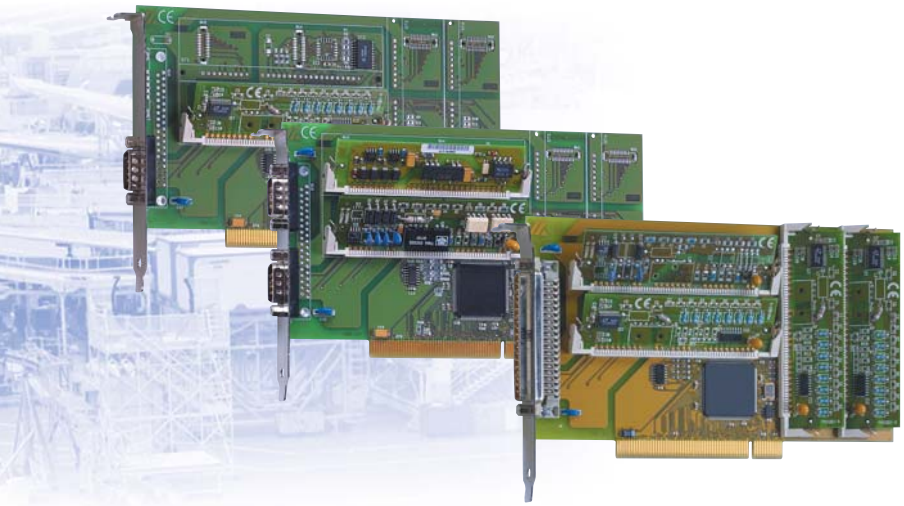
1-port, 2-port, 4-port serial interface, modular, with/without optical isolation



APCI-7300-MX - 1-port serial interface
APCI-7420-MX - 2-port serial interface
APCI-7500-MX - 4-port serial interface

RS232, RS422, RS485, 20 mA Current Loop

Free mode configuration for each port through MX modules

With/without optical isolation

128-byte FIFO buffer

16C950 UART downward compatible

APCI-7500
Kompatible Version
for the *CompactPCI™*-bus

The APCI-7xxx-MX series is configured by inserting MX modules which the board identifies automatically. This series allows higher transfer rates than boards with SI modules.
The APCI-7300-MX is a 1-port serial interface, the APCI-7420-MX a 2-port, and the APCI-7500-MX a 4-port serial interface for the PCI bus.
The serial interfaces 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 of up to 1000 V for the use in noisy environments where earth 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 structure through MX modules
  1 socket for 1-port serial interface (APCI-7300-MX)
  2 sockets for 2-port serial interface (APCI-7420-MX)
  4 sockets for 4-port serial interface (APCI-7500-MX)
- Can be configured as RS232, RS422, RS485 with/without optical isolation, 20 mA current loop (active, passive), with optical isolation through separate MX modules
- Automatic addressing through BIOS
- Automatic module identification
- 128-byte FIFO buffer for sending and receiving buffers
- 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 (APCI-7420-MX + APCI-7500-MX)

Safety features

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

EMC tested according to 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
- Multidrop applications
- Weighting 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

www.addi-data.com
Vertrieb: +49(0)7223/9493-0
Telefax: +49(0)7223/9493-97

1-port, 2-port, 4-port serial interface, modular, with/without optical isolation

MX-MODULES

Operating mode	RS232		RS422		RS485		20 mA CL
The MX modules can be freely selected for each port. They are not included with the board and must be ordered separately							
Modules	**MX232-G**	**MX232**	**MX422-G**	**MX422**	**MX485-G**	**MX485**	**MXTTY**
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	yes		yes		
Burst protection	yes	yes	yes	yes	yes	yes	yes
Duplex	Full	Full	Full/Half	Full/Half	Half	Half	Full
Max. Baud rate	115.2 kBaud 1MBaud opt.	115.2 kBaud 1MBaud opt.	115.2 kBaud 1MBaud opt.	115.2 kBaud 1MBaud opt.	115.2 kBaud 1MBaud opt.	115.2 kBaud 1MBaud opt.	19.2 kBaud
Modem control signals	through software	through software	optional RTS/CTS				
Autom. transmitter control					yes	yes	
Current consumption	86 mA	10 mA	46 mA	10 mA	58 mA	10 mA	75 mA

APCI-7300-MX / APCI-7420-MX / APCI-7500-MX

Spezifikationen

Serielle Schnittstelle - 1-fach, 2-fach oder 4-fach

Mode:	RS232, RS422, RS485, 20 mA Current Loop (aktiv, passiv) mit oder ohne galv. Trennung über separate MX-Module
Übertragungsart:	Asynchron, Full- oder Half-Duplex (MX-Module)
Adressierung:	Automatisch über BIOS
Speicher:	128-Byte FIFO-Buffer für Sender und Empfänger
Übertragungsrate:	Programmierbar bis zu 115,2 kBaud beliebige Baudraten bis 1 MBaud auf Anfrage
Protokoll:	5-, 6-,7- oder 8-Bit Character 1,1½ oder 2 Stopbits
Parität:	Gerade, ungerade, keine, Zeichen, Leerzeichen
Interruptleitungen:	Automatische Konfiguration über BIOS

Sicherheitsmerkmale

Galvanische Trennung:	1000 V (MX-Module)

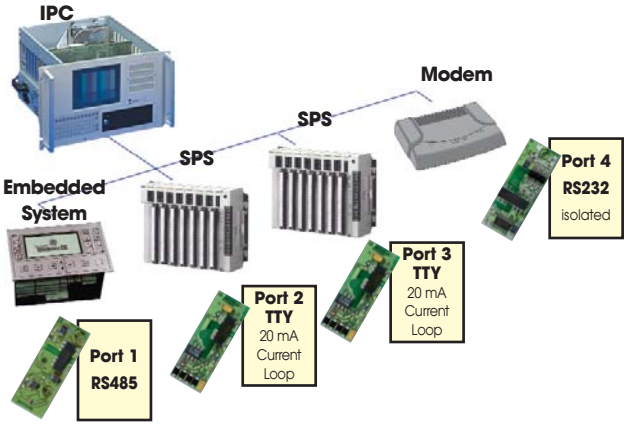
Störsicherheit

Prüfschärfe:	- ESD: 4 kV - Burst: 4 kV	- Felder: 10 V/m - Geleitete Funkstörungen: 10 V

PC-Systemanforderungen und Umgebungsbedingungen

Abmessungen:	175 x 99 mm
Systembus:	PCI 32-Bit 5 V gemäß Spezifikation 2.2 (PCIMXG)
Platzbedarf:	1 PCI Steckplatz
Betriebsspannung:	+5 V, ± 5 % vom PC
Stromverbrauch:	320 mA typ.
Frontstecker:	9-pol. SUB-D Stiftstecker (APCI-7300-MX) 2x9-pol. SUB-D Stiftstecker (APCI-7420-MX) 37-pol. SUB-D Stiftstecker (APCI-7500-MX)
Temperaturbereich:	0 bis 60 °C (mit Zwangsbelüftung)

Applikationsbeispiel für APCI-7500-MX



Anschlusskabel für APCI-7500-MX

37-pol. SUB-D Buchsenstecker

4 x 9-pol. SUB-D Stiftstecker (ST075) oder 4 x 25-pol. SUB-D Stiftstecker (ST074)

BESTELLINFORMATIONEN

ADDICOM APCI-7300-MX / APCI-7420-MX / APCI-7500-MX

APCI-7300-MX: 1-fach seriell **APCI-7420-MX:** 2-fach seriell **APCI-7500-MX:** 4-fach seriell. Jeweils inkl. Referenzhandbuch und Software-Treiber.

MX-Module: **Bitte Module zusätzlich bestellen!**

MX232-G: RS232 Mode mit galvanischer Trennung
MX232: RS232 Mode
MX422-G: RS422 Mode mit galvanischer Trennung
MX422: RS422 Mode
MX485-G: RS485 Mode mit galvanischer Trennung
MX485: RS485 Mode
MXTTY: 20 mA Current Loop Mode (aktiv, passiv) mit galv. Trennung

Option: 1 MBaud Übertragungrate für RS232, RS422, RS485

Zubehör

ST074: Geschirmtes Rundkabel, 37- auf 4 x 25-polig
ST075: Geschirmtes Rundkabel, 37- auf 4 x 9-polig

Zubehör für APCI-7500-MX

ST075: Geschirmtes Rundkabel, 37- auf 4 x 9-polig
ST074: Geschirmtes Rundkabel, 37- auf 4 x 25-polig

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