

EOM-104

4-port embedded managed Ethernet switch module



- > 10/100 Mbps Ethernet Interface
- > Turbo Ring, RSTP/STP for Ethernet Redundancy
- > SNMP and e-mail alerts for event trapping and notification
- > Two-thirds the size of a business card
- > Low power consumption
- > -40 to 75°C operating temperature range



Introduction

The EOM-104 Ethernet switch module is designed for device manufacturers who would like to embed an Ethernet switch module in their products to enhance performance and reliability.

The EOM-104 module provides an easy and cost-effective integrated solution for adding an Ethernet switch module to an existing product.

The module supports 10/100 Mbps Fast Ethernet, and comes with Turbo Ring's fast recovery time of under 20 ms built in. The EOM-104 also provides a rich set of peripherals, such as Turbo Ring Enable and GPIO programming pins, and is an ideal solution for embedded Ethernet applications.

Specifications

Technology

Standards:

- IEEE 802.3 for 10BaseT
- IEEE 802.3u for 100BaseT(X) and 100BaseFX
- IEEE 802.3x for flow control
- IEEE 802.1D for Spanning Tree Protocol
- IEEE 802.1w for Rapid STP
- IEEE 802.1p for Class of service

Protocols: SNMPv1/v2c/v3, DHCP Client, BootP, TFTP, SMTP, RARP, RMON, HTTP, Telnet, Syslog

MIB: MIB-II, Ethernet-Like MIB, P-Bridge MIB, Bridge MIB, RSTP MIB, RMON MIB Group 1, 2, 3, 9

Flow Control: IEEE 802.3x flow control

Interface

Ethernet Ports: 4, 10/100BaseT(X), auto MDI/MDI-X

Connectors: 1 connector with 2 x 20 pins, 2 connectors with 1 x 9 pins, and 1 connector with 2 x 2 pins

Console Port: RS-232 (TxD, RxD, DTR, DSR)

GPIO: 4 programmable I/O pins

Power Requirements

Input Voltage: 3.3 V

Input Current: 0.59 A @ 3.3 V

Physical Characteristics

Dimensions: 54 x 60 x 8.25 mm (2.13 x 2.36 x 0.32 in)

Environmental Limits

Operating Temperature: -40 to 75°C (-40 to 167°F)

Storage Temperature: -40 to 85°C (-40 to 185°F)

Ambient Relative Humidity: 5 to 95% (non-condensing)

Regulatory Approvals

EMI: FCC Part 15, CISPR (EN55022) class A, CE class A

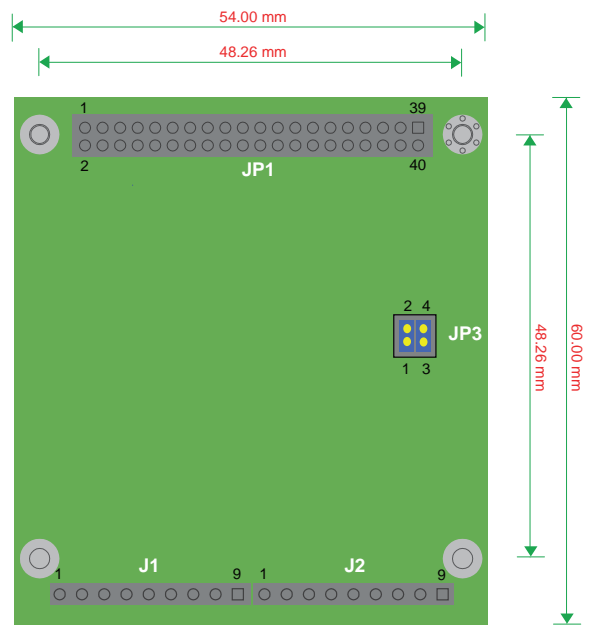
Note: Please check Moxa's website for the most up-to-date certification status.

Warranty

Warranty Period: 5 years

Details: See www.moxa.com/warranty

Dimensions (unit = mm)



Pin Assignment

J1 (2 x 20 connector pin assignment)

| | | | | | | | | | | |
|--------|-------|--------|--------|-------------------|----------------|---------------|------------|--------------|------|-----|
| PIN | 1 | 3 | 5 | 7 | 9 | 11 | 13 | 15 | 17 | 19 |
| SIGNAL | TX2 - | RX2 - | NC | RX1 + | TX1 + | NC | GND | 3.3V | GND | DTR |
| PIN | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 |
| SIGNAL | TX2 + | RX2 + | NC | RX1 - | TX1 - | NC | GND | 3.3V | GND | DSR |
| PIN | 21 | 23 | 25 | 27 | 29 | 31 | 33 | 35 | 37 | 39 |
| SIGNAL | TXD | GPIO 1 | GPIO 3 | MASTER ENABLE | MASTER LED | PORT 1 LED | PORT 3 LED | MANUAL RESET | 3.3V | GND |
| PIN | 22 | 24 | 26 | 28 | 30 | 32 | 34 | 36 | 38 | 40 |
| SIGNAL | RXD | GPIO 2 | GPIO 4 | TURBO RING ENABLE | TURBO RING LED | RESET DEFAULT | PORT 4 LED | PORT 2 LED | 3.3V | GND |

J1 (1 x 9 connector pin assignment)

| | | | | | | | | | |
|--------|-----|-------|-------|-------|-------|------|-------|-------|-----|
| PIN | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| SIGNAL | GND | TX4 + | TX4 - | 3.3 V | 3.3 V | FXSD | RX4 - | RX4 + | GND |

J2 (1 x 9 connector pin assignment)

| | | | | | | | | | |
|--------|-----|-------|-------|-------|-------|------|-------|-------|-----|
| PIN | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| SIGNAL | GND | TX3 + | TX3 - | 3.3 V | 3.3 V | FXSD | RX3 - | RX3 + | GND |

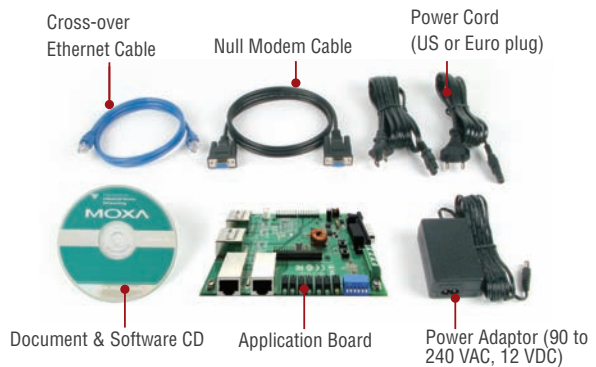
J3 (2 x 2 connector pin assignment)



Jumpers 1 and 2 are used to enable the Ring Master
Jumpers 3 and 4 are used to enable Turbo Ring

EOM-104 Evaluation Kit

The EOM Evaluation Kit includes an evaluation board, power adaptor, software CD, and serial and Ethernet cables to allow quick and easy evaluation of all embedded Ethernet switch functions. The evaluation board is equipped with an Ethernet port, console port, and Turbo Ring DIP switch to help you test your modules and applications.



Ordering Information

Available Models

EOM-104: 4-port embedded managed Ethernet switch module, -40 to 75°C operating temperature