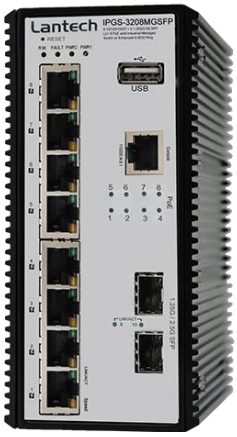
IPGS-3208MGSFP

8 10/100/1000T + 2 1.25G/2.5G SFP L2+ w/8 PoE at/af Industrial Managed Switch w/ Enhanced G.8032 Ring; Optional 12V input model



- *Multi-rate SFP cage support with 1.25G or 2.5G Mbps SFP*
- *Support IEEE802.3at/af up to 30W per port*
- *PoE management incl. Detection and Scheduling*
- *Enhanced G.8032 ring protection < 20ms with basic mode, enhanced mode, train mode** and auto** mode; Enhanced G.8032 ring covers multicast packets; MSTP 8MSTI/RSTP*
- *Miss-wiring avoidance & Repowered auto ring restore (node failure protection)*
- *User friendly UI, including auto topology drawing and DDM threshold monitoring with dB values**; Complete CLI*
- *Support LACP link aggregation, VLAN, QoS, IGMP v3/router port, GVRP, DHCP server & client, DHCP Option 82 relay / server**, TACAS+, ACL, SSH/SSL, IPv6, SMS*
- *Dual 9.5V~57VDC input(12V model) or Dual 48V DC input(48V model)*
- *USB port* and N-key** for backup, restore the configuration file and upgrade firmware*
- *Optional Environmental monitoring function to display inside switch info incl. temperature, voltage, current, power consumption*

OVERVIEW

Lantech IPGS-3208MGSFP is a high performance L2+ all Gigabit switch with 8 10/100/1000T + 2x 1.25G/2.5G selectable multi-Giga- rate SFP w/8 PoE 802.3af/at Injectors which provides L2 wire speed and advanced security function for network aggregation deployment. It delivers ITU G.8032 enhanced ring recovery less than 20ms for single ring, comprehensive QoS, VLAN, GVRP advanced security SSH/SSL, TACAS+, ACL, IGMPv1/v2/v3/router port, DHCP server/relay , jumbo frame which are important features required in mid and large network. It also supports Cisco Discovery Protocol (CDP) and LLDP for Ciscoworks to detect the switch info and to be shown on L2 map topology.

PoE at/af up to 8 Giga Ports with detection and scheduling

Lantech IPGS-3208MGSFP supports advanced PoE management including PoE detection and scheduling. PoE detection can detect if the connected PD is hanged then restart the PD; PoE scheduling is to allow pre-set power feeding schedule upon routine time table. Each PoE ports can be Enabled/disabled, get the voltage, current, Watt, and temperature info displayed on WebUI.

Loop protection; Auto ring repowered restore; Alert by email,trap,SMS

The IPGS-3208MGSFP also embedded several features for stronger and reliable network protection in an easy and intuitive way. When the pre-set ring configuration failed or looped by miss-wiring, Lantech IPGS-3208MGSFP is able to alert with the LED indicator and send out an email, trap or a SMS text. Repowered auto ring restore function (node failure protection) ensures the switches in a ring to survive after power breakout is back. The status can be shown in NMS when each switch is back. This feature prevents the broken ring and keep ring alive without any re-configuration needed. Loop protection is also available to prevent the generation of broadcast storm when a dumb switch is inserted in a closed loop connection.

User friendly UI; Auto topology drawing; DMI for dB value

The user friendly UI, innovative auto topology drawing and topology demo makes IPGS-3208MGSFP much easier to get hands-on. The switch also equips the RTC (real time clock) which can keep track of time always. The IPGS-3208MGSFP supports DMI interface that can correspond with DDM SFPs

(Digital diagnostic monitor) to display the five parameters in Lantech's UI, including optical output power, input power, temperature, laser bias current and transceiver supply voltage***. The TX power/RX power raw data is automatically converted to dB values for installer, making it easier to calculate the fiber distance. The complete CLI enables professional engineer to configure setting by command line.

Enhanced G.8032 Ring < 20ms covering multicast packets for single ring recovery; Enhanced/basic/auto**/train**mode; MSTP/RSTP

Lantech IPGS-3208MGSP features enhanced G.8032 ring which can be self-healed in less than 20ms for single ring topology protection covering Multicast packets. It also supports various ring topologies that covers double ring, multi-chain (under enhanced ring), train ring**, basic ring by easy setup than others. The innovative auto-Ring** configurator (auto mode) can calculate owner and neighbor in one step. It supports MSTP that allows RSTP over Vlan for redundant links with 8 MSTI.

DHCP server / client ; DHCP option 82 relay, port based**/Mac based DHCP**

It supports the standard DHCP server/client as well as DHCP option 82 relay. The optional port based DHCP distribution can offer the same IP address on port base where there is need to replace the new device connecting to Lantech switches to avoid any network disruption. The optional DHCP Option 82 server offers the convenience of policy setting on the switch. Mac based DHCP server** function binds a fixed IP address and a client Mac address to include dumb switches in DHCP network.

Optional QoS by VLAN for legacy device

QoS by VLAN can allow switch to tag QoS by VLAN regardless the devices acknowledge QoS or not in which greatly enhance the bandwidth management in a network.

Exported configuration text file; Factory reset button; CPU watchdog

The configuration file of Lantech IPGS-3208MGSFP can be exported in text file so that it can be edited and configured back to switch with ease for mass deployment. Factory reset button can restore the setting back to factory default and built-in watchdog design can automatically reboot the switch when CPU is found dead.

USB port* & N-key** for back up, restore configuration and upgrade firmware

The built-in USB port* can upload/download the firmware through USB dongle for switch replacement.

With N-key**, the configuration file can be mass auto backup, editable restored and auto upgrade firmware for easy maintenance.

2DI / 2DO relay to alarm and email/trap

Featured with relay contact alarm function, the IPGS-3208MGSFP is able to connect with alarm system in case of power failure and port disconnection.

Relay alarm and email/trap/SMS alerting

Featured with relay contact alarm function, the IPGS-3208MGSFP is able to connect with alarm system in case of power failure and port disconnection. In case of such event, it will send out email, SMS, trap alerting to predefined users.

Dual 12V~48V input with boost technology to 54V PoE output for 12V model, PoE budget 80W

Lantech IPGS-3208MGSFP-12V is designed with dual input power at 9.5V~57VDC while IPGS-3208MGSFP-48V allows 44~57VDC input. The PoE budget for 12V input is 80W and 24V input is 120W.

Optional environmental monitoring for inside switch info

The optional environmental monitoring can detect switch overall temperature, voltage, current and power consumption where can send the SNMP traps, email and SMS alert when abnormal.

High reliability and extended working temperature

Lantech IPGS-3208MGSFP provides ±2000V EFT and ±6000V contact ESD protection, which can reduce unstable situation caused by power line and Ethernet. It has high reliability and robustness coping with extensive EMI/RFI phenomenon, environmental vibration and shocks usually found in Automation, transportation, surveillance, Wireless backhaul, Semi-conductor factory and assembly lines.

The -E model can be used in extreme environments with an operating temperature range of -40°C to 75°C.

FEATURES & BENEFITS

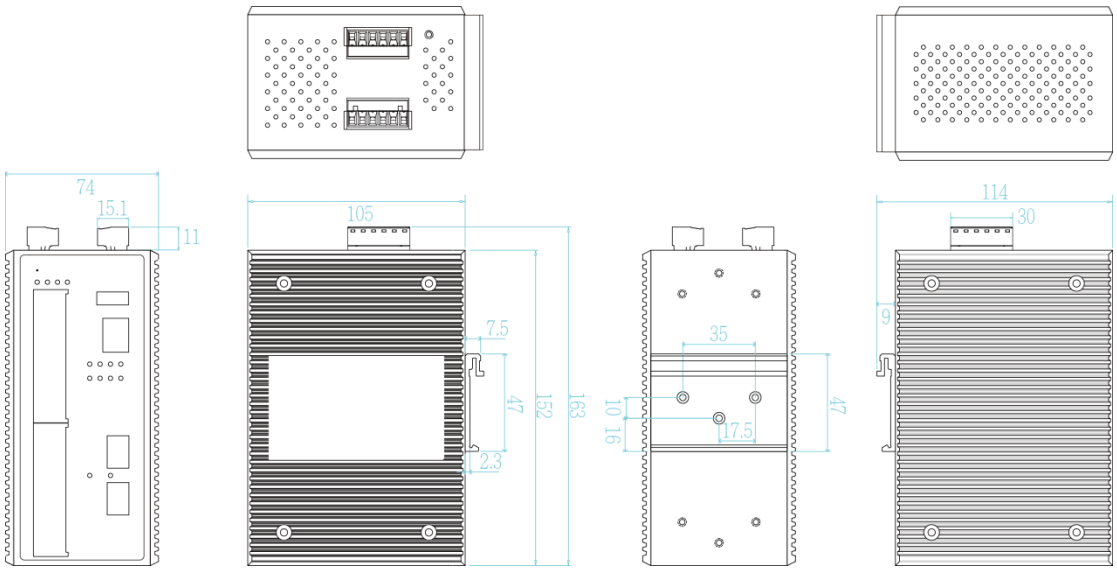
- **8 10/100/1000T + 2 1.25G/2.5G selectable SFP w/8 PoE 802.3af/at Injectors (Total 10 Ports Switch)**
- **Support 10K bytes jumbo frames**
- **Embedded 8 PoE Injectors IEEE802.3af/at function to feed power up to 30W per port for active operation**
- **Dual 9.5V~57VDC power input for 12V model with PoE budget 80W at 12V input, 120W at 24V input**
- **Dual 44V~57VDC power input for 48V model with PoE budget 120W**
- **PoE management including PoE detection and scheduling for PD (power devices)**
- **Back-plane (Switching Fabric): 26Gbps**
- **16K MAC address table**
- **DDM to support SFP diagnostic function*****
  - *Automatically convert the raw data into dB values for TX power/RX power, making it easier to measure the fiber distance*
- **10KB Jumbo frame supported on all ports**
- **User friendly UI, auto topology drawing, topology demo, complete CLI for professional setting**
- **Enhanced G.8032 Ring protection in 20ms < 256 switches(single ring)**
  - *Support single ring, double ring, multi-chain topology with easy setup than ever*

- *Auto ring configuration***
- *Basic mode compatible with 3rd party ERPS*
- *Covers multi-cast and data packets*

- **Provides EFT protection ±2000 VDC for power line.**
- **Supports ±6000 VDC ESD contact protection**
- **Built-in RTC (Real Time Clock) to keep track of time**
- **Supports IEEE 802.1p Class of Service, per port provides 8 priority queues Port base, Tag Base and Type of Service Priority**
- **IEEE 802.1d STP, IEEE 802.1w RSTP,802.1s MSTP VLAN redundancy with 8 MSTI**
- **4K 802.1Q VLAN, Port based VLAN, GVRP, QoS by VLAN****
- **Supports IEEE 802.1ab LLDP, Cisco CDP; LLDP info can be viewed via Web/ Console/ Lantech™ InstaConfig**/ Lantech™ InstaView****
- **DHCP server / client; DHCP Option 82 relay/ server**; Mac based DHCP**; Port based DHCP****
- **Bandwidth Control**
  - *Ingress packet filter and egress rate limit*
  - *Broadcast/multicast packet filter control*
- **Relay alarm output system events**
- **Miss-wiring avoidance**
  - *LED indicator*
  - *Email, traps, or SMS notification*
- **Repowered auto ring restore**
  - *Ensure the switches in a ring to survive after power breakout is back*
  - *The status can be shown in NMS when each switch is back*
- **TFTP/HTTP firmware upgrade; Lantech™ InstaConfig** for multiple upgrade**
- **Configuration backup and restoration**
  - *Supports text configuration file for system quick installation*
  - *N-key** for mass configuration auto-backup, editable restoration and auto firmware upgrade*
  - *USB port* to upload/download firmware by USB dongle*
- **System Event Log, SMTP Email alert, SMS mobile (text) and SNMP Trap for alarm support; 32 RMON counters**
- **Security**
  - *SSL/SSH/ L2&L3*
  - *Port Security: MAC address entries/Filter/MAC-Port binding*
  - *IP Security: IP address security management to prevent unauthorized intruder.*
  - *Management access control with priority*
  - *TACAS+*
  - *ACL*
  - *Login Security: IEEE802.1X/RADIUS*
  - *HTTPS for secure access to the web interface*
- **Static multicast forwarding forward reversed IGMP flow (MVR) with multicast packets binding with ports for IP surveillance application**
- **Multicast static forwarding for non- IGMP camera to prevent flooding; IGMP router port to assign query in ring and for reversed multicast video flow**
- **IGMPv1,v2,v3 with Query mode for multimedia**
- **Factory reset button to restore setting to factory default**
- **Optional environmental monitoring for system input voltage, current, ambient temperature**
- **Watchdog design to auto reboot switch CPU is found dead**
- **IP30 metal housing with DIN rail and Wall-mount** design**

DIMENSIONS (unit=mm)

/// The USB port on this model will be future released ///



SPECIFICATION

Hardware Specification

Standards	IEEE802.3 10Base-T Ethernet IEEE802.3u 100Base-TX IEEE802.3ab 1000Base-T Ethernet IEEE802.3z Gigabit fiber IEEE802.3x Flow Control and Back Pressure IEEE802.3ad 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 IEEE802.3at/af Power over Ethernet
Switch Architecture	Back-plane (Switching Fabric): 26Gbps
Transfer Rate	14,880pps for Ethernet port 148,800pps for Fast Ethernet port 1,488,000pps for Gigabit Fiber / Gigabit Ethernet port
Mac Address	16K MAC address table
Jumbo frame	10KB on all ports
Connectors	10/100/1000T: 8 x ports RJ-45 with Auto MDI/MDI-X function SFP port: 2 x 2.5G/1.25G selectable cage by software with DDMI supported RS-232 connector: RJ-45 type; USB x 1* Power & P-Fail connector: 1 x 6-pole terminal block
Network Cable	10Base-T: 2-pair UTP/STP Cat. 3, 4, 5/ 5E/ 6 cable EIA/TIA-568 100-ohm (100m) 100Base-TX: 2-pair UTP/STP Cat. 5/ 5E/ 6 cable EIA/TIA-568 100-ohm (100m) 1000Base-TX: 2-pair UTP/STP Cat. 5/ 5E/ 6 cable EIA/TIA-568 100-ohm (100m)
Optical Cable	**1.25Gbps:** 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 550 m, 850 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) **WDM 1.25Gbps:** 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 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)
Protocol	CSMA/CD
LED	Per unit: Power 1 (Green), Power 2 (Green), P-Fail (Red); RM(Green) Ethernet port: Link/Activity (Green), Speed (Amber); PoE : Link/Act (Green); Mini-GBIC: Link/Activity (Green)
Operating Humidity	5% ~ 95% (Non-condensing)
Operating Temperature	-20°C~60°C / -4°F~140°F (Standard model) -40°C~75°C / -40°F~167°F(-E model)
Storage Temperature	-40°C~85°C / -40°F~185°F
Power Supply	44~57VDC(48V model); 9.5V~57VDC(12V model)
PoE Budget	240W for 44~57V input(48V model) (54V input is recommended for 802.3at 30W applications)
	80W at 12V input; 120W at 24V input(12V model)
PoE pin assignment	RJ-45 port # 1~#8 support IEEE 802.3at/af End-point, Alternative A mode. Per port provides up to 30W Positive (VCC+): RJ-45 pin 1,2. Negative (VCC-): RJ-45 pin 3,6.
Power Consumption	10W
Case Dimension	IP-30, 74 (W) x 114 (D) x 152 (H) mm
Weight	900 g
Installation	DIN Rail and Wall Mount** Design
EMI & EMS	FCC Class A, CE EN55022 Class A, CE EN55024, CE EN61000-4-2, CE EN61000-4-3, CE EN61000-4-4, CE EN61000-4-5 ED3, CE EN61000-4-6, CE N61000-4-8, EN61000-4-11
Stability Testing	IEC60068-2-32 (Free fall), IEC60068-2-27 (Shock), IEC60068-2-6 (Vibration)
MTBF	NA
Warranty	5 years

Software Specification

Management	SNMP v1 v2c, v3/ Web/Telnet/CLI
SNMP MIB	RFC 1215 Traps MIB, RFC 1213 MIBII RFC 1158 MIBII RFC 1157 SNMP MIB, RFC 1493 Bridge MIB, RFC 1573 IF MIB RFC 2674 VLAN MIB, Partial RFC 1643 EtherLike, Partial RFC 1757 RMON, RFC 2674 Q-Bridge MIB; Bridge MIB, RFC 2790 Host Resource MIB LLDP MIB* RSTP MIB* Private MIB
Enhanced G.8032 ring	Support ITU G.8032 v2/2012 for single ring protection in less than 20ms for self-heal recovery; Support Enhanced mode, basic mode; auto mode** and train mode** Support double ring, multi-chain ring, etc. Covers multicast and data packets
PoE Management	1. PoE Detection to check if PD is hang up then restart the PD 2. PoE Scheduling to On/OFF PD upon routine time table
Per Port PoE Status	On/ Off, voltage, current, watts, temperature
User friendly UI	■ Auto topology drawing ■ Topology demo ■ Auto configuration for G.8032(auto mode)** for single ring ■ DDM threshold monitoring with dB values*** ■ Complete CLI for professional setting
Port Trunk with LACP	LACP Port Trunk: 8 Trunk groups/Maximum 10 trunk members
LLDP	Supports LLDP to allow switch to advise its identification and capability on the LAN
CDP	Cisco Discovery Protocol for topology mapping
VLAN	Port Based VLAN IEEE 802.1Q Tag VLAN (256 entries)/ VLAN ID (Up to 4K, VLAN ID can be assigned from 1 to 4096.), GVRP, QoS by VLAN**
IPv6/4	Present
RSTP/MSTP	Supports IEEE802.1d Spanning Tree and IEEE802.1w Rapid Spanning Tree, IEEE802.1s Multiple Spanning Tree with 8 MSTI
Quality of Service	The quality of service determined by port, Tag and IPv4 Type of service, IPv4 Differentiated Services Code Points - DSCP
Class of Service	Support IEEE802.1p class of service, per port

	provides 8 priority queues
IP Security	Supports 10 IP addresses that have permission to access the switch management and to prevent unauthorized intruder.
Login Security	Supports IEEE802.1X Authentication/RADIUS
Port Mirror	Support 3 mirroring types: "RX, TX and Both packet"
Network Security	Support 10 IP addresses that have permission to access the switch management and to prevent unauthorized intruder. 802.1X access control for port based and MAC based authentication/MAC-Port binding Management access control with priority TACAS+ ACL SSL/ SSH for Management HTTPS for secure access to the web interface
IGMP	Support IGMP snooping v1,v2,v3; Supports IGMP static route; 256 multicast groups; IGMP router port ; IGMP query; GMRP**
MVR	Static multicast forwarding forward reversed IGMP flow (MVR) with multicast packets binding with ports for IP surveillance application
Bandwidth Control	Support ingress packet filter and egress packet limit. The egress rate control supports all of packet type. Ingress filter packet type combination rules are Broadcast/Multicast/Flooded Unicast packet, Broadcast/Multicast packet, Broadcast packet only and all types of packet. The packet filter rate can be set an accurate value through the pull-down menu for the ingress packet filter and the egress packet limit.
RTC	Built-in Real Time Clock to keep track of time always
Flow Control	Supports Flow Control for Full-duplex and Back Pressure for Half-duplex
System Log	Supports System log record and remote system log server
SMTP/Text SMS	Supports SMTP Server and 8 e-mail accounts for receiving event alert; can send SMS text alert via mobile
Relay Alarm	Provides one relay output for port breakdown, power fail and alarm.

	Alarm Relay current carry ability: 1A @ DC24V
Protection	■ Miss-wiring avoidance ■ Repowered auto ring restore ■ Loop protection
SNMP Trap	Up to 10 trap stations; trap types including: ● Device cold start ● Authorization failure ● Port link up/link down ● Topology change(ITU ring) ● PoE ping failure ● Power failure ● Environmental abnormal**
DHCP	Provide DHCP client/ DHCP Server/ DHCP option 82 relay /DHCP option82 server** ; Mac based DHCP**; Port based DHCP**
DNS	Provide DNS Client feature and support Primary and Secondary DNS server.
SNTP	Supports SNTP to synchronize system clock in Internet
Environmental Monitoring**	System status for input voltage, current, consumption and ambient temperature to be shown in GUI and sent alerting if any abnormal status(-M models)
Firmware Update	Supports TFTP firmware update, TFTP backup and restore; HTTP firmware upgrade; Lantech™ InstaConfig** for multiple upgrade
Configuration upload and download	Supports text configuration file for system quick installation N-key** for mass firmware auto-backup, editable restoration and auto upgrade USB port* to upload/download firmware by USB dongle
IfAlias	Each port allows an alphabetic string of 128-byte assigned as its own unique name via the SNMP or CLI interface

*Future Release
**Optional
***Optional DDM SFP required

ORDERING INFOMATION

- **IPGS-3208MGSFP-48V…….. ……..P/N: 8350-990**
  8 10/100/1000T + 2 2.5G/1.25Gbps SFP w/8 PoE Mode A 802.3at/af 30W Managed Industrial Switch; dual 44~57VDC input; -20°C to 60°C
- **IPGS-3208MGSFP-48V-E…….....P/N: 8350-991**
  8 10/100/1000T + 2 2.5G/1.25Gbps SFP w/8 .PoE Mode A 802.3at/af 30W Managed Industrial Switch; dual 44~57VDC input; -40°C to 75°C
- **IPGS-3208MGSFP-12V…….. ……..P/N: 8350-992**
  8 10/100/1000T + 2 2.5G/1.25Gbps SFP w/8 PoE Mode A 802.3at/af 30W Managed Industrial Switch, dual 9.5V~57VDC input; -20°C to 60°C
- **IPGS-3208MGSFP-12V-E…….....P/N: 8350-993**
  8 10/100/1000T + 2 2.5G/1.25Gbps SFP w/8 PoE Mode A 802.3at/af 30W Managed Industrial Switch, dual 9.5V~57VDC input, -40°C to 75°C
- **IPGS-3208MGSFP-M-48V…… ……..P/N: 8350-9902**
  8 10/100/1000T + 2 2.5G/1.25Gbps SFP w/8 PoE Mode A 802.3at/af 30W Managed Industrial Switch w/Environmental monitoring; dual 44~57VDC input; -20°C to 60°C
- **IPGS-3208MGSFP-M-48V-E…….....P/N: 8350-9912**
  8 10/100/1000T + 2 2.5G/1.25Gbps SFP w/8 .PoE Mode A 802.3at/af 30W Managed Industrial Switch w/Environmental monitoring; dual 44~57VDC input; -40°C to 75°C
- **IPGS-3208MGSFP-M-12V…….. ……..P/N: 8350-9922**
  8 10/100/1000T + 2 2.5G/1.25Gbps SFP w/8 PoE Mode A 802.3at/af 30W Managed Industrial Switch w/Environmental monitoring, dual 9.5V~57VDC input; -20°C to 60°C
- **IPGS-3208MGSFP-M-12V-E…….....P/N: 8350-9932**
  8 10/100/1000T + 2 2.5G/1.25Gbps SFP w/8 PoE Mode A 802.3at/af 30W Managed Industrial Switch w/Environmental monitoring, dual 9.5V~57VDC input, -40°C to 75°C
- **N-key Configurator……..…….....P/N: 8850-100**
  RJ45 connector dongle for firmware upgrade, auto/editable configuration backup and restoration; -20°C to 60C

OPTIONAL ACCESSORIES

48~54VDC DIN Rail Power for 802.3at Applications

- **AD1240-48S** 48~57VDC, 4.3A, Wide AC Input, Build-in fan Cooled, DIN Rail or Wall Mounted, RoHS, Operating Temp. -20°C~50°C (ambient, derating each output at 2.5% per degree from 50°C ~ 70°C)
- **AD1360-48S** 48~57VDC, 6.5A, Wide AC Input, Build-in fan Cooled, DIN Rail or Wall Mounted, RoHS, Operating Temp. -20°C~50°C (ambient, derating each output at 2.5% per degree from 50°C ~ 70°C)
- **AD1500-48S** 48~57VDC, 9A, Wide AC Input, Build-in fan Cooled, DIN Rail or Wall Mounted, RoHS, Operating Temp. -20°C~50°C (ambient, derating each output at 2.5% per degree from 50°C ~ 70°C)

Mini GBIC (SFP)

- **8330-162X** MINI GBIC 1000SX (LC/0.5km) Transceiver
- **8330-163X** MINI GBIC 1000SX2 (LC/2km) Transceiver
- **8330-165X** MINI GBIC 1000LX (LC/10km) Transceiver
- **8340-0591** MINI GBIC 1000LHX (LC/40km) Transceiver
- **8330-166** MINI GBIC 1000XD (LC/50km) Transceiver
- **8330-169** MINI GBIC 1000XD (LC/60km) Transceiver
- **8330-167** MINI GBIC 1000ZX (LC/80km) Transceiver
- **8330-170** MINI GBIC 1000EZX (120km) Transceiver
- **8330-168** MINI GBIC 1000T (100m) Transceiver
- **8330-188** LTSFP-1000BX-10KM Transceiver (WDM 1310)
- **8330-189** LTSFP-1000BX-10KM Transceiver (WDM 1550)
- **8330-186** LTSFP-1000BX-20KM Transceiver (WDM 1310)
- **8330-187** LTSFP-1000BX-20KM Transceiver (WDM 1550)
- **8330-180** LTSFP-1000BX-40KM Transceiver (WDM 1310)
- **8330-182** LTSFP-1000BX-40KM Transceiver (WDM 1550)
- **8330-181** LTSFP-1000BX-60KM Transceiver (WDM 1310)
- **8330-183** LTSFP-1000BX-60KM Transceiver (WDM 1550)
- **8330-184** LTSFP-1000BX-80KM Transceiver (WDM 1490)
- **8330-185** LTSFP-1000BX-80KM Transceiver (WDM 1550)
- **8330-262** MINI GBIC 2.5G 850nm VCSEL (LC/0.3km) Transceiver
- **8330-263** MINI GBIC 2.5G 1310nm FP (LC/2km) Transceiver
- **8330-265** MINI GBIC 2.5G 1310nm DFB (LC/15km) Transceiver

All SFP ended with D are with Diagnostic function

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