

# 1784-PKT<sub>x</sub> Communication Cards Combine DH+, DH-485 and RIO with PCI Performance



(Catalog Numbers - 1784-PKT<sub>x</sub>, -PKTXD, -PKTS)

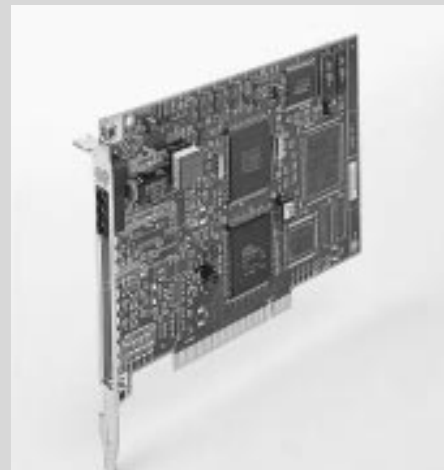
## Product Profile



The 1784-PKT<sub>x</sub> Card  
40029



The 1784-PKT<sub>x</sub>D Card  
40028



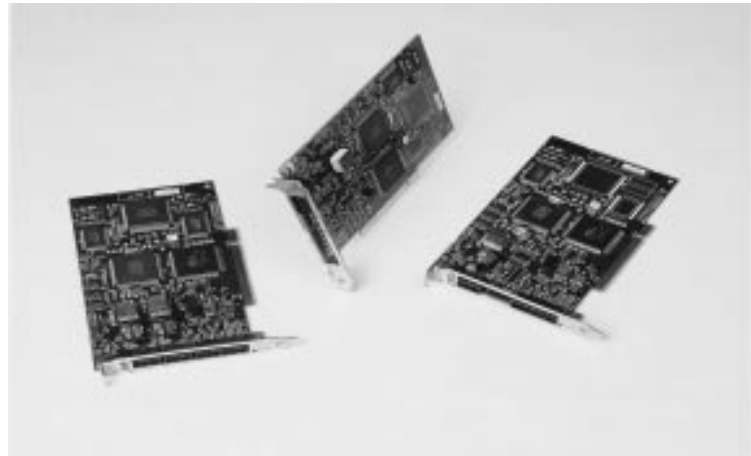
The 1784-PKTS Card  
40030

Use PCI technology to interface your PC or PC-based controller to Data Highway Plus™, Data Highway 485 or remote I/O networks with Allen-Bradley's 1784-PKT<sub>x</sub> family. This family of PCI interface cards leverages PCI and plug and play technology. All three cards allow for the automation of base memory addresses and interrupt requests.

### Hardware/Software Compatibility

The PKT<sub>x</sub> family functions well with evolving hardware and software platforms. Using Rockwell Software's RSLinx software, these cards operate within the Windows™ 95 and Windows NT platforms. Using the 6001-RIO RIO Toolkit and the 1784-PKTS, you can develop a remote I/O scanner driver. If you are using MS-DOS, Windows 3.x, or another operating system, you can design drivers for DH+™ or DH485 applications using 1784-DP5 specifications.

## The PKTx Family



The 1784-PKTx Family

40027

Catalog Number	Description
1784-PKTS	Single channel card supporting RIO scanner only
1784-PKTX	Single channel card supporting DH+, RIO scanner, and DH-485
1784-PKTXD	Dual channel card supporting DH+, RIO Scanner, and DH-485 on first channel, and DH+ and RIO scanner on the second channel

## PKTx Family Benefits

### Stock Fewer Parts

The PKTx family of interfaces helps reduce the quantity and variety of PC interfaces you'll need to support your Allen-Bradley control system. A single product can now support three A-B networks—Data Highway Plus, Data Highway 485 and remote I/O. This gives you flexibility in stocking fewer parts.

## The 1784-PKTS - Scanner-Only Interface

### Features/Benefits

- developed for applications using a personal computer for monitoring Allen-Bradley I/O modules
- intended for use where PC-based control systems are needed

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### **The 1784-PKTX - Selective Single Channel**

#### **Features/Benefits**

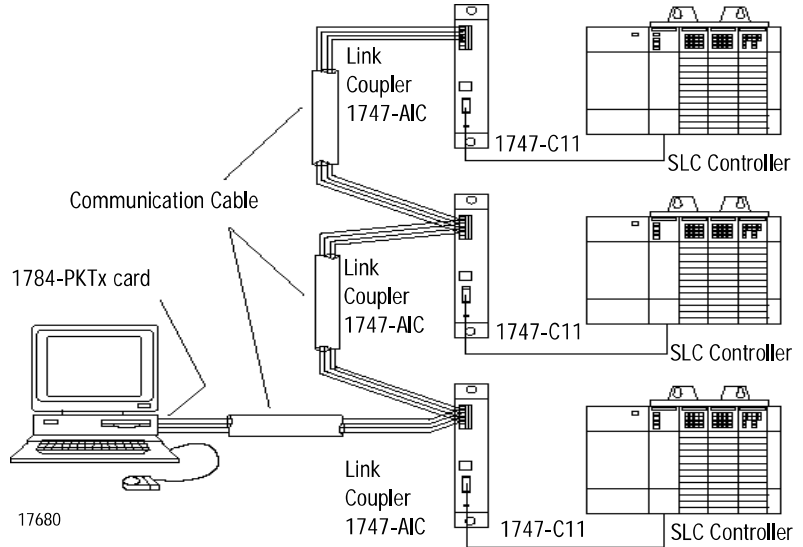
- provides a single channel for selective support of DH+, DH-485, or remote I/O
- two physical communication ports associated with a single protocol channel provide connections to networks
- can be configured to support a Man/Machine Interface (MMI) operating on either DH+ or DH-485 networks, or as a scanner module on the remote I/O network

### **The 1784-PKTXD - Dual Channels**

#### **Features/Benefits**

- divided into two channels which allows a personal computer to function as though two individual interface cards were installed and operating on its backplane
- each channel can support unique A-B communication protocols, which can operate simultaneously and independently
- single physical port associated with CH1 can be configured to support DH+, DH-485 and/or remote I/O networks
- single physical port associated with CH2 can be used to support an additional DH+ or remote I/O connection
- network interface diagnostics are provided by on-board LEDs located on the outside of the module.
- works with applications where programmable controllers must communicate with a MMI
- capable of configuring the one channel for DH+ and the second channel for DH-485 which allows Windows 95-based personal computers to run RSLinx software
- data can be collected from programmable controllers and networks simultaneously

**Figure 1 Communicating to multiple SLC programmable controllers via the DH-485 network with a 1785-PKTXD card**



## Connecting Personal Computers to A-B Networks

### Custom Cables

Allen-Bradley offers a variety of cable assemblies that simplify connecting your personal computer to A-B networks and processors. Keeping an assortment on hand will allow you to take full advantage of the flexibility of the 1784-PKTx family of interface cards.

For connections to:	Use this cable:	
remote I/O	1770-CD <sup>①③</sup>	Belden #9463
DH+	1770-CD <sup>①③</sup>	Belden #9463
DH-485	Belden #3106A <sup>①②</sup>	
Classic programmable controllers	1784-CP12	3-pin Phoenix connector to a 9-pin D-shell
Enhanced programmable controllers	1784-CP13	3-pin Phoenix connector to an 8-pin DIN
SLC 5/04 processors (direct DH+ connection)	1784-CP13 (DH+)	3-pin Phoenix connector to an 8-pin DIN
SLC family processors (direct DH-485 connection)	1784-CP14 (DH-485)	or 6-pin Phoenix to an RJ-45

<sup>①</sup>Cables used for construction of custom cables  
<sup>②</sup>Mating Connector: A-B PN 941999-06 or Phoenix Order No. 1849406  
<sup>③</sup>Mating Connector: A-B PN 941999-03 or Phoenix Order No. 1849396

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## Developers Kit

For third parties developing applications for MS-DOS and Windows 3.x, or other operating systems, A-B provides development software and documentation which includes DH+ and DH-485 binary and loader files.

A developer's kit (catalog number DP-5), which includes a diskette and documentation, is available for developing remote I/O scanner interface drivers. In addition to binary and loader files, the documentation provides examples of C code applications.

## Diagnostic Software

A diagnostic software program is included with the 1784-PKTX, -PKTXD, -PKTS cards. The program performs a variety of tests on the card, the host PC and the dual-port memory interfaces.

## Software Compatibility

RSLinx is PKTx-compatible and will operate on DH+ and/or DH-485 networks. Refer to Rockwell Software Inc.'s "Software Connection" for the latest list of compatible software products and connectivity supported.

## Specifications

### Functional Specifications

1784-PKTx	CH 1A (3-pin Phoenix) runs DH+ or remote I/O CH 1C (6-pin Phoenix) runs DH-485
1784-PKTXD	CH 1A (3-pin Phoenix) runs DH+ or remote I/O CH 1C (6-pin Phoenix) runs DH-485 Ch2 (3-pin Phoenix) runs DH+ or remote I/O
1784-PKTS	CH 1A (3-pin Phoenix) runs remote I/O
Maximum line lengths and communication rates	<b>DH+:</b> 10,000 ft. (3048 m) @ 57.6K bit/s 5,000 ft. (1,524 m) @ 115.2K bits/s 2,500 ft. (762 m) @ 230.4K bits/s <b>DH-485:</b> 4,000 ft. (1219 m) @ 1200, 2400, 4800, 9600 or 19,200 bits/s <b>remote I/O:</b> 2,500 ft. (762 m) @ 230.4K bit/s 5,000 ft. (1524 m) @ 115.2K bit/s 10,000 ft. (3048 m) @ 57.6K bit/s
Bus communications	Local PCI
LEDs	1 diagnostic/status LED per channel
Wiring category	2 <sup>1</sup>
Number of modules per system	4 maximum (specified by jumper on card)

<sup>1</sup> Refer to publication 1770-4.1, Industrial Automation Wiring and Grounding Guidelines for Noise Immunity.

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## System Requirements

Operating system	Windows 95 and Windows NT  For other operating systems, you have to create your own driver.
Driver development for remote I/O	6001-RIO, contains binary files and example C code for remote I/O communication
Driver development for DH+ or DH-485	Use the RSLinx PKTx driver.  1784-DP4, contains binary files and example C code for DH+ or DH-485 communication.

## Environmental Specifications

Operational slot temperature	0 to 60°C (32 to 140°F)
Non-operational slot temperature	-40 to 85°C (-40 to 185°F)
Relative humidity	5- 95% without condensation
Vibration	10 - 60 Hz, constant 0.012 in displacement 60 - 150 Hz, constant 2.0 G acceleration
Operational shock	30 G peak for 11 ± 1 ms
Non-operational shock	50 G peak for 11 ± 1 ms
Power dissipation (for the PKTXD)	800ma @ 5Vdc 4.0W

## For More Information

For more information on the PKTx family of PC interfaces or any of our products and services, contact your local Allen-Bradley sales office or appointed distributor, or write: Allen-Bradley Company Inc., Promotional Programs, 1 Allen-Bradley Drive, Cleveland, Ohio 44124.