

► 8-Channel High-Speed Serial I/O PCI-104 Adapter

The 8-Channel High-Speed Serial I/O PCI-104 Adapter provides eight channels of simultaneous, ultra-high-speed (>16 Mbps), bi-directional serial communications. Two channels are jumper configurable as RS232/422/485, the other six channels are RS422/485. This adapter also supports four UART (Universal Asynchronous Receiver/Transmitter) (<1 Mbps) RS232 channels.

The adapter is available in three air-cooled versions : ruggedised, industrial and commercial. The ruggedised version is ideally suited for environments with high temperature, shock and vibration levels.

Architecture

The 8-Channel High-Speed Serial I/O PCI-104 Adapter is an intelligent adapter with onboard CPUs and use dual Motorola PowerQUICC II Integrated PowerPC Microprocessors as communication controllers. The PowerQUICC II processors 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.

Ruggedised PCI-104 Adapters

The 8-Channel High-Speed Serial I/O PCI-104 Adapter is intended for very rough use and is exceptionally resistant to shock and vibration. The adapters contain an internal heat equilisation layer and can operate in ambient temperatures of -40 C to +85 C.

Applications

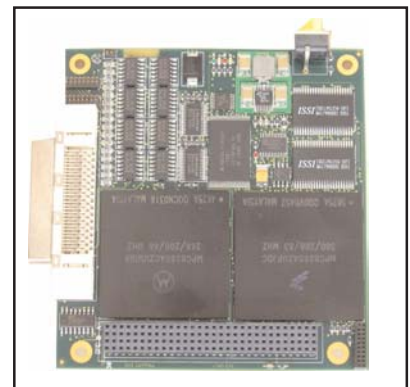
- Distributed real-time applications in harsh environments
- Mission-critical applications
- Avionics
- Vetronics
- High-speed sensor integration

Availability in Other Formfactors

The 8-Channel High-Speed Serial I/O PCI-104 Adapters are also available in the PMC and PCI formfactors.

In the PMC formfactor, they are available in conduction-cooled (-40 C to +85 C) and air-cooled versions : ruggedised (-40 C to +85 C), industrial (-15 C to +75 C) and commercial (0 C to +55 C).

In the PCI formfactor, they are available in air-cooled versions : ruggedised (-15 C to +75 C) and commercial (0 C to +55 C).





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8-Channel High-Speed Serial I/O PCI-104 Adapter Specifications

Bus Interface	32-bit, 3,3 V PCI-bus Complies with PCI-104 Version 1.0 specification		
Serial Interface	Two high-speed channels are jumper configurable as RS232/422/485, the other six are RS422/485. Also four UART RS232 channels.		
	RS232	TxD, RxD, RTS, CTS, CD, CLK_IN, CLK_OUT	
	RS422/485	TxD, RxD, CLK_IN, CLK_OUT	
Serial Channels	8 x SCCs (Serial Communication Controllers) for ultra-high-speed serial links - Synchronous or asynchronous 4 x SMCs (Serial Management Controllers) for UART serial links - Asynchronous, RxD and TxD only, no flow control		
CPU	2 x 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 (8 x SCC ports individually switchable with jumpers) for RS422/485		
I/O Addresses	Automatic assigned to the slot by PCI Rev. 2.2 Plug-and-Play		
Dimensions	95,89 mm x 90,17 mm x 23,80 mm in accordance with PC104 Plus V2.0		
Power Requirement	+3,3 V at 1,3 A; +12 V at 1 mA		
MTBF	Figures according to MIL-HDBK-217F, Parts Stress Method : Ground, Mobile $T_j = 65\text{ C}$ $T_a = 45\text{ C}$ 21 700 hrs Naval, Sheltered $T_j = 60\text{ C}$ $T_a = 40\text{ C}$ 35 800 hrs Airborne, Inhabited Cargo $T_j = 75\text{ C}$ $T_a = 55\text{ C}$ 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	<ul style="list-style-type: none"> • HDLC • SDLC • Async • BiSync 		
Supporting Software	Sample driver usage software (C/C++ source code)		

Environmental Specifications

Temperature	Commercial	Industrial	Ruggedised
- 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 g ² /Hz at 15 Hz to 2 kHz	0,1 g ² /Hz at 15 Hz to 2 kHz	0,1 g ² /Hz at 15 Hz to 2 kHz

Designations

CCII/SIO/PC104/8P/COM	Commercial	RS422/485/232
CCII/SIO/PC104/8P/IND	Industrial	RS422/485/232
CCII/SIO/PC104/8P/RGD	Ruggedised	RS422/485/232