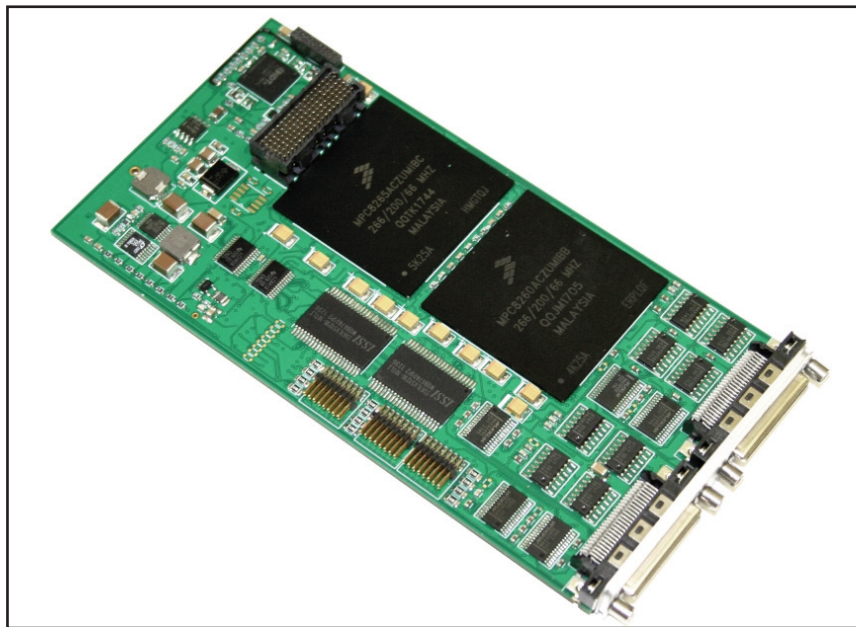


► 8-Channel and 4-Channel Ultra High-Speed Serial I/O XMC Adapter

The 8-Channel Ultra High-Speed Serial I/O XMC Adapter 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 4-Channel Ultra High-Speed Serial I/O XMC Adapter is a reduced cost version of the 8-Channel adapter with only half the line drivers fitted.

The adapter design complies with the XMC specification (ANSI/VITA 42.3-2006) and the Conduction-Cooled XMC (CCXMC) specification (ANSI/VITA 20-2005 (S2018)) and is available in ruggedised, industrial and commercial versions, as well as conduction-cooled for the 4-channel version.



8-Channel UHS XMC Adapter : Air-Cooled

Architecture

The 8-Channel and 4-Channel Ultra High-Speed Serial I/O XMC Adapter are intelligent adapters designed with NXP PowerQUICC II Integrated PowerPC Microprocessors as communication controllers. The PowerQUICC II processor can easily be configured to implement different serial protocols, thus allowing the adapters 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 high number of high-speed, real-time communication links as well as some low-speed serial links
- Offers independent I/O processing offboard the host

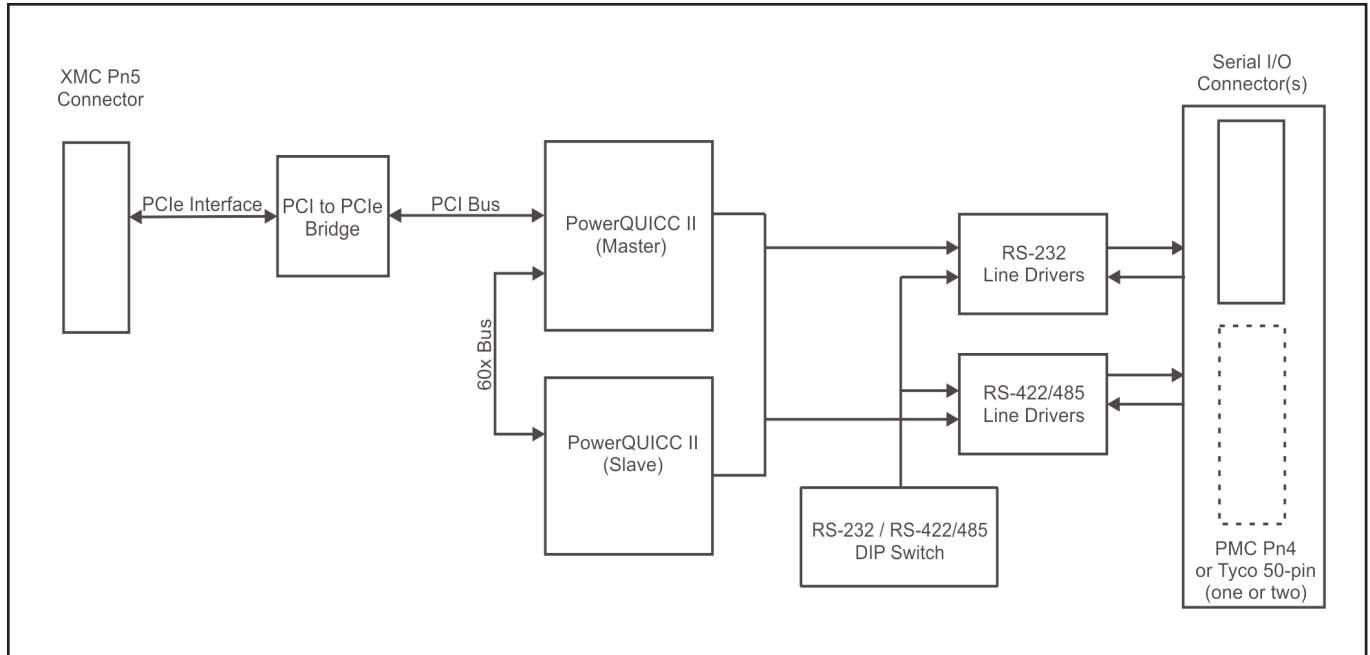
Conduction-Cooling

The Conduction-Cooled 4-Channel Ultra High-Speed Serial I/O XMC Adapter conforms to the CCXMC (Conduction-Cooled XMC Mezzanine Card) Standard namely ANSI/VITA 20-2005 (S2018).

Applications

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

► 8-Channel and 4-Channel Ultra High-Speed Serial I/O XMC Adapter



8-Channel and 4-Channel UHS XMC Adapter : Schematic Block Diagram

Specifications			
Host Interface	Single Lane; 2,5 GHz PCIe Electrically : PCI Express Rev. 2.0		
Number of Channels	8 x SCC + 2 x SMC		
EEPROM	EEPROM for board ID (Plug-and-Play) and configuration options		
Serial I/O Interface	SCC Channels		SMC Channels
	RS-232 : TxD, RxD, RTS, CTS, CD CLK_IN, CLK_OUT		RS-232 : RxD, TxD
	RS-422/485 : TxD, RxD, CLK_IN, CLK_OUT		
Termination	100 ohm (individually selectable for each SCC channel)		
Bit Rates	Serial I/O Clocking		
		RS-232	RS-422/485
	Synchronous Mode	1 Mbps	20 Mbps
	Asynchronous Mode	1 Mbps	6,25 Mbps
	Maximum External Clock	500 kHz	16 MHz
Protocols	<ul style="list-style-type: none"> - HDLC - SDLC - Async - BiSync 		
CPU	NXP PowerQUICC II Integrated PowerPC Microprocessor		
Power	10 Watt maximum, 3,3 V		
Software Drivers	Various software drivers offered including for VxWorks, Linux and basic Windows operating systems as standard; others are costed options. (*Standard PC HAL [Hardware Abstraction Layer] only)		
Supporting Software	Sample software driver usage (C/C++ source code)		

8-Channel and 4-Channel UHS XMC Adapter

Board-Level



► 8-Channel and 4-Channel Ultra High-Speed Serial I/O XMC Adapter

Serial I/O Connectors		
Air-Cooled	Front Panel I/O	Tyco 50-pin Connector (one for 4-channel, two for 8-channel)
Conduction-Cooled	Backplane I/O	XMC Pn4 Connector

Physical Characteristics		
Formfactor	Dimensions	Mass
XMC (ANSI/VITA 42.0-2016)	143,75 mm x 74,00 mm (+ 0,0 / -0,5 mm), conforming to VITA 42 height envelope	80 g +/- 10 g
CCXMC (ANSI/VITA 42.0-2016)	143,75 mm x 74,00 mm (+ 0,0 / -0,5 mm), conforming to VITA 42 height envelope	80 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	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	Number of Channels
CCII/UHS/XMC/8P/FP/COM	XMC	Commercial	8 x RS-232/422/485 4 x RS-232
CCII/UHS/XMC/8P/FP/IND	XMC	Industrial	8 x RS-232/422/485 4 x RS-232
CCII/UHS/XMC/8P/FP/RGD	XMC	Ruggedised	8 x RS-232/422/485 4 x RS-232
CCII/UHS/XMC/4P/FP/COM	XMC	Commercial	4 x RS-232/422/485 2 x RS-232
CCII/UHS/XMC/4P/FP/IND	XMC	Industrial	4 x RS-232/422/485 2 x RS-232
CCII/UHS/XMC/4P/FP/RGD	XMC	Ruggedised	4 x RS-232/422/485 2 x RS-232
CCII/UHS/XMC/4P/BP/CC	XMC	Conduction-Cooled	4 x RS-232/422/485

8-Channel and 4-Channel UHS XMC Adapter

Board-Level