

# TSN-G5004シリーズ

## 4Gポートフルギガビットマネージドイーサネットスイッチ



### 機能とメリット

- 狭いスペースにも収まるコンパクトで柔軟な筐体設計
- 簡単にデバイス設定と管理ができる、WebベースGUI
- IEC 62443に基づくセキュリティ機能
- IP40等級の金属製筐体
- TSN (Time-Sensitive Networking) 技術をサポート

### 認証



### 製品紹介

TSN-G5004シリーズスイッチは、製造ネットワークをインダストリー4.0のビジョンに準拠させるのに最適です。スイッチには、4個のギガビットイーサネットポートが装備されています。フルギガビット設計により、これらのスイッチは既存のネットワークをギガビット速度にアップグレードしたり、将来の高帯域幅アプリケーション用に新しいフルギガビットバックボーンを構築したりするのに適しています。コンパクトな設計と、新しいMoxa Web GUIが提供するユーザーフレンドリーな設定インターフェースにより、ネットワーク導入が非常に容易になります。TSN-G5004シリーズは標準イーサネットのTSN (Time-Sensitive Networking) 技術を活用し、リアルタイム通信を実現し、将来のファームウェアアップグレードで追加TSN規格のサポートを予定しています。

### 仕様

#### 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)	4 Auto negotiation speed Full/Half duplex mode Auto MDI/MDI-X connection

## 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 Mirror
MIB	RFC1213 Ethernet-like MIB IF MIB LLDP MIB Bridge MIB Q-BRIDGE MIB IEEE8021-PAE-MIB IEEE8021-SPANNING-TREE-MIB SNMPv2-MIB
Redundancy Protocols	RSTP STP Turbo Chain Link Aggregation
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	2 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	USB Type A
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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, SYNC
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## Power Parameters

Connection	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	1.25 A @ 12 VDC
Overload Current Protection	Supported
Reverse Polarity Protection	Supported

## Physical Characteristics

Housing	Metal
IP Rating	IP40
Dimensions	25 x 135 x 115 mm (0.98 x 5.32 x 4.53 in)
Weight	582 g (1.28 lb)
Installation	DIN-rail mounting Wall mounting (with optional kit)

## 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)

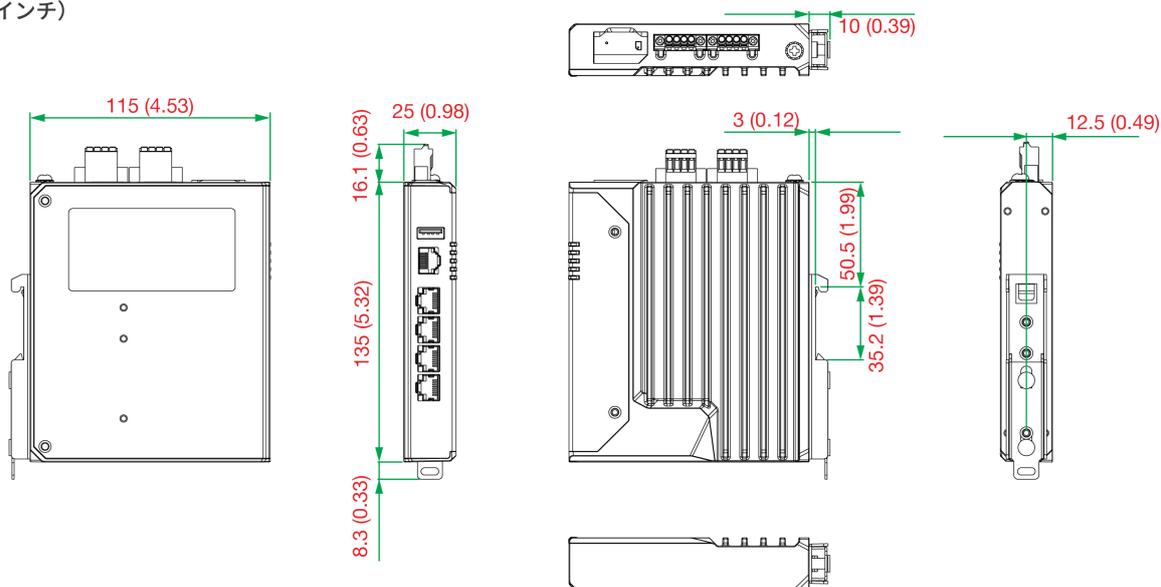
## Standards and Certifications

Safety	UL 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
<b>MTBF</b>	
Time	848,997 hrs
Standards	Telcordia (Bellcore), GB
<b>Warranty</b>	
Warranty Period	5 years
Details	See <a href="http://www.moxa.com/jp/warranty">www.moxa.com/jp/warranty</a>
<b>Package Contents</b>	
Device	1 x TSN-G5004 switch
Cable	1 x RJ45-to-DB9 console cable
Documentation	1 x quick installation guide 1 x warranty card 1 x substance disclosure table 1 x product notice, Simplified Chinese 1 x product certificates of quality inspection, Simplified Chinese
Connectors	2 x Terminal blocks

## 寸法

単位: mm (インチ)



## 注文情報

Model Name	Layer	No. of Ports	10/100/1000BaseT(X) Ports RJ45 Connector	Operating Temp.
TSN-G5004	2	4	4	-10 to 60°C

## アクセサリ (別売)

### SFP Modules

SFP-1GEZXC	SFP module with 1 1000BaseEZXC port with LC connector for 110 km transmission, 0 to 60°C operating temperature
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SFP-1GEZXC-120	SFP module with 1 1000BaseEZXC port with LC connector for 120 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-1GLHXLC	SFP module with 1 1000BaseLHX port with LC connector for 40 km 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-1GSXLC	SFP module with 1 1000BaseSX port with LC connector for 300m/550m 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-1GLHLC-T	SFP module with 1 1000BaseLH port with LC connector for 30 km transmission, -40 to 85°C operating temperature
SFP-1GLHXLC-T	SFP module with 1 1000BaseLHX port with LC connector for 40 km 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-1GSXLC-T	SFP module with 1 1000BaseSX port with LC connector for 300m/550m 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-1GZXLC-T	SFP module with 1 1000BaseZX port with LC connector for 80 km transmission, -40 to 85°C operating temperature
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-1FELLC-T	SFP module with 1 100Base single-mode with LC connector for 80 km transmission, -40 to 85°C operating temperature
SFP-1FEMLC-T	SFP module with 1 100Base multi-mode, LC connector for 2/4 km transmission, -40 to 85°C operating temperature

SFP-1FESLC-T	SFP module with 1 100Base single-mode with LC connector for 40 km transmission, -40 to 85°C operating temperature
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### Power Supplies

DR-120-24	120W/2.5A DIN-rail 24 VDC power supply with universal 88 to 132 VAC or 176 to 264 VAC input by switch, or 248 to 370 VDC input, -10 to 60°C operating temperature
DR-4524	45W/2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 50°C operating temperature
DR-75-24	75W/3.2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 60°C operating temperature
MDR-40-24	DIN-rail 24 VDC power supply with 40W/1.7A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature
MDR-60-24	DIN-rail 24 VDC power supply with 60W/2.5A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature

### Wall-Mounting Kits

WK-30-02	Wall-mounting kit, 2 plates, 4 screws, 30 x 66.8 x 2 mm
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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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