

# IPGS-6416XSFP

**16 10/100/1000T PoE at/af + 4 1G/2.5G/10G SFP+ L2+ Industrial Managed Ethernet Switch w/ Enhanced G.8032 Ring, PXE, 24V/48V input models**

- Auto-sensing triple speed 1G/2.5G/10G SFP+ Uplink Cage
- Support IEEE802.3at/af up to 30W per port PoE management incl. Detection and Scheduling
- Support PXE to verify switch firmware with the latest or certain version on server
- Enhanced G.8032 ring protection < 20ms for single ring. Supports enhanced mode and basic mode; Enhanced G.8032 ring covers multicast packets; MSTP 8 MSTI /RSTP ; support MRP ring
- Miss-wiring avoidance & node failure protection
- User friendly UI, including auto topology drawing and DDM threshold monitoring with dB values\*\*\*; Complete CLI
- Support LACP link aggregation, IGMP v3/router port, MLD snooping, DHCP server & DHCP Option82; Port based DHCP distribution, Mac based DHCP server, SSH v2/SSL, HTTPS, INGRESS ACL L2/L3, TACACS+, subnet VLAN and protocol VLAN
- Enhanced Environmental Monitoring for temp., actual input voltage, current & total power load
- Optional L3Lite/L3\* to be upgradable
- Wide range operation temperature (-E model):-40~75C/-40~167F; Fan-less design



## OVERVIEW

Lantech IPGS-6416XSFP-16 is a high performance L2+ (All Gigabit) Ethernet switch with 16 100/1000T + 4 1G/2.5G/10G auto sensing SFP+ w/16 PoE 802.3af/at ports which provides advanced security function for network aggregation deployment. It delivers ITU G.8032 enhanced ring recovery less than 20ms in single ring while also supports enhanced mode with easy configuration, comprehensive QoS, advanced security including INGRESS L2/L3, TACACS+, SSH v2/SSL, Mac based DHCP server, DHCP Option 82, DHCP server, IGMPv1/v2/v3/router port which are important features required in large network. The Cisco Discovery Protocol (CDP) and LLDP are supported for Ciscoworks to detect the switch info and show on L2 map topology.

### Up to 16 PoE at/af ports w/advanced PoE management

Compliant with 802.3af/at standard, the Lantech IPGS-6416XSFP-16 being able to feed each PoE port up to 30 Watt. Lantech IPGS-6416XSFP-16 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 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.

### Miss-wiring avoidance, Loop protection, node failure protection

The IPGS-6416XSFP-16 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-6416XSFP-16 being able to alert with the LED indicator and disable ring automatically. 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. Loop protection is also available to prevent the generation of broadcast storm when a dumb switch

is inserted in a closed loop connection.

**Support PXE to verify switch firmware with the latest or certain version**

The switch can check its firmware version during booting time via PXE protocol. If switch finds any newer version, it will upload automatically.

**Optional L3Lite/L3 to be upgradable**

Lantech OS3 is optional upgradable to L3 Lite for future expansion. The optional L3Lite includes editable routing table, VRRP, Router-on-a-stick, Inter-VLAN routing.

**Enhanced Storm control\***

Storm control prevents traffic on a LAN from being disrupted by a broadcast, multicast, or unicast storm on one of the physical interfaces and the detection is more precise and reaction is more efficient.

**DHCP option 82 & Port based, Mac based DHCP, Option66, IPv6 DHCP server**

DHCP server can assign dedicated IP address by MAC or by port (Port based for single switch), it also can assign IP address by port for multiple switches with single DHCP option82 server. For the ending device, which need to download file from TFTP server, DHCP Option66 server can offer IP address of TFTP server to DHCP client. Basic IPv6 DHCP service can be supported.

**User friendly GUI, Auto topology drawing**

The user-friendly UI, innovative auto topology drawing and topology demo makes IPGS-6416XSFP-16 much easier to get hands-on. The complete CLI enables professional engineer to configure setting by command line.

**Enhanced G.8032 ring, 8 MSTI MSTP; MRP ring**

Lantech IPGS-6416XSFP-16 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 enhanced ring and basic ring by easy setup than others. It supports MSTP that allows RSTP over VLAN for redundant links with 8 MSTI.

MRP (Media Redundancy Protocol) can be supported for industrial automation networks.

**IGMPv3, GMRP, router port, MLD Snooping, static multicast forwarding and multicast Ring protection**

The unique multicast protection under enhanced G.8032 ring can offer immediate self-recovery instead of waiting for IGMP

table timeout. It also supports IGMPv3, GMRP, router port, MLD snooping and static multicast forwarding binding by ports for video surveillance application.

**Editable configuration file; USB port for upload/download configuration**

The configuration file of Lantech IPGS-6416XSFP-16 can be exported and edited with word processor for the following switches to configure with ease.

The USB port can upload/download the configuration from/to USB dongle.

**2DI/2DO for relay contact and event alerting by email & traps**

In case of event, the IPGS-6416XSFP-16 being able to send an email to pre-defined addresses as well as SNMP Traps out immediately. It provides 2DI and 2DO. When disconnection of the specific port was detected; DO will activate the signal LED to alarm. DI can integrate the sensors for events and DO will trigger the alarm while sending alert information to IP network with email and traps.

**Enhanced environmental monitoring for switch inside information**

The enhanced environmental monitoring can detect switch overall temperature, total PoE load, voltage and current where can send the SNMP traps, email when abnormal.

**Dual power 24V/48V input, high PoE budget**

The Lantech IPGS-6416XSFP-16 is designed with dual power supply at 48VDC (48V model) or 12V~57VDC input (24V model). The 48V model can have 240W PoE budget while 24V model can have 80W (12V input) or 120W (24V input) budget.

**Industrial hardened design with high EFT and ESD protection**

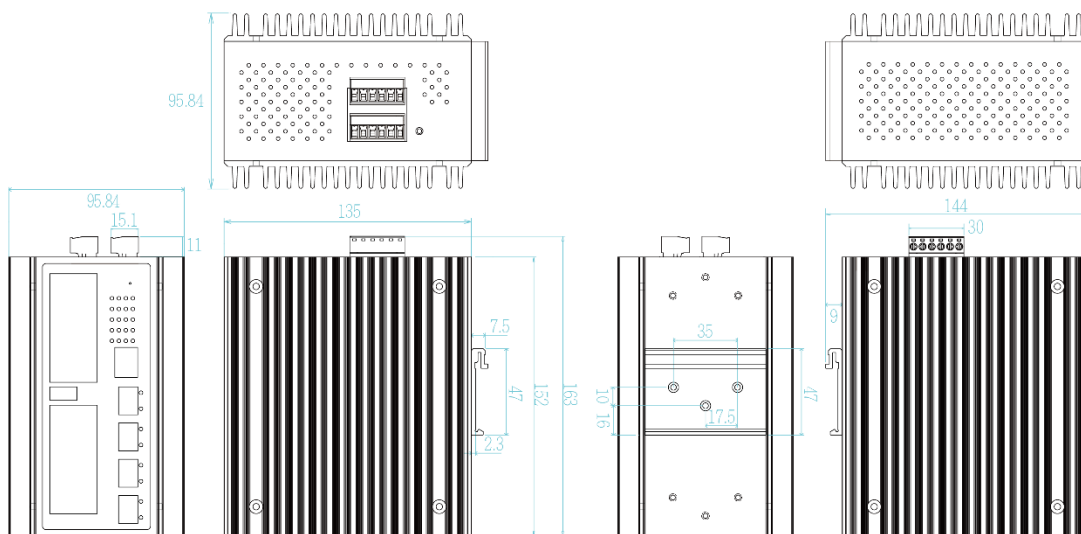
Lantech IPGS-6416XSFP-16 features high reliability and robustness coping with extensive EMI/RFI phenomenon, environmental vibration and shocks usually found in factory, substation, steel automation, aviation, mining and process control. Featured with relay contact alarm function, the IPGS-6416XSFP-16 being able to connect with alarm system in case of power failure or port disconnection. It is the best solution for Automation, transportation, surveillance, Wireless backhaul, Semi-conductor factory applications. The -E model can be used in extreme environments with an operating temperature range of -40°C to 75°C.

## FEATURES & BENEFITS

- 16 100/1000T + 4 1G/2.5G/10G auto sensing SFP\* w/16 PoE 802.3af/at ports (Total 20 Ports Switch)
- Embedded 16 PoE IEEE802.3af/at function to feed power up to 30W for active mode operation
- 48V input for PoE budget 240W; 24V input for PoE budget 80W/ 24V input for PoE budget 120W
- PoE management including PoE detection and scheduling for PD (power devices)
- Back-plane (Switching Fabric): 112Gbps
- 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
- User friendly UI, auto topology drawing, topology demo, complete CLI for professional setting
- Enhanced G.8032 Ring protection in 20ms for single ring
  - Support various ring/chain topologies, including enhanced ring & basic ring
  - Enhanced G.8032 ring configuration with ease

- Cover multicast and data packets protection
- 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
- Supports IEEE 802.1ab LLDP, Cisco CDP; LLDP info can be viewed via Web/ Console
- Support PXE to verify switch firmware with the latest or certain version
- DHCP server / client / DHCP Option 82 relay / DHCP Option 82 server; Port based DHCP server; Basic DHCP Option 66
- Mac based DHCP server to assign IP address that includes dumb switches in DHCP network
- Bandwidth Control
  - Ingress packet filter and egress rate limit
  - Broadcast/multicast packet filter control
- Relay alarm output system events
- Miss-wiring avoidance
  - LED indicator
- Node failure protection
  - 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
- System Event Log, SMTP Email alert and SNMP Trap for alarm support; 32 RMON counters
- Security
  - SSL/SSH v2/INGRESS ACL L2/L3
  - MAC address table: MAC address entries/Filter/static MAC-Port binding
  - Remote Admin: IP address security management to prevent unauthorized intruder.
- TACACS+
- Login Security: IEEE802.1X/RADIUS
- HTTPS for secure access to the web interface
- Static multicast forwarding forward reversed IGMP flow with multicast packets binding with ports for IP surveillance application
- IGMP router port for Multicast protection
- IGMPv1, v2, v3 with Query mode for multimedia; GMRP
- Dual image firmware support
- MLD Snooping for IPv6 Multicast stream
- Factory reset button to restore setting to factory default
- Watchdog design to auto reboot switch when CPU is found dead
- Enhanced environmental monitoring for system actual input voltage, current, ambient temperature, and total power load
- Supports DIDO (Digital Input/Digital Output)
- Configuration backup and restoration
  - Supports editable configuration file for system quick installation
  - USB port to upload/download firmware by USB dongle
- Wide operation temperature (-E model): -40C~70C/-40F~158F; Fan-less design
- Diagnostic including Ping / ARP table / DDM information
- Optional L3Lite/L3\* to be upgradable
- IP30 metal housing with DIN rail and Wall-mount\*\* design

**DIMENSIONS (unit=mm)**



## SPECIFICATION

### Hardware Specification

|                     |  |
|---------------------|--|
| Standards           | IEEE802.3 10Base-T Ethernet<br>IEEE802.3u 100Base-TX<br>IEEE802.3ab 1000Base-T<br>IEEE802.3z Gigabit fiber<br>IEEE802.3x Flow Control and Back Pressure<br>IEEE802.3ad Port trunk with LACP<br>IEEE802.1d Spanning Tree<br>IEEE802.1w Rapid Spanning Tree<br>IEEE802.1s Multiple Spanning Tree<br>IEEE802.3ad Link Aggregation Control Protocol (LACP)<br>IEEE802.1AB Link Layer Discovery Protocol (LLDP)<br>IEEE802.1X User Authentication (Radius)<br>IEEE802.1p Class of Service<br>IEEE802.1Q VLAN Tag<br>IEEE802.3at/af Power over Ethernet  |
| Switch Architecture | Back-plane (Switching Fabric): 112Gbps   |
| Mac Address         | 16K MAC address table  |
| Jumbo frame         | 10KB   |
| Connectors          | 10/100/1000T: 16 x ports RJ-45 with Auto MDI/MDI-X function<br>Mini-GBIC: 4 x 1G/2.5G/10G SFP+ auto-sensing socket with DDMI<br>RS-232 connector: RJ-45 type<br>USB x 1<br>Power & Relay connector: 1 x 6-pole terminal block<br>DIDO: 1 x 6-pole terminal block   |
| Network Cable       | 100Base-TX: 2-pair STP Cat. 5/ 5E/ 6 cable;<br>EIA/TIA-568 100-ohm (100m)<br>1000Base-T: 4-pair STP Cat5E/6 cable;<br>10GBaseT:4-pair STP Cat6/6A/7 cable  |
| Optical Cable       | <b>1Gbps:</b><br>Multi-mode: 0 to 550 m, 850 nm (50/125 μm); 0 to 2 km, 1310 nm (50/125 μm)<br>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)<br><b>2.5Gbps</b><br>Multi-mode: 0 to 300 m, 850 nm (50/125 μm);<br>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)<br><b>WDM 1Gbps:</b><br>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)<br><b>WDM 2.5Gbps</b><br>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)<br><b>10Gbps</b><br>Multi-mode: 0 to 300 m, 850 nm (OM3 50/125 μm);<br>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)<br><b>WDM 10Gbps</b><br>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) |
| LED                 | Per unit: Power 1 (Green), Power 2 (Green), FAULT (Red); RM(Green)<br>Ethernet port: Link/Activity (Green), Speed (Green); 10G (Amber)<br>PoE: Link/Act (Green); Mini-GBIC: Link/Activity (Green)  |
| DI/DO               | 2 Digital Input (DI):<br>Level 0: -30~2V / Level 1: 10~30V<br>Max. input current:8mA<br>2 Digital Output (DO): Open collector to 40 VDC, 200mA   |

|                       |  |
|-----------------------|--|
| Operating Humidity    | 5% ~ 95% (Non-condensing)  |
| Operating Temperature | -20°C~60°C / -4°F~140°F (Standard model)<br>-40°C~75°C / -40°F~167°F(-E model)   |
| Storage Temperature   | -40°C~85°C / -40°F~185°F   |
| Power Supply          | 44~56VDC(48V model); 12V~57VDC(24V model)<br>(18~57VDC to use with 10G copper SFP)   |
| PoE Budget            | 240W for 44~56V input (48V model)<br>(54V input is recommended for PTZ or heater applications<br>80W at 12V input; 120W at 24V input (24V model)                           |
| PoE pin assignment    | RJ-45 port # 1~#16 support IEEE 802.3at/af End-point, Alternative A mode.<br>Positive (VCC+): RJ-45 pin 1,2<br>Negative (VCC-): RJ-45 pin 3,6                              |
| Power Consumption     | Max. 27W (full load w/o PoE)   |
| Case Dimension        | Metal case. IP-30,<br>95,84 (W) x 135 (D) x 152 (H) mm   |
| Weight                | 900g   |
| Installation          | DIN Rail and Wall Mount** Design   |
| EMI & EMS             | FCC Class A,<br>CE EN55032 Class A, CE EN55024,<br>CE EN61000-4-2, CE EN61000-4-3,<br>CE EN61000-4-4, CE EN61000-4-5,<br>CE EN61000-4-6, CE EN61000-4-8,<br>CE EN61000-6-2 |
| Stability Testing     | IEC60068-2-32 (Free fall),<br>IEC60068-2-27 (Shock),<br>IEC60068-2-6 (Vibration)   |
| Railway compliance    | EN50155:2017, EN50121-3-2:2015,<br>EN50121-4:2015, EN61373:2010  |
| MTBF                  | 586,082.5 Hrs<br>(IEC 62380 standards)   |
| Warranty              | 5 years  |

### Software Specification

|                                   |   |
|-----------------------------------|---|
| Management                        | SNMP v1 v2c, v3/ Web/Telnet/CLI   |
| SNMP MIB                          | RFC 1213 MIBII<br>RFC 1158 MIB<br>RFC 1157 SNMP MIB<br>RFC 1493 Bridge MIB*<br>RFC 1573 IF MIB<br>RFC 2674 Q-Bridge MIB*<br>RFC 2819 RMON MIB<br>Private MIB  |
| ITU G.8032                        | Support ITU G.8032 for Ring protection in less than 20ms for self-heal recovery (single ring enhanced mode)<br>Support basic single ring & enhanced ring<br>Enhanced G.8032 ring configuration with ease<br>Cover multicast & data packets protection |
| PoE Management                    | PoE Detection to check if PD hangs then restart the PD<br>PoE scheduling  |
| Per Port PoE Status               | On/ Off, voltage, current, watts, temperature   |
| User friendly UI                  | <ul style="list-style-type: none"> <li>■ Auto topology drawing</li> <li>■ Topology demo</li> <li>■ Complete CLI for professional setting</li> </ul>   |
| Port Trunk with LACP              | LACP Port Trunk: 8 Trunk groups   |
| LLDP                              | Supports LLDP to allow switch to advise its identification and capability on the LAN  |
| CDP                               | Cisco Discovery Protocol for topology mapping   |
| Enhanced Environmental Monitoring | System status for actual input voltage, current, total power load and ambient temperature to be shown in GUI and sent alerting if any abnormal status   |
| VLAN                              | Port Based VLAN<br>IEEE 802.1Q Tag VLAN (256 entries)/ VLAN ID (Up to 4K, VLAN ID can be assigned from 1 to   |

|                             |  |
|-----------------------------|--|
|                             | 4096.)<br>GVRP<br>Protocol based VLAN, Subnet based VLAN   |
| Spanning Tree               | Supports IEEE802.1d Spanning Tree and IEEE802.1w Rapid Spanning Tree, IEEE802.1s Multiple Spanning Tree 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   |
| Remote Admin                | 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.<br>802.1X access control for port based and MAC based authentication/static MAC-Port binding<br>Ingress ACL L2/L3<br>SSL/ SSH v2 for Management<br>HTTPS for secure access to the web interface<br>TACACS+ for Authentication   |
| IGMP                        | Support IGMP snooping v1, v2, v3; 256 multicast groups; IGMP router port; IGMP query; GMRP   |
| MLD Snooping                | Support IPv6 Multicast stream  |
| Static multicast forwarding | Static multicast forwarding forward reversed IGMP flow with multicast packets binding with ports for IP surveillance application   |
| Bandwidth Control           | Support ingress packet filter and egress packet limit.<br>The egress rate control supports all of packet type.<br>Ingress filter packet type combination rules are Broadcast/Multicast/Flooded Unicast packet, Broadcast/Multicast packet, Broadcast packet only and all types of packet.<br>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. |
| 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 Trap                         | Supports SMTP Server and 8 e-mail accounts for receiving event alert   |
| Relay Alarm                       | Provides one relay output for port breakdown, power fail and alarm.<br>Alarm Relay current carry ability: 1A @ DC24V   |
| Protection                        | <ul style="list-style-type: none"> <li>■ Miss-wiring avoidance</li> <li>■ Node failure protection</li> <li>■ Loop protection</li> </ul>  |
| SNMP Trap                         | Up to 5 trap stations; trap types including: <ul style="list-style-type: none"> <li>● Device cold start</li> <li>● Authorization failure</li> <li>● Port link up/link down</li> <li>● DI/DO open/close</li> <li>● Typology change (ITU ring)</li> <li>● Power failure</li> <li>● Environmental abnormal</li> </ul> |
| PXE                               | PXE to verify switch firmware with the latest or certain version   |
| DHCP                              | Provide DHCP Client/ DHCP Server/DHCP Option 82 (Client & Server)/Port based DHCP; DHCP Option 66; Basic IPv6 DHCP server  |
| Mac based DHCP Server             | Assign IP address by Mac that can include dumb switch in DHCP network  |
| Optional L3Lite/L3*               | Lantech OS3 is optional upgradable to L3 Lite/L3* for future expansion. The optional L3Lite includes editable routing table, VRRP, Router-on-a-stick, Inter- VLAN routing.   |
| DNS                               | Provide DNS client feature and support Primary and Secondary DNS server.   |
| SNTP                              | Supports SNTP to synchronize system clock in Internet  |
| Firmware Update                   | Supports TFTP firmware update, TFTP backup and restore; HTTP firmware upgrade  |
| Configuration upload and download | Supports text configuration file for system quick installation; Support factory reset button to restore all settings back to factory default; USB for auto restore/backup  |
| Diagnostic                        | Support Ping, ARP table and DDM information  |
| Dual Image Firmware               | Support dual image firmware function   |

\*Future release  
\*\*Optional  
\*\*\*Optional DDM SFP required

## ORDERING INFORMATION

- **IPGS-6416XSFP-16-48V.....P/N: 8350-864**  
16 10/100/1000T PoE at/af up to 30W + 4 1G/2.5G/10G SFP\* L2+ Industrial PoE Managed Ethernet Switch; -20°C to 60°C; Enhanced Environmental Monitoring; dual 44V~56V input PoE budget 240W
- **IPGS-6416XSFP-16-48V-E.....P/N: 8350-865**  
16 10/100/1000T PoE at/af up to 30W + 4 1G/2.5G/10G SFP\* L2+ Industrial PoE Managed Ethernet Switch; -40°C to 75°C; Enhanced Environmental Monitoring; dual 44V~56V input PoE budget 240W
- **IPGS-6416XSFP-16-24V.....P/N: 8350-8661**  
16 10/100/1000T PoE at/af up to 30W + 4 1G/2.5G/10G SFP\* L2+ Industrial PoE Managed Ethernet Switch; -20°C to 60°C; Enhanced Environmental Monitoring; dual 12V~57V input, PoE budget 80W at 12V, 120W at 24V
- **IPGS-6416XSFP-16-24V-E.....P/N: 8350-8671**  
16 10/100/1000T PoE at/af up to 30W + 4 1G/2.5G/10G SFP\* L2+ Industrial PoE Managed Ethernet Switch; -40°C to 75°C; Enhanced Environmental Monitoring; dual 12V~57V input, PoE budget 80W at 12V, 120W at 24V

## OPTIONAL ACCESSORIES

### Software package

- **OS3 – L3L..... P/N: 9000-114**  
OS3 software platform with Layer 3 Lite functions (please check Lantech software data sheet for details)
- **OS3 – L3\*..... P/N: 9000-116**  
OS3 software platform with Layer 3 functions (please check Lantech software data sheet for details)

### DIN Rail Power for 802.3at Applications

- **NDR-240 series** 240W Single Output Industrial Din Rail Power; 90-264VAC / 127-370VDC Input Range; Cooling by free air convection; RoHS2 ; Operating Temp. -20°C~70°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)
- **8330-262D** MINI GBIC 2.5G 850nm VCSEL (LC/0.3km) Transceiver
- **8330-263D** MINI GBIC 2.5G 1310nm FP (LC/2km) Transceiver
- **8330-265D** MINI GBIC 2.5G 1310nm DFB (LC/15km) Transceiver
- **8330-193D** 10G Base SFP\* SR, Multi-mode (LC/300m) Transceiver
- **8330-194D** 10G Base SFP\* LR, Single-mode (LC/10km) Transceiver
- **8330-209D** 10G Base SFP+ , Single-mode(10km) Transceiver (WDM 1270)
- **8330-210D** 10G Base SFP+ , Single-mode(10km) Transceiver (WDM 1330)
- **8330-200D** 10G Base SFP\* , Single-mode(20km) Transceiver (WDM 1270)
- **8330-201D** 10G Base SFP\* , Single-mode(20km) Transceiver (WDM 1330)
- **8330-202D** 10G Base SFP\* , Single-mode(40km) Transceiver (WDM 1270)
- **8330-203D** 10G Base SFP\* , Single-mode(40km) Transceiver (WDM 1330)
- **8330-206** 10G/5G/2.5G/1000Base-T SFP, 3.3V,30m (10G) 50m (2.5G/5G) 100m (1G); -10~70°C (only used from 18V~57VDC power input, maximum two ports)

All SFP ended with D are with Diagnostic function

#### Lantech Communications Global Inc.

www.lantech.com.tw  
 info@lantech.com.tw

© 2020 Copyright Lantech Communications Global Inc. all rights reserved.  
 The revise authority rights of product specifications belong to Lantech Communications Global Inc.  
 Lantech may make changes to specification and product descriptions at anytime, without notice.