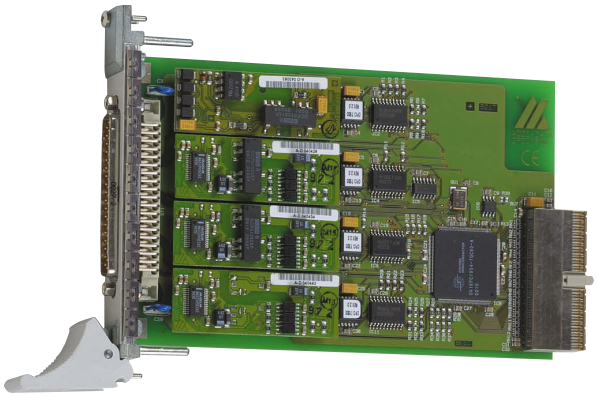
4-port serial interface, RS232, RS422, RS485, 20 mA CL



CPCI-7500

4-port, RS232, RS422, RS485, 20 mA Current Loop

Mode selection through MX modules

With/without optical isolation

Free mode configuration for each port

128-byte FIFO buffer per port

MTBF: 98 551 hours at 45 °C

RoHS 2002/95/EC

CompactPCI™ 32-bit

Also for PCI-Express
See APCIe-7xxx, page 142

Also for PCI
See APCI-7500, page 210

URS-7500-6U
6U bracket

Windows
64/32-bit drivers

The board CPCI-7500 is a 4-port serial interface for industrial applications. It is configured by inserting MX modules which the board identifies automatically. Each serial port can be configured individually through modules in the following modes: RS232, RS422, RS485 (with or without optical isolation) and Current Loop (optically isolated). The optically isolated modules allow a protection up to 1000 V for the use in noisy environments where earth loops can occur. Interrupts, addressing and transfer rate are controlled through the BIOS.
The I/O lines are protected against short-circuits, fast transients, electrostatic discharge and high-frequency EMI. Each port is supported through a 128-byte FIFO buffer for sending and receiving data which guarantees reliable operation with high data volumes.

Features

- Asynchronous 4-port serial interface
- 4 socket for MX modules
- Modular mounting through MX modules
- Can be configured as RS232, RS422, RS485 with or without optical isolation, 20 mA Current Loop (active, passive), with optical isolation
- Addressing through software
- No jumpers: software configuration
- Automatic module recognition
- 128-byte FIFO memory for each interface
- Common interrupts
- Programmable transfer rate
- 5-, 6- or 8-bit character
- 1, 1½ or 2 stop bits
- Parity: even, odd or none
- Automatic transmitter control for RS485

Safety features

- MX modules with optical isolation available
- Protection against fast transients (burst)
- Short-circuits protection for RS422 and RS485
- Internal diagnostic, break, parity, overrun and framing error
- Creeping distance IEC 61010-1 (MX modules)

Applications

- Data acquisition
- Industrial process control
- Industrial communication
- Multi-user systems
- Modem and printer monitoring
- Multidrop applications

Software

A CD-ROM with the following software and programming samples is supplied with the board.

Standard drivers for:

- Linux
- 32-bit drivers for Windows 8 / 7 / Vista / XP / 2000
- Signed 64-bit drivers for Windows 8 / 7 / XP
- Real-time use with Linux and Windows on request

Drivers and samples for the following compilers and software packages:

- Microsoft VC++
- Visual Basic • Delphi

On request:

Further operating systems, compilers and samples.

Driver download: www.addi-data.com/downloads

Phone: +49 7229 1847-0 info@addi-data.com
Fax: +49 7229 1847-222 www.addi-data.com

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MX modules

Operating mode	RS232		RS422		RS485		20 mA CL
							
	MX232-G	MX232	MX422-G	MX422	MX485-G	MX485	MXTTY
Optical isolation 1000 V	✓		✓		✓		✓
creeping distance 3.2 mm	✓		✓		✓		✓
short-circuit protection			✓	✓	✓	✓	
ESD protection	✓	✓	✓		✓		
Burst-protection	✓	✓	✓	✓	✓	✓	✓
Duplex	Full	Full	Full	Full	Half	Half	Full
Max. Baud rate	1 MBaud	1 MBaud	1 MBaud	1 MBaud	1 MBaud	1 MBaud	19,2 kBaud
Modem control signals	✓	✓	Optional RTS/CTS (MX-422-PEP)				
Autom. transmitter control					✓	✓	
Current consumption	16 mA	1 mA	15 mA	5 mA	15 mA	5 mA	82 mA

4-port serial interface

Modes:	RS232, RS422, RS485, 20 mA Current Loop (active, passive) with or without optically isolated via separate MX modules
Transmission mode:	Asynchronous, full /half duplex (MX modules)
Addressing:	Automatic through BIOS
Memory:	128-byte FIFO buffer for each interface
Transfer rate:	Programmable up to 1 MBaud (optional)
Protocol:	5-, 6-, or 8-bit Character 1, 1½ or 2 Stop bits
Parity:	Even, odd, none, mark, space
Interrupt:	Interrupt configuration through BIOS

Safety

Optical isolation:	1000 V (MX modules)

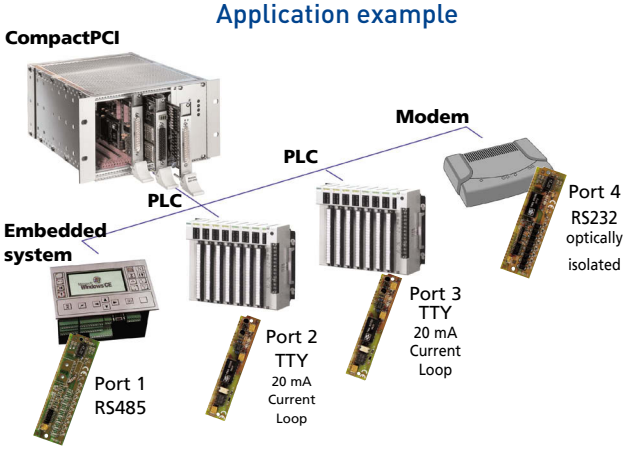
EMC – Electromagnetic compatibility

The product complies with the European EMC directive. The tests were carried out by a certified EMC laboratory in accordance with the norm from the EN 61326 series (IEC 61326). The limit values as set out by the European EMC directive for an industrial environment are complied with. The respective EMC test report is available on request.

Physical and environmental conditions

Dimensions:	3U/4TE
System bus:	CompactPCI 32-bit (5 V signal voltage)
Space required:	CompactPCI-slot, 3U
Operating voltage:	+5 V, ± 5 % from the PC
Current consumption:	192 mA typ.
Front connector:	37-pin D-Sub male connector
Temperature range:	0 to 60 °C (with forced cooling)
MTBF:	98 551 Hours at 45 °C

Application example



Connection cables

Ordering information

CPCI-7500

4-port serial interface, RS232, RS422, RS485, 20 mA CL. Incl. technical description and software drivers.

MX modules: Please order separately!

MX232-G: RS232 mode optically isolated
MX232: RS232 mode
MX422-G: RS422 mode optically isolated
MX422-PEP: RS422 mode optically isolated, with RTS/CTS
MX422: RS422 mode
MX485-G: RS485 mode optically isolated
MX485: RS485 mode
MXTTY: 20 mA Current Loop (active, passive), optically isolated

Option:

URS-7500-6U: 6U bracket for mounting in 6U housing
Quarz: Up to 1 MBaud transfer rate

Connection cables:

ST075: Shielded round cable, 37-pin to 4 x 9-pin
ST074: Shielded round cable, 37-pin to 4 x 25-pin