

RMM Series

Rack Mount Modems

Quick Start Guide





Warnings and Cautions: Installation Instructions



Secure Racking

If Secure Racked units are installed in a closed or multi-unit rack assembly, they may require further evaluation by Certification Agencies. The following items must be considered.

1. The ambient within the rack may be greater than room ambient. Installation should be such that the amount of air flow required for safe operation is not compromised. The maximum temperature for the equipment in this environment is 60°C. Consideration should be given to the maximum rated ambient.
2. Installation should be such that a hazardous stability condition is not achieved due to uneven loading.

Input Supply

1. Check nameplate ratings to assure there is no overloading of supply circuits that could have an effect on overcurrent protection and supply wiring.
2. When installing 48 VDC rated equipment, it must be installed only per the following conditions:
 - A. Connect the equipment to a 48 VDC supply source that is electrically isolated from the alternating current source. The 48 VDC source is to be connected to a 48 VDC SELV source.
 - B. Input wiring to terminal block must be routed and secured in such a manner that it is protected from damage and stress. Do not route wiring past sharp edges or moving parts.
 - C. A readily accessible disconnect device, with a 3 mm minimum contact gap, shall be incorporated in the fixed wiring.

Grounding

Reliable earthing of this equipment must be maintained. Particular attention should be given to supply connections when connecting to power strips, rather than direct connections to the branch circuit.

No Serviceable Parts Inside; Authorized Service Personnel Only

Do not attempt to repair or service this device yourself. Internal components must be serviced by authorized personnel only.

- **Shock Hazard - Do Not Enter**

- **Lithium Battery**

CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

Disconnect Power

If any of the following events are noted, immediately disconnect the unit from the outlet and contact qualified service personnel:

1. If the power cord becomes frayed or damaged.
2. If liquid has been spilled into the device or if the device has been exposed to rain or water.

Modem Cables

CAUTION: To reduce the risk of fire, use only No. 26 AWG or larger (e.g., 24 AWG) UL Listed or CSA Certified Telecommunication Line Cord.

1. Introduction

This Quick Start Guide describes a simplified installation procedure for our RMM units, which will allow you to communicate with the unit in order to demonstrate basic features and check for proper operation. Note that this Quick Start Guide does not provide a detailed description of unit configuration, or discuss advanced operating features in detail. For more information, please refer to the RMM User's Guide, which can be found on our web site at the address below, or by scanning the QR Code to the right.



<http://www.wti.com/uguides>

2. Hardware Installation

2.1. Apply Power to the RMM

Refer to the safety precautions listed at the beginning of this Quick Start Guide and to the power rating nameplate on the RMM unit, and then connect the unit to an appropriate power source.

AC powered RMM units can be connected to 100V to 240V AC power. DC powered RMM units can be connected to ± 18 to ± 72 Volt DC power. When power is applied to the RMM, the Input Power A and Input Power B indicators should light.

Note that the presence of two power inlets allows the RMM to be connected to both a primary power supply and secondary power supply to provide power redundancy for mission critical applications. For both AC and DC Powered RMM units, connect your primary power supply to the RMM's Input A inlet. Connect your secondary power supply to the Input B inlet.

2.2. Configuration

2.2.1. Default Configuration

In the default condition, the RMM is configured as follows:

- 9600 Baud, RTS/CTS Handshaking, 8 Data Bits, 1 Stop Bits
- Answer on first ring
- Audible Buzzer On
- Echo On
- Result Codes Off

If these parameters are compatible with your application, then there is no need to reconfigure the RMM unit. In this case, connect the modem port cable and phone line cable as described in Section 2.2.4. Note however that if you want to change modem parameters, you must access the modem configuration menu as described in Sections 2.2.2 and 2.2.3.

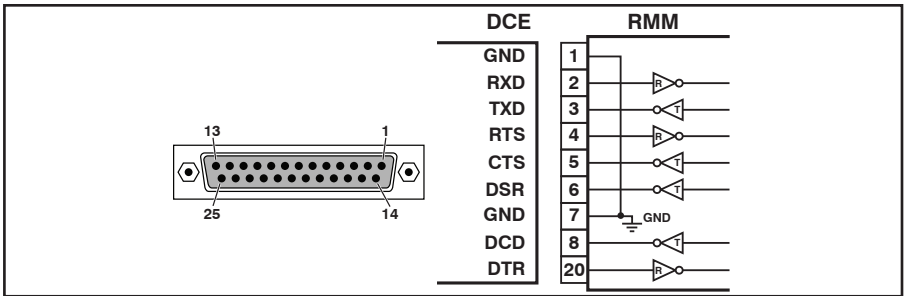


Figure 1. DB25F Modem Port (DCE)

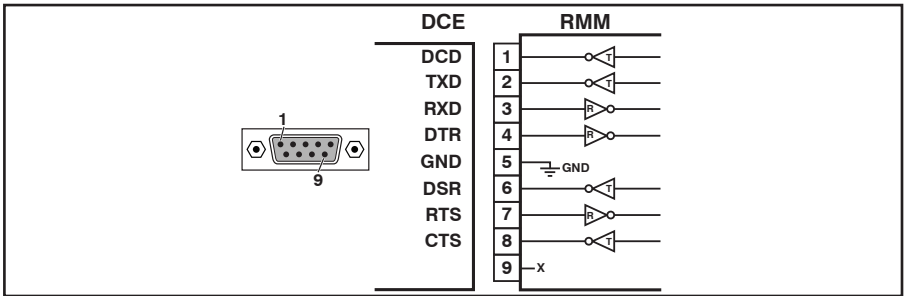


Figure 2. DB9F Modem Port (DCE)

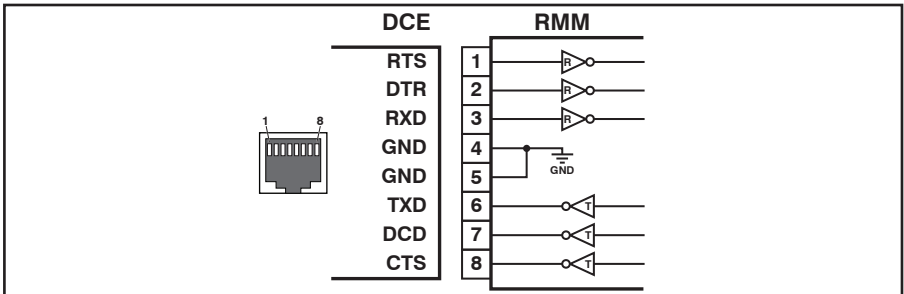


Figure 3. RJ45 Modem Port (DCE)

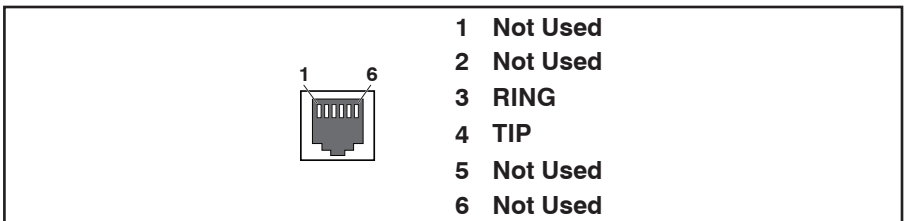


Figure 4. RJ11 Phone Line Port

2.2.2. Changing Modem Configuration Parameters

If the parameters listed above are incompatible with your application, you can access the modem command mode via any of the three available serial Modem Ports. Note that only one Modem Port can be connected at a time. To access modem command mode, proceed as follows:

1. Connect your PC or other device to one of the RMM's three available Modem Ports as follows:
 - **DB25F Modem Port:** Use a standard Modem Cable. For a description of the port pinout, see Figure 1.
 - **DB9F Modem Port:** Use a standard DB9 PC to Modem cable. For a description of the port pinout, see Figure 2.
 - **RJ45 Modem Port:** Use a standard Ethernet patch cable. For a description of the port pinout, see Figure 3.
2. Start your Terminal Emulation program (e.g., Terra Term.) When the connection menu appears, select "Serial" and then select the COM port that has been used to connect to the RMM.
3. Enter the appropriate AT commands to change the desired parameter(s). Note that the "AT" prefix must precede each command. Refer to the list of commonly used AT commands in Section 2.2.3 below, or refer to the MT5634/MT9234 Internal Modem AT Command Set document that can be found on the WTI web site at:

<https://www.wti.com/t-product-manuals.aspx>

2.2.3. Commonly Used AT Commands

The following common AT commands can be used to reconfigure the RMM for your Modem application. Note that each command must be preceded by the AT prefix:

Command	Function
E0	Disable command echo
Q1	Disable result codes
S0=1	Answer on first ring
&D0	Ignore DTR signal
&K0	Disable flow control
&E12	Disable Xon/Xoff pacing
\$\$\$n	Set baud rate to n; where n is the desired baud rate.
&W	Save current configuration
&V	Display current configuration parameters
Z	Reset Modem
H	Hook control; hang up
+++	Enter command mode

Note: These commands can be used to reset the RMM to default values.

2.2.4. Connecting the RMM to the Phone Line and Target Device

Phone Port:

Connect your RJ11 phone line to the RJ11 Phone Port on the RMM back panel. For a description of the RJ11 Phone Line Port pinout, please refer to Figure 4.

Modem Ports:

The RMM offers three Modem Serial Ports that can be used to connect the Modem to a target device such as a server or switch. The pinout of the three Modem Ports allows connection to most Cisco and WTI devices. When connecting to the Modem Port, note the following:

Note: Only one Modem Port can be connected at a time.

- **DB25F Modem Port:** Use a standard DB25 Modem Cable. For a description of the port pinout, see Figure 1.
- **DB9F Modem Port:** Use a standard DB9 PC to Modem cable. For a description of the port pinout, see Figure 2.
- **RJ45 Modem Port:** Use a standard RJ45 Ethernet patch cable. For a description of the port pinout, see Figure 3.

3. Operation

Normally, the RMM will require one second reset the internal modem after every 15 minutes of idle time (DCD inactive.) To reset the RMM's internal modem on demand, press and hold the Reset Button, (located on the RMM front panel,) for three seconds.

This completes the Quick Start Guide for the RMM. If you have further questions regarding the RMM unit, please contact WTI Customer Support.

FCC Part 15 Regulation

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. 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. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation

WARNING: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment

EMC and Safety Directive Compliance

The CE mark is affixed to this product to confirm compliance with the following European Community Directives:

- Council Directive 2014/30/EU of 26 February 2014 on the approximation of the laws of Member States relating to electromagnetic compatibility;
- and
- Council Directive 2014/35/EC of 26 February 2014 on the harmonization of the laws of Member States relating to electrical equipment designed for use within certain voltage limits;

Industry Canada

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

This product meets the applicable Industry Canada technical specifications

The Ringer Equivalence Number is an indication of the maximum number of devices 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 RENs of all the devices does not exceed five



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