

Industrial communication

Serial interfaces for the PCI bus



PC-based communication applications

In the automation industry many different tasks have to be performed with devices featuring serial interfaces designed according to the RS232, RS422 and RS485 standards or the 20 mA current loop: micro-processor-controlled devices have to be occasionally parameterized, data has to be cyclically acquired from measuring devices and sensors and so on. For these tasks barcode scanners, magnetic card readers, various types of sensors, counter and speedometer modules, weighting devices, displays, CNC machines, robots, SPC systems and much more are needed.

With its ADDICOM range, ADDI-DATA has developed a range of electrically isolated serial communication boards for the PCI bus with 1, 2, 4 or to 8 ports.

Features like high data throughput, plug-and-play capability and interrupt sharing have made the PCI bus the standard solution for industrial PC applications. One of the great advantages of these PCI interface boards: they leave ISA slots free for other applications.

Free configuration of the operating mode

In order to flexibly adapt the hardware to the diverse requirements coming up in industrial environments, ADDI-DATA has developed a concept with SI modules. The base board has 1, 2, 4 or 8 empty module slots in which modules can be inserted according to the user's instructions. modules for RS232, RS422, RS485 or 20-mA current loop (TTY) standards are available. Due to the modular set-up each port can be freely configured. In this way the hardware can be adapted optimally to changing requirements.

Apart from such a high degree of flexibility ADDI-DATA has reached another goal: high safety for your application.

Industry standard communication

To increase system reliability in harsh environment, ADDI-DATA serial interface boards are available with optional isolation. This isolation protects your PC and equipment against damages from ground loops. In addition, the modules are protected against electrostatic discharge, burst, and in the case of the RS485 mode short circuits.

Faster transfer rate and common interrupt

As a standard, data is transferred at rates of up to 115 kBaud. Clock speed options allow Baud rates up to 1 MBaud. 128-byte FIFO buffers for each channel make sure that even at high transfer rates no data is lost. Due to the common interrupt function there is never a lack of interrupt lines, even with many interfaces installed.

Fast and easy operation

The board is supplied with software which enables the user to put it into operation, parameterize it and carry out tests quickly and easily. The 32-bit program for Windows XP/2000/NT4.0/98/95 automatically recognizes which module is fitted into which slot and displays the occupied resources.

With the included standard drivers the interfaces can be accessed as usual COM ports by any kind of software – even under Windows XP/2000/NT/98/95.

	Serial interface			
	1-port	2-port	4-port	8-port
	APCI-7300	APCI-7420	APCI-7500	APCI-7800
Bus	PCI	PCI	PCI	PCI
Operating mode	RS232, RS485, RS422, 20 mA CL	RS232, RS485, RS422, 20 mA CL	RS232, RS485, RS422, 20 mA CL	RS232, RS485, RS422, 20 mA CL
Structure with SI modules	yes	yes	yes	yes
Optical isolation	1000 V, optional	1000 V, optional	1000 V, optional	1000 V, optional
Configurable as standard interface	yes	yes	yes	yes
Interrupts	BIOS	BIOS	BIOS	BIOS
Addressing				
Through software	BIOS	BIOS	BIOS	BIOS
COM	free configuration	free configuration	free configuration	free configuration
Functions				
FIFO memory	128 bytes	128 bytes	128 bytes	64 bytes
Transfer rate: 50 Baud to 112 kBaud	20 mA CL, RS232 isolated < 19,2 kBaud • RS232, RS485, RS422 < 115200 Baud • < 1 MBaud on request, RS485, RS422			
Overvoltage protection	yes	yes	yes	yes
ESD protection	RS232	RS232	RS232	RS232
Remarks	modular	modular common- interrupt	modular, common- interrupt	modular, common- interrupt
Connection cable			ST075: 4 x 9 -pin ST074: 4 x 25 -pin	ST7809: 8 x 9 -pin ST7825: 8 x 25 -pin
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Software	Drivers for Linux, Windows XP/2000/NT/98 + Samples Current driver list see on the web www.addi-data.com			

