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Application Note

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Subject: Information Sheet – Motion Module Pinout (MC202 Version)

Motion Module Pinout (MC202 Version)

PIN NO.	SIGNAL NAME	TYPE	LEVEL	DESCRIPTION
1	Digital Ground	Power	N/a	0v reference ⁽¹⁰⁾
2	+5V	Power	N/a	5V supply(+/-5%) @250mA (Typ)
3	Sout (AD7243D Data)	Output	TTL	Serial Data for AD7243 DAC ⁽¹⁾
4	DAC Clk (AD7243D Clock)	Output	TTL	Clock for AD7243 DAC ⁽¹⁾
5	SEN (AD7243D Sync)	Output	TTL	Sync Pulse for AD7243 DAC ⁽¹⁾
6	READY (AD7243D Clear)	Output	TTL	Reset for AD7243 DAC ⁽¹⁾⁽²⁾
7	STEP 0	Output	TTL	Stepper pulse output axis 0 ⁽³⁾
8	DIR 0	Output	TTL	Stepper direction output axis 0 ⁽³⁾
9	STEP 1	Output	TTL	Stepper pulse output axis 1 ⁽³⁾
10	DIR 1	Output	TTL	Stepper direction output axis 1 ⁽³⁾
11	Green LED	Output	TTL	Drives OK LED ⁽³⁾
12	Yell LED	Output	TTL	Drives Status LED ⁽³⁾
13	Serial Port 1 Out	Output	TTL	Transmit for serial port 1 ⁽³⁾
14	Serial Port 1 In	Input ⁽⁸⁾	TTL	Receive for serial port 1 ⁽³⁾
15	n/c	n/c	N/a	DO NOT CONNECT
16	n/c	n/c	N/a	DO NOT CONNECT
17	n/c	n/c	N/a	DO NOT CONNECT
18	Fault	Input ⁽⁸⁾	TTL	Fault input from drive ⁽⁴⁾
19	Encoder Axis 0 A	Input ⁽⁸⁾	TTL	Encoder channel A axis 0 ⁽³⁾
20	Encoder Axis 0 B	Input ⁽⁸⁾	TTL	Encoder channel B axis 0 ⁽³⁾
21	Encoder Axis 0 Z	Input ⁽⁸⁾	TTL	Encoder channel Z axis 0 ⁽³⁾
22	n/c	n/c	N/a	DO NOT CONNECT
23	Encoder Axis 1 A	Input ⁽⁸⁾	TTL	Encoder channel A axis 1 ⁽³⁾
24	Encoder Axis 1 B	Input ⁽⁸⁾	TTL	Encoder channel B axis 1 ⁽³⁾
25	Encoder Axis 1 Z	Input ⁽⁸⁾	TTL	Encoder channel Z axis 1 ⁽³⁾
26	n/c	n/c	N/a	DO NOT CONNECT
27	RS232 Port 0 Tx Out	Output	RS232	Transmit for serial port 0 ⁽³⁾
28	RS232 Port 0 Rx In	Input	RS232	Receive for serial port 0 ⁽³⁾
29	CAN Low	Bi-Dir	CAN BUS	CAN port low ⁽³⁾⁽⁹⁾
30	CAN High	Bi-Dir	CAN BUS	CAN port high ⁽³⁾⁽⁹⁾
31	Serial Port 1 Control	Output	TTL	Transmit enable (e.g. for RS485)
32	Syncx	Output	TTL	Inverted sync pulse for AD7243 ⁽¹⁾
33	Sclkx	Output	TTL	Inverted clock pulse for AD7243 ⁽¹⁾
34	/EX_RESET	Input ⁽⁸⁾	TTL	External reset ⁽⁵⁾
35	IN 0	Input ⁽⁸⁾	TTL	Digital input 0 (Active low) ⁽³⁾⁽⁶⁾
36	IN 1	Input ⁽⁸⁾	TTL	Digital input 1 (Active low) ⁽³⁾⁽⁶⁾
37	IN 2	Input ⁽⁸⁾	TTL	Digital input 2 (Active low) ⁽³⁾⁽⁶⁾
38	IN 3	Input ⁽⁸⁾	TTL	Digital input 3 (Active low) ⁽³⁾⁽⁶⁾
39	IN 8	Input ⁽⁸⁾	TTL	Digital input 8 (Active low) ⁽³⁾⁽⁶⁾
40	IN 9	Input ⁽⁸⁾	TTL	Digital input 9 (Active low) ⁽³⁾⁽⁶⁾
41	IN 10	Input ⁽⁸⁾	TTL	Digital input 10 (Active high) ⁽³⁾

42	IN 11	Input ⁽⁸⁾	TTL	Digital input 11 (Active high) ⁽³⁾
43	OP 8	Output	TTL	Digital output 8 (Active high) ⁽³⁾
44	OP 9	Output	TTL	Digital output 9 (Active high) ⁽³⁾
45	OP 10	Output	TTL	Digital output 10 (Active high) ⁽³⁾
46	OP 11	Output	TTL	Digital output 11 (Active high) ⁽³⁾
47	Wdog Relay Output	Output	TTL	Drive enable signal (WDOG) ⁽³⁾⁽⁷⁾
48	n/c	n/c	N/a	DO NOT CONNECT
49	+5V	Power	N/a	5V supply(+/-5%) @250mA (Typ)
50	Digital Ground	Power	N/a	0v reference ⁽¹⁰⁾

Notes:

- (1) See Analog Devices AD7243 Datasheet for timing information.
- (2) Same signal as Wdog Relay Output.
- (3) For details of the operation of this port see MC202 manual.
- (4) Not used on MC202 so support in software is not guaranteed.
- (5) Connected to pin 1 of Maxim MAX1232. See datasheet for more details. Should be left disconnected if not used.
- (6) These inputs are inverted in the motion module hardware.
- (7) Maximum current 8mA.
- (8) Maximum rise/fall time on any input is 500ns. Therefore opto-isolated inputs must be buffered.
- (9) No terminating resistor is fitted.
- (10) Connection to 0V is also made via the bottom right (viewed from rear) mounting hole. It is recommended that both 0V pins and the mounting hole are electrically connected.

OBSOLETE