



Application Note #1425

Description of the ICM/AMP-1900

The ICM-1900 Interconnect Module provides easy connections between the Galil Optima Series controllers and other system elements, such as amplifiers, encoders, and external switches. The ICM-1900 accepts the 100-pin main cable and 25-pin auxiliary cable, and distributes the I/O connections into screw-type terminals. Each screw terminal is labeled for quick connection of system elements. An ICM-1900 is required for each set of 4 axes; two are required for 5 thru 8 axis controllers. The ICM-1900 is contained in a metal enclosure. A version of the ICM-1900 is also available with servo amplifiers (see AMP-19x0).

Features

- Separates 100-pin cables into individual screw-type terminals
- Clearly identifies all terminals
- Provides jumper for connecting limit and input supplies to 5 V supply from DMC controller
- Available with on-board servo drives (see AMP-19x0)
- Can be configured for AEN high or low

Note: The part number for the 100-pin connector is #2-178238-9 from AMP

TERM	LABEL	I/O	DESCRIPTION
1	+AAX	I	X Auxiliary encoder A+
2	-AAX	I	X Auxiliary encoder A-
3	+ABX	I	X Auxiliary encoder B+
4	-ABX	I	X Auxiliary encoder B-
5	+AAZ	I	Z Auxiliary encoder A+
6	-AAZ	I	Z Auxiliary encoder A-
7	+ABZ	I	Z Auxiliary encoder B+
8	-ABZ	I	Z Auxiliary encoder B-
9	+AAW	I	W Auxiliary encoder A+
10	-AAW	I	W Auxiliary encoder A-
11	+ABW	I	W Auxiliary encoder B+
12	-ABW	I	W Auxiliary encoder B-
13	+AAW	I	W Auxiliary encoder A+

14	-AAW	I	W Auxiliary encoder A-
15	+ABW	I	W Auxiliary encoder B+
16	-ABW	I	W Auxiliary encoder B-
17	GND		Signal Ground
18	+VCC		+ 5 Volts
19	ISO OUT POWER	O	Output Common (for use with the opto- isolated output option)
20	ERROR	O	Error signal
21	RESET	I	Reset
22	CMP	O	Circular Compare output
23	MOCMDW	O	W axis motor command to amp input (w / respect to ground)
24	SIGNW	O	W axis sign output for input to stepper motor amp
25	PWMW	O	W axis pulse output for input to stepper motor amp
26	MOCMDZ	O	Z axis motor command to amp input (w / respect to ground)
27	SIGNZ	O	Z axis sign output for input to stepper motor amp
28	PWMZ	O	Z axis pulse output for input to stepper motor amp
29	MOCMDY	O	Y axis motor command to amp input (w / respect to ground)
30	SIGNY	O	Y axis sign output for input to stepper motor amp
31	PWMY	O	Y axis pulse output for input to stepper motor amp
32	MOCMDX	O	X axis motor command to amp input (w / respect to ground)
33	SIGNX	O	X axis sign output for input to stepper motor amp
34	PWMX	O	X axis pulse output for input to stepper motor amp
35	ISO OUT GND	O	Isolated Output Signal Ground
36	+VCC	O	+ 5 Volts
37	AMPENW	O	W axis amplifier enable

38	AMPENZ	O	Z axis amplifier enable
39	AMPENY	O	Y axis amplifier enable
40	AMPENX	O	X axis amplifier enable
41	LSCOM	I	Limit Switch Common
42	HOMEW	I	W axis home input
43	RLSW	I	W axis reverse limit switch input
44	FLSW	I	W axis forward limit switch input
45	HOMEZ	I	Z axis home input
46	RLSZ	I	Z axis reverse limit switch input
47	FLSZ	I	Z axis forward limit switch input
48	HOMEY	I	Y axis home input
49	RLSY	I	Y axis reverse limit switch input
50	FLSY	I	Y axis forward limit switch input
51	HOMEX	I	X axis home input
52	RLSX	I	X axis reverse limit switch input
53	FLSX	I	X axis forward limit switch input
54	+VCC		+ 5 Volts
55	GND		Signal Ground
56	INCOM	I	Input common (Common for general inputs and Abort input)
57	XLATCH	I	Input 1 (Used for X axis latch input)
58	YLATCH	I	Input 2 (Used for Y axis latch input)
59	ZLATCH	I	Input 3 (Used for Z axis latch input)
60	WLATCH	I	Input 4 (Used for W axis latch input)
61	IN5	I	Input 5
62	IN6	I	Input 6
63	IN7	I	Input 7
64	IN8	I	Input 8
65	ABORT	I	Abort Input
66	OUT1	O	Output 1
67	OUT2	O	Output 2
68	OUT3	O	Output 3
69	OUT4	O	Output 4
70	OUT5	O	Output 5

71	OUT6	O	Output 6
72	OUT7	O	Output 7
73	OUT8	O	Output 8
74	GND		Signal Ground
75	AN1	I	Analog Input 1
76	AN2	I	Analog Input 2
77	AN3	I	Analog Input 3
78	AN4	I	Analog Input 4
79	AN5	I	Analog Input 5
80	AN6	I	Analog Input 6
81	AN7	I	Analog Input 7
82	AN8	I	Analog Input 8
83	+MAX	I	X Main encoder A+
84	-MAX	I	X Main encoder A-
85	+MBX	I	X Main encoder B+
86	-MBX	I	X Main encoder B-
87	+INX	I	X Main encoder Index +
88	-INX	I	X Main encoder Index -
89	ANA GND		Analog Signal Ground
90	+VCC		+ 5 Volts
91	+MAY	I	Y Main encoder A+
92	-MAY	I	Y Main encoder A-
93	+MBY	I	Y Main encoder B+
94	-MBY	I	Y Main encoder B-
95	+INY	I	Y Main encoder Index +
96	-INY	I	Y Main encoder Index -
97	+MAZ	I	Z Main encoder A+
98	-MAZ	I	Z Main encoder A-
99	+MBZ	I	Z Main encoder B+
100	-MBZ	I	Z Main encoder B-
101	+INZ	I	Z Main encoder Index +
102	-INZ	I	Z Main encoder Index -
103	GND		Signal Ground
104	+VCC		+ 5 Volts

105	+MAW	I	W Main encoder A+
106	-MAW	I	W Main encoder A-
107	+MBW	I	W Main encoder B+
108	-MBW	I	W Main encoder B-
109	+INW	I	W Main encoder Index +
110	-INW	I	W Main encoder Index -
111	+12V		+12 Volts
112	-12V		-12 Volts

ICM-1900 Drawing:

