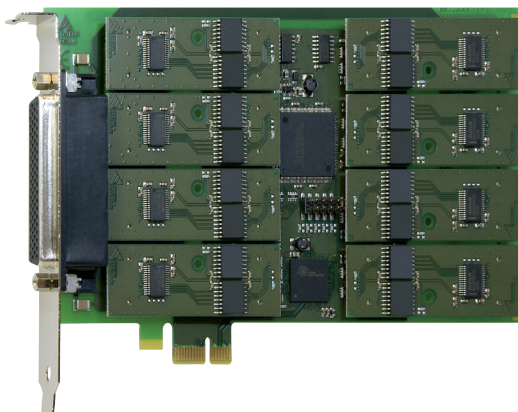


# 8-port serial interface, RS232, RS422, RS485, 20 mA CL, modular mounting through modules

PCI  
EXPRESS®



The APcle-7800 communication boards are configured by inserting SI modules which the board identifies automatically. The serial interfaces can be configured through modules in the following modes: RS232, RS422, RS485 and current loop (with optical isolation).

The SI modules with optical isolation allow a protection of up to 1000 V for the use in noisy environments where ground loops can occur.

The I/O lines are protected against short-circuits, fast transients, electrostatic discharge and high-frequency EMI. The interface is supported through a 128-byte FIFO buffer for sending and receiving data and guarantees reliable operation at high transfer rates.

## Features

- Asynchronous communication adapter
- Modular mounting through SI modules:  
8 sockets for 8-port serial interface
- Can be configured as RS232, RS422, RS485, 20 mA Current Loop (active, passive), with optical isolation through separate SI modules
- Automatic addressing through BIOS
- Automatic module identification
- UART 16C950, downward compatible to 16C450
- 128-byte FIFO buffer for sending and receiving data
- 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 and transmitter control through FIFO level
- Common interrupt

## Safety features

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

## APcle-7800 – 8-port serial interface RS232, RS422, RS485, 20 mA Current Loop

Free mode configuration for each port  
through SI modules

With optical isolation 1000 V

128-byte FIFO buffer for each port

16C950-compatible UART

## Applications

- Industrial serial communication
- Data acquisition
- Multi-user systems
- PLC interface
- Multidrop applications
- Modem and printer control, etc.

## Software

### Drivers and samples

This software can be downloaded for free from our website [www.addi-data.com/drivers](http://www.addi-data.com/drivers).

Software for other operating systems and programming environments is available on request.



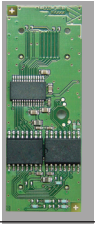
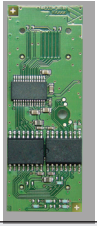
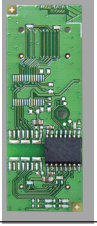

2000 / XP / Vista / 7 / 8 / 10 / 11



Phone: +49 7229 1847-0  
Fax: +49 7229 1847-222

info@addi-data.com  
www.addi-data.com

## SI modules

Operating mode	RS232	RS422	RS485	20 mA CL
				
	SI232-G	SI422-G	SI485-G	SITTY
Optical isolation 1000 V	O	O	O	O
Creeping distance 3.2 mm	O	O	O	O
Short-circuit protection		O	O	
ESD protection	O	O	O	O
Burst protection	O	O	O	O
Duplex	Full	Full	Half	Full
Max. Baud rate	1 MBaud	1 MBaud	1 MBaud	19.2 kBaud
Modem control signals	O	Optional RTS/CTS (SI-422-PEP)		
Autom. transmitter control			O	
Current consumption	16 mA	15 mA	15 mA	82 mA

## Specifications

## APCLe-7800

### Serial interface - 8-port

Mode:	RS232, RS422, RS485, 20 mA Current Loop (active, passive) with optical isolation through separate SI modules
Transmission mode:	Asynchronous, full or half duplex (SI modules)
Addressing:	Automatic through BIOS
Memory:	128-byte FIFO buffer for transmitter and receiver
Transfer rate:	Programmable up to 1 MBaud; transfer rate up to 2.5 MBaud on request
Protocol:	5-, 6-, 7- or 8-bit character; 1, 1½ or 2 stop bits
Parity:	Even, odd, none, mark, space
Interrupt lines:	Automatic configuration through BIOS

### 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 standard DIN EN IEC 61326-1. 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.

### Safety features

Optical isolation:	1000 V (SI modules)
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### Physical and environmental conditions

Dimensions:	168 x 99 mm
System bus:	1-/4-/8-/16-lane PCI Express acc. to PCI Express base specification, Revision 1.0a (PCI Express 1.0a)
Space required:	1 PCI Express slot
Operating voltage:	+3.3 V from the PC
Front connector:	78-pin D-Sub female connector
Temperature range:	0 to 60 °C (with forced cooling)

## Ordering information

### APCLe-7800

**APCLe-7800:** 8-port serial interface (1 x 78-pin D-Sub)  
Each incl. technical description and software drivers.

### SI modules

Please order the modules separately!

- SI232-G:** RS232 mode, optically isolated
- SI422-G:** RS422 mode, optically isolated
- SI422-PEP:** RS422 mode, optically isolated, with RTS/CTS
- SI485-G:** RS485 mode, optically isolated
- SITTY:** 20 mA Current Loop mode (active, passive), optically isolated

### Accessories

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