RocketPort® 8J/PCI

Hardware Reference Card

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Overview

The *RocketPort 8J/PCI* is an eight-port serial controller board designed to fit into the PCI-bus expansion slot of an Intel® based personal computer. This board features eight RS-232 DTE serial ports, accessible through standard RJ11 jacks built into the card's mounting bracket.

Note: RJ11 cables not included.

The RocketPort 8J controller uses a 36 MHz processor specifically designed to process asynchronous serial communications to maximize performance and eliminate bottlenecks. It is I/O mapped, to eliminate memory-mapping conflicts, and also uses Application Specific Integrated Circuits (ASICs) technology to replace most hardware components, including:

- The processor
- Serial controller
- Bus interface logic and other miscellaneous logic

You can install up to four RocketPort 8J controller boards in one PC, for a total of 32 additional serial ports, or you can install it in combination with other RocketPort PCI-bus and ISA-bus products, to produce a communications configuration suited to your needs.

Note: If you are installing a combination of PCI-bus and ISA-bus RocketPort cards, read the installation instructions before beginning installation.

The RocketPort series is easy to install and configure, using this document and the software device driver installation instructions for your operating system. (*Device driver installation instructions are available separately.*)

Specifications

The following tables list RocketPort 8J/PCI specifications:

Environmental Conditions

Condition	Value

Air temperature:
  System on
  System off
	0 to 40°C
	-20 to 85°C

Humidity (non-condensing):
  System on
  System off
	8% to 80%
	20% to 80%

Altitude	0 to 10,000 feet

Electromagnetic Compliance

Topic	Specification
Canadian EMC requirements	Yes
CISPR-22/EN55022 Class A	Yes
EN50082 (801-2 ESD, 801-3 RF, and 801-4 FT)	Yes
FCC Class A certification	Yes
Surge Protection	Meets standard EIA-232-E and provides ESD surge protection exceeding 10 KV.

Controller Specifications

Topic	Specification		
Bus interface	PCI		
I/O ports per expansion slot	8		
Maximum number of RocketPort controllers per system	4		
Data interface	RS-232 DTE		
Baud Rate (*Maximum rate depends on hardware and OS setup.*)	50 to 460.8 Kbps		

Device driver control:
  Data bits
  Parity
  Stop bits
	7 or 8
	Odd, Even, None
	1 or 2		

Current consumption	+5V 440mA	+12V 100mA	-12V 160mA
Dimensions	6" by 5"		
Heat output	18.1 BTU/hr		
Mean time between failures	31.8 Years		

Installing the Controller Board

Note: *For best result, we recommend installing RocketPort controller boards one at a time, in order to simplify the configuration and troubleshooting process.*

RocketPorts are available in both PCI- and ISA-bus types. If you already have one or more ISA-bus RocketPorts installed in your computer, or if you plan to install a combination of PCI- and ISA-bus cards at this time, read the **Special Instructions** (at right) before proceeding.

If you are not using this RocketPort PCI card in a system also containing RocketPort ISA cards, follow these steps:

1. Turn your computer off. Remove the system unit cover.

2. Select an available PCI expansion slot and remove the expansion slot cover.

3. Write down the controller board model number and serial number. You will need this information if you call Comtrol technical support.

4. Insert the controller in the expansion slot. Make sure it is seated securely. Reinstall the expansion slot cover screw and replace the system unit cover.

5. Connect the serial cables. If you need to build cables, see Connectors and Pinouts.

6. Switch the computer back on. The computer's system BIOS will automatically recognize the new interface board and handle all I/O address configuration.

7. Install the device driver software and verify and troubleshoot the installation, following the instructions for your operating system.

8. If you have additional RocketPort PCI controllers to install at this time, repeat steps 1—6 for each card.

Special Instructions

These instructions apply only if you already have one or more RocketPort ISA controllers installed in your system, or if you plan to install a combination of PCI-bus and ISA-bus RocketPort controller boards at this time.

If you have RocketPort ISA controllers already installed:

You must remove any existing RocketPort ISA cards before installing RocketPort PCI cards. After you have successfully installed the PCI card(s), reinstall the ISA card(s).

If you are installing both ISA- and PCI-bus RocketPorts in a new installation:

You must complete installation of all PCI-bus RocketPort cards before beginning to install any ISA-bus RocketPorts.

Explanation:

The memory I/O addressing for RocketPort PCI cards is handled automatically by the computer's system BIOS, when you first power up the computer after installing new "plug and play" hardware. The I/O addressing for RocketPort ISA cards is set manually, using DIP switches on the RocketPort card.

If you install the ISA cards *before* installing the PCI cards, the ISA card addressing will interfere with the computer's ability to recognize the PCI cards, and may prevent the PCI cards from operating.

Additional considerations:

If you are mixing PCI and ISA RocketPorts and setting DIP switches on the ISA cards, the first ISA board you install is the "first" controller for I/O addressing purposes, even if it's actually the second, third, or fourth board you install. (For more information, see the *RocketPort ISA Hardware Reference Card.*)

Connectors and Pinouts

The RocketPort 8J/PCI features eight standard RJ11 modular connectors, located on the controller board mounting bracket. The ports are numbered 0 through 7, with Port 7 being the connector closest to the bus.

Use the following table and figures for pinout information regarding the RJ11 jack.

RJ11 Connector Pinouts

Pin	RS-232 Signals
1	DTR
2	GND
3	TxD
4	RxD
5	DCD
6	CTS
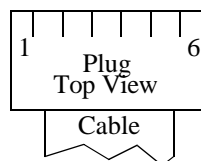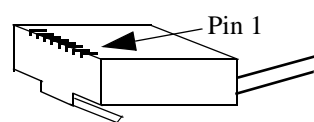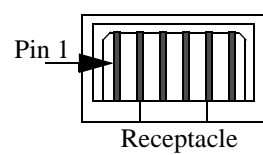
Building a Loopback Connector

Loopback connectors are plugs, with pins wired together as shown, that are used in conjunction with the RocketPort diagnostic software to test serial ports.

Wire these pins together to create an RJ11 loopback plug:

- **Pins 3 to 4**
- **Pins 1 to 5 to 6**
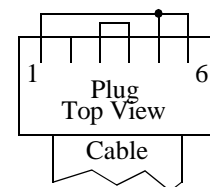
Technical Support

Comtrol has a staff of support technicians available to help you. U.S. telephone support is available from 8 AM to 6 PM Central time, Monday through Friday (holidays excluded), at the phone number listed below. Before you call, please have the following information available: controller model, interface type, I/O address selection, IRQ used, operating system type and release, device driver release number, and computer make, model, and processor speed.

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