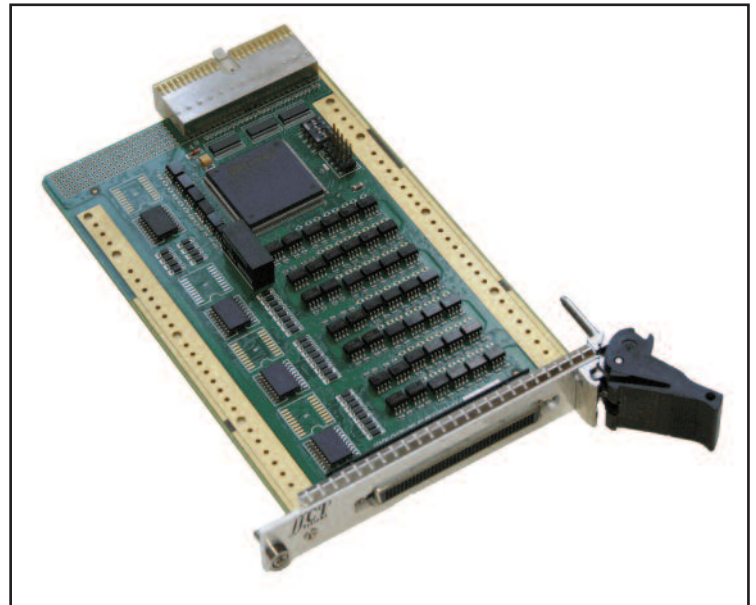


► 3U cPCI 64-Channel Isolated Digital I/O Board

The 64-Channel Digital Input/Output (I/O) Board provides 32 opto-isolated digital output channels, each with internal output status feedback, as well as 32 opto-isolated digital input channels on a single 3U CompactPCI board. A Field-Programmable Gate Array (FPGA) is used to provide access to the digital data over the PCI bus. The 32 output status feedback channels can be used as additional inputs giving a 96-channel board.

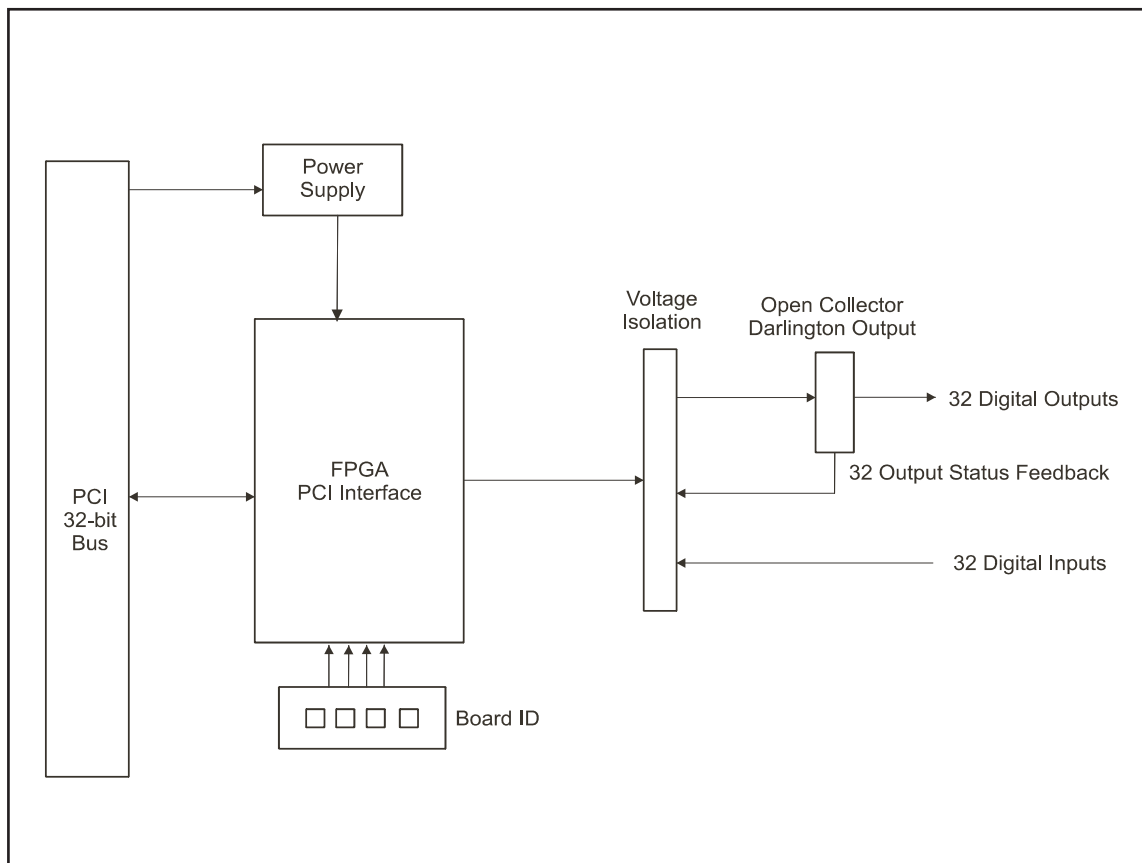
I/O channels to system isolation is
2 500 V RMS.



64-Channel Isolated Digital I/O Board

Architecture

A FPGA is used to control the 32 output channels and read the 32 input channels, and provides the PCI interface. LED optocouplers on all input and output channels provide 2 500 V RMS isolation, while outputs are driven by high-voltage Darlington transistor arrays.



Block Diagram of the 64-Channel Isolated Digital I/O Board



▶ 3U cPCI 64-Channel Isolated Digital I/O Board

Features

- wide input range (3 V to 35 V)
- wide output range (3 V to 35 V)
- Air-Cooled and Conduction-Cooled versions
- Commercial, Industrial and Ruggedised grades
- programmable inputs and outputs
- high output sink current (up to 300 mA)
- high number of digital inputs and digital outputs
- internal output feedback
- I/O channel voltage isolation
- board identification switch
- DC inputs
- frontpanel and backpanel I/O options

Formfactor and Bus Interface	PICMG 2.0 (R3.0) 3U CompactPCI 32 bit, 33 MHz 3,3 V PCI signalling, 5 V tolerant		
Digital Outputs	32	Optically Isolated Open Collector Darlington Transistor	
Digital Inputs	32	Optically Isolated DC	
Voltage Isolation	2 500 V RMS (I/O channel to system)		
Power	3,3 V DC at 0,3 A (1 Watt); 5 V DC at 0,5 A (2,5 Watt)		
Input Resistance	5 600 Ohm +/- 5%		
MTBF	Figures according to MIL-HDBK-217F, Parts Stress Method		
	Commercial and Industrial Grades	Ground Benign, Controlled, 25 C	415 000 hours
	Ruggedised Grade	Ground, Mobile, 45 C Naval, Sheltered, 40 C Airborne, Inhabited Cargo, 55 C	77 000 hours 106 000 hours 73 000 hours
Software Drivers	Support for Linux. VxWorks, Windows and others are costed options.		
Physical Characteristics			
Cooling Type		Air-Cooled	Conduction-Cooled
Dimensions		100,0 mm x 160,0 mm	100,0 mm x 160,0 mm
Mass		200 g +/- 10 g	225 g +/- 10 g
Environmental Specifications			
Grade	Commercial	Industrial	Ruggedised
Temperature			
- Operating	0 C to +55 C	-15 C to +75 C	-40 C to + 85 C
- Storage	-40 C to +85 C	-40 C to +85 C	-55 C to +125 C
Humidity	0% - 90%	0% - 95%	0% - 95%
Shock	10 g peak for 11 ms	20 g peak for 11 ms	40 g peak for 11 ms
Vibration			
- Sine	2 g (peak) at 10 Hz to 100 Hz	5 g (peak) at 5 Hz to 2 kHz	10 g (peak) at 5 Hz to 2 kHz
- Random	0,04 g²/Hz at 15 Hz to 2 kHz	0,06 g²/Hz at 15 Hz to 2 kHz	0,1 g²/Hz at 15 Hz to 2 kHz
Designation	Cooling	Connector	Grade
CCII/DIO/3UCPCI/64C/FP/COM	Air	Frontpanel	Commercial
CCII/DIO/3UCPCI/64C/FP/IND	Air	Frontpanel	Industrial
CCII/DIO/3UCPCI/64C/FP/RGD	Air	Frontpanel	Ruggedised
CCII/DIO/3UCPCI/64C/BP/COM	Air	Backpanel	Commercial
CCII/DIO/3UCPCI/64C/BP/IND	Air	Backpanel	Industrial
CCII/DIO/3UCPCI/64C/BP/RGD	Air	Backpanel	Ruggedised
CCII/DIO/3UCPCI/64C/BP/CC	Conduction	Backpanel	Ruggedised