

► 4-Channel High-Speed Serial I/O PMC Adapter (Not recommended for new designs)

The 4-Channel High-Speed Serial I/O PMC (PCI Mezzanine Card) Adapter provides four channels of simultaneous, high-speed (>10 Mbps), bi-directional serial communications, plus two UART (Universal Asynchronous Receiver/Transmitter) (<1 Mbps) channels. All channels are configurable as RS232/422/485. 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 onboard CPU and use the Motorola MPC860 PowerQUICC Integrated PowerPC Microprocessor as a communication controller. The PowerQUICC processor can easily be configured to implement different serial protocols, thus allowing the adapter to keep up with technological advances.

Features

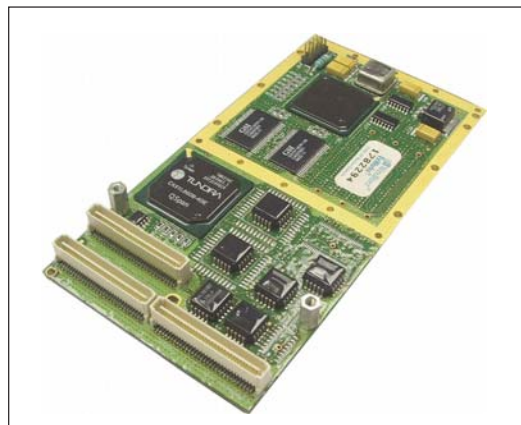
- Cost-effective and flexible option for systems that require both high-speed, real-time communication links as well as some low-speed serial links.
- Offers independent I/O processing offboard the host

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 VITA 20-199x and is currently implemented in accordance with VITA 20-199x, Draft 1.8.

Applications

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



4-Channel High-Speed Serial I/O CCPMC Adapter



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Specifications	
Bus Interface	32-bit, 33 MHz PCI-bus Electrically : 5 V signaling, PCI Rev. 2.2 Mechanically : Single CMC formfactor IEEE P1386
Serial Interface	RS232/422/485 configurable
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 - Asynchronous only
CPU	1 x Motorola MPC860 PowerQUICC - Integrated PowerPC Microprocessor
EEPROM	EEPROM for board ID (Plug-and-Play) and configuration options
Bit Rates	User-programmable up to 4 Mbps
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
Power Requirements	+5 V at 0,8 A
Software Drivers	Various software drivers offered including for VxWorks, 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

Characteristics		
Grade	Dimensions	Weight
Air-cooled	149,00 mm x 74,00 x 9,80 mm	80 g ± 10 g
Conduction-cooled	143,65 mm x 74,00 x 13,50 mm	80 g ± 10 g

4-Channel HS Serial I/O PMC
Board-Level



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Reliability				
MTBF	Figures according to MIL-HDBK-217F, Parts Stress Method			
	Ground, Mobile Naval, Sheltered Airborne, Inhabited Cargo	T _j = 65 C T _j = 60 C T _j = 75 C	T _a = 45 C T _a = 40 C T _a = 55 C	32 000 hrs 47 000 hrs 31 000 hrs

Environmental Specifications			
	Commercial Grade	Industrial Grade	Ruggedised/Conduction-Cooled Grade
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	N/A	30 g peak for 11 ms	40 g peak for 11 ms
Vibration - Sine - Random	2 g (peak) 10 Hz to 100 Hz 0,04 g²/Hz at 15 Hz to 2 kHz	10 g (peak) 5 Hz to 2 kHz 0,1 g²/Hz at 15 Hz to 2 kHz	10 g (peak) 5 Hz to 2 kHz 0,1 g²/Hz at 15 Hz to 2 kHz

Specifications			
Part Designation	Grade	I/O Options	Serial Interface
CCII/SIO/PMC/4P/FP/COM	Commercial	Front-panel or Backplane I/O	RS422/485/232
CCII/SIO/PMC/4P/FP/IND	Industrial	Front-panel or Backplane I/O	RS422/485/232
CCII/SIO/PMC/4P/FP/RGD	Ruggedised	Front-panel or Backplane I/O	RS422/485/232
CCII/SIO/PMC/4P/BP/CC/xx	Conduction-Cooled	Backplane I/O	RS422/485/232

Note :

xx =	4 x SCC	2 x SMC
22	232	232
42	422/485	232
44	422/485	422/485
Standard oscillator is 39,3216 MHz. Other oscillator frequencies (to support non-standard baud rates) indicated by an additional /yy at the end of the part number		
SCC = Serial Communication Controllers SMC = Serial Management Controllers		

4-Channel HS Serial I/O PMC Board-Level