



## **Bell 212A Data Communications Modem for S-100 Computers**

- IEEE 696/S-100 compatible
- FCC-registered for direct connection
- Auto answer and auto dial
- Baud rates 45.5-300 and 1200 baud
- 1200 baud synchronous and asynchronous
- Full or half duplex
- Microprocessor-based design
- 24 hour a day test center
- Five year limited warranty

## Introduction

PMMI Communications and Racal Vadic have joined forces to bring you the first Bell 212A-compatible modem for the S-100 computer bus. The MM-212 is a high quality modem designed from the ground up to meet all the IEEE 696/S-100 and FCC standards. Now you can have both the high quality you expect from PMMI and the modem excellence of Racal Vadic combined into one package.

All functions of the modem are controllable through software by sending ASCII commands to the on-board CPU. Once the commands are completed, the modem enters the communications mode and you are ready to transfer data. This setup makes programming a simple two step process (first entering commands and then starting communications). There is also a selection of ready-to-run software available for the MM-212.

As an overview, the following functions, and more, are easily used and software controllable:

- Auto answer/Auto dial
- Auto answer; variable ring count
- Auto dial commands include:
  - Tone dial/Pulse dial
  - Auto select between tone and pulse
  - Ability to insert delays in dialing (blind dial)
  - Ability to look for additional dial tones
  - Auto or manual redial capability
  - Can dial tones 0-9, #, \*, A-D
- Call progress reporting includes:
  - Dial tone/no dial tone detected
  - Remote ringing detected
  - Busy tone detected
  - Voice detected
  - Failed call
- Bell 212 or Bell 103 modes
- Synchronous or asynchronous in 212 mode
- 45.5-300 baud in 103 mode
- 1200 baud in 212 mode
- Remote and local loopback test modes
- Character length: 212 (8-11 bits) 103 (7-11 bits)
- Receive threshold level -52 dBm

## 24 Hour a Day Test Center

PMMI Communications owns and operates a test center day and night just for our customers with MM-212 modems. When you purchase your MM-212, we will give you the number to call and information on how to log in. Then you will have access to a testing standard that you may use at any time to verify the correct operation of your modem.

## FCC Registration

The MM-212 modem has been approved by the FCC under Part 68 of the FCC Rules and Regulations for direct connection to the telephone line. Additionally, the MM-212 has been verified under Part 15 of the FCC Rules and Regulations as a Class A computing device. This assures you that the MM-212 has met the rigorous testing requirements of the FCC and is ready for immediate legal connection to the telephone system.

## IEEE 696/S-100 Compliance

The MM-212 complies with all physical, electrical and timing requirements of the IEEE 696/S-100 specification. The MM-212 uses four consecutive I/O ports from the eight or sixteen line address space. Interrupts can be masked for transmitter buffer empty, receiver buffer full and ring detected. The above interrupts can be asserted on vectored interrupt lines VO-V7 or the PINT line. The MM-212 meets or exceeds all the signal line drive and buffering requirements for the S-100 bus.

## Warranty

The MM-212 features an unbeatable warranty, a service needed by less than 5% of all the boards PMMI has sold. Parts and labor are free to the original purchaser on repairs made within a year of purchase. Labor is free for an additional four years after the initial warranty period of one year. This gives you a five year labor warranty! Turnaround time is usually only a couple of days, and boards are shipped out UPS Blue Label unless you specify otherwise.

## For Complete Technical Data

For additional information on the MM-212 modem or any other PMMI product please write or give us a call. Our highly trained technical staff will be more than glad to assist you. We also provide owner's manuals for each of our products at a \$10.00 fee (refundable with the purchase of the product). Call us for the name and address of the dealer nearest you.



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