



# RocketPort™ USB Serial Hub (RPUSBSH)

## Hardware Documentation

### Product Overview

The RocketPort USB Serial Hub (RPUSBSH) connects to a Universal Serial Bus (USB) port on a PC and provides up to four ports serial interface connections. The RPUSBSH series includes two models:

- RS-232
- RS-422

RocketPort USB Serial Hub series supports the following features:

- Four independent high-speed serial interfaces (RS-232 or RS-422, depending upon model)
- Speeds up to 115.2 Kbps
- 128-byte FIFO, which relieves the CPU of excessive interrupts
- The serial ports appear as COM ports that support all standard RS-232 or RS-422 devices
- “Plug-and-Play” and “Hot Plug” capability
- Bus powered
- Compatible with USB specification 1.0/1.1
- Windows 98 compatible

The RocketPort USB Serial Hub series uses an internally generated 48 MHz controller specifically designed for a USB port to operate four serial port communications ports. With the USB standard of high-speed data transfers, this device is ideal for connections to high-speed modems or ISDN terminal adapters. This device and its software enable the USB interface to be transparent to the peripheral and requires no firmware changes. This makes it possible for serial peripherals to easily interface with a USB port. This feature is ideal for legacy applications.

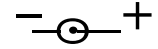
### Installing the Hardware

Hardware installation is discussed in the [Software Installation](#) document.

### Using the Optional Power Supply Feature

Use the optional power supply feature if you are connecting to a USB hub with cables longer than the 5 meters, which is specified in the USB specification. If connecting to a USB hub (not a PC USB port), the USB hub must be self-powered (external power supply).

If you want to connect a third-party power supply to the RocketPort USB Serial Hub, it must be a *UL Listed Direct Plug-In Power Unit identified as Class 2* and rated 5V DC +/- 10% and 1 A +/- 20%. Polarity is illustrated in this figure and marked on the back of the unit above the connector.



*Inside positive, outside negative.*

**Note:** Failure to use the correct power supply may damage the unit and void the warranty.

### LED Description

The Power light (amber) on the front of the unit indicates that there is power coming into the unit.

**Note:** This does not signify that the unit is working properly. Use WCOM32 supplied with the driver to diagnose possible problems with the unit.

### Building Cables

Use the following table for pinout information for the DB9 serial port connectors on the RocketPort USB Serial Hub.

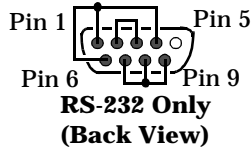
Pin Number	RS-232 Signals	RS-422 Signals
1	DCD	Not used
2	RxD	RxD-
3	TxD	TxD-
4	DTR	Not used
5	GND	GND
6	DSR	Not used
7	RTS	TxD+
8	CTS	RxD+
9	RI	Not used

### Building Additional Loopback Plugs

Loopback connectors are DB9 female serial port plugs with pins wired together as shown, and are used with WCOM to test serial ports. The RPUSBSH is shipped with a single loopback plug. This information can help you build additional plugs or replace a missing loopback.

Wire the following pins together for an RS-232/422 loopback plug.

- Pins 1 to 4 to 6
- Pins 2 to 3
- Pins 7 to 8 to 9



## Operating Conditions

The following tables illustrate RocketPort USB Serial Hub conditions and specifications.

Environmental 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	Status
Emission: Canadian EMC requirements CISPR-22/EN55022 Class A FCC PART 15, Subpart J: Class A	Yes
Immunity: EN50082: 801-2 ESD, 801-3 RF, 801-4 FT	Yes
UL Recognized	Yes

Topic	Hardware Specification
Baud rate	115 Kbps
Bus interface	USB
Control by device driver: Data bits Parity Stop bits	7 or 8 Odd, Even, None 1 or 2
Current consumption: RS-232 RS-422	125 mA +/- 20% 136 mA +/- 20%
Dimensions	3" x 4.375" x 1.75"
Mean time between failure	70.2 years
Number of serial ports	4
Optional power supply (max)	5V DC +/- 10% and 1 A
Output (voltage swing): RS-232 RS-422	+5V min, +7.5V typical +2.5 min, Max = VCC
Power consumption	< 1 W
Surge protection	10 KV ESD
Weight	6.5oz

## FCC Notices Radio Frequency Interference (RFI) (FCC 15.105)

This equipment has been tested and found to comply with the limits for Class A digital devices pursuant to Part 15 of the FCC Rules.

This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

### Labeling Requirements (FCC 15.19)

This equipment complies with Part 15 of FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

### Modifications (FCC 15.21)

Changes or modifications to this equipment not expressly approved by Comtrol Corporation may void the user's authority to operate this equipment.

### Serial Cables (FCC 15.27)

This equipment is certified for Class A operation when used with shielded cables.

## Technical Support

Comtrol has a staff of support technicians available to help you. Before you call, please have the following information available:

- Model number
- Serial number
- Type of USB hub (if appropriate)
- Operating system type and release
- Device driver version
- PC make, model, and speed

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