 2108	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Event15 Input Register

<b>Description:</b>			
Specifies the IO register to be used for event 15. Which input in this register is set in the Event3 Input BitMask register.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Event15_Input_Register_			
<b>Register ID:</b> 2106	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Event15 Input Transition

<b>Description:</b>			
Specifies the input activity that will cause this event. If the input is set up as digital this value is boolean and if set to 1, this event is generated when a transition of the input specified by the Event 3 Input Register.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Event15_Input_Transition_			
<b>Register ID:</b> 2109	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Event2 Input Bitmask

<b>Description:</b>			
Specifies the input to be used for Event 2. The IO register is set in the Event2 Input Register.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Event2_Input_Bitmask_			
<b>Register ID:</b> 178	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Event2 Input Level Sense Mask

<b>Description:</b>			
Specifies the bit mask that determines whether the input is to be sensed high or low.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Event2_Input_Level_Sense_Mask_			
<b>Register ID:</b> 179	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Event2 Input Limit Option

<b>Description:</b>			
Specifies whether event 2 is a limit in the positive, a limit in the negative direction or not at all.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Event2_Input_Limit_Option_			
<b>Register ID:</b> 190	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Value</u>	<u>Name</u>	<u>Description</u>	
0	A_Input_Event_Standard	Input event is a standard input event.	
1	A_Input_Event_Positive_Limit	Input event is a positive limit.	
2	A_Input_Event_Negative_Limit	Input event is a negative limit.	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Event2 Input Register

<b>Description:</b>			
Specifies the IO register to be used for event 2. Which input in this register is set in the Event2 Input BitMask register.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Event2_Input_Register_			
<b>Register ID:</b> 177	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Event2 Input Transition

<b>Description:</b>			
Specifies the input activity that will cause this event. A 1 in this register causes the event to be posted when there is a edge change on the input set by the Event 2 Input Register and the Event 2 Input BitMask register.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Event2_Input_Transition_			
<b>Register ID:</b> 180	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	1		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Event3 Input Bitmask

<b>Description:</b>			
Specifies the input to be used for event 3. The IO register is set in the Event3 Input Register. If the Event3 Input Register is set to be an analog input this register is ignored.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Event3_Input_Bitmask_			
<b>Register ID:</b> 185	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535	bit mask	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Event3 Input Level Sense Mask

<b>Description:</b>			
Specifies the threshold for the event 3 input if it is set up as an analog. If it is set up as digital the value in this register is a bit mask that determines whether the input is to be sensed high or low.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Event3_Input_Level_Sense_Mask_			
<b>Register ID:</b> 186	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	

0	65535	bit mask
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00

### Event3 Input Register

<b>Description:</b>			
Specifies the IO register to be used for event 3. Which input in this register is set in the Event3 Input BitMask register.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Event3_Input_Register_			
<b>Register ID:</b> 184	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
256	279		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Event3 Input Transition

<b>Description:</b>			
Specifies the input activity that will cause this event. If the input is set up as digital this value is boolean and if set to 1, this event is generated when a transition of the input specified by the Event 3 Input Register.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Event3_Input_Transition_			
<b>Register ID:</b> 187	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Value</b>	<b>Name</b>	<b>Description</b>	
0	A_Input_Sense_Greater_Than_Or_Equal	Sets the Input Event to be posted when its state is greater than or equal to the value in the Event 3 Input Level Sense Mask register.	
1	A_Input_Sense_Less_Than	Sets the Input Event to be posted when its state is less than value in the Event 3 Input Level Sense Mask register.	
2	A_Input_Sense_Crosses	Sets the Input Event to be posted when its state crosses the value in the Event 3 Input Level Sense Mask register.	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Event4 Axis Status Mask

<b>Description:</b>			
Specifies what will cause Event4.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Event4_Axis_Status_Mask_			
<b>Register ID:</b> 182	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Bit</b>	<b>Bit Name</b>	<b>Bit Description</b>	
0	A_Axis_Status_Warning	Indicates that a warning is present on the axis. All warnings are contained in the Axis Fault Warning register.	
1	A_Axis_Status_Error	Indicates that a fatal or non fatal error is present on the axis. The Axis Fault Fatal register contains the fatal error bits and the Axis Fault Non Fatal register	
2	A_Axis_Status_System_Fault	A fault has occurred on the controller or any axis.	

4	A_Axis_Status_Move_Done	Signifies that the encoder position of the motor has achieved the command setpoint destination, and has done so within the done zone and the done settle time
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5	A_Axis_Status_Move_Nearly_Done	done so within the done zone and the done settle time boundaries and has not exceeded the done timeout period.
6	A_Axis_Status_Profile_Upper_Threshold	Signifies that the encoder position has come within the nearly done boundary of the destination.
7	A_Axis_Status_Profile_Lower_Threshold	Profile Queue Upper Threshold value has been reached.
8	A_Axis_Status_Positive_Limit	Profile Queue Lower Threshold value has been reached.
9	A_Axis_Status_Negative_Limit	Axis is in positive limit. This flag will not be cleared until motion occurs in the reverse direction.
		Axis is in negative limit. This flag will not be cleared until motion occurs in the reverse direction.
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00

#### Event5 Axis Status Mask

<b>Description:</b>			
Specifies what will cause Event 5.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Event5_Axis_Status_Mask_			
<b>Register ID:</b> 183	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Bit</b>	<b>Bit Name</b>	<b>Bit Description</b>	
0	A_Axis_Status_Warning	Indicates that a warning is present on the axis. All warnings are contained in the Axis Fault Warning register.	
1	A_Axis_Status_Error	Indicates that a fatal or non fatal error is present on the axis. The Axis Fault Fatal register contains the fatal error bits and the Axis Fault Non Fatal register contains the non fatal error bits.	
2	A_Axis_Status_System_Fault	A fault has occurred on the controller or any axis.	
4	A_Axis_Status_Move_Done	Signifies that the encoder position of the motor has achieved the command setpoint destination, and has done so within the done zone and the done settle time boundaries and has not exceeded the done timeout period.	
5	A_Axis_Status_Move_Nearly_Done	Signifies that the encoder position has come within the nearly done boundary of the destination.	
6	A_Axis_Status_Profile_Upper_Threshold	Profile Queue Upper Threshold value has been reached.	
7	A_Axis_Status_Profile_Lower_Threshold	Profile Queue Lower Threshold value has been reached.	
8	A_Axis_Status_Positive_Limit	Axis is in positive limit. This flag will not be cleared until motion occurs in the reverse direction.	
9	A_Axis_Status_Negative_Limit	Axis is in negative limit. This flag will not be cleared until motion occurs in the reverse direction.	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Event6 Axis Warning Mask

<b>Description:</b>			
Specifies what will cause Event 6.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Event6_Axis_Warning_Mask_			
<b>Register ID:</b> 181	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Bit</b>	<b>Bit Name</b>	<b>Bit Description</b>	
1	A_Warning_Done_Zone_Timeout	The trajectory is done and the actual position of the	
2	A_Warning_Under_Voltage	The motor voltage has dropped below the specified	

3	A_Warning_Temperature_High	level.
4	A_Warning_Over_Current	Base temperature has exceeded 85 degrees C. The required current is close to the allowable threshold.
5	A_Warning_Over_Voltage	Motor voltage has exceeded 92 volts operation.
7	A_Warning_Profile_Under_Flow	Profile Queue, used for PVT and PT motions, has become empty and the axis is executing a soft stop.
8	A_Warning_Profile_Over_Flow	Profile Queue, used for PVT and PT motions, has become full.
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00

#### Event7 State Mask

<b>Description:</b>			
Specifies what will cause Event 3.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Event7_State_Mask_			
<b>Register ID:</b> 188	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Bit</b>	<b>Bit Name</b>	<b>Bit Description</b>	
0	A_State_Positive_Move_Start	A positive motion was started.	
1	A_State_Negative_Move_Start	A negative motion was started.	
2	A_State_Move_Enable	The motor has been asked to servo.	
3	A_State_Profile_Start	A profile motion was started.	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Position Capture Complete

<b>Description:</b>			
When this register equals 1 the position capture algorithm has captured the position of the motor at the time when the specified input event occurred.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Position_Capture_Complete_			
<b>Register ID:</b> 276	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	1		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Position Capture Input Bitmask

<b>Description:</b>			
The register index of the input register that specifies which input to capture position.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Position_Capture_Input_Bitmask_			
<b>Register ID:</b> 46	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

**Position Capture Input Level Sense Mask**

<b>Description:</b>			
When a 1 is set in the same location as the bit mask then position is captured on a 0->1 transition. If it is a 0 then the position is captured on a 1->0 transition.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Position_Capture_Input_Level_Sense_Mask_			
<b>Register ID:</b> 47	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	65535		
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

**Position Capture Input Register**

<b>Description:</b>			
The register bit mask of the input register that specifies which input to capture position.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Position_Capture_Input_Register_			
<b>Register ID:</b> 45	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	65535		
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

**Position Capture Input Transition**

<b>Description:</b>			
When a 1 is set in the same location as the bit mask then position is captured on any transition. The level sense mask for the position capture is ignored when this bit is set. This register is for future use only and should be always set to 0.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Position_Capture_Input_Transition_			
<b>Register ID:</b> 48	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	1		
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

**Position Capture Position**

<b>Description:</b>			
The motor position captured by the position capture algorithm when the specified input event occurred.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Position_Capture_Position_			
<b>Register ID:</b> 277	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
-2147483648	2147483647	counts	

<b>Minimum firmware version supported:</b> 7.93	<b>Maximum firmware version supported:</b> 11.00
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### Position Capture Start

<b>Description:</b>			
Write a 1 to this register to enable position capture. Make sure the position capture event registers are first set and wait for the 'Position Capture Complete' register to be equal 1 for success.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Position_Capture_Start_			
<b>Register ID:</b> 0	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	1		
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

### Response Disable Mask

<b>Description:</b>			
Specifying a 1 in the appropriate event bit position unmask disable response for that event. There are 16 possible events.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Response_Disable_Mask_			
<b>Register ID:</b> 165	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Bit</b>	<b>Bit Name</b>	<b>Bit Description</b>	
0	A_Digital_Input_Event_1	The digital input specified for Event 1 indicates a valid event condition. Digital Input Event 1 is an axis specific event.	
1	A_Digital_Input_Event_2	The digital input specified for Event 2 indicates a valid event condition. Digital Input Event 2 is an axis specific event.	
2	A_General_Input_Event_3	The input specified for Event 3 indicates a valid event condition. General Input Event 3 is an axis specific event.	
3	A_Status_Event_4	The status conditions specified for Event 4 are valid. Status Event 4 is an axis specific event.	
4	A_Status_Event_5	The status conditions specified for Event 5 are valid. Status Event 5 is an axis specific event.	
5	A_Axis_Warning_Event_6	The warning conditions specified for Event 6 have occurred. Warning Event 6 is an axis specific event.	
6	A_State_Event_7	The state conditions specified for Event 7 have occurred. State Event 7 is an axis specific event.	
11	A_Response_Event_12	Indicates that a specific or common event has triggered on the same or different axis. For example, an input (a kill switch) attached to axis 2 is sending notification that an event has occurred and that all axes should disable. Response Event 12 is common to all axes event.	
12	A_General_Input_Event_13	The input specified for Event 13 indicates a valid event condition. General Input Event 13 is common to all axes event.	
13	A_Digital_Input_Mask_Event_14	The grouping of digital inputs specified for Event 14 indicates a valid condition. Digital Input Mask Event 14 is common to all axes event.	
14	A_Digital_Input_Event_15	The digital input specified for Event 15 indicates a valid condition. Digital Input Event 15 is a common to all axes event.	
15	A_Error_Event_16	The error conditions specified for Event 16 have occurred. Error Event 16 is a common to all axes event.	

## Response Hard Stop Mask

<b>Description:</b>			
Specifying a 1 in the appropriate event bit position unmask hard stop response for that event. There are 16 possible events.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Response_Hard_Stop_Mask_			
<b>Register ID:</b> 164	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Bit</b>	<b>Bit Name</b>	<b>Bit Description</b>	
0	A_Digital_Input_Event_1	The digital input specified for Event 1 indicates a valid event condition. Digital Input Event 1 is an axis specific event.	
1	A_Digital_Input_Event_2	The digital input specified for Event 2 indicates a valid event condition. Digital Input Event 2 is an axis specific event.	
2	A_General_Input_Event_3	The input specified for Event 3 indicates a valid event condition. General Input Event 3 is an axis specific event.	
3	A_Status_Event_4	The status conditions specified for Event 4 are valid. Status Event 4 is an axis specific event.	
4	A_Status_Event_5	The status conditions specified for Event 5 are valid. Status Event 5 is an axis specific event.	
5	A_Axis_Warning_Event_6	The warning conditions specified for Event 6 have occurred. Warning Event 6 is an axis specific event.	
6	A_State_Event_7	The state conditions specified for Event 7 have occurred. State Event 7 is an axis specific event.	
11	A_Response_Event_12	Indicates that a specific or common event has triggered on the same or different axis. For example, an input (a kill switch) attached to axis 2 is sending notification that an event has occurred and that all axes should disable. Response Event 12 is common to all axes event.	
12	A_General_Input_Event_13	The input specified for Event 13 indicates a valid event condition. General Input Event 13 is common to all axes event.	
13	A_Digital_Input_Mask_Event_14	The grouping of digital inputs specified for Event 14 indicates a valid condition. Digital Input Mask Event 14 is common to all axes event.	
14	A_Digital_Input_Event_15	The digital input specified for Event 15 indicates a valid condition. Digital Input Event 15 is a common to all axes event.	
15	A_Error_Event_16	The error conditions specified for Event 16 have occurred. Error Event 16 is a common to all axes event.	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

## Response Notify Host Mask

<b>Description:</b>			
Specifying a 1 in the appropriate event bit position unmask notify host response for that event. There are 16 possible events.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Response_Notify_Host_Mask_			
<b>Register ID:</b> 167	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Bit</b>	<b>Bit Name</b>	<b>Bit Description</b>	
0	A_Digital_Input_Event_1	The digital input specified for Event 1 indicates a valid event condition. Digital Input Event 1 is an axis specific event.	
1	A_Digital_Input_Event_2	The digital input specified for Event 2 indicates a valid event condition. Digital Input Event 2 is an axis specific event.	

2	A_General_Input_Event_3	The input specified for Event 3 indicates a valid event condition. General Input Event 3 is an axis specific event.
3	A_Status_Event_4	The status conditions specified for Event 4 are valid. Status Event 4 is an axis specific event.
4	A_Status_Event_5	The status conditions specified for Event 5 are valid. Status Event 5 is an axis specific event.
5	A_Axis_Warning_Event_6	The warning conditions specified for Event 6 have occurred. Warning Event 6 is an axis specific event.
6	A_State_Event_7	The state conditions specified for Event 7 have occurred. State Event 7 is an axis specific event.
11	A_Response_Event_12	Indicates that a specific or common event has triggered on the same or different axis. For example, an input (a kill switch) attached to axis 2 is sending notification that an event has occurred and that all axes should disable. Response Event 12 is common to all axes event.
12	A_General_Input_Event_13	The input specified for Event 13 indicates a valid event condition. General Input Event 13 is common to all axes event.
13	A_Digital_Input_Mask_Event_14	The grouping of digital inputs specified for Event 14 indicates a valid condition. Digital Input Mask Event 14 is common to all axes event.
14	A_Digital_Input_Event_15	The digital input specified for Event 15 indicates a valid condition. Digital Input Event 15 is a common to all axes event.
15	A_Error_Event_16	The error conditions specified for Event 16 have occurred. Error Event 16 is a common to all axes event.
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00

#### Response Notify Host Method

<b>Description:</b>			
Configures the communication median for which events packets will be sent.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Response_Notify_Host_Method_			
<b>Register ID:</b> 2051	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b>Value</b>	<b>Name</b>	<b>Description</b>	
0	A_No_Events	Controller will send back no events.	
1	A_RS232_RS422_Events	Controller will send back events using RS232, RS485 or RS422 as the communication median.	
2	A_FireWire_Events	Controller will send back events using Firewire as the communication median.	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Response Output1 Bitmask

<b>Description:</b>			
Specifies the bit in the I/O register for output1 action. The I/O register is determined by the value in the Output1 Register. The state is determined by the value in the Sense BitMask register and will be achieved when the event that causes the output1 response to occur.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Response_Output1_Bitmask_			
<b>Register ID:</b> 171	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535	bit mask	

## Response Output1 Level

<b>Description:</b>			
Specifies the state of the Output1 action. Which Output is determined by the values in the Output1 Register and the Output1 Bitmask register. The output state will be achieved when the events that are unmasked by the value in the Output1 Event Mask register.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Response_Output1_Level_			
<b>Register ID:</b> 172	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	1		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

## Response Output1 Mask

<b>Description:</b>			
Specifying a 1 in the appropriate event bit position unmask output1 response for that event. There are 16 possible events.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Response_Output1_Mask_			
<b>Register ID:</b> 169	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Bit</b>	<b>Bit Name</b>	<b>Bit Description</b>	
0	A_Digital_Input_Event_1	The digital input specified for Event 1 indicates a valid event condition. Digital Input Event 1 is an axis specific event.	
1	A_Digital_Input_Event_2	The digital input specified for Event 2 indicates a valid event condition. Digital Input Event 2 is an axis specific event.	
2	A_General_Input_Event_3	The input specified for Event 3 indicates a valid event condition. General Input Event 3 is an axis specific event.	
3	A_Status_Event_4	The status conditions specified for Event 4 are valid. Status Event 4 is an axis specific event.	
4	A_Status_Event_5	The status conditions specified for Event 5 are valid. Status Event 5 is an axis specific event.	
5	A_Axis_Warning_Event_6	The warning conditions specified for Event 6 have occurred. Warning Event 6 is an axis specific event.	
6	A_State_Event_7	The state conditions specified for Event 7 have occurred. State Event 7 is an axis specific event.	
11	A_Response_Event_12	Indicates that a specific or common event has triggered on the same or different axis. For example, an input (a kill switch) attached to axis 2 is sending notification that an event has occurred and that all axes should disable. Response Event 12 is common to all axes event.	
12	A_General_Input_Event_13	The input specified for Event 13 indicates a valid event condition. General Input Event 13 is common to all axes event.	
13	A_Digital_Input_Mask_Event_14	The grouping of digital inputs specified for Event 14 indicates a valid condition. Digital Input Mask Event 14 is common to all axes event.	
14	A_Digital_Input_Event_15	The digital input specified for Event 15 indicates a valid condition. Digital Input Event 15 is a common to all axes event.	
15	A_Error_Event_16	The error conditions specified for Event 16 have occurred. Error Event 16 is a common to all axes event.	

<b>Minimum firmware version supported:</b> 7.93	<b>Maximum firmware version supported:</b> 11.00
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**Response Output1 Register**

<b>Description:</b>			
Specifies the I/O register value that contains the bit specified by the value in the Output1 BitMask register to be set to the state specified by the value in the Sense BitMask register when the event occurs that is unmasked by the Output1 Event Mask register.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Response_Output1_Register_			
<b>Register ID:</b> 170	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Response Output1 Toggle**

<b>Description:</b>			
Specifies whether to toggle the Output1 action. Which Output is determined by the values in the Output1 Register and the Output1 Bitmask register. The output state will toggle when the bit matches the Bitmask register.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Response_Output1_Toggle_			
<b>Register ID:</b> 191	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535	bit mask	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Response Output2 Bitmask**

<b>Description:</b>			
Specifies the bit(s) in the output register to be affected by the event.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Response_Output2_Bitmask_			
<b>Register ID:</b> 2111	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.95		<b>Maximum firmware version supported:</b> 11.00	

**Response Output2 Holdoff**

<b>Description:</b>			
Time after the event fires, before the action takes place. In 50 us steps.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Response_Output2_Holdoff_			

<b>Register ID:</b> 2114	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.95		<b>Maximum firmware version supported:</b> 11.00	

#### Response Output2 Level

<b>Description:</b>			
Set to 0 or 1 to specify the level of the output after holdoff.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Response_Output2_Level_			
<b>Register ID:</b> 2112	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.95		<b>Maximum firmware version supported:</b> 11.00	

#### Response Output2 Mask

<b>Description:</b>			
N/A			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Response_Output2_Mask_			
<b>Register ID:</b> 192	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Bit</u>	<u>Bit Name</u>	<u>Bit Description</u>	
0	A_Digital_Input_Event_1	The digital input specified for Event 1 indicates a valid event condition. Digital Input Event 1 is an axis specific event.	
1	A_Digital_Input_Event_2	The digital input specified for Event 2 indicates a valid event condition. Digital Input Event 2 is an axis specific event.	
2	A_General_Input_Event_3	The input specified for Event 3 indicates a valid event condition. General Input Event 3 is an axis specific event.	
3	A_Status_Event_4	The status conditions specified for Event 4 are valid. Status Event 4 is an axis specific event.	
4	A_Status_Event_5	The status conditions specified for Event 5 are valid. Status Event 5 is an axis specific event.	
5	A_Axis_Warning_Event_6	The warning conditions specified for Event 6 have occurred. Warning Event 6 is an axis specific event.	
6	A_State_Event_7	The state conditions specified for Event 7 have occurred. State Event 7 is an axis specific event.	
11	A_Response_Event_12	Indicates that a specific or common event has triggered on the same or different axis. For example, an input (a kill switch) attached to axis 2 is sending notification that an event has occurred and that all axes should disable. Response Event 12 is common to all axes event.	
12	A_General_Input_Event_13	The input specified for Event 13 indicates a valid event condition. General Input Event 13 is common to all axes event.	
13	A_Digital_Input_Mask_Event_14	The grouping of digital inputs specified for Event 14 indicates a valid condition. Digital Input Mask Event 14 is common to all axes event.	
14	A_Digital_Input_Event_15	The digital input specified for Event 15 indicates a valid condition. Digital Input Event 15 is a common to all axes event.	
15	A_Error_Event_16	The error conditions specified for Event 16 have	

occurred. Error Event 16 is a common to all axes event.	
<b>Minimum firmware version supported:</b> 7.95	<b>Maximum firmware version supported:</b> 11.00

#### Response Output2 Number of States

<b>Description:</b>			
Number of state changes to assert after the holdoff.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Response_Output2_Number_of_States_			
<b>Register ID:</b> 2117	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.95		<b>Maximum firmware version supported:</b> 11.00	

#### Response Output2 Register

<b>Description:</b>			
Specifies the register of the output to be affected by the event.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Response_Output2_Register_			
<b>Register ID:</b> 2110	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.95		<b>Maximum firmware version supported:</b> 11.00	

#### Response Output2 Time 1

<b>Description:</b>			
Time that the first state will be maintained.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Response_Output2_Time_1_			
<b>Register ID:</b> 2115	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.95		<b>Maximum firmware version supported:</b> 11.00	

#### Response Output2 Time 2

<b>Description:</b>			
Time that the second state will be maintained.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Response_Output2_Time_2_			

<b>Register ID:</b> 2116	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.95		<b>Maximum firmware version supported:</b> 11.00	

### Response Output2 Toggle

<b>Description:</b>			
Set to 1 to ignore the level and toggle the state of the output affected by the event.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Response_Output2_Toggle_			
<b>Register ID:</b> 2113	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.95		<b>Maximum firmware version supported:</b> 11.00	

### Response Response Mask

<b>Description:</b>			
Specifying a 1 in the appropriate event bit position unmask the response response for that event. There are 16 possible events.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Response_Response_Mask_			
<b>Register ID:</b> 168	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b><u>Bit</u></b>	<b><u>Bit Name</u></b>	<b><u>Bit Description</u></b>	
0	A_Digital_Input_Event_1	The digital input specified for Event 1 indicates a valid event condition. Digital Input Event 1 is an axis specific event.	
1	A_Digital_Input_Event_2	The digital input specified for Event 2 indicates a valid event condition. Digital Input Event 2 is an axis specific event.	
2	A_General_Input_Event_3	The input specified for Event 3 indicates a valid event condition. General Input Event 3 is an axis specific event.	
3	A_Status_Event_4	The status conditions specified for Event 4 are valid. Status Event 4 is an axis specific event.	
4	A_Status_Event_5	The status conditions specified for Event 5 are valid. Status Event 5 is an axis specific event.	
5	A_Axis_Warning_Event_6	The warning conditions specified for Event 6 have occurred. Warning Event 6 is an axis specific event.	
6	A_State_Event_7	The state conditions specified for Event 7 have occurred. State Event 7 is an axis specific event.	
11	A_Response_Event_12	Indicates that a specific or common event has triggered on the same or different axis. For example, an input (a kill switch) attached to axis 2 is sending notification that an event has occurred and that all axes should disable. Response Event 12 is common to all axes event.	
12	A_General_Input_Event_13	The input specified for Event 13 indicates a valid event condition. General Input Event 13 is common to all axes event.	
13	A_Digital_Input_Mask_Event_14	The grouping of digital inputs specified for Event 14 indicates a valid condition. Digital Input Mask Event 14 is common to all axes event.	
14	A_Digital_Input_Event_15	The digital input specified for Event 15 indicates a valid condition. Digital Input Event 15 is a common to all axes event.	
15	A_Error_Event_16	The error conditions specified for Event 16 have	

occurred. Error Event 16 is a common to all axes event.	
<b>Minimum firmware version supported:</b> 7.93	<b>Maximum firmware version supported:</b> 11.00

### Response Soft Stop Mask

<b>Description:</b>			
Specifying a 1 in the appropriate event bit position unmask soft stop response for that event. There are 16 possible events.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Response_Soft_Stop_Mask_			
<b>Register ID:</b> 163	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Bit</b>	<b>Bit Name</b>	<b>Bit Description</b>	
0	A_Digital_Input_Event_1	The digital input specified for Event 1 indicates a valid event condition. Digital Input Event 1 is an axis specific event.	
1	A_Digital_Input_Event_2	The digital input specified for Event 2 indicates a valid event condition. Digital Input Event 2 is an axis specific event.	
2	A_General_Input_Event_3	The input specified for Event 3 indicates a valid event condition. General Input Event 3 is an axis specific event.	
3	A_Status_Event_4	The status conditions specified for Event 4 are valid. Status Event 4 is an axis specific event.	
4	A_Status_Event_5	The status conditions specified for Event 5 are valid. Status Event 5 is an axis specific event.	
5	A_Axis_Warning_Event_6	The warning conditions specified for Event 6 have occurred. Warning Event 6 is an axis specific event.	
6	A_State_Event_7	The state conditions specified for Event 7 have occurred. State Event 7 is an axis specific event.	
11	A_Response_Event_12	Indicates that a specific or common event has triggered on the same or different axis. For example, an input (a kill switch) attached to axis 2 is sending notification that an event has occurred and that all axes should disable. Response Event 12 is common to all axes event.	
12	A_General_Input_Event_13	The input specified for Event 13 indicates a valid event condition. General Input Event 13 is common to all axes event.	
13	A_Digital_Input_Mask_Event_14	The grouping of digital inputs specified for Event 14 indicates a valid condition. Digital Input Mask Event 14 is common to all axes event.	
14	A_Digital_Input_Event_15	The digital input specified for Event 15 indicates a valid condition. Digital Input Event 15 is a common to all axes event.	
15	A_Error_Event_16	The error conditions specified for Event 16 have occurred. Error Event 16 is a common to all axes event.	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Response Trigger Datalog Mask

<b>Description:</b>			
Specifying a 1 in the appropriate event bit position unmask trigger datalog response for that event. There are 16 possible events.			
<b>Category:</b> Event			
<b>MAXCLib:</b> A_Response_Trigger_Datalog_Mask_			
<b>Register ID:</b> 166	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Bit</b>	<b>Bit Name</b>	<b>Bit Description</b>	
0	A_Digital_Input_Event_1	The digital input specified for Event 1 indicates a	

1	A_Digital_Input_Event_2	specific event. The digital input specified for Event 2 indicates a valid event condition. Digital Input Event 2 is an axis specific event.
2	A_General_Input_Event_3	The input specified for Event 3 indicates a valid event condition. General Input Event 3 is an axis specific event.
3	A_Status_Event_4	The status conditions specified for Event 4 are valid. Status Event 4 is an axis specific event.
4	A_Status_Event_5	The status conditions specified for Event 5 are valid. Status Event 5 is an axis specific event.
5	A_Axis_Warning_Event_6	The warning conditions specified for Event 6 have occurred. Warning Event 6 is an axis specific event.
6	A_State_Event_7	The state conditions specified for Event 7 have occurred. State Event 7 is an axis specific event.
11	A_Response_Event_12	Indicates that a specific or common event has triggered on the same or different axis. For example, an input (a kill switch) attached to axis 2 is sending notification that an event has occurred and that all axes should disable. Response Event 12 is common to all axes event.
12	A_General_Input_Event_13	The input specified for Event 13 indicates a valid event condition. General Input Event 13 is common to all axes event.
13	A_Digital_Input_Mask_Event_14	The grouping of digital inputs specified for Event 14 indicates a valid condition. Digital Input Mask Event 14 is common to all axes event.
14	A_Digital_Input_Event_15	The digital input specified for Event 15 indicates a valid condition. Digital Input Event 15 is a common to all axes event.
15	A_Error_Event_16	The error conditions specified for Event 16 have occurred. Error Event 16 is a common to all axes event.
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>

## Category - Filter

### Filter 1 A1

<b>Description:</b>			
Specifies the filter 1 A1 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> Filter			
<b>MAXCLib:</b> A_Filter_1_A1			
<b>Register ID:</b> 82	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-1	0.999996948242187		
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

### Filter 1 A2

<b>Description:</b>			
Specifies the filter 1 A2 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> Filter			
<b>MAXCLib:</b> A_Filter_1_A2			

<b>Register ID:</b> 81	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-1	0.999996948242187		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Filter 1 A3

<b>Description:</b>			
Specifies the filter 1 A3 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> Filter			
<b>MAXCLib:</b> A_Filter_1_A3_			
<b>Register ID:</b> 80	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-1	0.999996948242187		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Filter 1 B0

<b>Description:</b>			
Specifies the filter 1 B0 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> Filter			
<b>MAXCLib:</b> A_Filter_1_B0_			
<b>Register ID:</b> 79	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-1	0.999996948242187		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Filter 1 B1

<b>Description:</b>			
Specifies the filter 1 B1 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> Filter			
<b>MAXCLib:</b> A_Filter_1_B1_			
<b>Register ID:</b> 78	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-1	0.999996948242187		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Filter 1 B2

<b>Description:</b>			
Specifies the filter 1 B2 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> Filter			
<b>MAXCLib:</b> A_Filter_1_B2_			
<b>Register ID:</b> 77	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-1	0.999996948242187		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Filter 1 B3

<b>Description:</b>			
Specifies the filter 1 B3 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> Filter			
<b>MAXCLib:</b> A_Filter_1_B3_			
<b>Register ID:</b> 76	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-1	0.999996948242187		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Filter 1 Exponent

<b>Description:</b>			
Specifies the filter 1 exponent. This register contains the value that the filter 1 coefficients were shifted by to store them in 1:15 format. This value must be determined by the absolute maximum coefficient value.			
<b>Category:</b> Filter			
<b>MAXCLib:</b> A_Filter_1_Exponent_			
<b>Register ID:</b> 75	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-15	15		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Filter 2 A1

<b>Description:</b>			
Specifies the filter 2 A1 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> Filter			
<b>MAXCLib:</b> A_Filter_2_A1_			
<b>Register ID:</b> 137	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-1	0.999996948242187		

Minimum firmware version supported: 7.93

Maximum firmware version supported: 11.00

#### Filter 2 A2

<b>Description:</b>			
Specifies the filter 2 A2 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> Filter			
MAXCLib: A_Filter_2_A2			
<b>Register ID:</b> 136	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-1	0.999996948242187		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Filter 2 A3

<b>Description:</b>			
Specifies the filter 2 A3 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> Filter			
MAXCLib: A_Filter_2_A3			
<b>Register ID:</b> 135	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-1	0.999996948242187		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Filter 2 B0

<b>Description:</b>			
Specifies the filter 2 B0 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> Filter			
MAXCLib: A_Filter_2_B0			
<b>Register ID:</b> 134	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-1	0.999996948242187		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Filter 2 B1

<b>Description:</b>			
Specifies the filter 2 B1 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> Filter			

<b>MAXCLib: A_Filter_2_B1_</b>			
<b>Register ID:</b> 133	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-1	0.999996948242187		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Filter 2 B2

<b>Description:</b>			
Specifies the filter 2 B2 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> Filter			
<b>MAXCLib: A_Filter_2_B2_</b>			
<b>Register ID:</b> 132	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-1	0.999996948242187		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Filter 2 B3

<b>Description:</b>			
Specifies the filter 2 B3 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> Filter			
<b>MAXCLib: A_Filter_2_B3_</b>			
<b>Register ID:</b> 131	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-1	0.999996948242187		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Filter 2 Exponent

<b>Description:</b>			
Specifies the filter 2 exponent. This register contains the value that the filter 2 coefficients were shifted by to store them in 1:15 format. This value must be determined by the absolute maximum coefficient value.			
<b>Category:</b> Filter			
<b>MAXCLib: A_Filter_2_Exponent_</b>			
<b>Register ID:</b> 130	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-15	15		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Filter 3 A1

<b>Description:</b>			
Specifies the filter 3 A1 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> Filter			
<b>MAXCLib:</b> A_Filter_3_A1_			
<b>Register ID:</b> 145	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-1	0.999996948242187		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Filter 3 A2

<b>Description:</b>			
Specifies the filter 3 A2 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> Filter			
<b>MAXCLib:</b> A_Filter_3_A2_			
<b>Register ID:</b> 144	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-1	0.999996948242187		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Filter 3 A3

<b>Description:</b>			
Specifies the filter 3 A3 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> Filter			
<b>MAXCLib:</b> A_Filter_3_A3_			
<b>Register ID:</b> 143	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-1	0.999996948242187		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Filter 3 B0

<b>Description:</b>			
Specifies the filter 3 B0 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> Filter			
<b>MAXCLib:</b> A_Filter_3_B0_			
<b>Register ID:</b> 142	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-1	0.999996948242187		

Minimum firmware version supported: 7.93

Maximum firmware version supported: 11.00

### Filter 3 B1

<b>Description:</b>			
Specifies the filter 3 B1 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> Filter			
MAXCLib: A_Filter_3_B1			
<b>Register ID:</b> 141	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-1	0.999996948242187		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Filter 3 B2

<b>Description:</b>			
Specifies the filter 3 B2 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> Filter			
MAXCLib: A_Filter_3_B2			
<b>Register ID:</b> 140	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-1	0.999996948242187		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Filter 3 B3

<b>Description:</b>			
Specifies the filter 3 B3 coefficient in the filter equation $y[n] = b3 * X[N - 3] + B2 * X[N - 2] + B1 * X[N - 1] + B0 * X[N] + A3 * Y[N - 3] + A2 * Y[N - 2] + A1 * Y[N - 1]$ .			
<b>Category:</b> Filter			
MAXCLib: A_Filter_3_B3			
<b>Register ID:</b> 139	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-1	0.999996948242187		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Filter 3 Exponent

<b>Description:</b>			
Specifies the filter 3 exponent. This register contains the value that the filter 3 coefficients were shifted by to store them in 1:15 format. This value must be determined by the absolute maximum coefficient value.			
<b>Category:</b> Filter			

<b>MAXCLib:</b> A_Filter_3_Exponent_			
<b>Register ID:</b> 138	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-15	15		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Position Compensator Filter Placement

<b>Description:</b>			
Specifies the placement of all three position compenstator filters. If the bits are set then the filters are cascaded on the output.			
<b>Category:</b> Filter			
<b>MAXCLib:</b> A_Position_Compensator_Filter_Placement_			
<b>Register ID:</b> 246	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Bit</b>	<b>Bit Name</b>	<b>Bit Description</b>	
0	A_Cascade_Filter_1_on_Output	Place the filter 1 on the output after summation when bit is set else filter 1 is treated as a position error filter	
1	A_Cascade_Filter_2_on_Output	Place the filter 2 on the output after summation (and filter 1 if it is also placed on output) when bit is set else filter 2 is treated as a velocity error filter	
2	A_Cascade_Filter_3_on_Output	Place the filter 3 on the output after summation (and filter 2 if it is also placed on output) when bit is set else filter 3 is treated as a acceleration error filter	
<b>Minimum firmware version supported:</b> 9.01		<b>Maximum firmware version supported:</b> 11.00	

## Category – I/O

### Analog Register 0

<b>Description:</b>			
Holds the value of analog input 0. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
<b>MAXCLib:</b> A_Analog_Register_0_			
<b>Register ID:</b> 2304	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	4096	A/D Counts	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Analog Register 1

<b>Description:</b>			
Holds the value of analog input 1. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
<b>MAXCLib:</b> A_Analog_Register_1_			
<b>Register ID:</b> 2305	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller

<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>
0	4096	A/D Counts
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>

#### Analog Register 10

<b>Description:</b>			
Holds the value of analog input 10. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
MAXCLib: A_Analog_Register_10_			
<b>Register ID:</b> 2314	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	4096	A/D Counts	
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Analog Register 11

<b>Description:</b>			
Holds the value of analog input 11. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
MAXCLib: A_Analog_Register_11_			
<b>Register ID:</b> 2315	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	4096	A/D Counts	
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Analog Register 12

<b>Description:</b>			
Holds the value of analog input 12. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
MAXCLib: A_Analog_Register_12_			
<b>Register ID:</b> 2316	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	4096	A/D Counts	
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Analog Register 13

<b>Description:</b>
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Holds the value of analog input 13. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
<b>MAXCLib:</b> A_Analog_Register_13_			
<b>Register ID:</b> 2317	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	4096	A/D Counts	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Analog Register 14**

<b>Description:</b>			
Holds the value of analog input 14. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
<b>MAXCLib:</b> A_Analog_Register_14_			
<b>Register ID:</b> 2318	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	4096	A/D Counts	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Analog Register 15**

<b>Description:</b>			
Holds the value of analog input 15. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
<b>MAXCLib:</b> A_Analog_Register_15_			
<b>Register ID:</b> 2319	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	4096	A/D Counts	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Analog Register 2**

<b>Description:</b>			
Holds the value of analog input 2. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
<b>MAXCLib:</b> A_Analog_Register_2_			
<b>Register ID:</b> 2306	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	4096	A/D Counts	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Analog Register 3

<b>Description:</b>			
Holds the value of analog input 3. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
<b>MAXCLib:</b> A_Analog_Register_3_			
<b>Register ID:</b> 2307	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	4096	A/D Counts	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Analog Register 4

<b>Description:</b>			
Holds the value of analog input 4. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
<b>MAXCLib:</b> A_Analog_Register_4_			
<b>Register ID:</b> 2308	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	4096	A/D Counts	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Analog Register 5

<b>Description:</b>			
Holds the value of analog input 5. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
<b>MAXCLib:</b> A_Analog_Register_5_			
<b>Register ID:</b> 2309	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	4096	A/D Counts	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Analog Register 6

<b>Description:</b>			
Holds the value of analog input 6. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
<b>MAXCLib:</b> A_Analog_Register_6_			
<b>Register ID:</b> 2310	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller

<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>
0	4096	A/D Counts
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>

#### Analog Register 7

<b>Description:</b>			
Holds the value of analog input 7. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
MAXCLib: A_Analog_Register_7			
<b>Register ID:</b> 2311	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	4096	A/D Counts	
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Analog Register 8

<b>Description:</b>			
Holds the value of analog input 8. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
MAXCLib: A_Analog_Register_8			
<b>Register ID:</b> 2312	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	4096	A/D Counts	
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Analog Register 9

<b>Description:</b>			
Holds the value of analog input 9. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
MAXCLib: A_Analog_Register_9			
<b>Register ID:</b> 2313	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	4096	A/D Counts	
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Digital Input Register 0

<b>Description:</b>
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<b>Description:</b>			
Holds the state of the digital input bits for digital input register 0. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
<b>MAXCLib:</b> A_Digital_Input_Register_0_			
<b>Register ID:</b> 2320	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Digital Input Register 1

<b>Description:</b>			
Holds the state of the digital input bits for digital input register 1. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
<b>MAXCLib:</b> A_Digital_Input_Register_1_			
<b>Register ID:</b> 2321	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Digital Input Register 2

<b>Description:</b>			
Holds the state of the digital input bits for digital input register 2. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
<b>MAXCLib:</b> A_Digital_Input_Register_2_			
<b>Register ID:</b> 2322	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Digital Input Register 3

<b>Description:</b>			
Holds the state of the digital input bits for digital input register 3. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
<b>MAXCLib:</b> A_Digital_Input_Register_3_			
<b>Register ID:</b> 2323	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Digital Input Register 4**

<b>Description:</b>			
Holds the state of the digital input bits for digital input register 4. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
<b>MAXCLib:</b> A_Digital_Input_Register_4			
<b>Register ID:</b> 2324	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Digital Input Register 5**

<b>Description:</b>			
Holds the state of the digital input bits for digital input register 5. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
<b>MAXCLib:</b> A_Digital_Input_Register_5			
<b>Register ID:</b> 2325	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Digital Input Register 6**

<b>Description:</b>			
Holds the state of the digital input bits for digital input register 6. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
<b>MAXCLib:</b> A_Digital_Input_Register_6			
<b>Register ID:</b> 2326	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Digital Input Register 7**

<b>Description:</b>			
Holds the state of the digital input bits for digital input register 7. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
<b>MAXCLib:</b> A_Digital_Input_Register_7			
<b>Register ID:</b> 2327	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller

<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>
0	65535	
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>

#### Digital Output Register 0

<b>Description:</b>			
Holds the state of the digital output bits for Digital Output Register 0. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
MAXCLib: A_Digital_Output_Register_0			
<b>Register ID:</b> 2328	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Digital Output Register 1

<b>Description:</b>			
Holds the state of the digital output bits for Digital Output Register 1. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
MAXCLib: A_Digital_Output_Register_1			
<b>Register ID:</b> 2329	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Digital Output Register 2

<b>Description:</b>			
Holds the state of the digital output bits for Digital Output Register 2. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
MAXCLib: A_Digital_Output_Register_2			
<b>Register ID:</b> 2330	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Digital Output Register 3

<b>Description:</b>			
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Holds the state of the digital output bits for Digital Output Register 3. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
<b>MAXCLib:</b> A_Digital_Output_Register_3_			
<b>Register ID:</b> 2331	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Digital Output Register 4

<b>Description:</b>			
Holds the state of the digital output bits for Digital Output Register 4. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
<b>MAXCLib:</b> A_Digital_Output_Register_4_			
<b>Register ID:</b> 2332	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Digital Output Register 5

<b>Description:</b>			
Holds the state of the digital output bits for Digital Output Register 5. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
<b>MAXCLib:</b> A_Digital_Output_Register_5_			
<b>Register ID:</b> 2333	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Digital Output Register 6

<b>Description:</b>			
Holds the state of the digital output bits for Digital Output Register 6. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
<b>MAXCLib:</b> A_Digital_Output_Register_6_			
<b>Register ID:</b> 2334	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Digital Output Register 7

<b>Description:</b>			
Holds the state of the digital output bits for Digital Output Register 7. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
<b>MAXCLib:</b> A_Digital_Output_Register_7_			
<b>Register ID:</b> 2335	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Encoder Output Pulse Bit

<b>Description:</b>			
Encoder Output Pulse Bit.			
<b>Category:</b> I/O			
<b>MAXCLib:</b> A_Encoder_Output_Pulse_Bit_			
<b>Register ID:</b> 343	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

### Encoder Output Pulse Start

<b>Description:</b>			
N/A			
<b>Category:</b> I/O			
<b>MAXCLib:</b> A_Encoder_Output_Pulse_Start_			
<b>Register ID:</b> 1	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	1		
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

### PWM Output Register 0

<b>Description:</b>			
Sets the value of analog output 0. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
<b>MAXCLib:</b> A_PWM_Output_Register_0_			
<b>Register ID:</b> 2433	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	99.9984741	%	

<b>Minimum firmware version supported:</b> 9.90	<b>Maximum firmware version supported:</b> 11.00
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#### PWM Output Register 1

<b>Description:</b>			
Sets the value of analog output 1. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
<b>MAXCLib:</b> A_PWM_Output_Register_1_			
<b>Register ID:</b> 2434	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	99.9984741	%	
<b>Minimum firmware version supported:</b> 9.90		<b>Maximum firmware version supported:</b> 11.00	

#### PWM Output Register 2

<b>Description:</b>			
Sets the value of analog output 2. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
<b>MAXCLib:</b> A_PWM_Output_Register_2_			
<b>Register ID:</b> 2435	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	99.9984741	%	
<b>Minimum firmware version supported:</b> 9.90		<b>Maximum firmware version supported:</b> 11.00	

#### PWM Output Register 3

<b>Description:</b>			
Sets the value of analog output 3. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
<b>MAXCLib:</b> A_PWM_Output_Register_3_			
<b>Register ID:</b> 2436	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	99.9984741	%	
<b>Minimum firmware version supported:</b> 9.90		<b>Maximum firmware version supported:</b> 11.00	

#### PWM Output Register 4

<b>Description:</b>			
Sets the value of analog output 4. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			

<b>MAXCLib: A_PWM_Output_Register_4_</b>			
<b>Register ID:</b> 2437	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	99.9984741	%	
<b>Minimum firmware version supported:</b> 9.90		<b>Maximum firmware version supported:</b> 11.00	

#### PWM Output Register 5

<b>Description:</b>			
Sets the value of analog output 5. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
<b>MAXCLib: A_PWM_Output_Register_5_</b>			
<b>Register ID:</b> 2438	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	99.9984741	%	
<b>Minimum firmware version supported:</b> 9.90		<b>Maximum firmware version supported:</b> 11.00	

#### PWM Output Register 6

<b>Description:</b>			
Sets the value of analog output 6. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
<b>MAXCLib: A_PWM_Output_Register_6_</b>			
<b>Register ID:</b> 2439	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	99.9984741	%	
<b>Minimum firmware version supported:</b> 9.90		<b>Maximum firmware version supported:</b> 11.00	

#### PWM Output Register 7

<b>Description:</b>			
Sets the value of analog output 7. Please refer to the appropriate hardware document to see if this register applies to your specific hardware.			
<b>Category:</b> I/O			
<b>MAXCLib: A_PWM_Output_Register_7_</b>			
<b>Register ID:</b> 2440	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	99.9984741	%	
<b>Minimum firmware version supported:</b> 9.90		<b>Maximum firmware version supported:</b> 11.00	

#### Category – Internal

Address 0

<b>Description:</b>			
N/A			
<b>Category:</b> Internal			
MAXCLib: A_Address_0_			
<b>Register ID:</b> 360	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 8.51		<b>Maximum firmware version supported:</b> 11.00	

Address 1

<b>Description:</b>			
N/A			
<b>Category:</b> Internal			
MAXCLib: A_Address_1_			
<b>Register ID:</b> 361	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 8.51		<b>Maximum firmware version supported:</b> 11.00	

Address 2

<b>Description:</b>			
N/A			
<b>Category:</b> Internal			
MAXCLib: A_Address_2_			
<b>Register ID:</b> 362	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 8.51		<b>Maximum firmware version supported:</b> 11.00	

Address 3

<b>Description:</b>			
N/A			
<b>Category:</b> Internal			
MAXCLib: A_Address_3_			
<b>Register ID:</b> 363	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		

<b>Minimum firmware version supported:</b> 8.51	<b>Maximum firmware version supported:</b> 11.00
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**Address Data 0**

<b>Description:</b>			
N/A			
<b>Category:</b> Internal			
<b>MAXCLib:</b> A_Address_Data_0_			
<b>Register ID:</b> 368	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 8.51		<b>Maximum firmware version supported:</b> 11.00	

**Address Data 1**

<b>Description:</b>			
N/A			
<b>Category:</b> Internal			
<b>MAXCLib:</b> A_Address_Data_1_			
<b>Register ID:</b> 369	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 8.51		<b>Maximum firmware version supported:</b> 11.00	

**Address Data 2**

<b>Description:</b>			
N/A			
<b>Category:</b> Internal			
<b>MAXCLib:</b> A_Address_Data_2_			
<b>Register ID:</b> 370	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 8.51		<b>Maximum firmware version supported:</b> 11.00	

**Address Data 3**

<b>Description:</b>			
N/A			
<b>Category:</b> Internal			
<b>MAXCLib:</b> A_Address_Data_3_			
<b>Register ID:</b> 371	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis

<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>
0	65535	
<b>Minimum firmware version supported: 8.51</b>		<b>Maximum firmware version supported: 11.00</b>

#### Address Type 0

<b>Description:</b>			
N/A			
<b>Category:</b> Internal			
<b>MAXCLib:</b> A_Address_Type_0_			
<b>Register ID:</b> 364	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 8.51</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Address Type 1

<b>Description:</b>			
N/A			
<b>Category:</b> Internal			
<b>MAXCLib:</b> A_Address_Type_1_			
<b>Register ID:</b> 365	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 8.51</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Address Type 2

<b>Description:</b>			
N/A			
<b>Category:</b> Internal			
<b>MAXCLib:</b> A_Address_Type_2_			
<b>Register ID:</b> 366	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 8.51</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Address Type 3

<b>Description:</b>			
N/A			
<b>Category:</b> Internal			

<b>MAXCLib:</b> A_Address_Type_3_			
<b>Register ID:</b> 367	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 8.51		<b>Maximum firmware version supported:</b> 11.00	

#### Disable Amplifier Communication Thread

<b>Description:</b>			
Disables the Amplifier Communication Thread.			
<b>Category:</b> Internal			
<b>MAXCLib:</b> A_Disable_Amplifier_Communication_Thread_			
<b>Register ID:</b> 64	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	1		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Micro Step Velocity Factor

<b>Description:</b>			
N/A			
<b>Category:</b> Internal			
<b>MAXCLib:</b> A_Micro_Step_Velocity_Factor_			
<b>Register ID:</b> 212	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-32768	32767.9999984741		
<b>Minimum firmware version supported:</b> 7.97		<b>Maximum firmware version supported:</b> 11.00	

#### Register File Date Time

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Internal			
<b>MAXCLib:</b> A_Register_File_Date_Time_			
<b>Register ID:</b> 2343	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	4294967295		
<b>Minimum firmware version supported:</b> 7.96		<b>Maximum firmware version supported:</b> 11.00	

#### SilentStep A2D Calibration Status

<b>Description:</b>
A2D calibration result

<b>Category:</b> Internal			
<b>MAXCLib:</b> A_SilentStep_A2D_Calibration_Status_			
<b>Register ID:</b> 1756	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 1.00		<b>Maximum firmware version supported:</b> 11.00	

## Category - Motion

### Acceleration Negative Maximum

<b>Description:</b>			
Specifies the maximum motor deceleration for trajectory based moves.			
<b>Category:</b> Motion			
<b>MAXCLib:</b> A_Acceleration_Negative_Maximum_			
<b>Register ID:</b> 154	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	32767.9999984741	counts/ms^2	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Acceleration Positive Maximum

<b>Description:</b>			
Specifies the maximum motor acceleration for trajectory based moves.			
<b>Category:</b> Motion			
<b>MAXCLib:</b> A_Acceleration_Positive_Maximum_			
<b>Register ID:</b> 51	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	32767.9999984741	counts/ms^2	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Generate Position Impulse

<b>Description:</b>			
N/A			
<b>Category:</b> Motion			
<b>MAXCLib:</b> A_Generate_Position_Impulse_			
<b>Register ID:</b> 7	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-32768	32767		
<b>Minimum firmware version supported:</b> 8.51		<b>Maximum firmware version supported:</b> 11.00	

**Jerk Accelerating Start Maximum**

<b>Description:</b>			
Specifies the maximum start jerk acceleration for trajectory based moves.			
<b>Category:</b> Motion			
<b>MAXCLib:</b> A_Jerk_Accelerating_Start_Maximum_			
<b>Register ID:</b> 53	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	32767.9999984741	counts/ms^3	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Jerk Accelerating Stop Maximum**

<b>Description:</b>			
Specifies the maximum stop jerk acceleration for trajectory based moves.			
<b>Category:</b> Motion			
<b>MAXCLib:</b> A_Jerk_Accelerating_Stop_Maximum_			
<b>Register ID:</b> 55	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	32767.9999984741	counts/ms^3	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Jerk Decelerating Start Maximum**

<b>Description:</b>			
Specifies the maximum stop jerk deceleration for trajectory based moves.			
<b>Category:</b> Motion			
<b>MAXCLib:</b> A_Jerk_Decelerating_Start_Maximum_			
<b>Register ID:</b> 156	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	32767.9999984741	counts/ms^3	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Jerk Decelerating Stop Maximum**

<b>Description:</b>			
Specifies the maximum start jerk deceleration for trajectory based moves.			
<b>Category:</b> Motion			
<b>MAXCLib:</b> A_Jerk_Decelerating_Stop_Maximum_			
<b>Register ID:</b> 158	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	32767.9999984741	counts/ms^3	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Jerk Setpoint

<b>Description:</b>			
Jerk generated by trajectory or profiler.			
<b>Category:</b> Motion			
<b>MAXCLib:</b> A_Jerk_Setpoint_			
<b>Register ID:</b> 303	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-32768	32767.9999984741	counts/ms^3	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Operating Mode

<b>Description:</b>			
Specifies the source of position setpoints.			
<b>Category:</b> Motion			
<b>MAXCLib:</b> A_Operating_Mode_			
<b>Register ID:</b> 0	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Value</b>	<b>Name</b>	<b>Description</b>	
2	A_Pulse_and_Direction_Mode	Position setpoints are generated from a digital input.	
3	A_S_Curve_Mode	Position setpoints are generated from from the trajectory generator.	
4	A_Setpoint_Streaming_Mode	Position setpoint are automatically generated when profile queue fills.	
7	A_Frequency_Analysis_Mode	Position setpoints are generated for a sine wave.	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Profile Arm

<b>Description:</b>			
When set to 1 use this axis profile when generating profiles. Do not use this axis queue for profile generation when set to 0.			
<b>Category:</b> Motion			
<b>MAXCLib:</b> A_Profile_Arm_			
<b>Register ID:</b> 340	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

### Profile DeltaT

<b>Description:</b>			
Time between position setpoints.			
<b>Category:</b> Motion			
<b>MAXCLib:</b> A_Profile_DeltaT_			
<b>Register ID:</b> 328	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis

<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>
-32768	32767	ms
<b>Minimum firmware version supported: 11.00</b>		<b>Maximum firmware version supported: 11.00</b>

#### Profile Lower Threshold

<b>Description:</b>			
Profile Lower Threshold in Number of Packets.			
<b>Category:</b> Motion			
<b>MAXCLib:</b> A_Profile_Lower_Threshold_			
<b>Register ID:</b> 341	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 8.50</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Profile Upper Threshold

<b>Description:</b>			
Profile Upper Threshold in Number of Packets.			
<b>Category:</b> Motion			
<b>MAXCLib:</b> A_Profile_Upper_Threshold_			
<b>Register ID:</b> 342	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 8.50</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Pulse and Direction Sample Multiplier

<b>Description:</b>			
Specifies the time between sampling pulses.			
<b>Category:</b> Motion			
<b>MAXCLib:</b> A_Pulse_and_Direction_Sample_Multiplier_			
<b>Register ID:</b> 215	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	32767	ms	
<b>Minimum firmware version supported: 7.99</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Pulse and Direction Time

<b>Description:</b>			
Specifies the latency before the first pulse causes motion.			
<b>Category:</b> Motion			

<b>MAXCLib: A_Pulse_and_Direction_Time_</b>			
<b>Register ID:</b> 214	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	32767	ms	
<b>Minimum firmware version supported:</b> 7.99		<b>Maximum firmware version supported:</b> 11.00	

#### Setpoint Multiplier

<b>Description:</b>			
A multiplier of pulse and direction position setpoints.			
<b>Category:</b> Motion			
<b>MAXCLib: A_Setpoint_Multiplier_</b>			
<b>Register ID:</b> 27	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-32768	32767.9999984741	enc/pulse	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Sine Input Offset

<b>Description:</b>			
Sets the input offset of the sine wave for frequency analysis.			
<b>Category:</b> Motion			
<b>MAXCLib: A_Sine_Input_Offset_</b>			
<b>Register ID:</b> 2092	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-32768	32767		
<b>Minimum firmware version supported:</b> 9.94		<b>Maximum firmware version supported:</b> 11.00	

#### Sine Magnitude

<b>Description:</b>			
Sets the magnitude of sine wave for frequency analysis.			
<b>Category:</b> Motion			
<b>MAXCLib: A_Sine_Magnitude_</b>			
<b>Register ID:</b> 2089	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-2147483648	2147483647		
<b>Minimum firmware version supported:</b> 9.94		<b>Maximum firmware version supported:</b> 11.00	

#### Sine Omega

<b>Description:</b>			
Sets Omega of sine wave for frequency analysis.			

<b>Category:</b> Motion			
<b>MAXCLib:</b> A_Sine_Omega_			
<b>Register ID:</b> 2079	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Velocity Maximum

<b>Description:</b>			
Specifies the maximum motor velocity for trajectory based moves.			
<b>Category:</b> Motion			
<b>MAXCLib:</b> A_Velocity_Maximum_			
<b>Register ID:</b> 49	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	32767.9999984741	counts/ms	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Category - Motor

##### Current Average

<b>Description:</b>			
Average current reading			
<b>Category:</b> Motor			
<b>MAXCLib:</b> A_Current_Average_			
<b>Register ID:</b> 333	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	100	%	
<b>Minimum firmware version supported:</b> 9.94		<b>Maximum firmware version supported:</b> 11.00	

##### Motor BEMF Constant

<b>Description:</b>			
Specifies the BEMF constant. The BEMF constant can be obtained from the motor data sheet. This value is used to calculate initial current loop gains. Other values used in this calculation are the motor resistance, motor inductance and the DC bus voltage.			
<b>Category:</b> Motor			
<b>MAXCLib:</b> A_Motor_BEMF_Constant_			
<b>Register ID:</b> 59	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535	V/kRPM	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Motor Inductance

<b>Description:</b>			
Specifies the motor inductance. Motor inductance can be obtained from the motor data sheet. This value is used to calculate initial current loop gains. Other values used in this calculation are the motor resistance, BEMF constant and the DC bus voltage.			
<b>Category:</b> Motor			
<b>MAXCLib:</b> A_Motor_Inductance_			
<b>Register ID:</b> 58	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535	uHenries	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Motor Poles

<b>Description:</b>			
Specifies the number of magnetic poles in the attached motor. This number divided by 2 is the number of pole pairs.			
<b>Category:</b> Motor			
<b>MAXCLib:</b> A_Motor_Poles_			
<b>Register ID:</b> 25	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Motor Resistance

<b>Description:</b>			
Specifies the motor resistance. Motor resistance can be obtained from the motor data sheet. This value is used to calculate initial current loop gains. Other values used in this calculation are the motor inductance, BEMF constant and DC bus voltage.			
<b>Category:</b> Motor			
<b>MAXCLib:</b> A_Motor_Resistance_			
<b>Register ID:</b> 57	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535	mOhms	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Motor Type

<b>Description:</b>			
Specifies the motor type, commutation and whether or not the motor uses halls.			
<b>Category:</b> Motor			
<b>MAXCLib:</b> A_Motor_Type_			
<b>Register ID:</b> 68	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis

<u>Value</u>	<u>Name</u>	<u>Description</u>
0	A_Brushless_Trapezoidal_Halled	Sets the motor type to brushless, commutation to trapezoidal and does not use hall inputs.
1	A_Brushed	Sets the motor type to brushed.
2	A_Brushless_Sinusoidal_Halled	Sets the motor type to brushless, commutation to sinusoidal and uses hall inputs to align field on enable.
3	A_Brushless_Sinusoidal_Halless	Sets the motor type to brushless, commutation to sinusoidal and does not use hall inputs.
4	A_Stepper_Without_Encoder	Sets the motor type to stepper without encoder.
5	A_Stepper_With_Encoder	Sets the motor type to stepper with encoder.
6	A_SilentStep	Sets the motor type to SILENTstep
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>

## Category - Network

### Baud Rate Set

<b>Description:</b>			
Serial UART baud rate selector. Note: This register is provided for MAXCLib users. See the MAXCommRS232 class provided with MAXCLib example for an understanding of how to use this register.			
<b>Category:</b> Network			
<b>MAXCLib:</b> A_Baud_Rate_Set_			
<b>Register ID:</b> 2048	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	100		
<b>Minimum firmware version supported: 8.50</b>		<b>Maximum firmware version supported: 11.00</b>	

### Node ID

<b>Description:</b>			
Node Id is a unique number assigned by the user of the MAX3000 series controller. The controller will respond to 0 or this number.			
<b>Category:</b> Network			
<b>MAXCLib:</b> A_Node_ID_			
<b>Register ID:</b> 2048	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	255		
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

### Packet ID Check FireWire

<b>Description:</b>			
Packet ID sequencer for FireWire			
<b>Category:</b> Network			
<b>MAXCLib:</b> A_Packet_ID_Check_FireWire_			
<b>Register ID:</b> 2441	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Controller

<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>
-2	1	
<b>Minimum firmware version supported: 9.93</b>		<b>Maximum firmware version supported: 11.00</b>

#### Packet ID Check RS232 RS422

<b>Description:</b>			
Packet ID sequencer for RS232 and RS422			
<b>Category:</b> Network			
<b>MAXCLib:</b> A_Packet_ID_Check_RS232_RS422_			
<b>Register ID:</b> 2442	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-2	1		
<b>Minimum firmware version supported: 9.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Packet NodeID Error Count

<b>Description:</b>			
Counter for NodeID that are not meant for this controller.			
<b>Category:</b> Network			
<b>MAXCLib:</b> A_Packet_NodeID_Error_Count_			
<b>Register ID:</b> 2426	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 8.50</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Packet Rx 0

<b>Description:</b>			
Receive Packet Word 0.			
<b>Category:</b> Network			
<b>MAXCLib:</b> A_Packet_Rx_0_			
<b>Register ID:</b> 2427	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported: 8.50</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Packet Rx 1

<b>Description:</b>			
Receive Packet Word 1.			
<b>Category:</b> Network			

<b>MAXCLib:</b> A_Packet_Rx_1_			
<b>Register ID:</b> 2428	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	65535		
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

#### Packet Rx 2

<b>Description:</b>			
Receive Packet Word 2.			
<b>Category:</b> Network			
<b>MAXCLib:</b> A_Packet_Rx_2_			
<b>Register ID:</b> 2429	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	65535		
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

#### Packet Rx 3

<b>Description:</b>			
Receive Packet Word 3.			
<b>Category:</b> Network			
<b>MAXCLib:</b> A_Packet_Rx_3_			
<b>Register ID:</b> 2430	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	65535		
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

#### Packet Rx 4

<b>Description:</b>			
Receive Packet Word 4.			
<b>Category:</b> Network			
<b>MAXCLib:</b> A_Packet_Rx_4_			
<b>Register ID:</b> 2431	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	65535		
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

#### Packet Tx Count

<b>Description:</b>
Packet counter for every packet that is received.

<b>Category:</b> Network			
MAXCLib: A_Packet_Tx_Count			
<b>Register ID:</b> 2425	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

#### Phase Lock Loop Enable Flags

<b>Description:</b>			
N/A			
<b>Category:</b> Network			
MAXCLib: A_Phase_Lock_Loop_Enable_Flags_			
<b>Register ID:</b> 162	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535	bit mask	
<b>Minimum firmware version supported:</b> 7.95		<b>Maximum firmware version supported:</b> 11.00	

#### RS422 Enable

<b>Description:</b>			
Set the MAX3000 series motion controller to communicate using RS422. 0 - RS232; 1 - RS422 single node;3 - RS422 multidrop.			
<b>Category:</b> Network			
MAXCLib: A_RS422_Enable_			
<b>Register ID:</b> 2086	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Rx Timeout

<b>Description:</b>			
Rx Timeout for RS232			
<b>Category:</b> Network			
MAXCLib: A_Rx_Timeout_			
<b>Register ID:</b> 2443	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
1	65535	x 50us	
<b>Minimum firmware version supported:</b> 9.93		<b>Maximum firmware version supported:</b> 11.00	

#### Same Packet ID Count

<b>Description:</b>			
Same packet ID counter			
<b>Category:</b> Network			
MAXCLib: A_Same_Packet_ID_Count_			
<b>Register ID:</b> 2445	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 9.93		<b>Maximum firmware version supported:</b> 11.00	

#### Serial CRC Error Count

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Network			
MAXCLib: A_Serial_CRC_Error_Count_			
<b>Register ID:</b> 2395	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.95		<b>Maximum firmware version supported:</b> 11.00	

#### Serial Dirty Bit Count

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Network			
MAXCLib: A_Serial_Dirty_Bit_Count_			
<b>Register ID:</b> 2397	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.95		<b>Maximum firmware version supported:</b> 11.00	

#### Serial Even Byte Timeout Count

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Network			
MAXCLib: A_Serial_Even_Byte_Timeout_Count_			
<b>Register ID:</b> 2400	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.95		<b>Maximum firmware version supported:</b> 11.00	

### Serial Force Flush Count

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Network			
<b>MAXCLib:</b> A_Serial_Force_Flush_Count_			
<b>Register ID:</b> 2399	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.95		<b>Maximum firmware version supported:</b> 11.00	

### Serial Framing Error Count

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Network			
<b>MAXCLib:</b> A_Serial_Framing_Error_Count_			
<b>Register ID:</b> 2398	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.95		<b>Maximum firmware version supported:</b> 11.00	

### Serial Odd Byte Timeout Count

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Network			
<b>MAXCLib:</b> A_Serial_Odd_Byte_Timeout_Count_			
<b>Register ID:</b> 2402	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.95		<b>Maximum firmware version supported:</b> 11.00	

### Serial Overrun Count

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Network			
<b>MAXCLib:</b> A_Serial_Overrun_Count_			
<b>Register ID:</b> 2396	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.95		<b>Maximum firmware version supported:</b> 11.00	

### Serial Packet Count

<b>Description:</b>			
For internal use only.			
<b>Category:</b> Network			
<b>MAXCLib:</b> A_Serial_Packet_Count_			
<b>Register ID:</b> 2394	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.95		<b>Maximum firmware version supported:</b> 11.00	

### Tx Timeout

<b>Description:</b>			
Tx Timeout for event transmit retries			
<b>Category:</b> Network			
<b>MAXCLib:</b> A_Tx_Timeout_			
<b>Register ID:</b> 2444	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
1	65535	x 50us	
<b>Minimum firmware version supported:</b> 9.93		<b>Maximum firmware version supported:</b> 11.00	

### Category - Position

#### Acceleration Actual

<b>Description:</b>			
Actual acceleration calculated using the encoder.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Acceleration_Actual_			
<b>Register ID:</b> 305	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-32768	32767.9999984741	counts/ms^2	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Acceleration Error

<b>Description:</b>			
Difference between the setpoint acceleration and the actual acceleration.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Acceleration_Error_			
<b>Register ID:</b> 317	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis

<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>
-32768	32767	err counts/ms <sup>2</sup>
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>

#### Acceleration Error Filtered

<b>Description:</b>			
Filtered difference between the setpoint acceleration and the actual acceleration. Acceleration filters can be configured in DPWin.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Acceleration_Error_Filtered_			
<b>Register ID:</b> 325	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-32768	32767.9999984741	err counts/ms <sup>2</sup>	
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Acceleration Negative Soft Stop

<b>Description:</b>			
Specifies the maximum motor deceleration for the soft stop.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Acceleration_Negative_Soft_Stop_			
<b>Register ID:</b> 160	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	32767.9999984741	counts/ms <sup>2</sup>	
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Acceleration Setpoint

<b>Description:</b>			
Acceleration path generated by the trajectory generator or profiler.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Acceleration_Setpoint_			
<b>Register ID:</b> 299	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-32768	32767.9999984741	counts/ms <sup>2</sup>	
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Anti Hunt Gain Reduction

<b>Description:</b>			
If the absolute value of the position error becomes less than half the value in this register and there is no commanded motion, then after the time specified by the Anti Hunt Zone In Time register, the position loop gains are scaled by the value in the Zero			

Velocity Gain register. The zone is then increased by the amount Anti Hunt Zone Hysteresis register until the zone is exited or motion is commanded at which time the zone again becomes this register.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Anti_Hunt_Gain_Reduction_			
<b>Register ID:</b> 24	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-15	15		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Anti Hunt Zone

<b>Description:</b>			
When the absolute value of position error is within the anti hunt zone set in the Anti Hunt Zone register and If the velocity setpoint is equal to zero then the position loop gains are shifted right by the value in this register			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Anti_Hunt_Zone_			
<b>Register ID:</b> 31	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	32767	counts	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Anti-Hunt Zone Enable Time

<b>Description:</b>			
When the Anti Hunt Zone is first entered a timer is started which is equal to this register multiplied by the servo control period. Once the timer expires then gains are applied. This timer can lower vibrations due to gain changes during settling times.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Anti-Hunt_Zone_Enable_Time_			
<b>Register ID:</b> 253	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	32768	ms	
<b>Minimum firmware version supported:</b> 10.54		<b>Maximum firmware version supported:</b> 11.00	

#### Anti-Hunt Zone Hysteresis

<b>Description:</b>			
When the Anti Hunt Zone is first entered the zone is increased by this number providing hysteresis on the boundary so that increasing and decreasing the system gains does not stimulate vibration across zone transitions.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Anti-Hunt_Zone_Hysteresis_			
<b>Register ID:</b> 252	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	32768	encoder counts	
<b>Minimum firmware version supported:</b> 10.54		<b>Maximum firmware version supported:</b> 11.00	

## Control Mode

<b>Description:</b>			
Specifies the control loop mode.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Control_Mode_			
<b>Register ID:</b> 1	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Value</b>	<b>Name</b>	<b>Description</b>	
0	A_Closed_Current_Loop	N/A	
1	A_Closed_Acceleration_Loop	All loops are closed. The velocity setpoint is equal to the integral of the acceleration setpoint and position setpoint is equal to the integral of the velocity setpoint.	
2	A_Closed_Velocity_Loop	All loops are closed but the position setpoint is equal to the integral of the velocity setpoint.	
3	A_Closed_Position_Loop	All loops are closed.	
4	A_Open_Velocity_Loop	Position loop error is equal to the position setpoint and the velocity error is equal to the velocity setpoint.	
5	A_Open_Position_Loop	Position loop error is equal to the position setpoint.	
6	A_Open_Acceleration_Loop	The velocity and position loops are open and the acceleration error is equal to the acceleration setpoint.	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

## Current Offset

<b>Description:</b>			
Constant current offset. Usually used in a vertical system to offset gravity force.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Current_Offset_			
<b>Register ID:</b> 23	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	100	%	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

## Detent Torque Compensation Frequency Factor

<b>Description:</b>			
Specifies frequency factor in terms of Electrical Angle frequency of the sine wave of current added to the output of the Position Compensator.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Detent_Torque_Compensation_Frequency_Factor_			
<b>Register ID:</b> 239	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	32767	Factor	
<b>Minimum firmware version supported:</b> 7.99		<b>Maximum firmware version supported:</b> 11.00	

## Detent Torque Compensation Magnitude

<b>Description:</b>			
Specifies magnitude of the sine wave of current added to the output of the Position Compensator.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Detent_Torque_Compensation_Magnitude_			
<b>Register ID:</b> 240	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
-100	100	%	
<b>Minimum firmware version supported:</b> 7.99		<b>Maximum firmware version supported:</b> 11.00	

#### Detent Torque Compensation Output

<b>Description:</b>			
Observable State Variable to allow adjustment of Detent Torque Compensation.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Detent_Torque_Compensation_Output_			
<b>Register ID:</b> 327	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
-100	100	%	
<b>Minimum firmware version supported:</b> 7.99		<b>Maximum firmware version supported:</b> 11.00	

#### Detent Torque Compensation Phase

<b>Description:</b>			
Specifies Phase of the sine wave of current added to the output of the Position Compensator.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Detent_Torque_Compensation_Phase_			
<b>Register ID:</b> 241	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
-32768	32767	Fang	
<b>Minimum firmware version supported:</b> 7.99		<b>Maximum firmware version supported:</b> 11.00	

#### Directional Current Offset

<b>Description:</b>			
A value of current added in the direction of motion. If there is no motion ie velocity = 0 this value is not added. The register exists to deal with viscous friction.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Directional_Current_Offset_			
<b>Register ID:</b> 74	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	100	%	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Enable Acceleration Setpoint Feedback

<b>Description:</b>			
obsolete.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Enable_Acceleration_Setpoint_Feedback_			
<b>Register ID:</b> 2076	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b>Value</b>	<b>Name</b>	<b>Description</b>	
0	A_Off	Boolean Off.	
1	A_On	Boolean On.	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Enable Velocity Observer

<b>Description:</b>			
Enables the velocity observer.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Enable_Velocity_Observer_			
<b>Register ID:</b> 2075	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<b>Value</b>	<b>Name</b>	<b>Description</b>	
0	A_Off	Boolean Off.	
1	A_On	Boolean On.	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Hardware Velocity Estimator Enable

<b>Description:</b>			
Allows management and debugging of low count encoder changes to manipulate velocity measurements and analyze quantization effects. Normally set to Zero.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Hardware_Velocity_Estimator_Enable_			
<b>Register ID:</b> 147	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Bit</b>	<b>Bit Name</b>	<b>Bit Description</b>	
0	A_Enable_FPGA_encoder_timer	A 1 enables the high resolution 1/T timer instead of the 50us timer	
1	A_Enable_Analog_Encoder_5_sample_filter	The A2D is sampled at 20Khz or 5 times the Position loop rate. A 1 enable the 5x oversampling filter when the Velocity Setpoint is 0	
4	A_Disable_direction_change_zeroing_of_Velocity	A 1 disables the direction change from setting the Velocity to 0. Noisy encoders (usually high resolution Analog) should set this bit	
5	A_Half_direction_change_velocity.	If bit 4 is set then a one will assume the motor is still moving if a change in direction occurred but with half the time (double velocity). A zero will use the actual time.	
6	A_Mask_1_count_changes	A 1 will force the observer to ignore 1 count direction changes and continue.	
7	A_Force_T_=_250us	In combination with other bits this will make the velocity measurement a simple derivative.	
8	A_Enable_20Khz_direction_change_detection	If the encoder changed direction in the 20Khz loop but not the Position loop, flag this as a direction change. (helps to estimate 0 velocity)	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Observer Position Error Limit**

<b>Description:</b>			
Observer Position Torque Gain register will be used until the absolute value of the observed Position is greater than this value. Usually set to 1 or 2. If the observed position is greater than this than the result is invalid since the real encoder should have changed by this point.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Observer_Position_Error_Limit_			
<b>Register ID:</b> 234	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-32768	32767.9999984741		
<b>Minimum firmware version supported:</b> 7.97		<b>Maximum firmware version supported:</b> 11.00	

**Observer Position Torque Gain**

<b>Description:</b>			
Specifies a value proportional to the torque constant of the motor divided by the moment of inertia. The velocity observer uses this value. A value of 0 disables this option. Positive values are for the observer and negative values represent the Velocity Decay constant			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Observer_Position_Torque_Gain_			
<b>Register ID:</b> 232	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-32768	32767.9999984741		
<b>Minimum firmware version supported:</b> 7.97		<b>Maximum firmware version supported:</b> 11.00	

**Position Actual**

<b>Description:</b>			
Actual motor position read using the encoder.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Position_Actual			
<b>Register ID:</b> 263	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-2147483648	2147483647	counts	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Position Bp**

<b>Description:</b>			
Position loop Bp coefficient.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Position_Bp			
<b>Register ID:</b> 222	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis

<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>
-32768	32767.9999984741	
<b>Minimum firmware version supported: 7.97</b>		<b>Maximum firmware version supported: 11.00</b>

#### Position Control Unit Time Scale

<b>Description:</b>			
For high resolution encoders where 32 768 000 counts/s is not fast enough, this value can be change to decrease the internal unit of measurement. Example: If the value is changed to 2 the internal units are 0.5ms and a velocity of 32768 counts/ms becomes 65536 count/ms or 65 536 000 counts/s. Caution: These units effect Velocity, Acceleration and Jerk Setpoint, Feedback and Feedforward values.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Position_Control_Unit_Time_Scale_			
<b>Register ID:</b> 254	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	256	scalar	
<b>Minimum firmware version supported: 10.54</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Position Error

<b>Description:</b>			
The setpoint position minus the actual postion.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Position_Error_			
<b>Register ID:</b> 311	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-2147483648	2147483647	err counts	
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Position Error Derivative

<b>Description:</b>			
The derivative of the setpoint position minus the actual position.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Position_Error_Derivative_			
<b>Register ID:</b> 313	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-32768	32767.9999984741	err counts/ms	
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Position Error Derivative Filtered

<b>Description:</b>
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The derivative of the setpoint position minus the actual position filtered by the filter specified in the position filter registers.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Position_Error_Derivative_Filtered_			
<b>Register ID:</b> 321	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-32768	32767	err counts/ms	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Position Error Filtered**

<b>Description:</b>			
The setpoint position minus the actual position filtered by the filter specified in the position filter registers.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Position_Error_Filtered_			
<b>Register ID:</b> 319	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-2147483648	2147483647	err counts	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Position Error Integral Filtered**

<b>Description:</b>			
Filtered accumulation of difference between the setpoint position and the actual position.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Position_Error_Integral_Filtered_			
<b>Register ID:</b> 331	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-2147483648	2147483647	counts * ms	
<b>Minimum firmware version supported:</b> 9.94		<b>Maximum firmware version supported:</b> 11.00	

**Position Jp**

<b>Description:</b>			
Position loop Jp coefficient.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Position_Jp_			
<b>Register ID:</b> 224	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-32768	32767.9999984741		
<b>Minimum firmware version supported:</b> 7.97		<b>Maximum firmware version supported:</b> 11.00	

**Position Kaff**

<b>Description:</b>			
Position loop Kaff (acceleration feed forward) coefficient.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Position_Kaff_			
<b>Register ID:</b> 228	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-32768	32767.9999984741		
<b>Minimum firmware version supported:</b> 7.97		<b>Maximum firmware version supported:</b> 11.00	

**Position Kd**

<b>Description:</b>			
Position loop Kd coefficient.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Position_Kd_			
<b>Register ID:</b> 220	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-32768	32767.9999984741		
<b>Minimum firmware version supported:</b> 7.97		<b>Maximum firmware version supported:</b> 11.00	

**Position Ki**

<b>Description:</b>			
Position loop Ki coefficient.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Position_Ki_			
<b>Register ID:</b> 218	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-32768	32767.9999984741		
<b>Minimum firmware version supported:</b> 7.97		<b>Maximum firmware version supported:</b> 11.00	

**Position Ki Zero on Hold**

<b>Description:</b>			
Specifying a 1 in this register causes the Ki term to equal 0 for non zero velocity setpoints.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Position_Ki_Zero_on_Hold_			
<b>Register ID:</b> 70	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	1		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Position Kjff

<b>Description:</b>			
Position loop Kjff (jerk feed forward) coefficient.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Position_Kjff_			
<b>Register ID:</b> 230	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-32768	32767.9999984741		
<b>Minimum firmware version supported:</b> 7.97		<b>Maximum firmware version supported:</b> 11.00	

### Position Kp

<b>Description:</b>			
Position loop Kp coefficient.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Position_Kp_			
<b>Register ID:</b> 216	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-32768	32767.9999984741		
<b>Minimum firmware version supported:</b> 7.97		<b>Maximum firmware version supported:</b> 11.00	

### Position Kvff

<b>Description:</b>			
Position loop Kvff (velocity feed forward) coefficient.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Position_Kvff_			
<b>Register ID:</b> 226	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-32768	32767.9999984741		
<b>Minimum firmware version supported:</b> 7.97		<b>Maximum firmware version supported:</b> 11.00	

### Position Setpoint

<b>Description:</b>			
Position generated by trajectory or profiler.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Position_Setpoint_			
<b>Register ID:</b> 257	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-2147483648	2147483647	counts	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Velocity Actual**

<b>Description:</b>			
Actual velocity read using the encoder.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Velocity_Actual_			
<b>Register ID:</b> 307	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-32768	32767.9999984741	counts/ms	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Velocity Error**

<b>Description:</b>			
Difference between the setpoint velocity and the actual velocity.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Velocity_Error_			
<b>Register ID:</b> 315	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-32768	32767	err counts/ms	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Velocity Error Filtered**

<b>Description:</b>			
Difference between the setpoint velocity and the actual velocity filtered by the filter specified in the velocity filter registers.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Velocity_Error_Filtered_			
<b>Register ID:</b> 323	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-32768	32767.9999984741	err counts/ms	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Velocity Observed**

<b>Description:</b>			
Equals the last measured encoder velocity plus the estimated velocity calculated by the velocity observer.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Velocity_Observed_			
<b>Register ID:</b> 309	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-32768	32767.9999984741	counts/ms	

<b>Minimum firmware version supported:</b> 7.93	<b>Maximum firmware version supported:</b> 11.00
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### Velocity Setpoint

<b>Description:</b>			
Velocity generated by trajectory or profiler.			
<b>Category:</b> Position			
<b>MAXCLib:</b> A_Velocity_Setpoint_			
<b>Register ID:</b> 301	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-32768	32767.9999984741	counts/ms	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

### Category - Status

#### Axis Fault Fatal

<b>Description:</b>			
Axis level fatal error bits.			
<b>Category:</b> Status			
<b>MAXCLib:</b> A_Axis_Fault_Fatal_			
<b>Register ID:</b> 282	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Bit</b>	<b>Bit Name</b>	<b>Bit Description</b>	
0	A_Fatal_Error_Amplifier_Not_Responding	A packet was sent to the amplifier and it did not respond.	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Axis Fault Non Fatal

<b>Description:</b>			
Axis level non fatal errors bits.			
<b>Category:</b> Status			
<b>MAXCLib:</b> A_Axis_Fault_Non_Fatal_			
<b>Register ID:</b> 283	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Bit</b>	<b>Bit Name</b>	<b>Bit Description</b>	
0	A_Non_Fatal_Error_Stator_Alignment	When enabling a motor the stator alignment failed.	
1	A_Non_Fatal_Error_Excessive_Following	During motion the actual position has deviated from the setpoint position by an amount greater than the excessive following fault setting.	
3	A_Non_Fatal_Error_Average_Current	The commanded current average has exceeded the average current limit. Average current is calculated for every average current sample time register value.	
4	A_Non_Fatal_Error_Amplifier_Short_Circuit	The motor current is greater than 150% of the amplifier current rating. Note: The controller must be power cycled to clear this error condition.	
6	A_Non_Fatal_Error_Encoder	When enabling a motor with halls, the halls were seen moving without the encoder.	
8	A_Non_Fatal_Error_Over_Voltage	Maximum operating motor voltage has been exceeded.	
9	A_Non_Fatal_Error_Temperature_High	Maximum operating temperature has been exceeded.	

10	A_Non_Fatal_Error_Over_Current	Maximum allowable current has been exceeded.
11	A_Non_Fatal_Error_Startup_Sequence	An error occurred during pulse and direction mode startup whereby the input was not at the preset value.
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>

#### Axis Fault Warning

<b>Description:</b>			
Axis level warnings bits.			
<b>Category:</b> Status			
<b>MAXCLib:</b> A_Axis_Fault_Warning_			
<b>Register ID:</b> 284	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Bit</b>	<b>Bit Name</b>	<b>Bit Description</b>	
1	A_Warning_Done_Zone_Timeout	The trajectory is done and the actual position of the motor has not been seen in the done zone for the time specified in the Done Zone Time register.	
2	A_Warning_Under_Voltage	The motor voltage has dropped below the specified level.	
3	A_Warning_Temperature_High	Base temperature has exceeded 85 degrees C.	
4	A_Warning_Over_Current	The required current is close to the allowable threshold.	
5	A_Warning_Over_Voltage	Motor voltage has exceeded 92 volts operation.	
7	A_Warning_Profile_Under_Flow	Profile Queue, used for PVT and PT motions, has become empty and the axis is executing a soft stop.	
8	A_Warning_Profile_Over_Flow	Profile Queue, used for PVT and PT motions, has become full.	
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Axis Servo Status

<b>Description:</b>			
When this register is a 1 the motor is not servoed. When this register is a zero it indicated that the motor has passed the stator alignment successfully and servoed ready for any motion commands.			
<b>Category:</b> Status			
<b>MAXCLib:</b> A_Axis_Servo_Status_			
<b>Register ID:</b> 279	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Bit</b>	<b>Bit Name</b>	<b>Bit Description</b>	
0	A_Servo_Disabled	The motor is not properly servoed. Wait till this bit is cleared before issuing motion commands.	
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Axis Status

<b>Description:</b>			
The present status of the axis.			
<b>Category:</b> Status			
<b>MAXCLib:</b> A_Axis_Status_			
<b>Register ID:</b> 294	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Bit</b>	<b>Bit Name</b>	<b>Bit Description</b>	
0	A_Axis_Status_Warning	Indicates that a warning is present on the axis. All warnings are contained in the Axis Fault Warning	
1	A_Axis_Status_Error	Indicates that a fatal or non fatal error is present on the axis. The Axis Fault Fatal register contains the	

2	A_Axis_Status_System_Fault	fatal error bits and the Axis Fault Non Fatal register contains the non fatal error bits. A fault has occurred on the controller or any axis.
4	A_Axis_Status_Move_Done	
5	A_Axis_Status_Move_Nearly_Done	Signifies that the encoder position of the motor has achieved the command setpoint destination, and has done so within the done zone and the done settle time boundaries and has not exceeded the done timeout period.
6	A_Axis_Status_Profile_Upper_Threshold	Signifies that the encoder position has come within the nearly done boundary of the destination.
7	A_Axis_Status_Profile_Lower_Threshold	Profile Queue Upper Threshold value has been reached.
8	A_Axis_Status_Positive_Limit	Profile Queue Lower Threshold value has been reached.
9	A_Axis_Status_Negative_Limit	Axis is in positive limit. This flag will not be cleared until motion occurs in the reverse direction.
		Axis is in negative limit. This flag will not be cleared until motion occurs in the reverse direction.
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>

### Brake State

<b>Description:</b>			
The requested state of the brake output.			
<b>Category:</b> Status			
<b>MAXCLib:</b> A_Brake_State_			
<b>Register ID:</b> 280	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	1		
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

### Controller Fault Fatal

<b>Description:</b>			
Controller fatal error bits.			
<b>Category:</b> Status			
<b>MAXCLib:</b> A_Controller_Fault_Fatal_			
<b>Register ID:</b> 2339	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Bit</b>	<b>Bit Name</b>	<b>Bit Description</b>	
0	A_Fatal_Error_Register_File_Checksum	Registers were read from flash memory and the checksum calculated did not match the checksum that was stored in flash memory. Contact Agile Systems if problem persists.	
1	A_Fatal_Error_Register_File_Version	The configuration values stored in non-volatile memory do not match the version of the controller firmware. Most likely there has been a recent firmware download to the Agile controller. Please download a register file (.map) to the controller that matches the current firmware version or contact Agile Systems for help.	
2	A_Fatal_Error_Register_File_Save	The registers could not be saved to flash due to an error in the flash writing process. Contact Agile Systems if the problem persists.	
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

### Controller Fault Internal

<b>Description:</b>			
A non zero value in this register means the controller has an internal system error and is indicative of a hardware problem. Please contact Agile Systems for further assistance.			
<b>Category:</b> Status			
<b>MAXCLib:</b> A_Controller_Fault_Internal_			
<b>Register ID:</b> 2338	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Controller Fault Non Fatal

<b>Description:</b>			
Controller non fatal error bits.			
<b>Category:</b> Status			
<b>MAXCLib:</b> A_Controller_Fault_Non_Fatal_			
<b>Register ID:</b> 2340	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Bit</b>	<b>Bit Name</b>	<b>Bit Description</b>	
0	A_Non_Fatal_Error_Controller_Queue_Overflow	The controller command queue has overflowed.	
2	A_Non_Fatal_Error_Excessive_Brake_Current	The combined current drawn by all brake outputs has exceeded the allowable current.	
3	A_Non_Fatal_Error_Command_Stack_Error	The stored program has caused a stack overflow or underflow. Make sure that all subroutines do a proper return and that all program segments end with a 'Halt' command.	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Controller Fault Warning

<b>Description:</b>			
Controller warning error bits.			
<b>Category:</b> Status			
<b>MAXCLib:</b> A_Controller_Fault_Warning_			
<b>Register ID:</b> 2341	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Bit</b>	<b>Bit Name</b>	<b>Bit Description</b>	
0	A_Warning_Communication_Queue_Full	The controller queue is one command away from overflowing.	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Controller Status

<b>Description:</b>			
The present status of the controller.			
<b>Category:</b> Status			
<b>MAXCLib:</b> A_Controller_Status_			
<b>Register ID:</b> 2353	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Bit</b>	<b>Bit Name</b>	<b>Bit Description</b>	
0	A_Controller_Status_Warning	A controller warning has occurred.	
1	A_Controller_Status_Error	A controller error has occurred. Either fatal or not-	

2	A_Controller_Status_System_Fault	fatal error. A fault has occurred on the controller or one of its axis.
3	A_Controller_Status_Communication_Queue_Full	The controller communication queue is full. Do not send further packets until this bit is cleared.
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>

#### Current Actual

<b>Description:</b>			
Average motor current (using low pass filter).			
<b>Category:</b> Status			
<b>MAXCLib:</b> A_Current_Actual			
<b>Register ID:</b> 262	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
-100	100	%	
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Event Status

<b>Description:</b>			
Indicates the present status of events. Events can be triggered based on analog inputs, digital inputs, warnings, errors, axis states, and status flags and can fire multiple responses such as hard stop, soft stop, disable motor, set output, notify host and trigger scope. Events can be specific or common. Events specific to an axis will indicate an event on one axis only. Events common across all axes will indicate an event on all axes.			
<b>Category:</b> Status			
<b>MAXCLib:</b> A_Event_Status			
<b>Register ID:</b> 297	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<b>Bit</b>	<b>Bit Name</b>	<b>Bit Description</b>	
0	A_Digital_Input_Event_1	The digital input specified for Event 1 indicates a valid event condition. Digital Input Event 1 is an axis specific event.	
1	A_Digital_Input_Event_2	The digital input specified for Event 2 indicates a valid event condition. Digital Input Event 2 is an axis specific event.	
2	A_General_Input_Event_3	The input specified for Event 3 indicates a valid event condition. General Input Event 3 is an axis specific event.	
3	A_Status_Event_4	The status conditions specified for Event 4 are valid. Status Event 4 is an axis specific event.	
4	A_Status_Event_5	The status conditions specified for Event 5 are valid. Status Event 5 is an axis specific event.	
5	A_Axis_Warning_Event_6	The warning conditions specified for Event 6 have occurred. Warning Event 6 is an axis specific event.	
6	A_State_Event_7	The state conditions specified for Event 7 have occurred. State Event 7 is an axis specific event.	
11	A_Response_Event_12	Indicates that a specific or common event has triggered on the same or different axis. For example, an input (a kill switch) attached to axis 2 is sending	
12	A_General_Input_Event_13	The input specified for Event 13 indicates a valid event condition. General Input Event 13 is common to all axes event.	
13	A_Digital_Input_Mask_Event_14	The grouping of digital inputs specified for Event 14 indicates a valid condition. Digital Input Mask Event 14 is common to all axes event.	
14	A_Digital_Input_Event_15	The digital input specified for Event 15 indicates a valid condition. Digital Input Event 15 is a common to all axes event.	

14	A_Digital_Input_Event_15	The digital input specified for Event 15 indicates a valid condition. Digital Input Event 15 is a common to all axes event. The error conditions specified for Event 16 have occurred. Error Event 16 is a common to all axes event.
15	A_Error_Event_16	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00

#### Firmware Axes Mask

<b>Description:</b>			
Axis mask identifying which axes are present.			
<b>Category:</b> Status			
<b>MAXCLib:</b> A_Firmware_Axes_Mask_			
<b>Register ID:</b> 2450	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Bit</b>	<b>Bit Name</b>	<b>Bit Description</b>	
0	A_Axis1_Present	This controller has the ability to control a motor on Axis1 connections.	
1	A_Axis2_Present	This controller has the ability to control a motor on Axis2 connections.	
2	A_Axis3_Present	This controller has the ability to control a motor on Axis3 connections.	
3	A_Axis4_Present	This controller has the ability to control a motor on Axis4 connections.	
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

#### Firmware Date Time

<b>Description:</b>			
Firmware DateTime.			
<b>Category:</b> Status			
<b>MAXCLib:</b> A_Firmware_Date_Time_			
<b>Register ID:</b> 2454	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	4294967295		
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

#### Firmware Input Output ModelID

<b>Description:</b>			
Input Output ModelID Identifying which I/O is used to the controller.			
<b>Category:</b> Status			
<b>MAXCLib:</b> A_Firmware_Input_Output_ModelID_			
<b>Register ID:</b> 2451	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<b>Minimum</b>	<b>Maximum</b>	<b>Units</b>	
0	65535		
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

**Firmware Number of Axes**

<b>Description:</b>			
Number of Axes this controller supports.			
<b>Category:</b> Status			
<b>MAXCLib:</b> A_Firmware_Number_of_Axes_			
<b>Register ID:</b> 2449	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

**Firmware Tree ModelID**

<b>Description:</b>			
Tree ModelID that identifies which tree features are available in DPWin.			
<b>Category:</b> Status			
<b>MAXCLib:</b> A_Firmware_Tree_ModelID_			
<b>Register ID:</b> 2452	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

**Firmware Type**

<b>Description:</b>			
Firmware Type (i.e. Boot, App).			
<b>Category:</b> Status			
<b>MAXCLib:</b> A_Firmware_Type_			
<b>Register ID:</b> 2453	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

**Firmware Version**

<b>Description:</b>			
Firmware Version.			
<b>Category:</b> Status			
<b>MAXCLib:</b> A_Firmware_Version_			
<b>Register ID:</b> 2456	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

### FPGA Date Time

<b>Description:</b>			
FPGA DateTime.			
<b>Category:</b> Status			
<b>MAXCLib:</b> A_FPGA_Date_Time_			
<b>Register ID:</b> 2479	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	4294967295		
<b>Minimum firmware version supported:</b> 9.90		<b>Maximum firmware version supported:</b> 11.00	

### FPGA Version

<b>Description:</b>			
FPGA Version.			
<b>Category:</b> Status			
<b>MAXCLib:</b> A_FPGA_Version_			
<b>Register ID:</b> 2478	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 9.90		<b>Maximum firmware version supported:</b> 11.00	

### Register File Version

<b>Description:</b>			
Map file version - high byte is major version, low byte has minor version.			
<b>Category:</b> Status			
<b>MAXCLib:</b> A_Register_File_Version_			
<b>Register ID:</b> 2404	<b>Writable:</b> No	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535		
<b>Minimum firmware version supported:</b> 7.96		<b>Maximum firmware version supported:</b> 11.00	

### Category - Threshold

#### Current Limit

<b>Description:</b>			
Specifies the maximum permissible motor current.			
<b>Category:</b> Threshold			
<b>MAXCLib:</b> A_Current_Limit_			
<b>Register ID:</b> 2	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis

<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>
0	100	%
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>

#### Current Limit Average

<b>Description:</b>			
Specifies the average current limit. This limit is checked every 10ms times the value in the Average Current Sample Time register.			
<b>Category:</b> Threshold			
<b>MAXCLib:</b> A_Current_Limit_Average_			
<b>Register ID:</b> 3	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	100	%	
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Current Limit Average Time

<b>Description:</b>			
The average current limit is checked every 10ms times the value in this register. The average current limit is set by the Average Current Limit register.			
<b>Category:</b> Threshold			
<b>MAXCLib:</b> A_Current_Limit_Average_Time_			
<b>Register ID:</b> 4	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	1000	s	
<b>Minimum firmware version supported: 7.93</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Current Limit Fault Threshold

<b>Description:</b>			
N/A			
<b>Category:</b> Threshold			
<b>MAXCLib:</b> A_Current_Limit_Fault_Threshold_			
<b>Register ID:</b> 149	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	100	%	
<b>Minimum firmware version supported: 7.94</b>		<b>Maximum firmware version supported: 11.00</b>	

#### Current Limit Warning Threshold

<b>Description:</b>			
N/A			

<b>Category:</b> Threshold			
<b>MAXCLib:</b> A_Current_Limit_Warning_Threshold_			
<b>Register ID:</b> 148	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	100	%	
<b>Minimum firmware version supported:</b> 7.94		<b>Maximum firmware version supported:</b> 11.00	

#### DC Bus Voltage

<b>Description:</b>			
Specifies the DC bus voltage. The DC bus voltage is what the user intends to have for his/her motor voltage. This value is used to calculate initial current loop gains. Other values used in this calculation are the motor resistance, BEMF constant and motor inductance.			
<b>Category:</b> Threshold			
<b>MAXCLib:</b> A_DC_Bus_Voltage_			
<b>Register ID:</b> 2088	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	255	V	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Done Zone

<b>Description:</b>			
This register is used to specify the motion end point. A motion is defined as complete when the actual position falls within +/- the value in this register for the done settle time set in the Done Settle Time register and its time does not exceed the value in the Done Timeout register.			
<b>Category:</b> Threshold			
<b>MAXCLib:</b> A_Done_Zone_			
<b>Register ID:</b> 32	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535	enc counts	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

#### Done Zone Settle Time

<b>Description:</b>			
For a motion to be complete its actual position must fall with +/- the done zone specified in the Done Zone register for the value specified in this register. A counter will be reset each time the actual position crosses the done zone.			
<b>Category:</b> Threshold			
<b>MAXCLib:</b> A_Done_Zone_Settle_Time_			
<b>Register ID:</b> 33	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
0	65535	ms	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Near Done Zone**

<b>Description:</b>			
This register is used to specify when a motion has almost reached its endpoint. A motion is defined as almost complete when the actual position falls within the value in this register.			
<b>Category:</b> Threshold			
<b>MAXCLib:</b> A_Near_Done_Zone_			
<b>Register ID:</b> 34	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	65535	enc counts	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Position Error Maximum**

<b>Description:</b>			
Maximum deviation of the actual motor position from the set point position before an excessive following error will occur. Caution: A value of 0 in this register turns off the excessive following error.			
<b>Category:</b> Threshold			
<b>MAXCLib:</b> A_Position_Error_Maximum_			
<b>Register ID:</b> 35	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	2147483647	enc counts	
<b>Minimum firmware version supported:</b> 7.96		<b>Maximum firmware version supported:</b> 11.00	

**Category - Thresholds**

**Done Timeout**

<b>Description:</b>			
This register is used to specify the done zone timeout value. A motion is defined as complete when the actual position falls within +/- the value in the Done Zone register for the done settle time set in the Done Settle Time register.			
<b>Category:</b> Thresholds			
<b>MAXCLib:</b> A_Done_Timeout_			
<b>Register ID:</b> 69	<b>Writable:</b> Yes	<b>Appears in Map file:</b> Yes	<b>Level:</b> Axis
<b><u>Minimum</u></b>	<b><u>Maximum</u></b>	<b><u>Units</u></b>	
0	65535	ms	
<b>Minimum firmware version supported:</b> 7.93		<b>Maximum firmware version supported:</b> 11.00	

**Category - User**

**User 0**

<b>Description:</b>
---------------------

Axis User Register 0 (Float).			
Category: User			
MAXCLib: A_User_0_			
Register ID: 350	Writable: Yes	Appears in Map file: No	Level: Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-2147483648	2147483647		
Minimum firmware version supported: 8.50		Maximum firmware version supported: 11.00	

User 1

Description:			
Axis User Register 1 (Float).			
Category: User			
MAXCLib: A_User_1_			
Register ID: 351	Writable: Yes	Appears in Map file: No	Level: Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-2147483648	2147483647		
Minimum firmware version supported: 8.50		Maximum firmware version supported: 11.00	

User 2

Description:			
Axis User Register 2 (Float).			
Category: User			
MAXCLib: A_User_2_			
Register ID: 352	Writable: Yes	Appears in Map file: No	Level: Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-2147483648	2147483647		
Minimum firmware version supported: 8.50		Maximum firmware version supported: 11.00	

User 3

Description:			
Axis User Register 3 (Float).			
Category: User			
MAXCLib: A_User_3_			
Register ID: 353	Writable: Yes	Appears in Map file: No	Level: Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-2147483648	2147483647		
Minimum firmware version supported: 8.50		Maximum firmware version supported: 11.00	

User 4

<b>Description:</b>			
Axis User Register 4 (Float).			
<b>Category:</b> User			
MAXCLib: A_User_4_			
<b>Register ID:</b> 354	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-2147483648	2147483647		
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

User 5

<b>Description:</b>			
Axis User Register 5 (Float).			
<b>Category:</b> User			
MAXCLib: A_User_5_			
<b>Register ID:</b> 355	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-2147483648	2147483647		
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

User 6

<b>Description:</b>			
Axis User Register 6 (Float).			
<b>Category:</b> User			
MAXCLib: A_User_6_			
<b>Register ID:</b> 356	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-2147483648	2147483647		
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

User 7

<b>Description:</b>			
Axis User Register 7 (Float).			
<b>Category:</b> User			
MAXCLib: A_User_7_			
<b>Register ID:</b> 357	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-2147483648	2147483647		
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

User 8

<b>Description:</b>			
Axis User Register 8 (Float).			
<b>Category:</b> User			
<b>MAXCLib:</b> A_User_8_			
<b>Register ID:</b> 358	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-2147483648	2147483647		
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

User 9

<b>Description:</b>			
Axis User Register 9 (Float).			
<b>Category:</b> User			
<b>MAXCLib:</b> A_User_9_			
<b>Register ID:</b> 359	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Axis
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-2147483648	2147483647		
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

User C0

<b>Description:</b>			
Controller User Register 0 (Float).			
<b>Category:</b> User			
<b>MAXCLib:</b> A_User_C0_			
<b>Register ID:</b> 2468	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-2147483648	2147483647		
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

User C1

<b>Description:</b>			
Controller User Register 1 (Float).			
<b>Category:</b> User			
<b>MAXCLib:</b> A_User_C1_			
<b>Register ID:</b> 2469	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-2147483648	2147483647		
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

User C2

<b>Description:</b>			
Controller User Register 2 (Float).			
<b>Category:</b> User			
<b>MAXCLib:</b> A_User_C2_			
<b>Register ID:</b> 2470	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-2147483648	2147483647		
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

User C3

<b>Description:</b>			
Controller User Register 3 (Float).			
<b>Category:</b> User			
<b>MAXCLib:</b> A_User_C3_			
<b>Register ID:</b> 2471	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-2147483648	2147483647		
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

User C4

<b>Description:</b>			
Controller User Register 4 (Float).			
<b>Category:</b> User			
<b>MAXCLib:</b> A_User_C4_			
<b>Register ID:</b> 2472	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-2147483648	2147483647		
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

User C5

<b>Description:</b>			
Controller User Register 5 (Float).			
<b>Category:</b> User			
<b>MAXCLib:</b> A_User_C5_			
<b>Register ID:</b> 2473	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-2147483648	2147483647		

<b>Minimum firmware version supported:</b> 8.50	<b>Maximum firmware version supported:</b> 11.00
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User C6

<b>Description:</b>			
Controller User Register 6 (Float).			
<b>Category:</b> User			
<b>MAXCLib:</b> A_User_C6_			
<b>Register ID:</b> 2474	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-2147483648	2147483647		
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

User C7

<b>Description:</b>			
Controller User Register 7 (Float).			
<b>Category:</b> User			
<b>MAXCLib:</b> A_User_C7_			
<b>Register ID:</b> 2475	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-2147483648	2147483647		
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

User C8

<b>Description:</b>			
Controller User Register 8 (Float).			
<b>Category:</b> User			
<b>MAXCLib:</b> A_User_C8_			
<b>Register ID:</b> 2476	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Controller
<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>	
-2147483648	2147483647		
<b>Minimum firmware version supported:</b> 8.50		<b>Maximum firmware version supported:</b> 11.00	

User C9

<b>Description:</b>			
Controller User Register 9 (Float).			
<b>Category:</b> User			
<b>MAXCLib:</b> A_User_C9_			
<b>Register ID:</b> 2477	<b>Writable:</b> Yes	<b>Appears in Map file:</b> No	<b>Level:</b> Controller

<u>Minimum</u>	<u>Maximum</u>	<u>Units</u>
-2147483648	2147483647	
<b>Minimum firmware version supported: 8.50</b>		<b>Maximum firmware version supported: 11.00</b>