

MRX-G4064 系列

56 個 GbE 連接埠和 8 個 10GbE 連接埠的 Layer 3 全 Gigabit 模組化網管型乙太網路交換器



特色與優點

- 8 個 10GbE 乙太網路埠
- 最多 56 個 1GbE 連接埠或 SFP 插槽
- HAST (高可用性靜態中繼) 技術支援骨幹可靠性
- 機載 LCM 顯示器可提供一目了然的狀態更新，方便現場維護與操作。
- 雙電源模組和 6+2 風扇備援設計，確保網路不間斷運作
- 即時系統溫度監控，以保護網路和設備

認證



簡介

MRX-G4064 系列旨在滿足工業場所資訊技術日益融合對於工業視訊、語音和資料應用的高效能、高可用性要求。

MRX-G4064 系列採用模組化設計，內建 8 個 10GbE 連接埠，可透過模組擴展至多達 56 個 1GbE 連接埠，這是建構大規模工業網路應用的理想選擇。10GbE 連接埠顯著提高網路交換頻寬，允許直接連接到支援 10GbE 的伺服器，並且使資料收集和分析更靠近應用現場。此外，支援多埠聚合可以實現更高的骨幹網路頻寬，同時也為未來的網路發展留出空間。

除了能夠容納更多數量的現場設備之外，MRX-G4064 系列也能減少資料傳輸延遲，並能夠在高效能網路上快速傳輸大量視訊、語音和資料。此系列產品配備備援多風扇冷卻系統和備援隔離電源。這支援工業級高效能 Turbo Ring 技術，以及其他網路備援技術，如 ERPS (ITU-T G.8032) 和 RSTP/STP，這些技術可以增強 IT/OT 融合應用中骨幹網路的可靠性和可用性。

附加特色與優點

- 彈性的頻寬/連接埠組合，實現有效的頻寬管理和最高的可靠性
- 用於快速管理的命令列介面 (CLI)
- 帶外管理 (OOBM) 連接埠，用於確保在帶內服務不可用時網路管理的可用性。
- 系統溫度控制和功耗管理，實現不間斷運作
- 連接埠鏡像 (N:M) 技術支援安全監控和稽核
- 針對大規模視訊監控的突發傳輸進行最佳化，以防止封包遺失。
- 用於網路時間同步的 IEEE1588v2 PTP (精確時間協定)
- 支援 MXconfig 和 MXview One，用於工業網路管理和視覺化

規格

Ethernet Interface	
1000/2500/10000BaseSFP Ports	8
1000BaseSFP Slots	8
Out-of-band Management (OOBM)	1 x 8-pin RJ45 1GbE Ethernet port (MGMT)

Module	There are 3 module slots on the switch. Users can select different types of modules to insert into the switch. The modules that can be selected include 16-port modules with 1000BaseT(X) or 1000BaseSFP interfaces. Refer to Expansion Modules in the Accessories section for a full list of supported interface modules.
Standards	IEEE 802.1D-2004 for Spanning Tree Protocol IEEE 802.1p for Class of Service IEEE 802.1Q for VLAN Tagging IEEE 802.1s for Multiple Spanning Tree Protocol IEEE 802.1w for Rapid Spanning Tree Protocol IEEE 802.1X for Authentication IEEE 802.3x for Flow Control IEEE 802.3z for 1000BaseSX/LX/LHX/ZX IEEE 802.3ab for 1000BaseT(X) IEEE 802.3ad for Port Trunk with LACP IEEE 802.1ad for Q-in-Q IEEE 802.3ae for 10 Gigabit Ethernet IEEE 802.3az for Energy-Efficient Ethernet ITU-T G.8032 Ethernet Ring Protection Switching

Ethernet Software Features

Management	ARP Back Pressure Flow Control DHCP Client Fiber check Flow control HTTP HTTPS IPv4 Linkup Delay LLDP Port Mirroring (SPAN, RSPAN) Private MIB RARP RMON SFTP SMTP SNMP Inform SNMP Trap SNMPv1/v2c/v3 Telnet TFTP Syslog
Filter	802.1Q GARP GMRP GVRP IGMP Querier IGMP Snooping v1/v2/v3 Q-in-Q
Redundancy Protocols	ERPS v2 Link Aggregation MRP MRP Interconnection MSTP Multiple Dual-Homing Multiple Network Coupling Network Loop Protection Ring Coupling RSTP STP Tracking Turbo Chain Turbo Ring v2
Routing Redundancy	VRRP
Security	Access control list

	Broadcast storm protection DHCP Snooping Dynamic ARP Inspection HTTPS/SSL IP Source Guard Login and password policy MAB authentication MAC authentication bypass RADIUS Rate Limit Secure Boot SSH Static port lock Sticky MAC TACACS+ Trust access control
Time Management	SNTP IEEE 1588v2 PTP (hardware-based) NTP Server/Client NTP Authentication
Protocols	802.1X ARP DHCP Client DNS HTTP HTTPS ICMP IPv4 NTP Client QoS RARP RMON SMTP SNMPv1/v2c/v3 Syslog TCP/IP Telnet TFTP UDP VLAN Assignment
Industrial Protocols	EtherNet/IP Modbus TCP PROFINET
Unicast Routing	OSPF Static Route
MIB	P-BRIDGE MIB Q-BRIDGE-MIB IEEE8021-SPANNING-TREE-MIB IEEE8021-PAE-MIB IEEE8023-LAG-MIB LLDP-EXT-DOT1-MIB LLDP-EXT-DOT3-MIB SNMPv2-MIB RMON MIB Groups 1, 2, 3, 9

Switch Properties

MAC Table Size	32 K
Max. No. of VLANs	512
IGMP Groups	2048
Jumbo Frame Size	9.6 KB
Packet Buffer Size	6 MB

Priority Queues	8
VLAN ID Range	VID 1 to 4094
USB Interface	
Storage Port	USB Type A
MicroSD Interface	
Storage Port	microSD card
Serial Interface	
Console Port	RS-232 (RJ45)
Input/Output Interface	
Alarm Contact Channels	1 relay output with current carrying capacity of 2 A @ 30 VDC
Power Parameters	
Input Voltage	100-240 VAC, 50-60 Hz or 230-240 VDC (for each power supply)
Operating Voltage	90-264 VAC, 47-63 Hz or 180-300 VDC (for each power supply)
Overload Current Protection	Supported
Reverse Polarity Protection	Supported
Input Current	Max. 1.236 A @ 110 VAC Max. 0.675 A @ 220 VAC Max. 0.74 A @ 180 VDC Max. 0.439 A @ 300 VDC
Power Consumption (Max.)	Max. 134.2 W @ 110 VAC Max. 132.3 W @ 220 VAC Max. 133.2 W @ 180 VDC Max. 131.8 W @ 300 VDC Note: These are the maximum power consumption ratings for the device with the maximum number of modules installed.
Power Module	2 x slots (2 x PWR-300-HVA-IF power modules included)
Physical Characteristics	
IP Rating	IP30
Dimensions	440 x 88 x 420 mm (17.32 x 3.46 x 16.54 in)
Weight	12 kg (26 lb)
Fan Module	8 x slots (8 x XM-4000-FAN-R preinstalled)
Installation	Rack mounting
Interactive Interface	Onboard LCM display Push buttons for configuration
Environmental Limits	
Operating Temperature	-10 to 60°C (-14 to 140°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

Safety	UL 62368-1 UL 61010-2-201 IEC 62368-1
EMC	EN 55032/35 EN 61000-6-2/-6-4
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF IEC 61000-4-11 Voltage Dips & Interruptions
Railway	EN 50121-4
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-6
Package Drop Test	ISTA 1A
Package Vibration Test	ISTA 1A

MTBF

Time	1,337,959 hrs
Standards	Telcordia (Bellcore), GB

Warranty

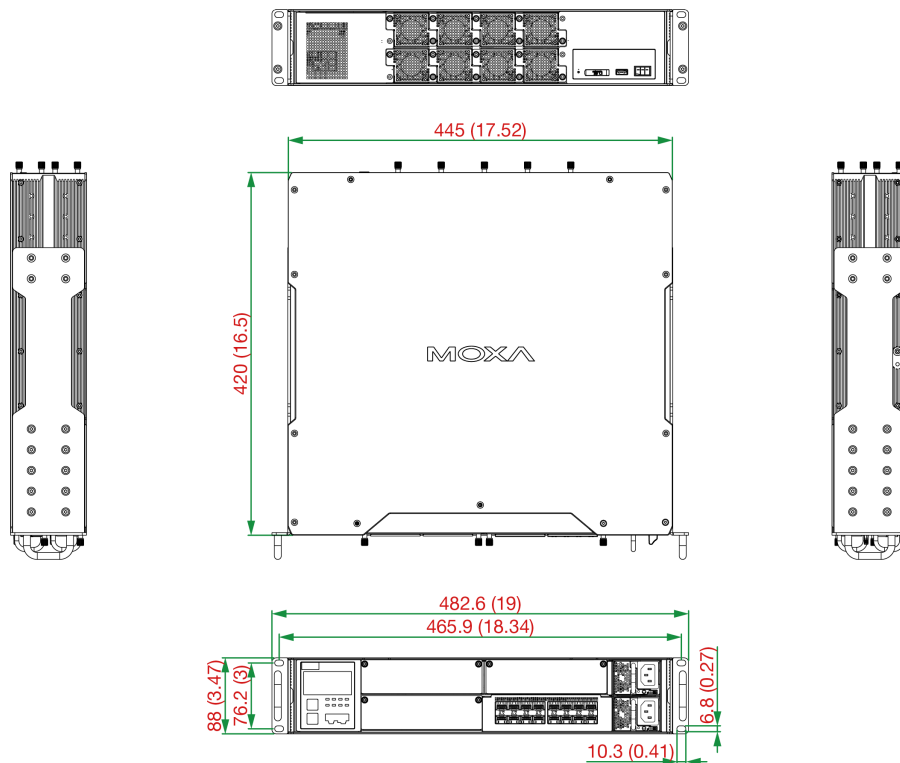
Warranty Period	5 years
Details	See www.moxa.com/tw/warranty

Package Contents

Device	1 x MRX-G4064-L3-8XGS Series switch (eight XM-4000-FAN-R fan modules preinstalled)
Power Supply	2 x PWR-300-HVA-IF power modules
Installation Kit	2 x rack-mounting ear 2 x plastic IP30 dust cover for PWR power modules 8 x round stickers for module screws
Documentation	1 x quick installation guide 1 x warranty card
Note	This product requires additional modules (sold separately) and IEC 60320 C15 power cords to function.

尺寸

單位：公釐（英吋）



訂購資訊

Model Name	Max. No. of Ports	10GbE SFP+ Slots	1000Base SFP Slots	1000BaseT(X) Ports (RJ-45)	L3 Functionality	Operating Temp.
MRX-G4064-L3-8XGS	64	8	Up to 56	Up to 48	P	-10 to 60°C

配件（選購）

Expansion Modules

XM-4000-16GTX	Gigabit Ethernet module with 16 1000BaseT(X) ports
XM-4000-16GSFP	Gigabit Ethernet module with 16 1000BaseSFP ports

Power Modules

PWR-300-HVA-IF	Isolated power supply module (110/220 VAC/VDC) with system power input, AC power inlet, intake fan
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Fan Modules

XM-4000-FAN-R	Exhaust fan module for MRX switches
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SFP Modules

SFP-1G10ALC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature
SFP-1G10BLC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature
SFP-1G20ALC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature
SFP-1G20BLC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature
SFP-1G40ALC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature
SFP-1G40BLC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature

SFP-1G10ALC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature
SFP-1G10BLC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature
SFP-1G20ALC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature
SFP-1G20BLC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature
SFP-1G40ALC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature
SFP-1G40BLC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature
SFP-1GSXLC	SFP module with 1 1000BaseSX port with LC connector for 300m/550m transmission, 0 to 60°C operating temperature
SFP-1GLSXLC	SFP module with 1 1000BaseLSX port with LC connector for 1km/2km transmission, 0 to 60°C operating temperature
SFP-1GLXLC	SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, 0 to 60°C operating temperature
SFP-1GLHLC	SFP module with 1 1000BaseLH port with LC connector for 30 km transmission, 0 to 60°C operating temperature
SFP-1GLHLC	SFP module with 1 1000BaseLH port with LC connector for 30 km transmission, 0 to 60°C operating temperature
SFP-1GLHXL	SFP module with 1 1000BaseLHX port with LC connector for 40 km transmission, 0 to 60°C operating temperature
SFP-1GZXLC	SFP module with 1 1000BaseZX port with LC connector for 80 km transmission, 0 to 60°C operating temperature
SFP-1GEZXL	SFP module with 1 1000BaseEZ port with LC connector for 110 km transmission, 0 to 60°C operating temperature
SFP-1GEZXL-120	SFP module with 1 1000BaseEZ port with LC connector for 120 km transmission, 0 to 60°C operating temperature
SFP-1GSXLC-T	SFP module with 1 1000BaseSX port with LC connector for 300m/550m transmission, -40 to 85°C operating temperature
SFP-1GLSXLC-T	SFP module with 1 1000BaseLSX port with LC connector for 1km/2km transmission, -40 to 85°C operating temperature
SFP-1GLXLC-T	SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, -40 to 85°C operating temperature
SFP-1GLHLC-T	SFP module with 1 1000BaseLH port with LC connector for 30 km transmission, -40 to 85°C operating temperature
SFP-1GLHXL-T	SFP module with 1 1000BaseLHX port with LC connector for 40 km transmission, -40 to 85°C operating temperature
SFP-1GZXLC-T	SFP module with 1 1000BaseZX port with LC connector for 80 km transmission, -40 to 85°C operating temperature
SFP-1GTXRJ45-T	SFP module with 1 1000BaseT port with RJ45 connector for 100 m transmission, -40 to 75°C operating temperature
SFP-10GSRLC-T	SFP+ module with 1 10GBase-SR port, LC connector for 33m/82m/300m/400m transmission, -40 to 85°C operating temperature
SFP-10GLRLC-T	SFP+ module with 1 10GBase-LR port, LC connector for 10 km transmission, -40 to 85°C operating temperature
SFP-10GERLC-T	SFP+ module with 1 10GBase-ER port, LC connector for 40 km transmission, -40 to 85°C operating temperature
SFP-10GZRLC-T	SFP+ module with 1 10GBase-ZR port, LC connector for 80 km transmission, -40 to 85°C operating temperature

Cables

CN20070	10-pin RJ45 to DB9 female serial cable
PWC-C15US-3B-183	C15 power cord with US plug, 1.83 m
PWC-C15EU-3B-183	C15 power cord with EU plug, 1.83 m

Software

LIC-MXviewOne-NEW-XN-SR	MXview One node license with customizable node quantity (minimum 1 node)
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Storage Kits

ABC-02-USB	Configuration backup and restoration tool, firmware upgrade, and log file storage tool for managed Ethernet switches and routers, 0 to 60°C operating temperature
ABC-02-USB-T	Configuration backup and restoration tool, firmware upgrade, and log file storage tool for managed Ethernet switches and routers, -40 to 75°C operating temperature
ABC-03-microSD-T	MicroSD-based configuration backup and restoration tool, firmware upgrades, and log file storage tool for managed Ethernet switches and WLAN products, -40 to 85°C operating temperature

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