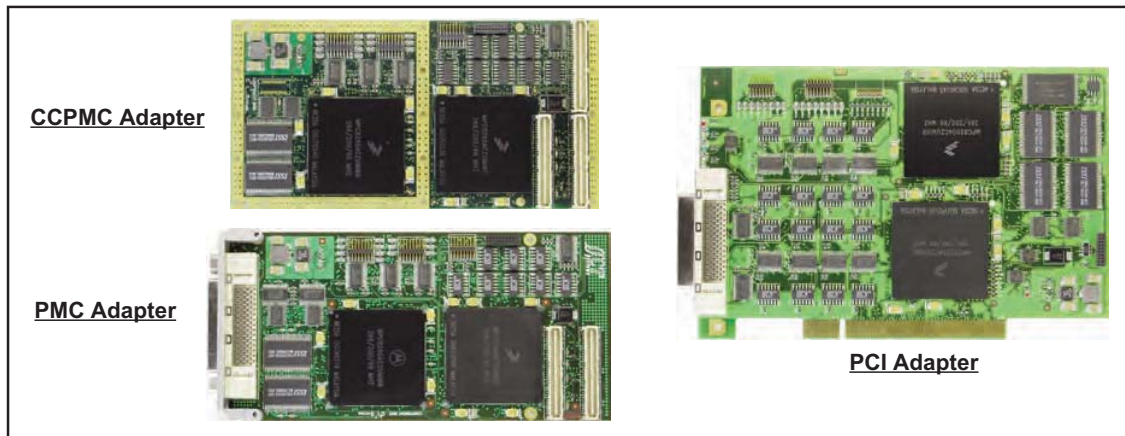


▶ 8-Channel and New Generation 4-Channel High-Speed Serial I/O Adapters

The 8-Channel and New Generation 4-Channel High-Speed Serial I/O Adapters provide eight or four channels of simultaneous, high-speed (>16 Mbps), bi-directional serial communications. All channels are jumper configurable as RS232/422/485. These adapters also support a number of UART (Universal Asynchronous Receiver/Transmitter) (<1 Mbps) channels. The adapters are available in the following industry standard compliant formfactors :

- PMC
 - Air-cooled PMC adapter with frontpanel I/O (IEEE Std 1386.1-2001)
 - Conduction-Cooled PMC (CCPMC) adapter with backplane I/O (ANSI/VITA 20-2001)
 - Conduction-Cooled PMC adapter with frontpanel I/O (requires modification to host carrier)
- PCI-104 (PCI-104 v2.0)
- PCI (PCI Local Bus Specification Rev. 2.3)



Architecture

The 8-Channel and New Generation 4-Channel High-Speed Serial I/O Adapters are intelligent adapters designed with Motorola PowerQUICC II Integrated PowerPC Microprocessors as communication controllers. The PowerQUICC II processor can easily be configured to implement different serial protocols, thus allowing the adapters to keep up with technological advances. All high-speed serial I/O channels are implemented using the PowerQUICC II.

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 8-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



► **8-Channel and New Generation 4-Channel High-Speed Serial I/O Adapters**

Bus Interface	32 bit, 33 / 66 MHz Electrically : PCI Rev. 2.1, 3,3 V signalling (some versions 3,3 V and 5 V)			
I/O Addresses	Automatically assigned to the slot by PCI Rev. 2.1 Plug-and-Play			
Interrupts	PCI INT A			
DMA	Automatic depending on PCI slot			
Serial I/O Interface	SCC Channels	SMC Channels		
	RS-232 : TxD, RxD, RTS, CTS, CD CLK_IN, CLK_OUT	RS-232 : RxD, TxD		
	RS-422/485 : TxD, RxD, CLK_IN, CLK_OUT			
EEPROM	EEPROM for board ID (Plug-and-Play) and configuration options			
Protocols	<ul style="list-style-type: none"> - HDLC - SDLC - Async - BiSync 			
Power	3,3 V at 1,3 A; 5 V at 1 mA (5V PCI version 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 hours
	Naval, Sheltered	T _j = 60 C	T _a = 40 C	35 800 hours
	Airborne, Inhabited Cargo	T _j = 75 C	T _a = 55 C	26 200 hours
CPU	Motorola PowerQUICC II Intergrated PowerPC Microprocessor			
Termination	100 ohm (individually selectable for each SCC channel).			
Bit Rates	Serial I/O Clocking	RS-232	RS-422/485	
	Synchronous Mode	1 Mbps	16 Mbps	
	Asynchronous Mode	1 Mbps	6,25 Mbps	
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 (Hardware Abstraction Layer) only)			
Supporting Software	Sample software driver usage (C/C++ source code).			

Environmental Specifications

Grade	Commercial	Industrial	Ruggedised
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) at 10 Hz to 100 Hz	10 g (peak) at 5 Hz to 2 kHz	10 g (peak) at 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

8 & 4-Channel HS Serial

Board-Level



► **8-Channel and New Generation 4-Channel High-Speed Serial I/O Adapters**

Physical Characteristics			
Formfactor		Dimensions	Mass
PMC (IEEE Std 1386.1-2001)	FDDI	149,00 mm x 74,00 mm, conforming to CMC height envelope.	90 g +/- 10 g
CCPMC (ANSI/VITA 20-2001)	FDDI	143,65 mm x 74,00 mm, conforming to VITA 20 height envelope	80 g +/- 10 g
PCI-104 (PCI-104 v1.0)	FDDI	95,89 mm x 90,17 mm x 23,80 mm	85 g +/- 10 g
PCI (PCI Local Bus Specification Rev. 2.1)	FDDI	175,26 mm x 106,68 mm x 15,24 mm	125 g +/- 10 g

Part Designations					
Part Number	Formfactor	Grade	Nr of SCC	Nr of SMC	PCI VIO
CCII/SIO/PMC/8P/FP/COM	PMC	Commercial	8 x RS-232/422/485	4 x RS-232	3,3 V
CCII/SIO/PMC/8P/FP/IND	PMC	Industrial	8 x RS-232/422/485	4 x RS-232	3,3 V
CCII/SIO/PMC/8P/FP/RGD	PMC	Ruggedised	8 x RS-232/422/485	4 x RS-232	3,3 V
CCII/SIO/PMC/8P/BP/CC	CCPMC	Conduction-Cooled	8 x RS-232/422/485	0	3,3 V
CCII/SIO/PMC/8P/FP1/COM	PMC	Commercial	8 x RS-232/422/485	4 x RS-232	3,3/5,0 V
CCII/SIO/PMC/8P/FP1/IND	PMC	Industrial	8 x RS-232/422/485	4 x RS-232	3,3/5,0 V
CCII/SIO/PMC/8P/FP1/RGD	PMC	Ruggedised	8 x RS-232/422/485	4 x RS-232	3,3/5,0 V
CCII/SIO/PMC/4PN/FP/COM	PMC	Commercial	4 x RS-232/422/485	2 x RS-232	3,3 V
CCII/SIO/PMC/4PN/FP/IND	PMC	Industrial	4 x RS-232/422/485	2 x RS-232	3,3 V
CCII/SIO/PMC/4PN/FP/RGD	PMC	Ruggedised	4 x RS-232/422/485	2 x RS-232	3,3 V
CCII/SIO/PMC/4PN/BP/CC	CCPMC	Conduction-Cooled	4 x RS-232/422/485	0	3,3 V
CCII/SIO/PMC/4PN/FP1/COM	PMC	Commercial	4 x RS-232/422/485	2 x RS-232	3,3/5,0 V
CCII/SIO/PMC/4PN/FP1/IND	PMC	Industrial	4 x RS-232/422/485	2 x RS-232	3,3/5,0 V
CCII/SIO/PMC/4PN/FP1/RGD	PMC	Ruggedised	4 x RS-232/422/485	2 x RS-232	3,3/5,0 V
CCII/SIO/PC104/8P/COM	PC-104	Commercial	2 x RS-232/422/485 6 x RS-422/485	4 x RS-232	3,3 V
CCII/SIO/PC104/8P/IND	PC-104	Industrial	2 x RS-232/422/485 6 x RS-422/485	4 x RS-232	3,3 V
CCII/SIO/PC104/8P/RGD	PC-104	Ruggedised	2 x RS-232/422/485 6 x RS-422/485	4 x RS-232	3,3 V
CCII/SIO/PC104/4PN/COM	PC-104	Commercial	2 x RS-232/422/485 2 x RS-422/485	2 x RS-232	3,3 V
CCII/SIO/PC104/4PN/IND	PC-104	Industrial	2 x RS-232/422/485 2 x RS-422/485	2 x RS-232	3,3 V
CCII/SIO/PC104/4PN/RGD	PC-104	Ruggedised	2 x RS-232/422/485 2 x RS-422/485	2 x RS-232	3,3 V
CCII/SIO/PCI/8P/COM	PCI	Commercial	8 x RS-232/422/485	4 x RS-232	3,3/5,0 V
CCII/SIO/PCI/8P/IND	PCI	Industrial	8 x RS-232/422/485	4 x RS-232	3,3/5,0 V

Board-Level 8 & 4-Channel HS Serial