PT-7528シリーズ

IEC 61850-3準拠28ポートレイヤ2マネージドラックマウントイーサネットスイッチ

機能と特長

- IEC 61850-3、IEEE 1613（変電所向け）準拠
- Power SCADA用のIEC 61850-90-4スイッチデータモデリングに基づく内蔵MMSサーバー
- Noise Guard™ ワイヤ速度ゼロパケットロス技術
- Turbo RingおよびTurbo Chain（リカバリ時間はスイッチ250台で20ミリ秒未満）、[1]をサポートし、RSTP/STP、およびMSTPでネットワーク冗長性を実現
- ユニバーサル24 VDC、48 VDC、または110/220 VDC/VAC電源範囲に対応した絶縁冗長電源
- 動作温度範囲-40～85°C

認証

製品紹介

PT-7528シリーズは、極端に過酷な環境で運用される変電所オートメーションアプリケーション向けに設計されています。PT-7528シリーズはMoxaのNoise Guard™技術をサポートし、IEC 61850-3に準拠しており、そのEMC耐性はIEEE 1613 Class 2規格を超えており、ワイヤ速度でデータを送信してもパケット損失ゼロが確保されます。また、PT-7528シリーズは、高精度のパケット優先順位付け（GOOSEおよびSMV）機能、内蔵MMSサーバー、変電所オートメーション向けに特別に設計された設定ウィザードも装備しています。

ギガビットイーサネット、冗長リング、110/220 VDC/VACの絶縁冗長電源に対応しているため、通信の信頼性が向上し、ケーブルや配線にかかるコストを削減できます。利用可能な数多くのPT-7528モデルは、多様なポート設定が可能であり、最大28基のカッパー（銅線）または光ファイバポートおよび最大4基のギガビットポートを用意しています。PT-7528は上記の特徴に加え、より優れた柔軟性を備えているため、さまざまな産業アプリケーションに適しています。

その他の機能とメリット

- IEC 61850-90-4規格に基づくスイッチデータモデリング
- Fiber Check™は、MST/MSC/SSC/SFPファイバポート上の監視と診断機能を提供します。
- VLAN Unaware：特定のIEDが受信する優先タグ付きフレームをサポート
- EtherNet/IPおよびModbus TCP産業用イーサネットプロトコルをサポート
- Webブラウザ、Telnet/シリアルコンソール、CLI、Windowsユーティリティ、ABC-01自動バックアップコンフィギュレータによる設定が可能
- Turbo RingおよびTurbo Chain（リカバリ時間はスイッチ250台で20ミリ秒未満）、[1]をサポートし、RSTP/STP、およびMSTPでネットワーク冗長性を実現
- 各ポリシーに応じてIPアドレスを割り当てるDHCP Option 82
- 産業用イーサネットプロトコルからマルチキャストトラフィックをフィルタリングするIGMPスヌーピングおよびGMRP
- 最適な帯域幅利用のIEEE 802.3ad、LACP
- 想定外のネットワーク状況を防ぐ帯域幅管理
- オンラインデバッグ用のマルチポートミラーリング
- メールとリレー出力を通じた例外検出による自動警告
- プロアクティブで効率の高いネットワーク監視のためのRMON
- 接続されたデバイスのIPアドレスの自動復旧
- ラインスワップ高速リカバリ
- Noise Guard™はクリティカルなアプリケーションに対して、IEEE 1613 Class 2を超える高レベルのEMC耐性を提供

1. ギガビットイーサネットのリカバリ時間50ミリ秒未満

サイバーセキュリティ機能

- 複数レベルのセキュリティを備えたユーザーパスワードにより、不正な設定から保護
- パスワードとデータの暗号化のためにSSH/HTTPSを使用
- 許可されたクライアントのみがポートにアクセスできるように、802.1Xポートベースのネットワークアクセス制御を備えたスイッチポートをロック
- RADIUS/TACACS+により、一元化された場所からパスワードを管理可能
- 802.1Q VLANを使用すると、選択したスイッチポート間で送信されるトラフィックを論理的に分割可能
- 特定のデバイスやMACアドレスのみがポートにアクセスできるように、スイッチポートを保護
- 一つや複数のポートを無効にして、ネットワークトラフィックをブロック
- SNMPv3は、暗号化された認証とアクセスセキュリティを提供

仕様

Ethernet Interface

10/100BaseT(X) Ports (RJ45 connector)	PT-7528-4TX Series: 4 PT-7528-8TX Series: 8 PT-7528-12TX Series: 12 PT-7528-16TX Series: 16 PT-7528-24TX Series: 24
100/1000BaseSFP Ports	PT-7528-4GSFP Models: 4
100BaseFX Ports (multi-mode SC connector)	PT-7528-8MSC Series: 8 PT-7528-12MSC Series: 12 PT-7528-16MSC Series: 16 PT-7528-20MSC Series: 20
100BaseFX Ports (multi-mode ST connector)	PT-7528-8MST Series: 8 PT-7528-12MST Series: 12 PT-7528-16MST Series: 16 PT-7528-20MST Series: 20
100BaseFX Ports (single-mode SC connector)	PT-7528-8SSC Series: 8
Optical Fiber	

		100BaseFX			
		Multi-Mode		Single-Mode	
Fiber Cable Type		OM1	50/125 µm 800 MHz x km	G.652	
Typical Distance		4 km	5 km	40 km	80 km
Wavelength	Typical (nm)	1300		1310	1550
	TX Range (nm)	1260 to 1360		1280 to 1340	1530 to 1570
	RX Range (nm)	1100 to 1600		1100 to 1600	1100 to 1600
Optical Power	TX Range (dBm)	-14 to -20*		0 to -5	0 to -5
	RX Range (dBm)	-3 to -32		-3 to -34	-3 to -34
	Link Budget (dB)	12		29	29
	Dispersion Penalty (dB)	3		1	1

*This range only applies to the PT-7528 multi-mode SC and ST fiber modules.

Note: When connecting a single-mode fiber transceiver, we recommend using an attenuator to prevent damage caused by excessive optical power.
Note: Compute the “typical distance” of a specific fiber transceiver as follows: Link budget (dB) > dispersion penalty (dB) + total link loss (dB).

Cabling Direction	Front cabling

Compatible Modules	PT-7528-24TX Series: Slot 1: PM-7500-2GTXSP, PM-7500-4GTXSFP, PM-7500-2MSC/4MSC, PM-7500-2MST/4MST, PM-7500-2SSC/4SSC
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 802.3 for 10BaseT IEEE 802.3ab for 1000BaseT(X) IEEE 802.3ad for Port Trunk with LACP IEEE 802.3u for 100BaseT(X) and 100BaseFX IEEE 802.3x for flow control IEEE 802.3z for 1000BaseSX/LX/LHX/ZX

Ethernet Software Features

Filter	802.1Q GMRP GVRP IGMP v1/v2c Port-based VLAN VLAN unaware
Industrial Protocols	EtherNet/IP Modbus TCP
Management	Back Pressure Flow Control BOOTP DHCP Option 66/67/82 DHCP Server/Client Flow control HTTP IPv4/IPv6 LLDP Port Mirror RARP RMON SMTP SNMP Inform SNMPv1/v2c/v3 Syslog Telnet TFTP Fiber check
MIB	Bridge MIB Ethernet-like MIB MIB-II P-BRIDGE MIB Q-BRIDGE MIB RMON MIB Groups 1, 2, 3, 9 RSTP MIB
Power Substation	IEC 61850 QoS MMS Configuration Wizard
Redundancy Protocols	Link Aggregation MSTP RSTP STP Turbo Chain Turbo Ring v1/v2

Security	Broadcast storm protection HTTPS/SSL TACACS+ Port Lock RADIUS Rate Limit SSH
Time Management	NTP Server/Client SNTP

Switch Properties

IGMP Groups	256
Jumbo Frame Size	9.6 KB
Max. No. of VLANs	256
VLAN ID Range	VID 1 to 4094
Priority Queues	4
Switching Capacity	12.8 Gbps
Forwarding Capacity	12.8 Gbps

USB Interface

Storage Port	USB Type A

Serial Interface

Console Port	USB-serial console (Type B connector)

Input/Output Interface

Alarm Contact Channels	Resistive load: 3 A @ 30 VDC, 240 VAC

Power Parameters

Connection	10-pin terminal block
Input Voltage	PT-7528-HV-HV/WV-WV/WV-HV Series: Redundant power modules PT-7528-WV Series: 24/48 VDC (18 to 72 VDC) PT-7528-HV Series: 110/220 VAC/VDC (85 to 264 VAC, 88 to 300 VDC)
Input Current	For models with fewer than 8 fiber ports: PT-7528-WV Series: 0.741 A @ 24 VDC, 0.364 A @ 48 VDC PT-7528-HV Series: 0.147/0.077 A @ 110/220 VDC, 0.283/0.190 A @ 110/220 VAC For models with 8 or more fiber ports: PT-7528-WV Series: 1.428 A @ 24 VDC, 0.735 A @ 48 VDC PT-7528-HV Series: 0.586/0.382 A @ 110/220 VAC, 0.313/0.167 A @ 110/220 VDC
Overload Current Protection	Supported
Reverse Polarity Protection	Supported

Physical Characteristics

Housing	Aluminum
IP Rating	IP40
Dimensions (without ears)	440 x 44 x 325 mm (17.32 x 1.73 x 12.80 in)
Weight	4900 g (10.89 lb)
Installation	19-inch rack mounting

Environmental Limits

Operating Temperature	-40 to 85°C (-40 to 185°F) Note: Cold start requires minimum of 100 VAC @ -40°C
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

EMI	EN 55032 Class A CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 8 kV; Air: 15 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 35 V/m IEC 61000-4-4 EFT: Power: 4 kV; Signal: 4 kV IEC 61000-4-5 Surge: Power: 4 kV; Signal: 4 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF IEC 61000-4-11
Safety	UL 508
Power Substation	IEC 61850-3 IEEE 1613 Class 2 Note: Models with MCS and SSC fiber ports are compliant with IEEE 1613 Class 1
Railway	EN 50121-4
Traffic Control	NEMA TS2

MTBF

Time	771,320 hrs
Standards	Telcordia SR332

Warranty

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

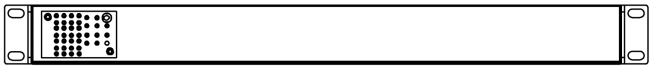
Package Contents

Device	1 x PT-7528 Series switch
Cable	1 x USB type A male to USB type B male
Installation Kit	4 x cap, plastic, for RJ45 port 4 x cap, plastic, for SFP slot 2 x rack-mounting ear
Documentation	1 x document and software CD 1 x quick installation guide 1 x product certificates of quality inspection, Simplified Chinese 1 x product notice, Simplified Chinese 1 x warranty card
Note	SFP modules and/or modules from the PM-7500 Module Series need to be purchased separately for use with this product.

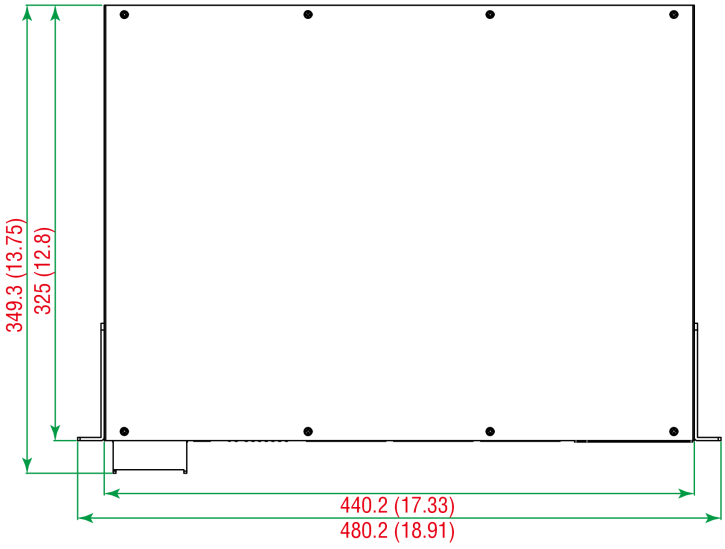
寸法

単位：mm（インチ）

背面図

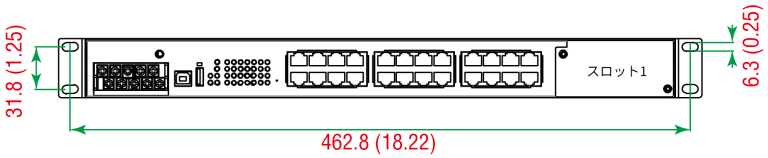


上面図



側面図

前面図



注文情報

Model Name	1000Base SFP Slots	10/100BaseT(X)	100BaseFX	Input Voltage 1	Input Voltage 2	Redundant Power Module	Operating Temp.
PT-7528-24TX-WV-HV	–	24	–	24/48 VDC	110/220 VDC/VAC	P	-45 to 85°C
PT-7528-24TX-WV	–	24	–	24/48 VDC	–	–	-45 to 85°C
PT-7528-24TX-HV	–	24	–	110/220 VDC/VAC	–	–	-45 to 85°C
PT-7528-24TX-WV-WV	–	24	–	24/48 VDC	24/48 VDC	P	-45 to 85°C
PT-7528-24TX-HV-HV	–	24	–	110/220 VDC/VAC	110/220 VDC/VAC	P	-45 to 85°C
PT-7528-8MSC-16TX-4GSFP-WV	4	16	8 x multi-mode, SC connector	24/48 VDC	–	–	-45 to 85°C
PT-7528-8MSC-16TX-4GSFP-WV-WV	4	16	8 x multi-mode, SC connector	24/48 VDC	24/48 VDC	P	-45 to 85°C
PT-7528-8MSC-16TX-4GSFP-HV	4	16	8 x multi-mode, SC connector	110/220 VDC/VAC	–	–	-45 to 85°C
PT-7528-8MSC-16TX-4GSFP-HV-HV	4	16	8 x multi-mode, SC connector	110/220 VDC/VAC	110/220 VDC/VAC	P	-45 to 85°C
PT-7528-12MSC-12TX-4GSFP-WV	4	12	12 x multi-mode, SC connector	24/48 VDC	–	–	-45 to 85°C
PT-7528-12MSC-12TX-4GSFP-WV-WV	4	12	12 x multi-mode, SC connector	24/48 VDC	24/48 VDC	P	-45 to 85°C

Model Name	1000Base SFP Slots	10/100BaseT(X)	100BaseFX	Input Voltage 1	Input Voltage 2	Redundant Power Module	Operating Temp.
PT-7528-12MSC-12TX-4GSFP-HV	4	12	12 x multi-mode, SC connector	110/220 VDC/VAC	–	–	-45 to 85°C
PT-7528-12MSC-12TX-4GSFP-HV-HV	4	12	12 x multi-mode, SC connector	110/220 VDC/VAC	110/220 VDC/VAC	P	-45 to 85°C
PT-7528-16MSC-8TX-4GSFP-WV	4	8	16 x multi-mode, SC connector	24/48 VDC	–	–	-45 to 85°C
PT-7528-16MSC-8TX-4GSFP-WV-WV	4	8	16 x multi-mode, SC connector	24/48 VDC	24/48 VDC	P	-45 to 85°C
PT-7528-16MSC-8TX-4GSFP-HV	4	8	16 x multi-mode, SC connector	110/220 VDC/VAC	–	–	-45 to 85°C
PT-7528-16MSC-8TX-4GSFP-HV-HV	4	8	16 x multi-mode, SC connector	110/220 VDC/VAC	110/220 VDC/VAC	P	-45 to 85°C
PT-7528-20MSC-4TX-4GSFP-WV	4	4	20 x multi-mode, SC connector	24/48 VDC	–	–	-45 to 85°C
PT-7528-20MSC-4TX-4GSFP-WV-WV	4	4	20 x multi-mode, SC connector	24/48 VDC	24/48 VDC	P	-45 to 85°C
PT-7528-20MSC-4TX-4GSFP-HV	4	4	20 x multi-mode, SC connector	110/220 VDC/VAC	–	–	-45 to 85°C
PT-7528-20MSC-4TX-4GSFP-HV-HV	4	4	20 x multi-mode, SC connector	110/220 VDC/VAC	110/220 VDC/VAC	P	-45 to 85°C
PT-7528-8SSC-16TX-4GSFP-WV-WV	4	16	8 x single-mode, SC connector	24/48 VDC	24/48 VDC	P	-45 to 85°C
PT-7528-8SSC-16TX-4GSFP-HV-HV	4	16	8 x single-mode, SC connector	110/220 VDC/VAC	110/220 VDC/VAC	P	-45 to 85°C
PT-7528-8MST-16TX-4GSFP-WV	4	16	8 x multi-mode, ST connector	24/48 VDC	–	–	-45 to 85°C
PT-7528-8MST-16TX-4GSFP-WV-WV	4	16	8 x multi-mode, ST connector	24/48 VDC	24/48 VDC	P	-45 to 85°C
PT-7528-8MST-16TX-4GSFP-HV	4	16	8 x multi-mode, ST connector	110/220 VDC/VAC	–	–	-45 to 85°C
PT-7528-8MST-16TX-4GSFP-HV-HV	4	16	8 x multi-mode, ST connector	110/220 VDC/VAC	110/220 VDC/VAC	P	-45 to 85°C
PT-7528-12MST-12TX-4GSFP-WV	4	12	12 x multi-mode, ST connector	24/48 VDC	–	–	-45 to 85°C
PT-7528-12MST-12TX-4GSFP-WV-WV	4	12	12 x multi-mode, ST connector	24/48 VDC	24/48 VDC	P	-45 to 85°C
PT-7528-12MST-12TX-4GSFP-HV	4	12	12 x multi-mode, ST connector	110/220 VDC/VAC	–	–	-45 to 85°C
PT-7528-12MST-12TX-4GSFP-HV-HV	4	12	12 x multi-mode, ST connector	110/220 VDC/VAC	110/220 VDC/VAC	P	-45 to 85°C
PT-7528-16MST-8TX-4GSFP-WV	4	8	16 x multi-mode, ST connector	24/48 VDC	–	–	-45 to 85°C

Model Name	1000Base SFP Slots	10/100BaseT(X)	100BaseFX	Input Voltage 1	Input Voltage 2	Redundant Power Module	Operating Temp.
PT-7528-16MST-8TX-4GSFP-WV-WV	4	8	16 x multi-mode, ST connector	24/48 VDC	24/48 VDC	P	-45 to 85°C
PT-7528-16MST-8TX-4GSFP-HV	4	8	16 x multi-mode, ST connector	110/220 VDC/ VAC	–	–	-45 to 85°C
PT-7528-16MST-8TX-4GSFP-HV-HV	4	8	16 x multi-mode, ST connector	110/220 VDC/ VAC	110/220 VDC/ VAC	P	-45 to 85°C
PT-7528-20MST-4TX-4GSFP-WV	4	4	20 x multi-mode, ST connector	24/48 VDC	–	–	-45 to 85°C
PT-7528-20MST-4TX-4GSFP-WV-WV	4	4	20 x multi-mode, ST connector	24/48 VDC	24/48 VDC	P	-45 to 85°C
PT-7528-20MST-4TX-4GSFP-HV	4	4	20 x multi-mode, ST connector	110/220 VDC/ VAC	–	–	-45 to 85°C
PT-7528-20MST-4TX-4GSFP-HV-HV	4	4	20 x multi-mode, ST connector	110/220 VDC/ VAC	110/220 VDC/ VAC	P	-45 to 85°C

アクセサリー（別売）

PM-7500 Module Series

PM-7500-2GTXSFP	Gigabit Ethernet module with 2 100/1000BaseSFP slots or 2 100/1000BaseT(X) ports, compliant with IEC 61850-3, -40 to 85°C operating temperature
PM-7500-2MSC	Fast Ethernet module with 2 100BaseFX multi-mode ports with SC connectors, compliant with IEC 61850-3, -40 to 85°C operating temperature
PM-7500-2MST	Fast Ethernet module with 2 100BaseFX multi-mode ports with ST connectors, compliant with IEC 61850-3, -40 to 85°C operating temperature
PM-7500-2SSC	Fast Ethernet module with 2 100BaseFX single-mode ports with SC connectors, compliant with IEC 61850-3, -40 to 85°C operating temperature
PM-7500-4GTXSFP	Gigabit Ethernet module with 4 100/1000BaseSFP slots or 4 100/1000BaseT(X) ports, compliant with IEC 61850-3, -40 to 85°C operating temperature
PM-7500-4MSC	Fast Ethernet module with 4 100BaseFX multi-mode ports with SC connectors, compliant with IEC 61850-3, -40 to 85°C operating temperature
PM-7500-4MST	Fast Ethernet module with 4 100BaseFX multi-mode ports with ST connectors, compliant with IEC 61850-3, -40 to 85°C operating temperature
PM-7500-4SSC	Fast Ethernet module with 4 100BaseFX single-mode ports with SC connectors, compliant with IEC 61850-3, -40 to 85°C operating temperature

Storage Kits

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

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-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	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-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	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-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	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-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	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-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	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-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-1GEZXLC	SFP module with 1 1000BaseEZX port with LC connector for 110 km transmission, 0 to 60°C operating temperature
SFP-1GEZXLC-120	SFP module with 1 1000BaseEZX 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-1GLHLC-T	SFP module with 1 1000BaseLH port with LC connector for 30 km transmission, -40 to 85°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-1GLHXLC-T	SFP module with 1 1000BaseLHX port with LC connector for 40 km transmission, -40 to 85°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-1GLSXLC-T	SFP module with 1 1000BaseLSX port with LC connector for 1km/2km transmission, -40 to 85°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-1GLXLC-T	SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, -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-1GSXLC-T	SFP module with 1 1000BaseSX port with LC connector for 300m/550m transmission, -40 to 85°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-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-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

Software

MXview-50	MXview license for 50 nodes

MXview-100	MXview license for 100 nodes
MXview-250	MXview license for 250 nodes
MXview-500	MXview license for 500 nodes
MXview-1000	MXview license for 1000 nodes
MXview-2000	MXview license for 2000 nodes
MXview Upgrade-50	MXview license expansion for 50 nodes