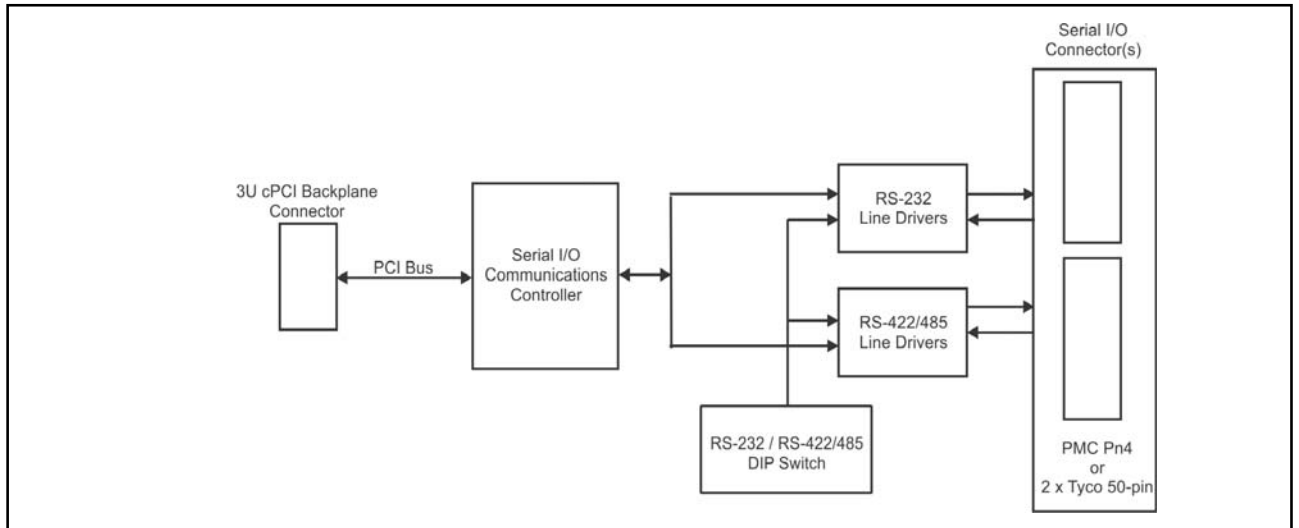


## ► 8-Channel Ultra High-Speed Serial I/O 3U cPCI Board

The 8-Channel Ultra High-Speed Serial I/O 3U cPCI Board provides eight channels of simultaneous, high-speed (>20 Mbit/s), bi-directional serial communications. All channels are jumper configurable as RS232/422/485. This adapter also supports a number of UART (Universal Asynchronous Receiver/Transmitter) (<1 Mbit/s) channels.

The board design complies with the 3U cPCI specification (PICMG 2.0 (R 3.0) and is available in commercial, industrial and ruggedised grades, as well as in air-cooled and conduction-cooled versions with front panel or backplane I/O.



8-Channel Ultra High-Speed Serial I/O 3U cPCI Board Block Diagram

### Architecture

The 8-Channel Ultra High-Speed Serial I/O 3U cPCI Board is an intelligent I/O board designed with an NXP PowerQUICC II Integrated PowerPC Microprocessor as communication controller. The PowerQUICC II processor can easily be configured to implement different serial protocols, thus allowing the boards to keep up with technological advances. All high-speed serial I/O channels are implemented using the PowerQUICC II.

### Features

- cost-effective and flexible option for systems that require both a large number of high-speed, real-time communication links, as well as some low-speed serial links
- offers independent I/O processing offboard the host

### Applications

- Distributed real-time applications in harsh environments
- Mission-critical applications
- Avionics
- Vetronics
- High-speed sensor integration
- Legacy connectivity



► **8-Channel Ultra High-Speed Serial I/O 3U cPCI Board**

Specifications			
<b>Formfactor</b>	32-bit, 66 MHz Electrically : PICMG 2.0 (R 3.0) CompactPCI 3,3 V PCI signalling, 5 V tolerant		
<b>Host Interface</b>	Electrically : PCI Rev. 2.3		
<b>I/O Addresses</b>	Automatically assigned to the slot by PCI Rev. 2.3 Plug-and-Play		
<b>EEPROM</b>	EEPROM for Board ID (Plug-and-Play) and configuration options		
<b>DMA</b>	Automatic depending on PCI slot		
<b>Serial I/O Interface</b>	<b>SCC Channels</b>		<b>SMC Channels</b>
	RS-232 : TxD, RxD, RTS, CTS, CD, CLK_IN, CLK_OUT		RS-232 : RxD, TxD
	RS-422/485 : TxD, RxD, CLK_IN, CLK_OUT		
<b>Termination</b>	100 Ohm (individually selectable for each SCC channel)		
<b>Bit Rates</b>	<b>Serial I/O Clocking</b>	<b>RS-232</b>	<b>RS-422/485</b>
	Synchronous Mode	1 Mbps	20 Mbps
	Asynchronous Mode	1 Mbps	6,25 Mbps
	Maximum External Clock	500 kHz	16 MHz
<b>Protocols</b>	<ul style="list-style-type: none"> <li>- HDLC</li> <li>- SDLC</li> <li>- Async</li> <li>- BiSync</li> </ul>		
<b>CPU</b>	NXP PowerQUICC II Integrated PowerPC Microprocessor		
<b>Power</b>	<ul style="list-style-type: none"> <li>- 3,3 V at 1,3 A</li> <li>- 5 V at 100 mA</li> <li>- 12 V at 1 mA</li> </ul>		
<b>Software Drivers</b>	Various software drivers offered including for VxWorks and Linux operating systems as standard; others are costed options.		
<b>Supporting Software</b>	Sample software driver usage (C/C++ source code)		
<b>MTBF</b>	Figures according to MIL-HDBK-217F, Parts Stress Method		
	Commercial and Industrial Grades	Ground Benign, Controlled, 25 C	350 000 hours
	Ruggedised Grade	Ground, Mobile, 45 C Naval, Sheltered, 40 C Airborne, Inhabited Cargo, 55 C	30 000 hours 60 000 hours 50 000 hours

Physical Characteristics		
Formfactor	Dimensions	Mass
cPCI : 3U	100,0 mm x 160,0 mm	250 g ± 30 g

Serial I/O Connectors		
Air-Cooled	Front Panel I/O	2 x Tyco 50-pin Connectors
Conduction-Cooled	Backplane I/O	cPCI Connector



► **8-Channel Ultra High-Speed Serial I/O 3U cPCI Board**

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	N/A	30 g peak for 11 ms	40 g peak for 11 ms
Vibration			
- Sine	2 g (peak) at 10 Hz to 100 Hz	10 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	0,1 g²/Hz at 15 Hz to 2 kHz	0,1 g²/Hz at 15 Hz to 2 kHz

Part Selector					
Part Number	Formfactor	Grade	Cooling	I/O	Number of Channels
CCII/UHS/3UCPCI/8P/FP/COM	3U cPCI	Commercial	Air	Front Panel	8 x RS-232/422/485 4 x RS-232
CCII/UHS/3UPCIC/8P/FP/IND	3U cPCI	Industrial	Air	Front Panel	8 x RS-232/422/485 4 x RS-232
CCII/UHS/3UCPCI/8P/FP/RGD	3U cPCI	Ruggedised	Air	Front Panel	8 x RS-232/422/485 4 x RS-232
CCII/UHS/3UCPCI/8P/BP/CC	3U cPCI	Ruggedised	Conduction	Backplane	8 x RS-232/422/485 4 x RS-232