



# RocketPort® USB Modem Hub Hardware Documentation

## Product Overview

The RocketPort USB Modem Hub (RPUUSBMH) connects to a Universal Serial Bus (USB) port on a PC. It is Hayes® compatible and contains four RJ11 modem ports that can operate at speeds up to 56 Kbps.

RocketPort USB Modem Hub series supports the following features:

- Four V.90/56K flex modem ports
- Two downstream USB ports
- “Plug-and-Play” and “Hot Plug” capability
- Analog fax to 14.4 Kbps
- Compatible with USB specification 1.0/1.1
- Individual hardware modem reset capability
- Windows 98 compatible
- Speaker

**Note:** See the AT Command Set and the Software Installation document for more information.

Characteristic	RocketPort USB Modem Support
Supported standards	V.90, K56flex, V.34, V.32 bis, V.32, V.23, V.22 bis, V.22 V.21, Bell 212A, Bell 103
Error correction	V.42 LAPM, MNP 2-4
Data compression	V.42 bis, MNP 5
Fax group	Group 3
Fax class	Class 1 and Class 2
Reset	Hardware controlled

**Note:** If your software applications list does not contain the Control RocketPort USB Modem Hub, you can select *SupraFAXModem 288(336)* for fax emulation and *Zoom Telephonics Zoom V.34X* for modem emulation.

The RocketPort USB Modem Hub uses an internally generated 48 MHz controller specifically designed for a USB port to operate four modem ports. 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 modems to easily interface with a USB port.

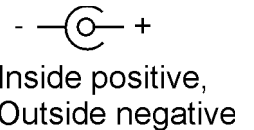
## Installing the Hardware

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

## Using a Third-Party Power Supply

Control supplies a power adapter with the unit.

If you want to connect a third-party power supply to the RocketPort USB Modem Hub, it must be a *UL Listed Direct Plug-In Power Unit identified as Class 2* and rated 5V DC +/- 10% and 2A +/- 20%. See the previous polarity figure and compare it to the one marked on the back of the unit above the connector.



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

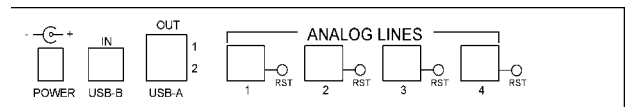
## LED Description

- 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.

- One LED for each modem (4). Each LED indicates that the modem has been connected.

## Port Identification



The back plate includes the following connections and switches:

- Power: 5V DC power supply
- USB-B: USB type B Upstream Port
- USB-A: Two USB type A Downstream Ports
- Analog Lines: Four RJ11 modem ports with manual reset.
- Manual Reset Switch

Reset a modem if it locks up during use. Use a sharp thin object (like a paper clip) to push the recessed reset switch.

## Using the Speaker

The RocketPort USB Modem Hub includes a speaker that enables you to listen to the call in progress and helps you determine the state of the phone line and the modem. You can control each modem by using the AT commands. All the modems in this hub share one speaker.

The following table lists some of the more commonly used speaker-related AT commands. For a complete list, see the AT Commands set.

AT Command	Usage
<b>M</b>	ATM(0, 1, 2, 3). Enter the ATM $n$ command to set the modem speaker mode. This value is written to S22 bits 2 and 3. Valid values are: <ul style="list-style-type: none"> <li>• M0 - Speaker always off</li> <li>• M1 - Speaker on when making call but off when receiving carrier</li> <li>• M2 - Speaker always on</li> <li>• M3 - Speaker off when making call but on when answering</li> </ul>
<b>&amp;V</b>	Enter AT&V to display the contents of the S-Registers and check the state of the L and M registers.

## Using the Downstream Ports

The modem hub includes two USB type A downstream ports, so you can connect multiple peripherals (including additional modem hubs) while at the same time supporting your modem hub.

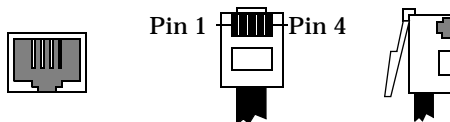
If you want to add more RocketPort USB Modem hubs to this one, you can daisy-chain up to three modem hubs. Each modem hub requires its own power supply.

## Building Cables

The modem ports use standard telephone-type unshielded twisted-pair cables with RJ11 modular connectors. You can purchase these anywhere commercial telephone products are sold.

Use the following table for pinout information for the RJ11 port connectors on the RocketPort USB Modem Hub.

When building cables, use Category 3 (or better) unshielded twisted-pair wiring.



The following table describes the connector pinouts.

RJ11 Pins	Signals
1 and 4	Not used
2	Ring
3	Tip

## Safety Notice

Installation of inside wire may bring you close to electrical wire, conduit, terminals and other electrical facilities. Use extreme caution to avoid electrical shock from such facilities. Avoid contact with electrical current by following these guidelines:

- Use tools with insulated handles.
- Do not place telephone wiring or connections in any conduit, outlet, or junction box containing electrical wiring.

**Note:** Do not work on your telephone wiring at all if you wear a pacemaker. Telephone lines carry electrical current.

- Telephone wiring must be at least 6 feet from bare power wiring or lightning rods, and associated wires, and at least 6 inches from other wire (antenna wires, doorbell wires, wires from transformers to neon signs), steam or hot water pipes, and heating ducts.
- Before working with existing inside wiring, check all electrical outlets for a square telephone dial light transformer and unplug it from the electrical outlet. Failure to unplug all telephone transformers can cause electrical shock.
- Do not place a jack where it would allow a person to use the telephone while in a bathtub, shower, swimming pool, or similar hazardous location.
- Do not connect to, remove, or modify protectors and grounding wire placed by the service provider.

**CAUTION:** Do not touch telephone wiring during lightning!

## 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 and 801-4 FT)	Yes
European TBR21/CTR21 Compliant	Yes
JATE Compliant	Yes

<b>Electromagnetic Compliance</b>	<b>Status</b>
FCC Part 68	Yes
Canadian IC-03 Certification	Yes
FCC Part 68 Certification	Yes
Safety: UL Listed EN60950	Yes

<b>Topic</b>	<b>Hardware Specification</b>
Baud rate (connect speed)	300 to 56 Kbps
Bus interface	USB
Control by device driver: Data bits Parity Stop bits	7 or 8 Odd, Even, None 1 or 2
Current consumption (max): 4 modem & 2 USB	1.6 A
Dimensions	6" x 9" x 1.5"
DTE Speed	Up to 600 - 115,200 bps
Heat output:	<28 BTU/hr (max)
Mean time between failure	16.8 years
Number of modem ports	4
Number of downstream self-powered USB ports	2
Power consumption	< 8 W (max)
Power supply (max)	5V DC +/- 10% and 2 A
Ringer Equivalence Number (REN)	0.1
Surge Protection	10 KV ESD (meets standard part 68 telcom requirement)
Telcom connections	RJ11C
Weight	1 lb 2 oz

### **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 or 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.

### **FCC Part 68 Notice**

1. This equipment complies with Part 68 of FCC rules. On the bottom panel of the unit is a label containing the FCC registration number, ringer equivalence number, and the USOC jack code.
2. The RocketPort USB Modem Hub uses FCC compliant modular plugs; it is designed to be connected to the telephone network or premises wiring using a compatible modular jack which is FCC Part 68 compliant.
3. If this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But, if advance notice is not practical, the telephone company will notify you as soon as possible. Also you will be advised of your right to file a complaint with the FCC if you believe it is necessary.
4. The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice in order for you to make necessary modifications in order to maintain uninterrupted service.
5. If the equipment is causing harm to the network, the telephone company may request you to remove the equipment from the network until the problem is resolved. If so, contact Comtrol Corporation at 763-494-4100.
6. No repairs are to be made by you. Repairs are to be made only by Comtrol or its licensees. Unauthorized repairs void the warranty and the registration.
7. This equipment may not be used for public coin phone service provided by the Telephone Company. Connection to Party Line Service is subject to state tariffs. (Contact the state public utility commission, public service commission, or corporation commission for information.)

8. The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device, including fax machines, to send any message unless such message clearly contains in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time when it is sent, an identification of the business or other entity, or other individual sending the message, and the telephone number of the sending machine or of such business, other entity, or individual. (The telephone number provided may not be a 900 number or any other number for which charges exceed local or long-distance transmission charges.) In order to program this information into your fax software, you should refer to the manual of the Fax software being used.

**RocketPort USB Modem Hub - Canada**

The RocketPort USB Modem Hub connects directly to off-premises Common Carrier facilities using the standard two-wire telephone connection. In some cases, the building's inside wiring associated with a single line individual server may be extended by means of a certified connector assembly (telephone extension card).

*NOTICE: The Industry Canada label identifies certified equipment. This certification means the equipment meets telecommunications network protective, operational, and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document(s). The department does not guarantee the equipment will operate to the user's satisfaction.*

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines, and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

*CAUTION: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority or electrician, as appropriate.*

*NOTICE: The Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices, subject only to the requirement that the sum of the Ringer Equivalence*

*Numbers of all the devices does not exceed 5.*

This digital apparatus meets the Class A limits for radio noise for digital apparatus set out in the interference-causing equipment standard entitled: "Digital Apparatus," ICES-003 of Industry Canada.

When connecting the RocketPort USB Modem Hub to the telephone service, avoid contact with the telecommunications lead wire. Grasp the insulated part of the jack, and do not contact the back of the circuit board. Telephone wiring can carry dangerous voltages from electrical faults or lightning.

**External Wiring**

Any external communications wiring you may install needs to be constructed to all relevant electrical codes. In the United States this is the National Electrical Code Article 800. Contact a licensed electrician for details.

**Canada - Return Center**

In Canada, contact the following Return Center:

Gandacar Consulting, Ltd  
 189 Lake Avenue East  
 Carlton Place, Ontario  
 Canada K7C 1J7 Phone: **800-563-5102**

**Technical Support**

Control 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

Control	Headquarters	Europe
Phone	(763) 494-4100	+44 (0)1869 323220
FAX	(763) 494-4199	+44 (0)1869 323211
Email	<a href="mailto:support@comtrol.com">support@comtrol.com</a>	<a href="mailto:support@comtrol.co.uk">support@comtrol.co.uk</a>
web site	<a href="http://www.comtrol.com">www.comtrol.com</a>	<a href="http://www.comtrol.co.uk">www.comtrol.co.uk</a>
ftp site	<a href="ftp://ftp.comtrol.com">ftp.comtrol.com</a>	

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