

Force Multiplication through Information Technology®



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

Bus Interface		32-bit, 33 MHz PCI-bus								
		Electrically : 5 V signaling, PCI Rev. 2.2								
		Mechanically : Single CMC formfactor IEEE P1386-2001								
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 Address	es	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 x 9,80 mm								
		Conduction-cooled : 143,65 mm x 74,00 mm x 13,50 mm (VITA 20)								
Mass		80 g ± 10 g								
Power Requirement		+5 V at 0,8 A								
MTBF		Figures according to MII -HDBK-217F. Parts Count Method :								
		Ground, Mobile		$T_i = 65 C T_a$	= 45 C 32 00	0 hrs				
		Naval, Sheltered		$T_i = 60 C$ $T_a$	= 40 C 47 00	0 hrs				
		Airborne. Inhabited Cargo $T_i = 75 \text{ C}$ $T_a = 55 \text{ C}$ 31 000 hrs								
Drivers		Various software drivers offered including for VxWorks. Windows NT. Windows 2000*								
Brivers		and Windows XP* operating systems as standard: others optional. (*Standard PC HAI								
		only)								
Protocols		• HDLC								
		• SDLC								
		Async     DiSync								
Supporting Software		Sample driver usage software (C/C++ source code)								
Ontions	Juitware	Salinpie unvei	AIV Drivero		coue					
Options				) In Data and Driman	Data)	Solaris, UNX, AIX Drivers				
		SS7, ISDN Protocol (Basic Rate and Primary Rate)								
		• 557, ISDN IN		Dation	Rale)					
<b>F</b> ·	1.1.0	Ethernet / Fasi	Ethernet C	Detion	Kale)					
Environmen	tal Specif	Ethernet / Fast cations	Ethernet C	Dption						
Environmen	ital Specif	Ethernet / Fassications	Ethernet C	Dption	Ruggedised	/Conduction-Cooled				
Environmen Temperatur	tal Specif Comme	Ethernet / Fas	Industri	Dption	Ruggedised	/Conduction-Cooled				
Environmen Temperature - Operating	e 0 C to	Ethernet / Fas ications Frcial	-15 C to	+75 C	Ruggedised	/Conduction-Cooled				
Environmen Temperature - Operating - Storage	e OC to -40 C to	Ethernet / Fas ications ercial     +55 C     +85 C	-15 C to -40 C to	+75 C +85 C	Ruggedised -40 C to + 8 -55 C to + 12	/Conduction-Cooled				
Environmen Temperature - Operating - Storage Humidity	tal Specif Commo e 0 C to -40 C to 0% - 90	Ethernet / Fas ications ercial +55 C +85 C %	Industri           -15 C to           -40 C to           0% - 95°	+75 C +85 C	Ruggedised           -40 C to + 8!           -55 C to +12!           0% - 95%	/Conduction-Cooled				
Environmen Temperature - Operating - Storage Humidity Shock	tal Specif Comme e 0 C to -40 C to 0% - 90 N/A	Ethernet / Fas     ications     recial     +55 C     %	Industri           -15 C to           -40 C to           0% - 95'           30 g pea	+75 C +85 C % ak for 11 ms	Ruggedised           -40 C to + 8!           -55 C to +12!           0% - 95%           40 g peak for	/Conduction-Cooled				
Environmen Temperature - Operating - Storage Humidity Shock Vibration	tal Specif Comme e 0 C to -40 C to 0% - 90 N/A	Ethernet / Fas     ications     ircial     +55 C     +85 C %	Industri           -15 C to           -40 C to           0% - 95'           30 g pea	+75 C +85 C % ak for 11 ms	Ruggedised           -40 C to + 8!           -55 C to +12!           0% - 95%           40 g peak for	/Conduction-Cooled				
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**Board-Level** 

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