IPGS-3408GSFP

8 10/100/1000T PoE at/af + 4 1000M SFP L2 Plus Industrial Managed Switch w/ ITU G.8032 Ring

- *Support IEEE802.3at/af up to 30W PoE output*
- *ITU G.8032 standard ring protection < 20ms incl. data & multicast* packets; MSTP*
- *Miss-wiring avoidance & Repowered auto ring restore*
- *User friendly UI, including auto topology drawing and DDM threshold monitoring with dB values****
- *Support ACL L2/L3, IGMP v3/router port, Static multicast forwarding, MVR, QinQ, SSH/SSL, TACAS+*, SMS alert, LACP load balance*

(-E model)

FCC CE RoHS IPv6 DDM ITU G.8032

OVERVIEW

Lantech IPGS-3408GSFP is a high performance L2+ industrial full Gigabit switch which provides L2 wire speed and advanced security function for network aggregation deployment. It delivers ITU G.8032 ring recovery less than 20ms, comprehensive QoS, advanced security including ACL L2/L3, TACAS+*, SSH/SSL, DHCP Option 82* and IGMPv1/v2/v3 & routing, QinQ (double tag VLAN), MVR (multicast VLAN registration)*, which are important feature s required in large network. It also supports Cisco Discovery Protocol (CDP) and LLDP for Ciscoworks to detect the switch info and shown on L2 map topology. LACP load balancing can split each trunk at equally percentage for special application. The switch also equips the RTC (real time clock) which can keep track of time always.

IPGS-3408GSFP supports IEEE802.3at/af standard which can feed HI-power up to 30W at each PoE port for big power consumption devices like PTZ IP camera, High power wireless AP etc. The advanced PoE management* includes PoE detection and scheduling. PoE detection can detect if the connected PD is hang up then restart the PD; PoE scheduling is to allow pre-set power feeding schedule upon routine time table.

Lantech IPGS-3408GSFP features ITU G.8032 ring which can be self-healed in less than 20ms up to 256 switches that covers data & multicast* packets protection. It also supports MSTP that allows RSTP over Vlan for redundant links.

The IPGS-3408GSFP 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-3408GSFP is able to alert with the LED indicator and send out an email, traps or a SMS text. Repowered auto ring restore function 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.

The user friendly UI, innovative auto topology drawing and topology demo makes IPGS-3408GSFP much easier to get hands-on. The IPGS-3408GSFP 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.

Lantech IPGS-3408GSFP designs with redundant firmware* where can survive if the primary firmware is crashed due to improper upgrading. The configuration file can also be exported in text file so that it can be edited and configured back to switch with ease for mass deployment. The 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.

The IPGS-3408GSFP DIDO function can support additional open/close physical contact for designate applications besides Port / Power events, for example, DIDO function can trigger alarm if the switch was moved or stolen. In case of events, the IPGS-3408GSFP will immediately send an email & SMS text message to pre-defined addresses as well as SNMP Traps out. It provides 2DI and 2DO while 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, traps and SMS

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

The Lantech IPGS-3408GSFP is designed with redundant power supply at 48VDC. Featured with relay contact alarm function, the IPGS-3408GSFP is able to connect with alarm system in case of power failure. The IPGS-3408GSFP also provides 3000V EFT and 6000V ESD protection, which can reduce unstable situation caused by power line and Ethernet.

Lantech IPGS-3408GSFP features high reliability and robustness coping with extensive EMI/RFI phenomenon,

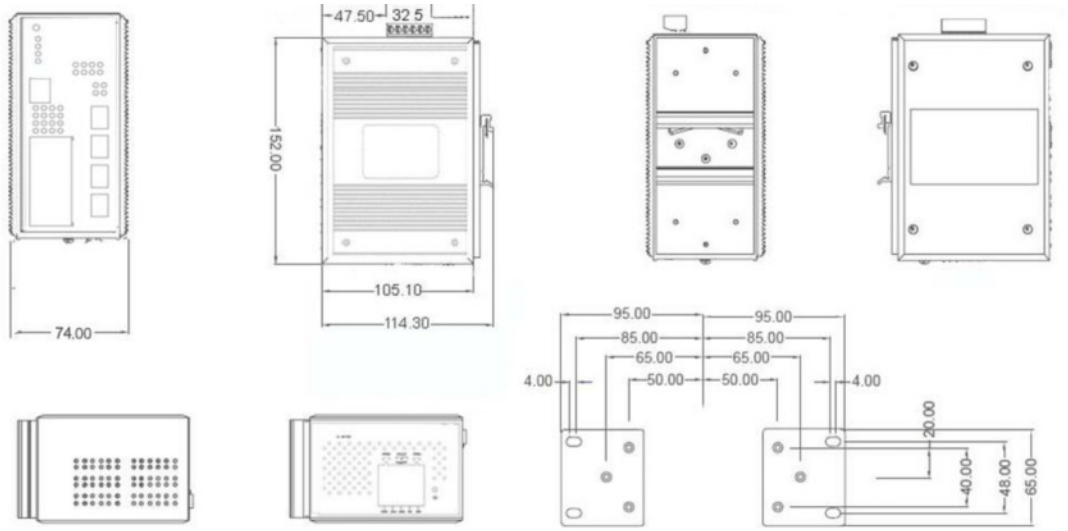
environmental vibration and shocks usually found in factory, Substation, Steel automation, Aviation, Mining and Process control. It is the best solution for Automation, transportation, surveillance, Wireless backhaul, Semi-conductor factory and assembly lines.

FEATURES & BENEFITS

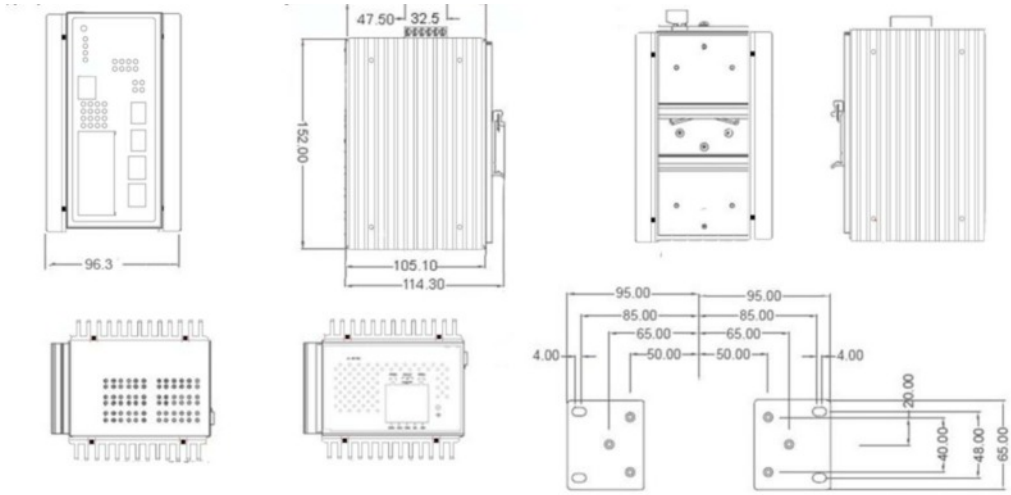
- **8 10/100/1000T + 4 1000M SFP L2 plus Managed Industrial Switch (Total 12 Ports Switch)**
- **Back-plane (Switching Fabric):24Gbps**
- **16K MAC address table**
- **10KB Jumbo frame supported on 10/100/1000T**
- **Supports IEEE802.3at/af feeding power up to 30W per PoE port at 48~56VDC**
- **Advanced PoE management incl. Scheduling & Detection***
- **User friendly UI, Auto topology drawing, topology demo**
- **ITU G.8032 Ring protection in 20ms < 256 switches**
  - *Support various ring/chain topologies, including double ring*
  - *Ring protection coverage data and multicast* packets*
- **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*
- **Provides EFT protection 3000 VDC for power line.**
- **Supports 6000 VDC Ethernet ESD 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**
- **4K 802.1Q VLAN, Port based VLAN, GVRP*, QinQ, ,GMRP***
- **Supports IEEE 802.1ab LLDP, Cisco CDP**
- **LACP trunk & load balancing to be equally splitted**
- **DHCP server / client / DHCP Option 82* supported**
- **Bandwidth Control**
  - *Ingress Packet Filter and Egress Rate Limit*
  - *Broadcast/Multicast Packet Filter Control*
- **SNTP,NTP supported**
- **TFTP/HTTP firmware upgrade; Redundant firmware** to avoid crashing in case of upgrading failure**
- **System Event Log, SMTP Email alert, SMS(mobile text) and SNMP Trap for alarm support; 32 RMON counter**
- **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*
- **Security**
  - *SSL/SSH/TACAS+*/ACL L2&L3*
  - *Port Security: MAC address entries/Filter/MAC-IP-Port binding*
  - *IP Security: IP address security management to prevent unauthorized intruder.*
  - *Management access control with priority*
  - *Login Security: IEEE802.1X/RADIUS*
- **Multicast static route for non- IGMP camera to prevent flooding; IGMP router port to assign query in ring**
- **Multicast VLAN registration for metro video**
- **IGMPv1,v2,v3 with Query mode for Multi Media**
- **Factory reset button to restore setting to factory default**
- **Watchdog design to auto reboot switch when CPU is found dead**
- **Optional environmental monitoring for system input voltage, current, ambient temperature**
- **Supports DIDO(Digital Input/Digital Output)**
- **IP30 metal housing with DIN rail and Wall Mount** design**

DIMENSIONS (unit=mm)

IPGS-3048GSFP; -20~60°C (Standard model)



IPGS-3048GSFP-E; -40~75°C (-E model)



SPECIFICATION

Hardware Specification

Standards	IEEE 802.3 10Base-T Ethernet IEEE 802.3u 100Base-TX 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 IEEE 802.3ad Link Aggregation Control Protocol (LACP) IEEE 802.1AB Link Layer Discovery Protocol (LLDP) IEEE 802.1X User Authentication (Radius) IEEE802.1p Class of Service IEEE802.1Q VLAN Tag IEEE802.3at/af PoE
Switch Architecture	Back-plane (Switching Fabric): 24Gbps Packet throughput ability (Full-Duplex): 23.8Mpps @64bytes
Transfer Rate	14,880pps for Ethernet port 148,800pps for Fast Ethernet port 1,488,000pps for Gigabit Fiber Ethernet port
Mac Address	16K MAC address table
Connectors	10/100/1000T: 8 x RJ-45 type connector Mini-GBIC: 4 x 1000 SFP Sockets Power & P-Fail connector: 1 x 6-pole terminal block RS-232 connector: 1 x RJ-45 type connector
Network Cable	10Base-T: 2-pair UTP/STP Cat. 3, 4, 5 cable EIA/TIA-568 100-ohm (100m) 100Base-TX: 2-pair UTP/STP Cat. 5/ 5E cable EIA/TIA-568 100-ohm (100m) 1000Base-T: 4-pair UTP/STP Cat. 5E cable or above EIA/TIA-568 100-ohm (100m)
Optical Cable	Multi-mode: 50/125um~62.5/125um; Single mode: 9/125um Wavelength: 850nm (Multi-mode) / 1310nm (Single-mode)
PoE pin assignment	RJ-45 port # 1~#8 support IEEE 802.3at End-point, Alternative A mode. Per port provides 30W at 52~56VDC/15W at 48V~56VDC. Positive (VCC+): RJ-45 pin 1,2. Negative (VCC-): RJ-45 pin 3,6.
Protocol	CSMA/CD
LED	Per unit: Power 1 (Green), Power 2 (Green), P-Fail (Red) Ethernet port: Link/Activity (Green), Speed (Green); Mini-GBIC: Link/Activity (Green)
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
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	±48~56VDC, Redundant power only with +48~56VDC, -48V~56VDC work only with single power input
Power Consumption	18W
PoE Power Budget	240W
Case Dimension	Metal case. IP-30, 96.3(W) x 114 (D) x 152 (H) mm (-E model) 74.15(W) x 114 (D) x 152 (H) mm (Standard model)
Weight	900 g
Installation	DIN Rail and Wall Mount**Design
EMI & EMS	FCC Class A, CE EN61000-6-2, CE EN61000-6-4, CE EN61000-4-2, CE EN61000-4-3, CE EN61000-4-4, CE EN61000-4-5, 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	n/a
Warranty	5 years

Software Specification

Management	SNMP v1 v2c, v3/ Web/Telnet/CLI
SNMP MIB	RFC 1215 Traps MIB, RFC 1213 MIBII, RFC 1157 SNMP MIB, RFC 1493 Bridge MIB, RFC 2674 VLAN MIB, RFC 1643 EtherLike, RFC 1757 RMON, RSTP MIB, Private MIB, LLDP MIB
ITU G.8032	Support ITU G.8032 v2 for Ring protection in less than 20ms for self-heal recovery < 256 switches Support various ring/chain topologies Ring covers data & multicast* packets
User friendly UI	■ Auto topology drawing ■ Topology demo ■ Auto configuration for G.8032* ■ DDM threshold monitoring with dB values***
PoE Management*	■ PoE Detection to check if PD is hang up then restart the PD ■ PoE Scheduling to On/OFF PD upon routine time table
Port Trunk with LACP	LACP Port Trunk: 4 Trunk groups/Maximum 4 trunk members
LACP load balancing	Split the trunk packets in equal percentage for specific applications
LLDP & CDP	Supports LLDP and CDP(Cisco Discovery Protocal) to allow switch to advise its identification and capability on the LAN
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* (256 Groups)*,GMRP*, QinQ
Environmental Monitoring**	System status for input voltage, current and ambient temperature to be shown in GUI and sent alerting if any abnormal status(-M models)
IPv6/IPv4	Present
Spanning Tree	Supports IEEE802.1d Spanning Tree and IEEE802.1w Rapid Spanning Tree, IEEE802.1s Multiple Spanning Tree
Quality of Service	The quality of service determined by port, Tag and IPv4 Type of service, IPv4 Different Service
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”
IGMP	Support IGMP v1,v2,v3 with snooping and query; Supports static multicast routing 256 IGMP router port for assign another query
Multicast VLAN	MVR enables multicast packets go through VLAN
Registration	for VOD application
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-IP-Port binding Management access control with priority * 256 Policy based Access Control List SSL/ SSH for Management TACACS+ for Authentication*
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.
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 6 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 3 trap stations; trap types including: ● Device cold start ● Authorization failure ● Port link up/link down ● DI/DO open/close ● PoE port event ● Environmental abnormal**
DHCP	Provide DHCP Client/ DHCP Server/ DHCP Relay Option 82*
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.
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 dongle for auto restore/backup
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-3408GSFP……P/N: 8350-611**
  8 10/100/1000T PoE at/af up to 30W + 4 1000M SFP L2+ Managed Industrial PoE Switch; -20°C to 60°C
- **IPGS-3408GSFP-E……P/N: 8350-612**
  8 10/100/1000T PoE at/af up to 30W + 4 1000M SFP L2+ Managed Industrial PoE Switch; -40°C to 75°C
- **IPGS-3408GSFP-M……P/N: 8350-613**
  8 10/100/1000T PoE at/af up to 30W + 4 1000M SFP L2+ Managed Industrial PoE Switch w/Environmental Monitoring; -20°C to 60°C
- **IPGS-3408GSFP-M-E……P/N: 8350-614**
  8 10/100/1000T PoE at/af up to 30W + 4 1000M SFP L2+ Managed Industrial PoE Switch w/Enviromental monitoring; -40°C to 75°C

OPTIONAL ACCESSORIES

DIN Rail Power

- **AD1240-48S-5** 48~56VDC, 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-5** 48~56VDC, 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-5** 48~56VDC, 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)

- **8330-162** MINI GBIC 1000SX (LC/0.5km) Transceiver
- **8330-163** MINI GBIC 1000SX2 (LC/2km) Transceiver
- **8330-165** 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 10/100/1000T (100m) Transceiver

Wall Mount Bracket

MBEAR001 Wall mount bracket for 96.3(W) x 114.3 (D) x 152 (H) mm Industrial switches

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