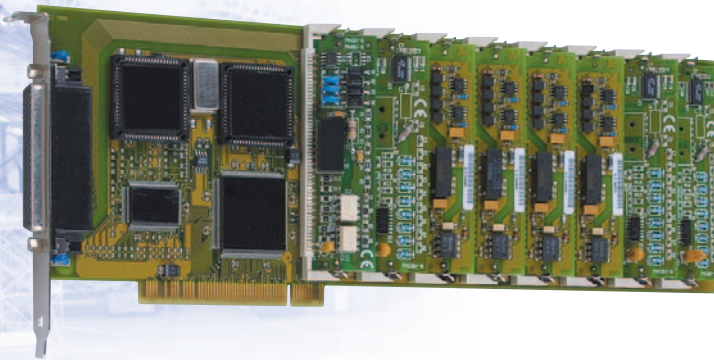


8-port serial interface, modular, with/without optical isolation



APCI-7800

**8-port, RS232, RS422, RS485,
20 mA Current Loop**

**Free mode configuration for
each port through SI modules**

With/without optical isolation

64-byte FIFO buffer for high transfer rates



The APCI-7800 is a PCI 8-port serial interface for industrial applications. It is configured by inserting SI modules which the board identifies automatically. The serial interface can be configured through modules in the following modes: RS232, RS422, RS485 (with or without optical isolation) and Current Loop (with optical isolation). The modules with optical isolation allow a protection up to 1000 V for the use in noisy environments where earth loops can occur.

The I/O lines are protected against short-circuit, fast transients, electrostatic discharge and high-frequency EMI. The interface is supported through a 64-byte FIFO buffer for sending and receiving data and guarantees reliable operation at high transfer rates

Features

- Asynchronous communication adapter, 8-port serial interface
- Modular structure through SI modules
- 8 sockets for SI modules
- Configurable as RS232, RS422, RS485 with or without optical isolation, 20 mA Current Loop (active, passive), with optical isolation through separate SI modules
- Addressing through BIOS, each group of 2 ports is allocated a 16-byte address range
- Automatic module identification
- 64-byte FIFO buffer for each port
- Common interrupt (BIOS)
- Programmable transfer rate
- 5, 6, 7 or 8-bit character
- 1, 1½ or 2 stop bits
- Parity: even, odd or none
- Automatic transmitter control for RS485

Safety features

- SI modules with optical isolation of 1000 V available
- Creeping distance IEC 61010-1 (VDE411-1)
- Protection against fast transients (Burst)
- Short-circuit protection for RS422 and RS485 through PTC
- Detection of false start bits
- Internal diagnostic possibility break, parity, overrun and framing error

EMC tested gemäß 89/336/EEC

- IEC 61326: electrical equipment for measurement, control and laboratory use

Applications

- Data acquisition
- Industrial process control
- Industrial serial communication
- Multi-user systems
- SPS-interface
- Modem and printer interface
- Weighing devices
- ...

Software drivers

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

Standard drivers for:

Windows XP/2000/NT/98/95, Embedded NT
Standard COM driver

Samples for the following compilers:

Microsoft VC++ 5.0
Visual Basic 5.0
Delphi 4

On request:

Drivers for Linux Kernel Version 2.4.2
MS-DOS
Windows 3.11
Embedded NT

Current driver list on the web: www.addi-data.com

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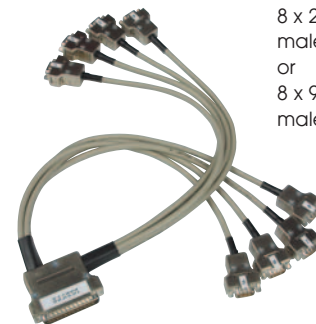
SI MODULES

Operating mode	RS232		RS422		RS485		20 mA CL
<p>The SI modules can be freely selected for each port. They are not included with the board and have to be ordered separately.</p>							
	PM232-G	PM232	PM422-G	PM422	PM485-G	PM485	PMTTY
optical isolation 1000 V	yes		yes		yes		yes
Creeping distance 3.2 mm	yes		yes		yes		yes
Short-circuit protection			yes	yes	yes	yes	
ESD protection	yes	yes					
Burst protection			yes	yes	yes	yes	yes
Duplex	Full	Full	Full/Half	Full/Half	Half	Half	Full
Max. Baudrate	19.2 kBaud to 1 MBaud on request	115.2 kBaud to 1 MBaud on request	115.2 kBaud to 1 MBaud on request	115.2 kBaud to 1 MBaud on request	115.2 kBaud to 1 MBaud on request	115.2 kBaud to 1 MBaud on request	19.2 kBaud
Modem control signals	through software	through software	Automatic	Automatic	Automatic	Automatic	Automatic
Autom. transmitter control					yes	yes	
Current consumption	48 mA	21 mA	42 mA	5 mA	54 mA	5 mA	51 mA

APCI-7800

8-port serial interface		Specifications
Mode:	RS232, RS422, RS485, 20 mA Current Loop (active, passive) with or without optical isolation through separate SI modules	
Transmission mode:	Asynchronous, full or half duplex (SI modules)	
Addressing:	automatic through BIOS	
Memory:	64-byte FIFO buffer for each port	
Transfer rate:	programmable up to 112 kBaud (Optional 1 MBaud for RS485)	
Protocol:	5, 6, 7 or 8-bit character 1, 1½ or 2 stop bits	
Parity:	even, odd, none, mark, space	
Interrupt lines:	common interrupt, automatic configuration through BIOS	
Safety features		
Optical isolation:	1000 V	
Noise immunity		
Test level:	- ESD: 4 kV - Fields: 10 V/m - Burst: 4 kV - Cond. radio interferences: 10 V	
Physical and environmental conditions		
Dimensions:	312 x 99 mm	
System bus:	PCI 32-bit 5 V acc. to specification 2.1 (PCISIG)	
Place required:	long board, 1 PCI slot	
Operating voltage:	+5 V, ± 5 % from the PC	
Current consumption:	425 mA typ.	
Front connector:	78-pin SUB-D female connector	
Temperature range:	0 to 60 °C (with forced cooling)	

Connection cable



8 x 25-pin SUB-D male connector (ST7825) or 8 x 9-pin SUB-D male connector (ST7809)

78-pin SUB-D male connector

ADDICOM APCI-7800

APCI-7800: 8-port serial interface. Incl. technical description and software drivers .

SI modules:

Please order the modules separately

- PM232-G:** RS232 mode with optical isolation
- PM232:** RS232 mode
- PM422-G:** RS422 mode with optical isolation
- PM422:** RS422 mode
- PM485-G:** RS485 mode with optical isolation

- PM485:** RS485 mode
- PMTTY:** 20 mA Current Loop mode (active, passive) with optical with optical isolation
- Option:** up to 1 MBaud transfer rate for RS232, RS422, RS485, PMTTY

Connection

- ST7809:** Shielded round cable, 78-pin to 8 x 9-pin
- ST7825:** Shielded round cable, 78-pin to 8 x 25-pin

ORDERING INFORMATION

www.addi-data.com

Sales: +49(0)7223/9493-120
Fax: +49(0)7223/9493-92