OPAL-MM-1616 16 Optoisolated Input & 16 Relay Output PC/104 Module

PC104

FEATURES

- 16 unidirectional optoisolated digital inputs with 0-30VDC input
- 16 Form C SPDT relay outputs
- 2A relay switching capacity
- Relays can switch both DC and AC voltages
- Long lifetime relays (10,000,000 operations)
- 500VDC isolation between board and signals
- +5VDC power input
- PC/104 form factor

Description

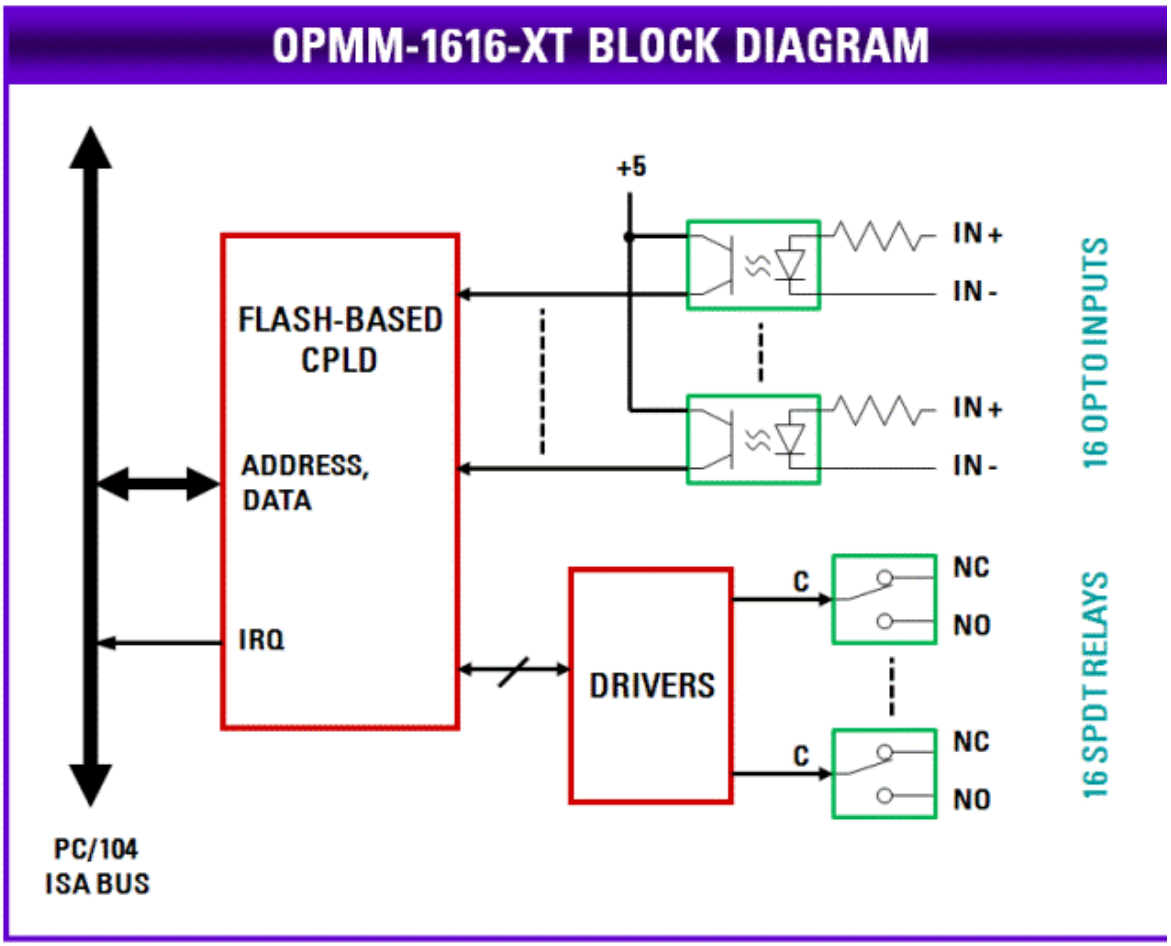
Opal-MM-1616 is a PC/104 format digital I/O module designed for industrial applications requiring isolation between the computer and the external signals it is monitoring and controlling.

The Opal-MM-1616 features 16 optoisolated digital inputs and 16 relay outputs. Each input has an input range of 0-30VDC. Opal-MM-1616 can be configured to generate an interrupt when any input changes state. Either or both banks of 8 inputs can be configured for interrupt operation. One 34-pin I/O header is used for the optoisolated inputs.

The 16 relay outputs are SPDT format (form C). Each relay has 3 contacts: Common, Normally Open, and Normally Closed. For safety and reliability, all relays are at their power-off state at power-up or system reset. Each relay can switch both AC and DC voltages. Two 26-pin I/O headers are used for the relay outputs with 8 relays on each pin header. The relays have long lifetime (10,000,000 operations) and quick actuation time (5ms max operate and release, break before make).

Diamond Systems' Universal Driver software provides drivers and example code for use

with the Opal-MM-1616. The software provides support for interrupts and enables you to integrate you own code that is called when an interrupt occurs.



Signal Isolation

Opal-MM-1616 provides isolation on its input and output lines. The board will withstand up to 500V DC or AC difference in potential between the I/O lines and the rest of the board's circuitry. Each input and output channel on Opal-MM-1616 is completely independent and does not share any signal trace with any other channel. Therefore, every channel is isolated from every other channel.

I/O Headers

Opto-isolated Input Connector

In 0+	**1**	**2**	In 0-
In 1+	**3**	**4**	In 1-
In 2+	**5**	**6**	In 2-
In 3+	**7**	**8**	In 3-
In 4+	**9**	**10**	In 4-
In 5+	**11**	**12**	In 5-
In 6+	**13**	**14**	In 6-
In 7+	**15**	**16**	In 7-
In 8+	**17**	**18**	In 8-

Relay Output Connectors (2nd connector same as first for relays 8 - 15)

Relay 0 NO	**1**	**2**	Relay 0 C
Relay 0 NC	**3**	**4**	Relay 1 NO
Relay 1 C	**5**	**6**	Relay 1 NC
Relay 2 NO	**7**	**8**	Relay 2 C
Relay 2 NC	**9**	**10**	Relay 3 NO
Relay 3 C	**11**	**12**	Relay 3 NC
Relay 5 NO	**13**	**14**	Relay 4 C
Relay 4 NC	**15**	**16**	Relay 5 NO

In 9+	**19**	**20**	In 9-
In 10+	**21**	**22**	In 10-
In 11+	**23**	**24**	In 11-
In 12+	**25**	**26**	In 12-
In 13+	**27**	**28**	In 13-
In 14+	**29**	**30**	In 14-
In 15+	**31**	**32**	In 15-
NC	**33**	**34**	NC

Relay 5 C	**17**	**18**	Relay 5 NC
Relay 6 NO	**19**	**20**	Relay 6 C
Relay 6 NC	**21**	**22**	Relay 7 NO
Relay 7 C	**23**	**24**	Relay 7 NC
NC	**25**	**26**	NC

Specifications

Optoisolated Inputs	
Number of inputs	16 unidirectional optoisolated inputs
Input capacity	30VDC with current limiting resistors
Input impedance	8k ohms
Logic levels	Logic 0: 0 - 1.5VDC Logic 1: 3 - 30VDC
Programmability	Programmable edge detection with interrupts
Relay Outputs	
Number of outputs	16 relay outputs
Relay contacts	SPDT (Form C) contacts Break before make
Current capacity	2A
Switching capacity	30VDC at 2A 125VAC at 0.1A resistive
Maximum switching capacity	30W (DC)
Contact resistance	50mohm max
Actuation time	Operate: 5ms maximum Release: 5ms maximum
Relay lifetime	10,000,000 operations
General	
I/O header	Optoisolated inputs: 1 34-pin (2 x 17) header on .1" connector Relay outputs: 2 26-pin (2 x 13) headers on .1" connecters
Mating Cables:	C-34-18 for optoisolated inputs C-26-18 for relay outputs (quantity 2)
Isolation (all I/O)	500VDC or AC, input to board or board to output Channel to channel isolation
Power supply	+5VDC ±10%
Current consumption	70mA typical, all relays off; additional 28mA per activated relay
Bus interface	PC/104 (ISA) bus
Form factor	PC/104 (3.55" x 3.775")
Operating temperature	-40°C to +85°C (-40°F to +185°F)
Weight	3.4oz (96g)
Universal Driver support	
RoHS	Compliant

Models and Accessories

Opal-MM-1616

available models:

OPMM-1616-XT 16 Optoisolated Input & 16 Relay Output PC/104 Module Available

Please login or signup for an online quote request.

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