

1. Introduction

The MD-N33 is a data communication modem intended for data transfer over worldwide PSTN networks. It is intended to link RS232 based serial communication devices over dial-up telephone lines in applications where these are located on remote areas.

The MD-N33 is a V.34/33.6K modem complies with worldwide telecom requirements. The modem is AT Command set compatible and can be configured from any PC based communication program

The following pages outline the installation and configuration instructions for your new MD-N33 modem.



2. Features

- V.34/33.6K
- AT command compatibility
- 60-character command line buffering
- Auto-dial, redial, and auto-answer
- Pulse or tone dial
- Remote hang-up detection
- Digital PBX detection and protection
- Global approvals
- Buzzer for call progress monitoring
- LED indication of telephone line status
- LED indication of power supply
- Intelligent DAA technology detects line status
- Industry-standard error correction and data compression
- DTMF detection and distinctive ring
- Non Volatile RAM (memory) to store user profiles
- Line protection circuitry included

3. Technical Specifications

3.1 Data Characteristics

Data format: Serial RS232 interface

Data - V.34, V.32bis, V.32, V.22bis, V.22, V23, V.21, Bell 212A & Bell103

Error Correction: V.42 (LAP-M or MNP 2-4)

Data Compression: V.42bis, MNP 5

Fax: V.17, V29, V.29ter, V.21 ch.2
Class 1 and 1.0 commands

Modes of Operations: Full duplex over dial-up lines; data mode, command mode, Online command mode

Advanced -Extension pickup detection, remote hang-up detection, line-in-Use detection, digital PBX detection and protection

Flow Control - XON/XOFF (software), RTS/CTS (hardware)

Command Buffer - 60 characters

Telephony - V.253 commands: V.253
2-bit and 4-bit ADPCM, 8-bit linear PCM, and 4-bit IMA coding 8 kHz sample rate
Concurrent DTMF, ring, and Caller ID detection

3.2 Electrical Characteristics

Input Power: 10-16 V DC

Power Consumption: Typical: 70 mA
Maximum: 100 mA

Buzzer: For call progress monitoring

LED - Blue LED indication of telephone line status
Red LED indication of power supply

3.3 Environmental Characteristics

Operating Environment: indoor use

Operating Temperature: 0°C to 63°C (32°F to 145°F)

Operating Humidity: 0 to 95% (Non-Condensing)

3.4 Physical Characteristics and Interface

Dimensions: 110mm(4.3")x63mm(2.5")Wx39mm(1.5")

Weight: 0.214 Lbs. (97g)

Phone - RJ-11 jack for phone line

Data - D9 Male connector, RS232 link:
1 - DCD 2 - RD 3 - TD 4 - DTR
5 - GND signal 6 - DSR 7 - RTS
8 - CTS 9 - NC

4. Connection and Configuration

4.1 Hardware Requirements

The following are the required hardware units used to connect the MD-N33 to either the PC or remote Unit.

- Crossed linked RS-232 cable - 9 pin D type female plugs on both sides.
- Standard telephone cable- RJ11 plugs on both sides.
- 12V (200mA) DC power adaptor, connected to the unit's DC jack.
- MD-N14 RS485 to RS232 Converter (for RS485 units)

4.2 General:

Both Md-N33's, the one connected to the remote unit and the one connected to the PC need to be configured while connected to the PC, prior to remote installation.

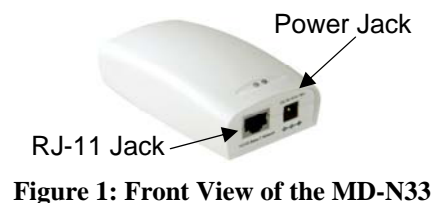


Figure 1: Front View of the MD-N33



Figure 2: Rear View of the MD-N33

4.3 PC Side Connection

- 1) Connect a 12V (200mA) DC power adaptors to the MD-N33. Ensure that the Power LED (red) is on.
- 2) Connect the MD-N33's D9 RS-232 jack to an available COM port on the PC using a crossed Serial Cable.
- 3) Connect the MD-N33 to the telephone line using a standard telephone RJ-11 cable.
- 4) Configure the modem using the networked software (AS-215 or DCC)

4.4 Remote Connection

After configuring the MD-N33 for the remote unit connect it as follows:

- 5) Connect a 12V (200mA) DC power adaptors to the MD-N33. Ensure that the Power LED (red) is on.
- 6) Connect the MD-N33 to the telephone line using a standard telephone RJ-11 cable.
- 7) Connect the unit to Rosslare's MD-14 (RS485 to RS-232 Converter) using the 4 wire cable.

- 8) Connect the MD-14 directly to the MD-N33 DB9 jack.

4.5 Network Connection Diagrams



5. Limited Warranty

ROSSLARE ENTERPRISES LIMITED S (Rosslare) ONE YEAR LIMITED WARRANTY is applicable worldwide. This warranty supersedes any other warranty. Rosslare's ONE YEAR LIMITED WARRANTY is subject to the following conditions:

Warranty

Warranty of Rosslare's products extends to the original purchaser (Customer) of the Rosslare product and is not transferable.

Products Covered By This Warranty and Duration

ROSSLARE ENTERPRISES LTD. AND / OR SUBSIDIARIES (ROSSLARE) warrants that the MD-N33 modem, to be free from defects in materials and assembly in the course of normal use and service. The warranty period commences with the date of shipment to the original purchaser and extends for a period of 1 year (12 Months).

Warranty Remedy Coverage

In the event of a breach of warranty, ROSSLARE will credit Customer with the price of the Product paid by Customer, provided that the warranty claim is delivered to ROSSLARE by the Customer during the warranty period in accordance with the terms of this warranty. Unless otherwise requested by ROSSLARE ENTERPRISES LTD. AND / OR SUBSIDIARIES representative, return of the failed product(s) is not immediately required.

If ROSSLARE has not contacted the Customer within a sixty (60) day holding period following the delivery of the warranty claim, Customer will not be required to return the failed product(s). All returned Product(s), as may be requested at ROSSLARE ENTERPRISES LTD. AND / OR SUBSIDIARY'S sole discretion, shall become the property of ROSSLARE ENTERPRISES LTD. AND / OR SUBSIDIARIES.

To exercise the warranty, the user must contact Rosslare Enterprises Ltd. to obtain an RMA number after which, the product must be returned to the Manufacturer freight prepaid and insured

In the event ROSSLARE chooses to perform a product evaluation within the sixty (60) day holding period and no defect is found, a minimum US\$ 50.00 or equivalent charge will be applied to each Product for labor required in the evaluation.

Rosslare will repair or replace, at its discretion, any product that under normal conditions of use and service proves to be defective in material or workmanship. No charge will be applied for labor or parts with respect to defects covered by this warranty, provided that the work is done by Rosslare or a Rosslare authorized service center.

Exclusions and Limitations

ROSSLARE shall not be responsible or liable for any damage or loss resulting from the operation or performance of any Product or any systems in which a Product is

incorporated. This warranty shall not extend to any ancillary equipment not furnished by ROSSLARE, which is attached to or used in conjunction with a Product, nor to any Product that is used with any ancillary equipment, which is not furnished by ROSSLARE.

This warranty does not cover expenses incurred in the transportation, freight cost to the repair center, removal or reinstallation of the product, whether or not proven defective.

Specifically excluded from this warranty are any failures resulting from Customer's improper testing, operation, installation, or damage resulting from use of the Product in other than its normal and customary manner, or any maintenance, modification, alteration, or adjustment or any type of abuse, neglect, accident, misuse, improper operation, normal wear, defects or damage due to lightning or other electrical discharge. This warranty does not cover repair or replacement where normal use has exhausted the life of a part or instrument, or any modification or abuse of, or tampering with, the Product if Product disassembled or repaired in such a manner as to adversely affect performance or prevent adequate inspection and testing to verify any warranty claim.

ROSSLARE does not warrant the installation, maintenance, or service of the Product. Service life of the product is dependent upon the care it receives and the conditions under which it has to operate.

In no event shall Rosslare be liable for incidental or consequential damages.

Limited Warranty Terms

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THIS WARRANTY SHALL BECOME NULL AND VOID IN THE EVENT OF A VIOLATION OF THE PROVISIONS OF THIS LIMITED WARRANTY.

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