

## ► 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

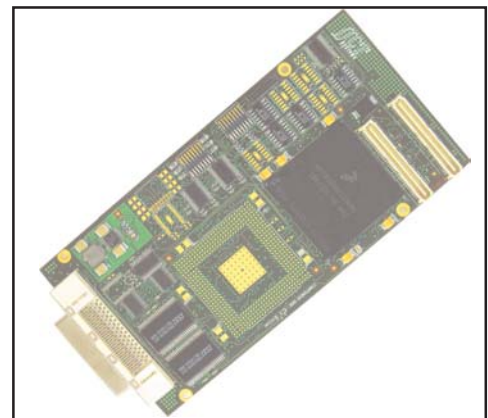
- Cost-effective and flexible option for systems that require both high-speed, real-time communication links as well as some low-speed serial links.
- Offers independent I/O processing offboard the host.

### 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**  
4-Channel High-Speed Serial I/O PMC Adapter

### Environmental Specifications

	Commercial	Industrial	Ruggedised/Conduction-Cooled
<b>Temperature</b>			
- 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
<b>Humidity</b>	0% - 90%	0% - 95%	0% - 95%
<b>Shock</b>	N/A	30 g peak for 11 ms	40 g peak for 11 ms
<b>Vibration</b>			
- 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 g <sup>2</sup> /Hz at 15 Hz to 2 kHz	0,1 g <sup>2</sup> /Hz at 15 Hz to 2 kHz	0,1 g <sup>2</sup> /Hz at 15 Hz to 2 kHz



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

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

<b>Bus Interface</b>	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			
<b>Serial Interface</b>	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		
<b>Serial Channels</b>	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			
<b>CPU</b>	Motorola PowerQUICC II Integrated PowerPC Microprocessors			
<b>EEPROM</b>	EEPROM for board ID (Plug-and-Play) and configuration options			
<b>Bit Rates</b>	<b>User-programmable up to :</b>	<b>RS232 Mode</b>	<b>RS422/485 Mode</b>	
	Synchronous Mode	1 Mbps	16 Mbps	
	Asynchronous Mode	1 Mbps	6,25 Mbps	
<b>Termination</b>	100 R (all ports individually switchable with jumpers) for RS422/485			
<b>I/O Addresses</b>	Automatic assigned to the slot by PCI Rev. 2.2 Plug-and-Play			
<b>I/O Options</b>	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.			
<b>Interrupts</b>	PCI INT A			
<b>DMA</b>	Automatic depending on PCI slot			
<b>Dimensions</b>	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		
<b>Mass</b>	80 g ± 10 g			
<b>Power Requirement</b>	+3,3 V at 750mA +5 V at 1 mA (5 V PCI versions only) +12 V at 1 mA			
<b>MTBF</b>	Figures according to MIL-HDBK-217F, Parts Stress Method :			
	Ground, Mobile	T <sub>j</sub> = 65 C	T <sub>a</sub> = 45 C	21 700 hrs
	Naval, Sheltered	T <sub>j</sub> = 60 C	T <sub>a</sub> = 40 C	35 800 hrs
	Airborne, Inhabited Cargo	T <sub>j</sub> = 75 C	T <sub>a</sub> = 55 C	26 200 hrs
<b>Software Drivers</b>	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)			
<b>Protocols</b>	<ul style="list-style-type: none"> <li>• HDLC</li> <li>• SDLC</li> <li>• Async</li> <li>• BiSync</li> </ul>			
<b>Supporting Software</b>	Sample driver usage software (C/C++ source code)			
<b>Options</b>	<ul style="list-style-type: none"> <li>• Solaris, QNX, AIX Drivers</li> <li>• SS7, ISDN Protocol (Basic Rate and Primary Rate)</li> <li>• Ethernet / Fast Ethernet Option</li> </ul>			

### 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.