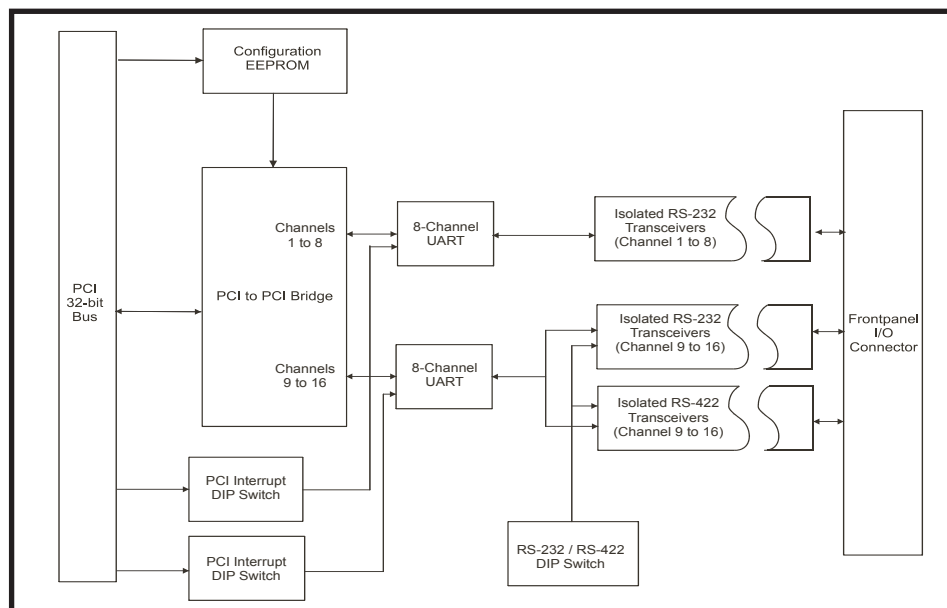


▶ 16-Channel Isolated Serial I/O CompactPCI Board

The 16-Channel Isolated Serial Input / Output (I/O) CompactPCI Board provides sixteen channels of simultaneous, bidirectional Universal Asynchronous Receiver / Transmitter (UART) serial communications on a CompactPCI formfactor. Eight of these channels are individually configurable as RS-232 or RS-422 by means of a DIP switch. The other eight RS-232 channels offer full modem control. The board conforms to the PCI Local Bus Specification Rev. 2.3.

All serial I/O lines have voltage isolation to 2 500 Volts.

The board is available with a 6U CompactPCI formfactor bezel as well as with only 8 channels, the latter so as to offer a lower cost version. An equivalent in PMC formfactor with 8 channels is also available.



Functional Block Diagram : 16-Channel Isolated Serial I/O CompactPCI Board

Architecture

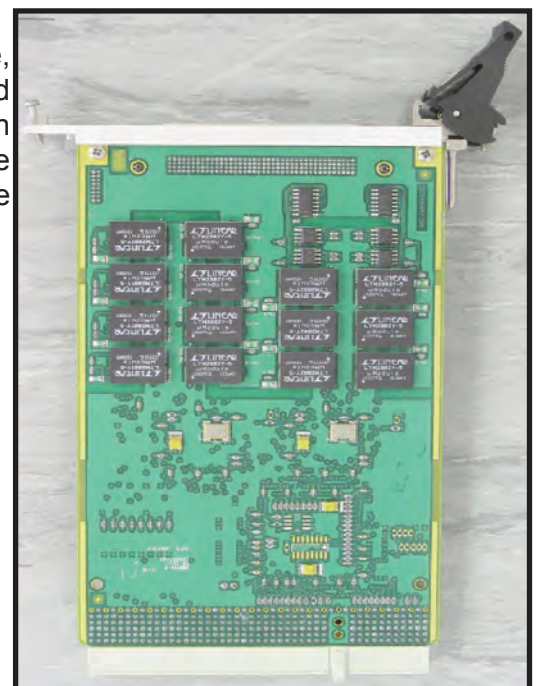
The Serial I/O Board employs two high performance, industry standard 16550 compatible, 8-channel PCI-based UARTs. The UART serial channels are connected to both RS-232 and RS-422 transceivers. The transceivers are enabled or disabled by a configuration DIP (Dual In-line Package) switch.

Features

- Very large number of UART compatible serial I/O channels
- Direct low-level control of the serial communication channels
- Supports many different combinations of RS-232 and RS-422 communications interfaces simultaneously
- Voltage isolation on all serial I/O lines

Applications

- Data concentrators
- Multiple modem control
- Intrinsically safe environments



3U cPCI 16-Channel Isolated Serial I/O Board



► 16-Channel Isolated Serial I/O CompactPCI Board

Bus Interface	32-bit, 33/66 MHz Electrically : PCI Rev. 2.3; 3,3 V PCI signalling, 5 V tolerant		
I/O Addresses	Automatically assigned to the slot by PCI Rev. 2.2 Plug-and-Play		
Interrupts	Switch selectable, typically PCI INT A and PCI INT B		
Termination	120 Ohm for RS-422 for each serial I/O channel		
Voltage Isolation	2 500 V (channel to system)		
Communications Controller	2 x EXAR XR17D158 Octal PCI UARTs		
Power	5 V at < 1,0 A 5,0 W (typical) 5 V at < 1,5 A 7,5 W (maximum)		
Serial I/O Interfaces	Channels 1 to 8 : RS-232 : TxD, RxD, RTS, CTS, DTR, DSR, CD, RI Channels 9 to 16 : RS-232 : TxD, RxD, RTS, CTS Channels 9 to 16 : RS-422 : TxD+, RxD+, TxD-, RxD-		
Bit Rates	Serial I/O Clocking Mode	RS-232	RS-422
	Asynchronous	921,6 kbit/s	1,8432 Mbit/s (up to 4 Mbit/s with custom oscillator)
MTBF	Figures according to MIL-HDBK-217F, Parts Stress Method		
	Commercial and Industrial Grades, 8-Channel	Ground Benign, Controlled, 25 C	350 000 hours
	Commercial and Industrial Grades, 16-Channel	Ground Benign, Controlled, 25 C	250 000 hours
	Ruggedised Grade, 8-Channel	Ground, Mobile, 45 C	30 000 hours
		Naval, Sheltered, 40 C Airborne, Inhabited Cargo, 55 C	60 000 hours 50 000 hours
Ruggedised Grade, 16-Channel	Ground, Mobile, 45 C	20 000 hours	
	Naval, Sheltered, 40 C Airborne, Inhabited Cargo, 55 C	35 000 hours 30 000 hours	
Software Drivers	VxWorks, Linux, Windows 7		

Physical Characteristics

Formfactor	Dimensions	Mass
Compact PCI (cPCI) : 3U : 6U	100 mm x 160 mm 233,35 mm x 160 mm	200 g ± 30 g 350 g ± 60 g

Environmental Specifications

Grade	Commercial	Industrial	Ruggedised
Temperature - Operating - Storage	0 C to +55 C -40 C to +85 C	-15 C to +75 C -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 - Random	2 g (peak) at 10 Hz to 100 Hz 0,04 g²/Hz at 15 Hz to 2 kHz	5 g (peak) at 5 Hz to 2 kHz 0,06 g²/Hz at 15 Hz to 2 kHz	10 g (peak) at 5 Hz to 2 kHz 0,1 g²/Hz at 15 Hz to 2 kHz

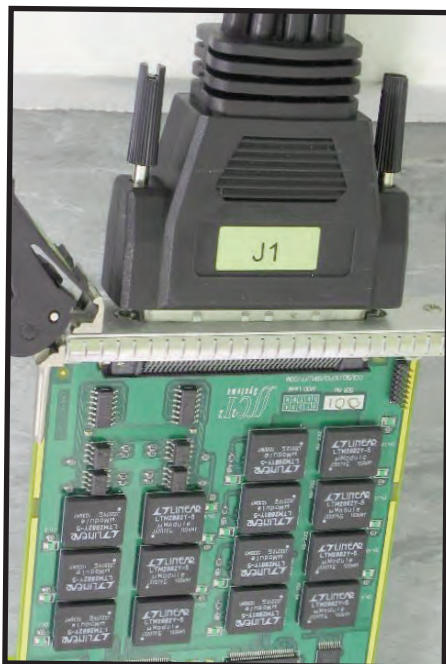
▶ **16-Channel Isolated Serial I/O CompactPCI Board**

Part Designations	Option			
Part Designation	Formfactor	Serial I/O Channels	Cooling	Grade
CCII/SIO/3CPCI/8PU/FP/COM	3U cPCI	8 total	Air	Commercial
CCII/SIO/3CPCI/8PU/FP/IND	3U cPCI	8 total	Air	Industrial
CCII/SIO/3CPCI/8PU/FP/RGD	3U cPCI	8 total	Air	Ruggedised
CCII/SIO/3CPCI/8PU/BP/CC	3U cPCI	8 total	Conduction	Ruggedised
CCII/SIO/3CPCI/16PU/FP/COM	3U cPCI	16 total	Air	Commercial
CCII/SIO/3CPCI/16PU/FP/IND	3U cPCI	16 total	Air	Industrial
CCII/SIO/3CPCI/16PU/FP/RGD	3U cPCI	16 total	Air	Ruggedised
CCII/SIO/3CPCI/16PU/BP/CC	3U cPCI	16 total	Conduction	Ruggedised
CCII/SIO/6CPCI/8PU/FP/COM	6U cPCI	8 total	Air	Commercial
CCII/SIO/6CPCI/8PU/FP/IND	6U cPCI	8 total	Air	Industrial
CCII/SIO/6CPCI/8PU/FP/RGD	6U cPCI	8 total	Air	Ruggedised
CCII/SIO/6CPCI/8PU/BP/CC	6U cPCI	8 total	Conduction	Ruggedised
CCII/SIO/6CPCI/16PU/FP/COM	6U cPCI	16 total	Air	Commercial
CCII/SIO/6CPCI/16PU/FP/IND	6U cPCI	16 total	Air	Industrial
CCII/SIO/6CPCI/16PU/FP/RGD	6U cPCI	16 total	Air	Ruggedised
CCII/SIO/6CPCI/16PU/BP/CC	6U cPCI	16 total	Conduction	Ruggedised

Connector/Cable Assemblies

Optional 8-way or 16-way connector/cable assemblies available in 0,5; 1,0; 2,0; 3,0 metre or custom cable lengths.
Board-side connector is 160-pin Molex connector with custom moulded hood.
Screw-down board-side connector option available for industrial and ruggedised grades.
Terminal equipment side connectors are D-type 15-pin connectors.

Part Designation	Description
CCII/CBC/3CPCI/16PU/FP/COM	3U cPCI Isolated 16-Channel Serial I/O Board + 16-Channel Serial I/O Cable Assembly, 2 m. CCII/SIO/3CPCI/16PU/FP/COM + CCII/LCP/40-CCM/020/IND.



3U cCPI 16-Channel Isolated Serial I/O Board with Captive I/O Connector