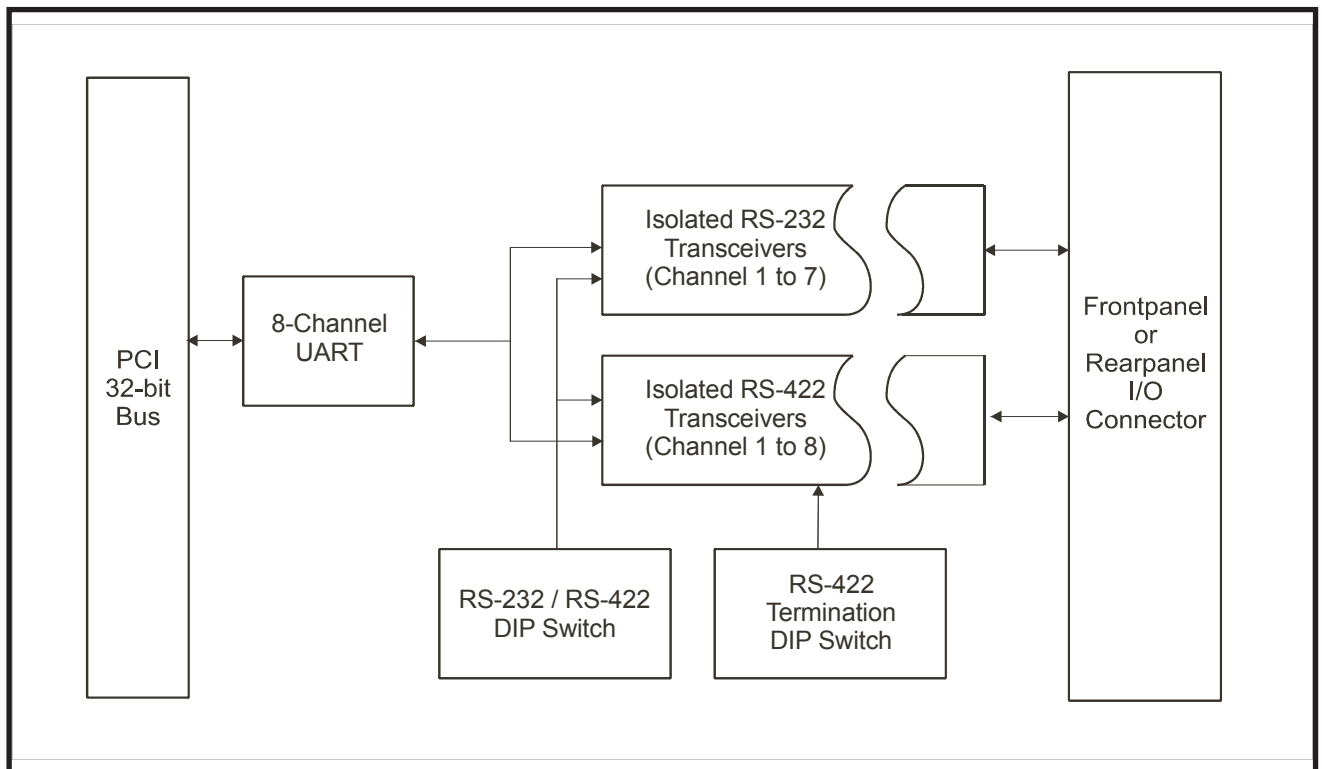


► 8-Channel Isolated Serial Input / Output PMC Adapter

The 8-Channel Serial Input / Output (I/O) PMC Adapter provides four channels of simultaneous, bidirectional Universal Asynchronous Receiver / Transmitter (UART) serial communications on a PMC formfactor. All channels are individually configurable as RS-232 or RS-422 by means of a DIP switch. The adapter conforms to the PCI Local Bus Specification Rev. 2.3.

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

A 4-channel version is available as a lower cost option.



Functional Block Diagram : 8-Channel Isolated Serial I/O PMC Adapter

Architecture

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

Features

- 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

- Mission-critical I/O
- Intrinsically safe environments



► 8-Channel Isolated Serial Input / Output PMC Adapter

| | | | |
|---|--|--|--|
| 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 | PCI INT A | | |
| Termination | 120 Ohm for RS-422 for each serial I/O channel | | |
| Voltage | 2 500 V (channel to PMC) | | |
| Communications Controller | EXAR XR17D158 Octal PCI UART | | |
| Power | 3,3 V at < 1,0 A 3,3 W (typical) 3,3 V at < 1,5 A 5,0 W (maximum) | | |
| Serial I/O Interfaces | Channels 1 to 4 : RS-232 : TxD, RxD, RTS, CTS, DTR, DSR, CD, RI Channels 5 to 8 : RS-422 : TxD+, RxD+, TxD-, RxD- | | |
| Bit Rates | Serial I/O Clocking Mode | RS-232 | RS-422/485 |
| | 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 Grade | Ground Benign, Controlled, 25 | 350 000 hours |
| | Industrial Grade | Ground Benign, Controlled, 25 | 250 000 hours |
| | Ruggedised Grade | Ground, Mobile, 45 C | 30 000 hours |
| | | Naval, Sheltered, 40 C | 60 000 hours |
| Airborne, Inhabited Cargo, 55 C | | 50 000 hours | |
| Ruggedised Grade | Ground, Mobile, 45 C Naval, Sheltered, 40 C Airborne, Inhabited Cargo, 55 C | 20 000 hours 35 000 hours 30 000 hours | |
| Software Drivers | VxWorks, Linux, Windows 7 | | |
| Physical Characteristics | | | |
| | Formfactor | Dimensions | Mass |
| | PMC (IEEE Std 1386.1-2001) | 149,00 mm x 79,00 mm, conforming to CMC envelope | 90 g +/- 10 g |
| | CCPMC (ANSI / VITA 20-2001) | 143,65 mm x 79,00 mm, conforming to CMC envelope | 80 g +/- 5 g |
| Connector/Cable Assemblies | | | |
| Optional connector / cable assemblies available in 0,5; 1,0; 2,0; 3,0 metre or custom cable lengths. Board-side connectors are two Tyco 50-pin connectors. Terminal equipment side connectors are D-type 9-pin connectors. Backplane I/O on PMC Jn4 connector for Conduction-Cooled version. | | | |

8-Channel Isolated Serial I/O PMC Adapter

Board-Level



8-Channel Isolated Serial Input / Output PMC Adapter

| Environmental Specifications | | | | |
|--|---|---|---|----------------|
| | Commercial | Industrial | Ruggedised / Conduction-Cooled | |
| 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 | |
| Part Selector | | | | |
| Part Designation | Formfactor | Grade | No. of Serial I/O Channels | Product Status |
| CCII/ISIO/PMC/4PU/FP/COM | PMC | Commercial | 4 total | On Request |
| CCII/ISIO/PMC/4PU/FP/IND | PMC | Industrial | 4 total | On Request |
| CCII/ISIO/PMC/4PU/FP/RGD | PMC | Ruggedised | 4 total | On Request |
| CCII/ISIO/PMC/4PU/BP/CC | CCPMC | Conduction-Cooled | 4 total | On Request |
| CCII/ISIO/PMC/8PU/FP/COM | PMC | Commercial | 8 total | On Request |
| CCII/ISIO/PMC/8PU/FP/IND | PMC | Industrial | 8 total | On Request |
| CCII/ISIO/PMC/8PU/FP/RGD | PMC | Ruggedised | 8 total | On Request |
| CCII/ISIO/PMC/8PU/BP/CC | CCPMC | Conduction-Cooled | 8 total | On Request |