OS5 Platform OS5 Managed Ethernet Switches

I(P)GS-H7624XF-TX

24 GT + 6 10G SFP+ (w/24 PoE) Managed Ethernet Switch

w/optional L3L/L3 & Cybersecurity

OVERVIEW

Lantech I(P)GS-H7624XF-TX is a high-performance OS5 EN50155** Ethernet switch with 24 10/100/1000T + 6 1G/2.5G/5G/10G SFP switch (total 30 ports) w/(20/24 PoE 802.3bt/af/at ports). The OS5 platform supports L3/L2, IPv6/v4, NAT**, standardized ITU G.803 ring, IEC62443-4-2 certified cybersecurity, Macsec**, PTP v2** as well as ETBN TTDP** protocol suitable for the future-proof modern network.

Lantech OS5 platform is equipped with complete L2 management and L3 communication protocols incl. dynamic routing, multicast routing, hardware NAT and ETBN TTDP; optional PTP, MacSec to be upgradable

The switch runs on the Lantech OS5 platform which is powerful with complete Layer 2 management features and major L3 protocols inclusive of RIP, OSPF, PIM, DVMRP, IEC61375-2-5 (ETBN), and hardware-based NAT. It also supports optional Macsec for authentication and encryption between two Macsec devices. The optional PTP V2 and gPTP support transparent clock, boundary clock and ordinary clocks with 2-step processing that synchronizes network time accuracy to sub-microseconds. To learn more about the Lantech OS5 Platform, please refer to **Lantech OS5 Software Datasheet**

Certified cybersecurity development process with IEC 62443-4-1, and IEC 62443-4-2** certificate with physical tamper resistance and detection for integrity and authenticity of the boot process

Lantech OS5 platform is designed with a high standard of cybersecurity to prevent threats from network attacks. To ensure the safety and reliability of communication networks, Lantech software development is certified with IEC 62443-4-1 security process standards and the switch is also certified with IEC 62443-4-2**. The switch uses roots of trust to verify the integrity and authenticity of the firmware, software, and configuration data needed for the switch's boot process.

To learn more about Lantech cybersecurity software solutions, please refer to **Lantech OS5 Software Datasheet**

Support Restful API for better switch performance; Auto-provisioning for firmware/configuration update

The switch supports Restful API that uses JSON format to access and use data for GET, PUT, POST and DELETE types to avoid traditional SNMP management occupying CPU utilization. The OPEN API document format for Restful API can greatly improve central management efficiency for various applications including fleet management and AIOT.

It also supports auto-provisioning for switch to auto-check the latest software image and configuration through TFTP server.

Dying Gasp message to notify center

The dying Gasp function can send the last message to the center before losing power or shutting down.

Optional IEC 61375-2-5/3-4 ETBN/ECN TTDP protocol, RNAT and proprietary DHCP and VLAN over TTDP

Lantech optional L3L/L3 license includes IEC 61375-2-5 and 3-4 ETBN standardized TTDP protocol that automatically assigns the switch IP address reflecting its location to adapt with various train-car arrangements of the operator's plan. With RNAT (railway NAT), each car device's IP address can be routed to the specific server and proprietary DHCP and VLAN over TTDP to help manage fixed IP address per device as well as the segmentation of VLAN in ECN.

DCI /AC inputs with redundancy (2AC/2DCI) and dedicated PoE power source input

The switch is designed for easy maintenance and installation; It also supports dual DCI power supplies (galvanic isolated power DC16.8~137.5V) or dual isolated AC 90~264VAC IEC320 power input to increase the system reliability.

Up to 24 PoE at/af and 4 T4 PoE bt ports w/advanced PoE management and PoE galvanic isolation with max PoE budget, support Perpetual/Fast PoE

Compliant with T4 802.3 bt/at/af and perpetual/fast PoE standard, the PoE model is able to feed 24 PoE ports up to 30 Watt@ (-24 model) for various PD devices or 16 PoE ports up to 30 Watt@ and 4 T4 PoE IEEE 802.3bt to feed PoE up to 90 Watt@ (-20 model). It supports advanced PoE management including PoE detection and scheduling. PoE detection can detect if the connected PD hangs then restart the PD; PoE scheduling is to allow a pre-set power feeding schedule upon a routine timetable. Each PoE port can be Enabled/disabled, get the voltage, current, Watt, and temperature info displayed on WebUI.

Perpetual and Fast PoE provides immediate and continuous power to devices during PSE switch reboots.

The PoE galvanic isolation provides insulation between the power input to PoE Ethernet ports, preventing cabling and grounding incidents from damaging the Ethernet switch. The efficiency of the galvanically decoupled voltage converters can reach above 90%.

Support RTC (Real Time Clock) with longevity golden capacitor

Our switch supports RTC which is powered by a golden capacitor, ensuring accurate real-time event logs for all times. Unlike traditional batteries, golden capacitors offer superior reliability, and longevity, without a need to change battery.

User-friendly GUI, Auto topology drawing, Enhanced Environmental Monitoring

The user-friendly UI, innovative auto topology drawing, and topology demo make the switch much easier to get hands-on. The complete CLI enables professional engineers to configure settings by command line. It supports enhanced environmental monitoring for actual input voltage, current, switch ambient temperature and total power load.

Out-Of-Band management

OOB management allows a separate and secure method to access and manage the switch even when the primary network is inaccessible.

Editable configuration file; USB port for import/export configuration; USB Type-C console port

The configuration file of the switch can be imported and edited with a word processor for the following switches to configure with ease. The USB data port can import/export the configuration from/to the USB dongle and also to upgrade firmware. It supports USB type-C console port that allows CLI access without an external RS232 adapter is required.

DIMENSIONS (unit=mm)

2DCI model

2AC model
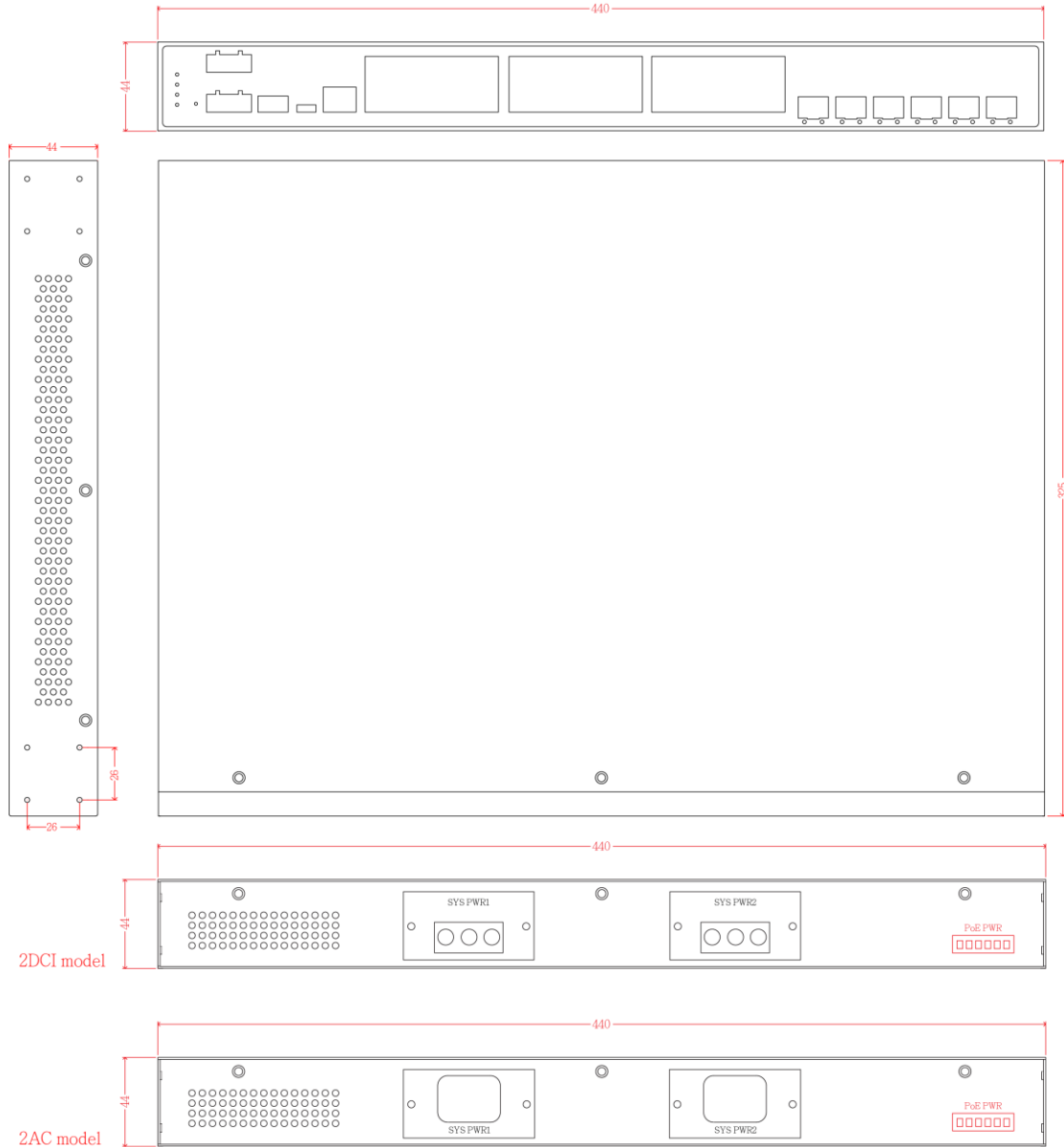
*Note: The component in red color only appears on PoE models.

SPECIFICATIONS

Hardware Specification

Standards	IEEE802.3 10Base-T Ethernet IEEE802.3u 100Base-TX IEEE802.3ab 1000Base-T IEEE802.3an 10Gbase-T	IEEE802.3x Flow Control and Back Pressure IEEE802.3ax Port trunk with LACP IEEE802.1d Spanning Tree IEEE802.1w Rapid Spanning Tree IEEE802.1s Multiple Spanning Tree IEEE802.3ad Link Aggregation Control Protocol

	(LACP) IEEE802.1AB Link Layer Discovery Protocol (LLDP) IEEE802.1X User Authentication (Radius) IEEE802.1p Class of Service IEEE802.1Q VLAN Tag IEEE802.3bt/at/af Power over Ethernet		Speed (Orange) 100M/1G Copper port: Link/Active (Green); Speed (100M/1G: Green; 2.5G/5G/10G: Orange) PoE: Link/Act (Green) (PoE model)
Switch Architecture	Back-plane (Switching Fabric): 168Gbps	Operating Humidity	5% ~ 95% (Non-condensing)
Mac Address	16K MAC address table	Operating Temperature	-40°C~75°C / -40°F~167°F
Jumbo frame	10KB	Storage Temperature	-40°C~85°C / -40°F~185°F
Connectors	24 10/100/1000T RJ-45 with auto MDI/MDI-X function 6 1G/2.5G/5G/10G Mini-GBIC: SFP+ sockets Console: USB type C USB type A slot for upload/download config file Out-Of-Band connector: RJ45 *1 DI/DO and Relay: 2x 6 pin terminal blocks	Power Supply	Galvanic isolated 16.8~137.5VDC (2DCI model) AC 90~264VAC IEC320 socket (2AC model)
DI/DO	2 Digital Input (DI) : Level 0: -30~2V / Level 1: 10~30V Max. input current:8mA 2 Digital Output(DO): Open collector to 40 VDC, 200mA	PoE Budget (PoE model)	Max 720W (from separate PoE power supply) (50-57VDC input is recommended for 802.3at 30W applications)
Optical Cable	**1Gbps:** Multi-mode: 0 to 550 m, 850 nm (50/125 µm); 0 to 2 km, 1310 nm (50/125 µm) Single mode: 0 to 10 km/ 30 km/ 40 km, 1310 nm (9/125 µm); 0 to 50 km/ 60 km/ 80km/ 120 km, 1550 nm (9/125 µm) **2.5Gbps** Multi-mode: 0 to 300 m, 850 nm (50/125 µm); Single mode: 0 to 2 km/ 15 km/ 40 km, 1310 nm (9/125 µm); 0 to 40 km/ 80 km/ 100km, 1550 nm (9/125 µm) **WDM 1Gbps:** Single mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 µm); 0 to 80 km, 1490 nm (9/125 µm); 0 to 10 km/ 20 km/ 40 km/ 60 km/ 80 km, 1550 nm (9/125 µm) **WDM 2.5Gbps** Single mode: 0 to 5 km/ 20 km/ 40 km/ 60 km, 1310 /1550nm (9/125 µm); 0 to 80 km, 1490/1550 nm (9/125 µm) **10Gbps** Multi-mode: 0 to 300 m, 850 nm (OM3 50/125 µm); Single mode: 0 to 10 km/ 20 km, 1310 nm (9/125 µm); 0 to 40 km/ 80km/ 100 km, 1550 nm (9/125 µm) **WDM 10Gbps** Single mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1270/1330 nm (9/125 µm); 0 to 80km, 1490/1550 nm (9/125 µm)	PoE pin assignment (PoE model)	RJ-45 port # 1~#24 supports IEEE 802.3at/af End-point, Alternative A mode. (IPGS-H7624XF-TX-24) RJ-45 port #1~$16 supports IEEE 802.3at/af End-point, Alternative A model. Port #17,19,21,23 support T4 IEEE 802.3bt/at/af 90W (IPGS-H7624XF-TX-20) Positive (VCC+): RJ-45 pin 1,2. Negative (VCC-): RJ-45 pin 3,6.
		PoE Type (PoE model)	IEEE802.3af (Type 1, PoE) IEEE802.3at (Type 2, PoE+) IEEE 802.3bt (Type 3,4, PoE++)
		Power Consumption	Max. 60W
		Dimensions	Metal case. IP-30 440mm(W)x44mm(H)x325mm(D)
		Weight	2.9kgs
		Installation	Rackmount Design
		EMI & EMS	FCC Part 15 Class A EN61000-6-2 EN61000-6-4 CE EN55032 Class A CE EN55024 CE EN61000-4-2 (ESD) Level 3 CE EN61000-4-3 (RS) Level 3 CE EN61000-4-4 (EFT) Level 3 CE EN61000-4-5 ED3 (Surge) Level 3 CE EN61000-4-6 (CS) Level 3 CE EN61000-4-8 (Magnetic field) Level 3
		Verifications	EN50155**; EN50121-3-2**/EN50121-4**; EN 45545-1**, EN 45545-2** Fire & Smoke verification
		MTBF	114,831 hrs. (standards: IEC 62380)
		Warranty	5 years
LED	Per unit: Power 1 (Green), Power 2 (Green), FAULT (Red) R.M. indicator (Green) 100M/1G Mini-GBIC: Link/Active (Green); Speed (Orange) 2.5G/5G/10G Mini-GBIC: Link/Activity (Green);		

Software Specification

Lantech OS5 Platform	**Download Software Datasheet**

*Future release
**Optional

ORDERING INFORMATION

2AC; 2DCI are fixed configurations for ordering, user cannot add or remove the power supply on their own.
For optional PTP add -PTP; For optional MacSec add -MacSec; For optional out-of-band, add -OOB

■ **IGS-H7624XF-TX-2DCI-E …….........P/N: 8361-0323**

24 10/100/1000T+ 6 1G/2.5G/5G/10G SFP+ Managed Ethernet Switch; Built-in x2 galvanic isolated DC 16.8~137.5VDC power supply; IP30 rackmount design; -40°C to 75°C

■ **IGS-H7624XF-TX-2AC-EU-E...…..……P/N: 8361-03231**

24 10/100/1000T+ 6 1G/2.5G/5G/10G SFP+ Managed Ethernet Switch; Built-in 2x isolated AC 90~264VAC IEC320 power conversion; IP30 rackmount design; -40°C to 75°C; EU plug

■ **IGS-H7624XF-TX-2AC-UK-E.…………P/N: 8361-03232**

24 10/100/1000T+ 6 1G/2.5G/5G/10G SFP+ Managed Ethernet Switch; Built-in 2x isolated AC 90~264VAC IEC320 power

conversion; IP30 rackmount design; -40°C to 75°C; UK plug

■ **IGS-H7624XF-TX-2AC-US-E...............P/N: 8361-03233**

24 10/100/1000T+ 6 1G/2.5G/5G/10G SFP+ Managed Ethernet Switch; Built-in 2x isolated AC 90~264VAC IEC320 power conversion; IP30 rackmount design; -40°C to 75°C; US plug

■ **IPGS-H7624XF-TX-24-2DCI-E ….….......P/N: 8361-0324**

24 10/100/1000T+ 6 1G/2.5G/5G/10G SFP+ with 24 PoE at/af Managed Ethernet Switch; Built-in x2 galvanic isolated DC 16.8~137.5VDC power supply w/ 1x 48VDC PoE power input; IP30 rackmount design; -40°C to 75°C

■ **IPGS-H7624XF-TX-24-2AC-EU-E....…….P/N: 8361-03241**

24 10/100/1000T+ 6 1G/2.5G/5G/10G SFP+ with 24 PoE at/af Managed Ethernet Switch; Built-in 2x isolated AC 90~264VAC IEC320 power conversion w/ 1x 48VDC PoE power input; IP30 rackmount design; -40°C to 75°C; EU plug

■ **IPGS-H7624XF-TX-24-2AC-UK-E.........P/N: 8361-03242**

24 10/100/1000T+ 6 1G/2.5G/5G/10G SFP+ with 24 PoE at/af Managed Ethernet Switch; Built-in 2x isolated AC 90~264VAC IEC320 power conversion w/ 1x 48VDC PoE power input; IP30 rackmount design; -40°C to 75°C; UK plug

■ **IPGS-H7624XF-TX-24-2AC-US-E…...……P/N: 8361-03243**

24 10/100/1000T+ 6 1G/2.5G/5G/10G SFP+ with 24 PoE at/af Managed Ethernet Switch; Built-in 2x isolated AC 90~264VAC IEC320 power conversion w/ 1x 48VDC PoE power input; IP30 rackmount design; -40°C to 75°C; US plug

■ **IPGS-H7624XF-TX-20-2DCI-E ….…......P/N: 8361-0325**

24 10/100/1000T+ 6 1G/2.5G/5G/10G SFP+ with 16 PoE at/af + 4 T4 PoE IEEE 802.3bt Managed Ethernet Switch; Built-in x2 galvanic isolated DC 16.8~137.5VDC power supply w/ 1x 48VDC PoE power input; IP30 rackmount design; -40°C to 75°C

■ **IPGS-H7624XF-TX-20-2AC-EU-E....……P/N: 8361-03251**

24 10/100/1000T+ 6 1G/2.5G/5G/10G SFP+ with 16 PoE at/af + 4 T4 PoE IEEE 802.3bt Managed Ethernet Switch; Built-in 2x isolated AC 90~264VAC IEC320 power conversion w/ 1x 48VDC PoE power input; IP30 rackmount design; -40°C to 75°C; EU plug

■ **IPGS-H7624XF-TX-20-2AC-UK-E……….P/N: 8361-03252**

24 10/100/1000T+ 6 1G/2.5G/5G/10G SFP+ with 16 PoE at/af + 4 T4 PoE IEEE 802.3bt Managed Ethernet Switch; Built-in 2x isolated AC 90~264VAC IEC320 power conversion w/ 1x 48VDC PoE power input; IP30 rackmount design; -40°C to 75°C; UK plug

■ **IPGS-H7624XF-TX-20-2AC-US-E……….P/N: 8361-03253**

24 10/100/1000T+ 6 1G/2.5G/5G/10G SFP+ with 16 PoE at/af + 4 T4 PoE IEEE 802.3bt Managed Ethernet Switch; Built-in 2x isolated AC 90~264VAC IEC320 power conversion w/ 1x 48VDC PoE power input; IP30 rackmount design; -40°C to 75°C; US plug

■ **IGS-H7624XF-TX-2DCI ……….................P/N: 8361-0326**

24 10/100/1000T+ 6 1G/2.5G/5G/10G SFP+ Managed Ethernet Switch; Built-in x2 galvanic isolated DC 16.8~137.5VDC power supply; IP30 rackmount design; -20°C to 60°C

■ **IGS-H7624XF-TX-2AC-EU..………………P/N: 8361-03261**

24 10/100/1000T+ 6 1G/2.5G/5G/10G SFP+ Managed Ethernet Switch; Built-in 2x isolated AC 90~264VAC IEC320 power conversion; IP30 rackmount design; -20°C to 60°C; EU plug

■ **IGS-H7624XF-TX-2AC-UK..………………P/N: 8361-03262**

24 10/100/1000T+ 6 1G/2.5G/5G/10G SFP+ Managed Ethernet Switch; Built-in 2x isolated AC 90~264VAC IEC320 power conversion; IP30 rackmount design; -20°C to 60°C; UK plug

■ **IGS-H7624XF-TX-2AC-US..………………P/N: 8361-03263**

24 10/100/1000T+ 6 1G/2.5G/5G/10G SFP+ Managed Ethernet Switch; Built-in 2x isolated AC 90~264VAC IEC320 power conversion; IP30 rackmount design; -20°C to 60°C; US plug

■ **IPGS-H7624XF-TX-24-2DCI ……….........P/N: 8361-0329**

24 10/100/1000T+ 6 1G/2.5G/5G/10G SFP+ with 24 PoE at/af Managed Ethernet Switch; Built-in x2 galvanic isolated DC 16.8~137.5VDC power supply w/ 1x 48VDC PoE power input; IP30 rackmount design; -20°C to 60°C

■ **IPGS-H7624XF-TX-24-2AC-EU..…………P/N: 8361-03291**

24 10/100/1000T+ 6 1G/2.5G/5G/10G SFP+ with 24 PoE at/af Managed Ethernet Switch; Built-in 2x isolated AC 90~264VAC IEC320 power conversion w/ 1x 48VDC PoE power input; IP30 rackmount design; -20°C to 60°C; EU plug

■ **IPGS-H7624XF-TX-24-2AC-UK..…………P/N: 8361-03292**

24 10/100/1000T+ 6 1G/2.5G/5G/10G SFP+ with 24 PoE at/af Managed Ethernet Switch; Built-in 2x isolated AC 90~264VAC IEC320 power conversion w/ 1x 48VDC PoE power input; IP30 rackmount design; -20°C to 60°C; UK plug

■ **IPGS-H7624XF-TX-24-2AC-US..…………P/N: 8361-03293**

24 10/100/1000T+ 6 1G/2.5G/5G/10G SFP+ with 24 PoE at/af Managed Ethernet Switch; Built-in 2x isolated AC 90~264VAC IEC320 power conversion w/ 1x 48VDC PoE power input; IP30 rackmount design; -20°C to 60°C; US plug

■ **IPGS-H7624XF-TX-20-2DCI ……………....P/N: 8361-0327**

24 10/100/1000T+ 6 1G/2.5G/5G/10G SFP+ with 16 PoE at/af + 4 T4 PoE IEEE 802.3bt Managed Ethernet Switch; Built-in x2 galvanic isolated DC 16.8~137.5VDC power supply w/ 1x 48VDC PoE power input; IP30 rackmount design; -20°C to 60°C

■ **IPGS-H7624XF-TX-20-2AC-EU..…………P/N: 8361-03271**

24 10/100/1000T+ 6 1G/2.5G/5G/10G SFP+ with 16 PoE at/af + 4 T4 PoE IEEE 802.3bt Managed Ethernet Switch; Built-in 2x isolated AC 90~264VAC IEC320 power conversion w/ 1x 48VDC PoE power input; IP30 rackmount design; -20°C to 60°C; EU plug

■ **IPGS-H7624XF-TX-20-2AC-UK..…………P/N: 8361-03272**

24 10/100/1000T+ 6 1G/2.5G/5G/10G SFP+ with 16 PoE at/af + 4 T4 PoE IEEE 802.3bt Managed Ethernet Switch; Built-in 2x isolated AC 90~264VAC IEC320 power conversion w/ 1x 48VDC PoE power input; IP30 rackmount design; -20°C to 60°C; UK plug

■ **IPGS-H7624XF-TX-20-2AC-US..…………P/N: 8361-03273**

OS5 Platform OS5 Managed Ethernet Switches

24 10/100/1000T+ 6 1G/2.5G/5G/10G SFP+ with 16 PoE at/af + 4 T4 PoE IEEE 802.3bt Managed Ethernet Switch; Built-in 2x isolated AC 90~264VAC IEC320 power conversion w/ 1x 48VDC PoE power input; IP30 rackmount design; -20°C to 60°C; US plug

OPTIONAL ACCESSORIES

Software package

Please refer to the software datasheet

Power cords (2AC models)
- **EUROPE AC POWER CORDS…..…………………….. P/N: 4106-00000014-001**
- **USA AC POWER CORDS .... P/N: 4106-00000012-001**
- **UK AC POWER CORDS .... P/N: 4106-00000015-001**

Mini GBIC (SFP)

- **8330-162-V1** MINI GBIC 1000SX (LC/0.5km) Transceiver
- **8330-163-V1** MINI GBIC 1000SX2 (LC/2km) Transceiver
- **8330-165-V1** MINI GBIC 1000LX (LC/10km) Transceiver
- **8340-0591-V1** MINI GBIC 1000LHX (LC/40km) Transceiver
- **8330-166-V1** MINI GBIC 1000XD (LC/50km) Transceiver
- **8330-169-V1** MINI GBIC 1000XD (LC/60km) Transceiver
- **8330-167-V1** MINI GBIC 1000ZX (LC/80km) Transceiver
- **8330-170-V1** MINI GBIC 1000EZX (120km) Transceiver
- **8330-168-V1** MINI GBIC 1000T (100m) Transceiver
- **8330-188-V1** LTSFP-1000BX-10KM Transceiver (WDM 1310)
- **8330-189-V1** LTSFP-1000BX-10KM Transceiver (WDM 1550)
- **8330-186-V1** LTSFP-1000BX-20KM Transceiver (WDM 1310)
- **8330-187-V1** LTSFP-1000BX-20KM Transceiver (WDM 1550)
- **8330-180-V1** LTSFP-1000BX-40KM Transceiver (WDM 1310)
- **8330-182-V1** LTSFP-1000BX-40KM Transceiver (WDM 1550)
- **8330-181-V1** LTSFP-1000BX-60KM Transceiver (WDM 1310)
- **8330-183-V1** LTSFP-1000BX-60KM Transceiver (WDM 1550)
- **8330-184-V1** LTSFP-1000BX-80KM Transceiver (WDM 1490)
- **8330-185-V1** LTSFP-1000BX-80KM Transceiver (WDM 1550)
- **8330-262D-V1** MINI GBIC 2.5G 850nm VCSEL (LC/0.3km) Transceiver

- **8330-263D-V1** MINI GBIC 2.5G 1310nm FP (LC/2km) Transceiver
- **8330-265D-V1** MINI GBIC 2.5G 1310nm DFB (LC/15km) Transceiver
- **8330-193D-V1** 10G Base SFP$^+$ SR, Multi-mode (LC/300m) Transceiver
- **8330-194D-V1** 10G Base SFP$^+$ LR, Single-mode (LC/10km) Transceiver
- **8330-209D-V1** 10G Base SFP+ , Single-mode(10km) Transceiver (WDM 1270)
- **8330-210D-V1** 10G Base SFP+ , Single-mode(10km) Transceiver (WDM 1330)
- **8330-200D-V1** 10G Base SFP$^+$, Single-mode(20km) Transceiver (WDM 1270)
- **8330-201D-V1** 10G Base SFP$^+$, Single-mode(20km) Transceiver (WDM 1330)
- **8330-202D-V1** 10G Base SFP$^+$, Single-mode(40km) Transceiver (WDM 1270)
- **8330-203D-V1** 10G Base SFP$^+$, Single-mode(40km) Transceiver (WDM 1330)
- **8330-206-V1** 10G/5G/2.5G/1000Base-T SFP, 3.3V,30m (10G) 50m (2.5G/5G) 100m (1G); -10~70°

All SFPs ended with D are with Diagnostic function