

TSN-G5016 系列

16 埠支援 TSN 的網管型乙太網路交換器



特色與優點

- 支援 10GbE 乙太網路埠，可提供高頻寬與低延遲的通訊
- 精巧且具彈性的外殼設計，適合安裝於空間受限的環境
- 網頁式 GUI，便於進行裝置配置與管理
- IP40 等級金屬外殼
- 支援時間敏感網路 (TSN) 技術

認證



簡介

TSN-G5016 系列旨在滿足現代工業網路的需求，並實現工業 4.0 的願景。這些交換器最多配備四個 10GbE 乙太網路埠，可提供高頻寬且具有低延遲的通訊能力，使其非常適合資料密集型應用，並有助於未來網路的擴充與升級。

精巧且具彈性的設計使 TSN-G5016 系列能輕鬆安裝於空間受限的環境，而堅固的 IP40 等級金屬外殼則確保其在嚴苛工業環境中的可靠運作。易用的網頁介面可簡化配置與管理，降低部署時間與操作複雜度。

透過採用標準乙太網路時間敏感網路 (TSN) 技術，TSN-G5016 系列可建構單一整合的乙太網路，提供可靠、具確定性及有低延遲的通訊，並可在未來透過韌體升級擴展 TSN 功能。

規格

Ethernet Interface

Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) IEEE 802.3ab for 1000BaseT(X) IEEE 802.3z for 1000BaseX IEEE 802.1Q for VLAN Tagging IEEE 802.1p for Class of Service IEEE 802.1D-2004 for Spanning Tree Protocol IEEE 802.1w for Rapid Spanning Tree Protocol IEEE 1588v2 PTP Precision Time Protocol (hardware-based) IEEE 802.1 AS for Time Synchronization IEEE 802.1 Qbv for Time-aware Shaper
10/100/1000BaseT(X) Ports (RJ45 connector)	12 Auto negotiation speed Full/Half duplex mode Auto MDI/MDI-X connection
10GbE SFP+ Slots	TSN-G5016-4XGS-SoMD-LV-T: 4
1000BaseSFP Slots	TSN-G5016-4GS-SoMD-LV-T: 4

Ethernet Software Features

Management	IPv4/IPv6 LLDP SMTP SNMP Inform SNMPv1/v2c/v3 SNMP Trap DHCP Server/Client ARP TFTP SFTP HTTP HTTPS SSH Telnet Private MIB Syslog Port Mirroring
MIB	Bridge-MIB Ethernet-like-MIB IEEE8021-AS-MIB IEEE8021-SPANNING-TREE-MIB IF-MIB LLDP-MIB PTPBASE-MIB Q-BRIDGE-MIB RFC1213-MIB SNMPv2-MIB
Redundancy Protocols	RSTP STP
Security	Broadcast storm protection Trust access control Login and Password Policy HTTPS/SSL SSH SNMPv3 RADIUS TACACS+
Time Management	SNTP NTP Server/Client IEEE 1588v2 PTP (hardware-based) IEEE 802.1 AS IEEE 802.1 Qbv
Filter	802.1Q VLAN Static Multicast

Switch Properties

MAC Table Size	9 K
Max. No. of VLANs	256
VLAN ID Range	VID 1 to 4094
Packet Buffer Size	8 Mbits

Serial Interface

Console Port	RS-232 (TxD, RxD, GND), 8-pin RJ45 (115200, n, 8, 1)
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USB Interface

USB Connector	(This interface is reserved for future use.)
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Input/Output Interface

Alarm Contact Channels	1 Relay output with current carrying capacity of 1 A @ 24 VDC
Buttons	Reset button
Digital Input Channels	1
Digital Inputs	+13 to +30 V for state 1 -30 to +3 V for state 0 Max. input current: 8 mA

LED Interface

LED Indicators	STATE, FAULT, PWR1, PWR2, M/H, C/T, SYNC, R1, R2, R3
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Power Parameters

Connector	2 removable 4-contact terminal block(s)
Input Voltage	12 to 48 VDC Redundant dual inputs
Operating Voltage	9.6 to 60 VDC
Input Current	3A (max.)
Overload Current Protection	Supported
Reverse Polarity Protection	Supported

Physical Characteristics

Housing	Metal
IP Rating	IP40
Dimensions	84 x 140 x 105 mm (3.31 x 5.51 x 4.13 in)
Weight	1,380.5 g (3.04 lb)
Installation	DIN-rail mounting Wall mounting (with optional kit)

Environmental Limits

Operating Temperature	-40 to 70°C (-40 to 158°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 61010-2-201 EN 62368-1
EMC	EN 55032/35
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: 10 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 1 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
Shock	IEC 60068-2-27

Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6

MTBF

Time	809,568 hrs
Standards	Telcordia (Bellcore), GB

Warranty

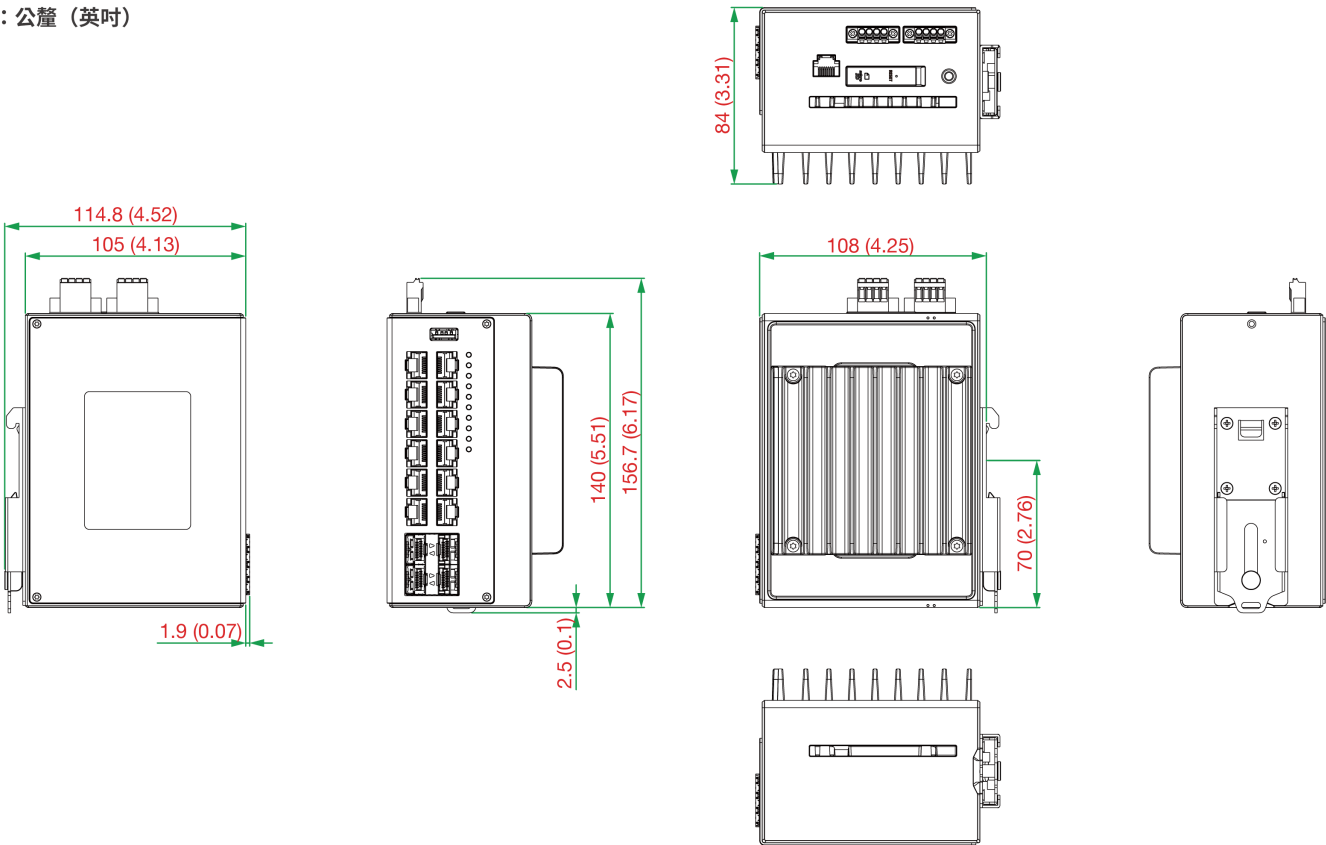
Warranty Period	5 years
Details	See www.moxa.com/tw/warranty

Package Contents

Device	1 x TSN-G5016 Series switch
Cable	1 x RJ45-to-DB9 console cable
Documentation	1 x quick installation guide 1 x warranty card 1 x product notice, Simplified Chinese 1 x product certificates of quality inspection, Simplified Chinese
Connectors	2 x Terminal blocks

尺寸

單位：公釐（英吋）



訂購資訊

Model Name	Layer	No. of Ports	10/100/1000BaseT(X) Ports (RJ45 connector)	SFP Ports (10GbE SFP+)	SFP Ports (1000BaseSFP)	Operating Temp.
TSN-G5016-4XGS-SoMD-LV-T	2	16	12	4	–	-40 to 70°C
TSN-G5016-4GS-SoMD-LV-T	2	16	12	–	4	-40 to 70°C

配件（選購）

SFP Modules

SFP-1GLXLC-T	SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, -40 to 85°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-10GLRLC-T	SFP+ module with 1 10GBase-LR port, LC connector for 10 km transmission, -40 to 85°C operating temperature

Power Supplies

NDR-120-24	120 W/5.0 A DIN-rail 24 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -20 to 70°C operating temperature
NDR-240-48	240 W/5.0 A DIN-rail 48 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -20 to 70°C operating temperature

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