4-Channel High-Speed Serial I/O PMC Adapter - New Generation

This 4-Channel High-Speed Serial I/O PMC (PCI Mezzanine Card) Adapter provides four channels of simultaneous, high-speed (>16 Mbps), bi-directional serial communications. All channels are jumper configurable as RS232/422/485. The front-panel 4-Channel High-Speed Serial I/O PMC Adapter also supports two UART (Universal Asynchronous Receiver/Transmitter) (<1 Mbps) channels. The adapter is available in both conduction-cooled (CC) and air-cooled versions : ruggedised, industrial and commercial.

Architecture

The 4-Channel High-Speed Serial I/O PMC and CCPMC Adapters are intelligent adapters with an onboard CPU and uses a Motorola PowerQUICC II Integrated PowerPC Microprocessor as a communication controller. The PowerQUICC II processor can easily be configured to implement different serial protocols, thus allowing the adapter to keep up with technological advances.

Features

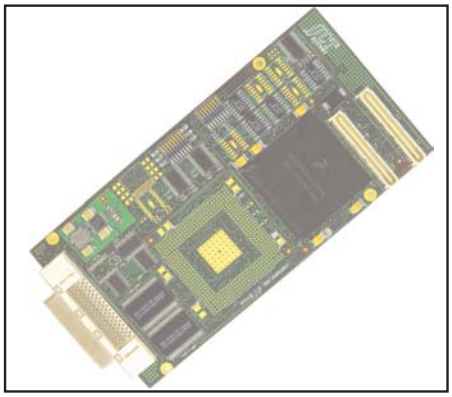
- Cost-effective and flexible option for systems that require both high-speed, real-time communication links as well as some low-speed serial links.
- Offers independent I/O processing offboard the host.

Conduction-Cooling

The conduction-cooled 4-Channel High-Speed Serial I/O PMC Adapter conforms to the CCPMC (Conduction-Cooled PCI Mezzanine Card) Standard, namely ANSI/VITA 20-2001.

Applications

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



New Generation
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Environmental Specifications

	Commercial	Industrial	Ruggedised/Conduction-Cooled
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) 10 Hz to 100 Hz	10 g (peak) 5 Hz to 2 kHz	10 g (peak) 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

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4-Channel High-Speed Serial I/O PMC and CCPMC Adapter Specifications

Bus Interface	32-bit, 33/66 MHz PCI-bus Electrically : 3,3 V and 5 V signaling, PCI Rev. 2.2 (some versions only 3,3 V) Mechanically : Single CMC formfactor IEEE P1386-2001		
Serial Interface	RS232/422/485 (all ports individually configurable with jumpers)		
	RS232	TxD, RxD, RTS, CTS, CD, CLK_IN, CLK_OUT	
	RS422/485	TxD, RxD, CLK_IN, CLK_OUT	
Serial Channels	4 x SCCs (Serial Communication Controllers) for high-speed serial links - Synchronous or asynchronous 2 x SMCs (Serial Management Controllers) for UART serial links - Front-panel, asynchronous, RxD and TxD only, no flow control		
CPU	Motorola PowerQUICC II Integrated PowerPC Microprocessors		
EEPROM	EEPROM for board ID (Plug-and-Play) and configuration options		
Bit Rates	**User-programmable up to :**	**RS232 Mode**	**RS422/485 Mode**
	Synchronous Mode	1 Mbps	16 Mbps
	Asynchronous Mode	1 Mbps	6,25 Mbps
Termination	100 R (all ports individually switchable with jumpers) for RS422/485		
I/O Addresses	Automatic assigned to the slot by PCI Rev. 2.2 Plug-and-Play		
I/O Options	Front-panel and rear connector I/O options with various rear connector PMC Jn4 I/O pin assignments. Conduction-cooled version has rear connector I/O only.		
Interrupts	PCI INT A		
DMA	Automatic depending on PCI slot		
Dimensions	Air-cooled : 149,00 mm x 74,00 mm with envelope according to CMC specification Conduction-cooled : 143,65 mm x 74,00 mm (VITA 20) with envelope according to VITA 20 specification Outside Dimensions : 160,00 mm x 75,00 mm x 15,00 mm		
Mass	80 g ± 10 g		
Power Requirement	+3,3 V at 750mA +5 V at 1 mA (5 V PCI versions only) +12 V at 1 mA		
MTBF	Figures according to MIL-HDBK-217F, Parts Stress Method : Ground, Mobile T_j = 65 C T_a = 45 C 21 700 hrs Naval, Sheltered T_j = 60 C T_a = 40 C 35 800 hrs Airborne, Inhabited Cargo T_j = 75 C T_a = 55 C 26 200 hrs		
Software Drivers	Various software drivers offered including for VxWorks, Linux, Windows NT, Windows 2000* and Windows XP* operating systems as standard; others are costed options. (*Standard PC HAL only)		
Protocols	• HDLC • SDLC • Async • BiSync		
Supporting Software	Sample driver usage software (C/C++ source code)		
Options	• Solaris, QNX, AIX Drivers • SS7, ISDN Protocol (Basic Rate and Primary Rate) • Ethernet / Fast Ethernet Option		

Designations

CCII/SIO/PMC/4PN/FP/COM	Commercial	Front-panel I/O	RS422/485/232	3,3 V PCI
CCII/SIO/PMC/4PN/FP/IND	Industrial	Front-panel I/O	RS422/485/232	3,3 V PCI
CCII/SIO/PMC/4PN/FP/RGD	Ruggedised	Front-panel I/O	RS422/485/232	3,3 V PCI
CCII/SIO/PMC/4PN/BP/CC	Conduction-Cooled	Backplane I/O	RS422/485/232	3,3 V PCI
CCII/SIO/PMC/4PN/FP1/COM	Commercial	Front-panel I/O	RS422/485/232	3,3/5 V PCI
CCII/SIO/PMC/4PN/FP1/IND	Industrial	Front-panel I/O	RS422/485/232	3,3/5 V PCI
CCII/SIO/PMC/4PN/FP1/RGD	Ruggedised	Front-panel I/O	RS422/485/232	3,3/5 V PCI

An 8-channel version of this product is also available.

