



DIDO-0710

3U DIGITAL INPUT/OUTPUT CARD

The DIDO-0710 is a general-purpose data acquisition control card containing 48 digital I/O points. Each pin can be used as digital input or digital output. If used as an output, the point can be read back in for verification. The I/O and power signals are distributed through J2 rear connector.

Features & Benefits

- 48 Isolated input or output points
- 24 VDC, 200 mA per point
- Current sinking, NPN
- Optically-isolated I/O
- Isolated power from cPCI Bus and external 24 VDC
- LED indication for each point
- Watchdog Timer
- Interrupt on Event™
- Optional SGLT-0055 rear signal distribution card

Watchdog Timer

The watchdog timer provides the option to turn all outputs inactive if not reset within 100 ms (default timeout).

Interrupt on Event™

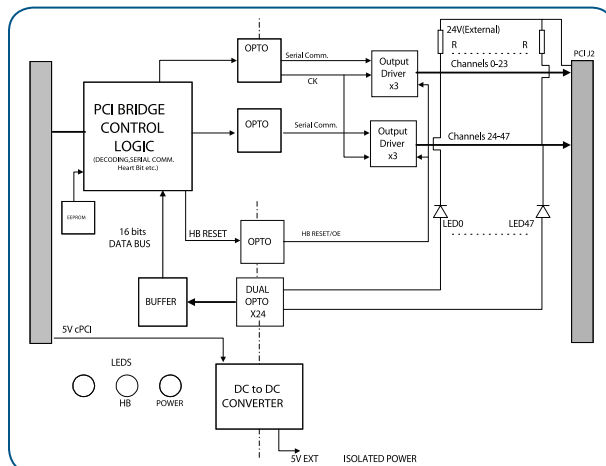
All inputs can be used to force an interrupt over the PCI bus. Mask-based system.

BIT Indicator

The BIT indicator turns on while the hardware built-in-test is running. If the test fails, the LED remains on.

HB Indicator

The Heartbeat LED turns on when the watchdog timer is enabled and times out.



Block Diagram



Specifications and Ordering Information

Physical

PCB Dimensions	100mm (3.9370") Height x 160mm (6.2992") Depth x 1.6mm (0.0629") Thickness
Form Factor	Plug in Eurocard, 3U Height, 8HP Width (1 slot), IEEE (1101.1, 101.10 and P1101.11)
Rear Connector	Metric 2.0mm grid, female connector type A is used for J1 (cPCI BUS) and J2 (Signal distribution)
Front Panel	128.5mm Height x 20.32mm Depth x 2.5mm Thickness
Weight	200g (0.44lb)
Compliance	PICMG 2.0 R 2.1

Environmental

Operating Temperature	0 to 70°C
Storage	-40 to +85°C
Humidity	5-95% non-condensing

Functional

Bus Interface	Compact PCI, 32 bit (16 bit data transfer), 33MHz
Plug and Play	Supports auto-recognition of board on power-on and plug-in; includes Device ID, Vendor ID, and configuration
Front Panel Indicators	48 I/O points, 3.3V, 5V, 5V ext, 24V, HB, BIT
Watchdog Timer	Disables outputs (sets all outputs to inactive +24V on timeout)
I/O Protection	2A fuse on each output driver; Suppression diode on each digital I/O port
Response Time	Write to output change – 100 us max; Input change to read – 150 us max
Compliance	PICMG 2.0 R 2.1

Power

Digital Section	+3.3VDC @ 20 mA, +5VDC @ 220 mA from J1
I/O Section	+24VDC from J2, +5V EXT generated on board

Input/Output

Number of I/O	48 points (input or output)
Input	Current sinking, active low active input, 6 mA
Output	Current sinking, active low output, 200 mA max

Ordering Code Example:

3U Digital I/O Card	AS00710-01
3U Rear Signal Transition Card	AS00055-01

	A	B	C	D	E
22	Reserved	Reserved	Reserved	Reserved	Reserved
21	Reserved	Reserved	Reserved	Reserved	Reserved
20					
19	DI/O 44	DI/O 45	DI/O 46	DI/O 47	
18	DI/O 39	DI/O 40	DI/O 41	DI/O 42	DI/O 43
17	Dig Com	Dig Com	Dig Com	Dig Com	Dig Com
16	DI/O34	DI/O 35	DI/O 36	DI/O 37	DI/O 38
15	DI/O 29	DI/O 30	DI/O 31	DI/O 32	DI/O 33
14	DI/O 24	DI/O 25	DI/O 26	DI/O 27	DI/O 28
13	Dig Com	Dig Com	Dig Com	Dig Com	Dig Com
12					
11					
10	DI/O 20	DI/O 21	DI/O 22	DI/O 23	
9	Dig Com	Dig Com	Dig Com	Dig Com	Dig Com
8	DI/O 15	DI/O 16	DI/O 17	DI/O 18	DI/O 19
7	DI/O 10	DI/O 11	DI/O 12	DI/O 13	DI/O 14
6	DI/O 5	DI/O 6	DI/O 7	DI/O 8	DI/O 9
5	DI/O 0	DI/O 1	DI/O 2	DI/O 3	DI/O 4
4	24V	24V Ret	24V	24V Ret	Reserved
3	Reserved	Reserved	Reserved	Reserved	Reserved
2	Reserved	Reserved	Reserved	Reserved	Reserved
1	3.3V	3.3V	3.3V	5V	5V

cPCI J2 Signals



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