

EOM-104 Series

4-port embedded managed Ethernet switch modules



- > 10/100BaseT(X) and 100BaseFX Ethernet interfaces
- > Turbo Ring and 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 series Ethernet switch modules are designed for device manufacturers who would like to embed Ethernet modules in their products to enhance performance and reliability.

The EOM-104 series modules provide an easy and cost-effective integrated solution for adding an Ethernet switch module to an existing

product. The modules support 10/100M Ethernet transmission and come with Turbo Ring's fast recovery time of under 20 ms. The EOM-104 series also provide 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

Switch Properties

MAC Table Size: 1 K

Packet Buffer Size: 512 kbit

Interface

Ethernet Ports:

- EOM-104: 4 10/100BaseT(X) ports
 - EOM-104-FO: 2 10/100BaseT(X) and 2 100BaseFX ports
- 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:

EOM-104: 0.59 A @ 3.3 V

EOM-104-FO: 1.22 A @ 3.3 V

Physical Characteristics

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

Weight: 21 g

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)

Standards and Certifications

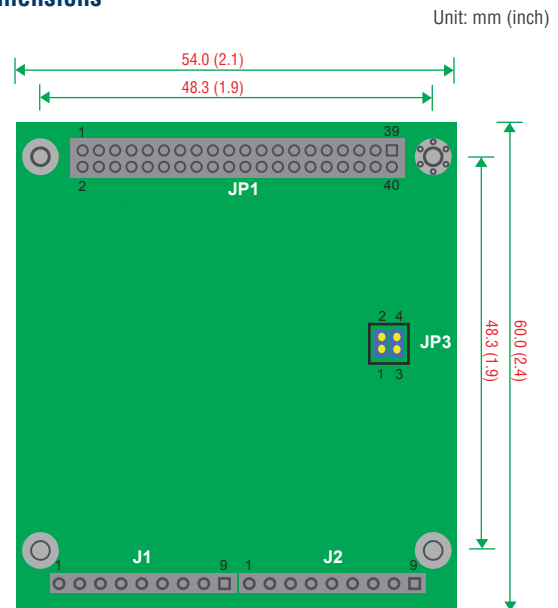
EMI: FCC Part 15 Subpart B Class A, EN 55022 Class A, CE Class A
 Note: Please check Moxa's website for the most up-to-date certification status.

Warranty

Warranty Period: 5 years

Details: See www.moxa.com/warranty

Dimensions



Pin Assignment

JP1 (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 4	GPIO 2	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 3	GPIO 1	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

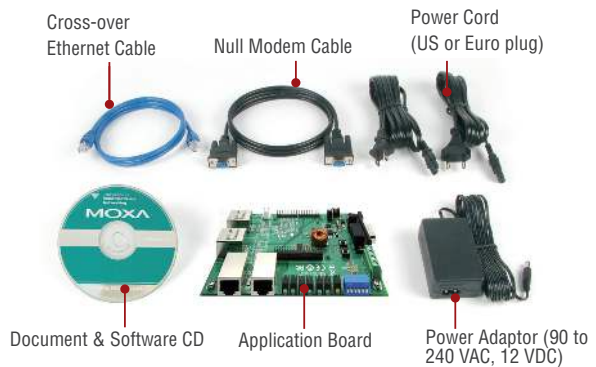
JP3 (2 x 2 connector pin assignment)



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

Evaluation Kits

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 Ethernet ports, console port, and Turbo Ring DIP switch to help you test your modules and applications.



Ordering Information

Available Models

EOM-104: Embedded managed Ethernet switch module with 4 10/100BaseT(X) ports, -40 to 75°C operating temperature

EOM-104-FO: Embedded managed Ethernet switch module with 2 10/100BaseT(X) and 2 100BaseFX ports, -40 to 75°C operating temperature

EOM-104 20PCS: Embedded managed Ethernet switch module with 4 10/100BaseT(X) ports, -40 to 75°C operating temperature, 20 pcs per package

EOM-104-FO 20PCS: Embedded managed Ethernet switch module with 2 10/100BaseT(X) and 2 100BaseFX ports, -40 to 75°C operating temperature, 20 pcs per package

Evaluation Kits (must be purchased separately)

EOM-104 Evaluation Kit: Includes an EOM-104 switch module and evaluation board with 4 10/100BaseT(X) ports for testing and application development

EOM-104-FO Evaluation Kit: Includes an EOM-104-FO switch module and evaluation board with 2 10/100BaseT(X) ports and 2 100BaseFX multi-mode ports (SC connectors) for testing and application development

Evaluation Kit Package Checklist

- EOM-104 module
- EOM-104 evaluation board
- Universal power adaptor
- 2 power cords
- Null modem serial cable
- Cross-over Ethernet cable
- Accessories pack
- Documentation and software CD
- Warranty card