

IPGS-3008

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

- Support IEEE802.3at/af up to 30W per port
- PoE management incl, Detection and Scheduling
- Enhanced G.8032 ring protection < 20ms for single ring. Supports auto mode*, enhanced mode*, train mode* and basic 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; Complete CLI.
- Support LACP link aggregation, VLAN, QoS, IGMP v3/router port, GMRP*, GVRP*, DHCP server & client, DHCP Option 82 relay / server*, TACACS+*, INGRESS/EGRESS ACL L2/L3*, SSH/SSL*, IPv6, SMS
- Dual 9.5V~57VDC input(12V model) or Dual 44~57VDC input(48V model)
- N-key ** for configuration restore, backup and firmware upgrade
- Optional Environmental monitoring function to display inside switch info incl. temperature, voltage, current, power consumption



OVERVIEW

Lantech IPGS-3008 is a high performance L2+ all Gigabit switch with 8 10/100/1000T 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*, TACACS+*, INGRESS/EGRESS ACL L2/L3*, 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-3008 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.

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

The IPGS-3008 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-3008 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-3008 much easier to get hands-on. The switch also equips the RTC (real time clock) which can keep track of time always. 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-3008 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*; DHCP Option 66

It supports the standard DHCP server/client as well as DHCP option 82 relay. The 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 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. It also supports DHCP Option 66.

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.

QinQ*, QoS QinQ* and GVRP* supported

It supports the QinQ, QoS QinQ, GVRP for large VLAN segmentation.

IGMPv3,GMRP*; router port, 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 and static multicast forwarding binding by ports for video surveillance application.

Exported configuration text file; Factory reset button; CPU watchdog

The configuration file of Lantech IPGS-3008 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.

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

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

Relay alarm and email/trap/SMS alerting

Featured with relay contact alarm function, the IPGS-3008 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-3008-12V is designed with dual input power at 9.5V~57VDC while IPGS-3008-48V allows with 44~57VDC input. The PoE budget for 12V input is 80W and for 24V input is 120W.

High reliability and extended working temperature

Lantech IPGS-3008 provides $\pm 2000V$ EFT/SURGE and $\pm 6000V$ 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.

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.

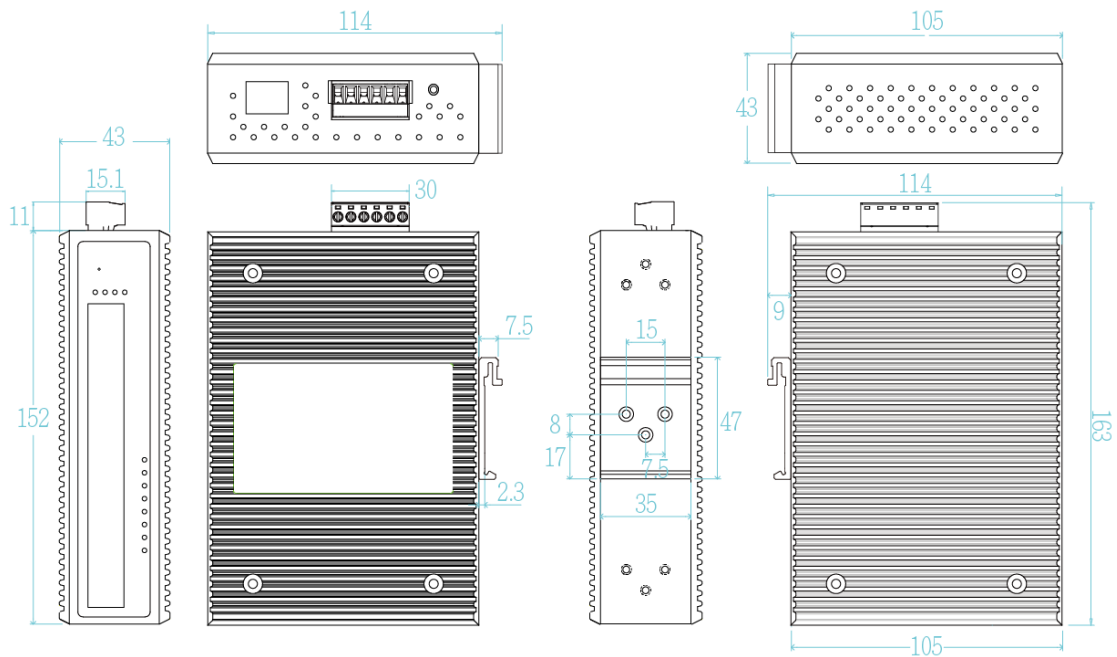
The -E model can be used in extreme environments with an operating temperature range of -40°C to 75°C.

FEATURES & BENEFITS

- 8 10/100/1000T w/8 PoE 802.3af/at Injectors (Total 8 Ports Switch)
- Embedded 8 PoE Injectors IEEE802.3af/at function to feed power up to 30W@54V; 15W @ 48V 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 45V~57VDC power input for 48V model with PoE budget 240W
- PoE management including PoE detection and scheduling for PD (power devices)
- Back-plane (Switching Fabric): 16Gbps
- 16K MAC address table
- 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 (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/SURGE 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*, DHCP Option 66*
- **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
- **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
 - TACACS+*
 - INGRESS/EGRESS ACL L2/L3*
 - 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**
- **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; GMRP***
- **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)



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): 16Gbps |
| Transfer Rate | 14,880pps for Ethernet port 148,800pps for Fast Ethernet port 1,488,000pps for Gigabit Fiber / Gigabit Ethernet port |
| CPU | Marvell 1600Mhz |
| RAM | 512M Byte |
| Flash | 128M Byte |
| 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 Power & Relay 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) |
| Protocol | CSMA/CD |
| LED | Per unit: Power 1 (Green), Power 2 (Green), FAULT (Red); RM(Green) Ethernet port: Link/Activity (Green), Speed (Amber); PoE: Link/Act (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) |
| Power Consumption | 10W |
| PoE Budget | 240W for 44~57V input(48V model) (54V input is recommended for PTZ or heater 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. 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 | Metal case. IP-30, 43 (W) x 105 (D) x 152 (H) mm |
| Weight | 660 g |
| Installation | DIN Rail and Wall Mount** Design |
| EMI & EMS | FCC Part 15 Class A IEC/EN61000-6-2 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 |
| 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 1757 RMON, RFC 2674 Q-Bridge MIB*; Bridge 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 | <ul style="list-style-type: none"> ■ Auto topology drawing* ■ Topology demo ■ Auto configuration for G.8032(auto mode)* for single ring ■ 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*, QinQ*, QoS QinQ* |
| 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*/MAC-Port binding TACACS+ INGRESS/EGRESS ACL L2/L3* 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* |
| Static MAC-Port bridge | 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. 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 | 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) |
| Protection | <ul style="list-style-type: none"> ■ Miss-wiring avoidance ■ Repowered auto ring restore ■ Loop protection | Firmware Update | Supports TFTP firmware update, TFTP backup and restore; HTTP firmware upgrade; Lantech™ InstaConfig* for multiple upgrade |
| SNMP Trap | Up to 10 trap stations; trap types including: <ul style="list-style-type: none"> ● Device cold start ● Authorization failure ● Port link up/link down ● Topology change(ITU ring) ● PoE ping failure ● Power failure ● Environmental abnormal** | Configuration upload and download | Supports text configuration file for system quick installation N-key** for mass firmware auto-backup, editable restoration and auto upgrade |
| | | IfAlias | Each port allows an alphabetic string of 128-byte assigned as its own unique name via the SNMP or CLI interface. |
| DHCP | Provide DHCP client/ DHCP Server/ DHCP option 82 relay /DHCP option82 server* ; Mac based DHCP* ; Port based DHCP* , DHCP option 66* | | *Future Release ** Optional Release |
| DNS | Provide DNS Client feature and support Primary and Secondary DNS server. | | |
| SNTP | Supports SNTP to synchronize system clock in Internet | | |

ORDERING INFORMATION

- **IPGS-3008-48V.....P/N: 8350-986**
8 10/100/1000T w/8 PoE Mode A 802.3at/af 30W Managed Industrial Switch; dual 44~57VDC input; -20°C to 60°C
- **IPGS-3008-48V-E.....P/N: 8350-987**
8 10/100/1000T w/8 PoE Mode A 802.3at/af 30W Managed Industrial Switch; dual 44~57VDC input; -40°C to 75°C
- **IPGS-3008-M-48V.....P/N: 8350-9861**
8 10/100/1000T w/8 PoE Mode A 802.3at/af 30W Managed Industrial Switch; dual 44~57VDC input; -20°C to 60°C
- **IPGS-3008-M-48V-E.....P/N: 8350-9871**
8 10/100/1000T w/8 PoE Mode A 802.3at/af 30W Managed Industrial Switch; dual 44~57VDC input; -40°C to 75°C
- **IPGS-3008-12V.....P/N: 8350-988**
8 10/100/1000T w/8 PoE Mode A 802.3at/af 30W Managed Industrial Switch, dual 9.5V~57VDC input; -20°C to 60°C
- **IPGS-3008-12V-E.....P/N: 8350-989**
8 10/100/1000T w/8 PoE Mode A 802.3at/af 30W Managed Industrial Switch, dual 9.5V~57VDC input; -40°C to 75°C
- **IPGS-3008-M-12V.....P/N: 8350-9884**
8 10/100/1000T w/8 PoE Mode A 802.3at/af 30W Managed Industrial Switch, dual 9.5V~57VDC input; -20°C to 60°C
- **IPGS-3008-M-12V-E.....P/N: 8350-9892**
8 10/100/1000T w/8 PoE Mode A 802.3at/af 30W Managed Industrial Switch, 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 60°C

OPTIONAL ACCESSORIES

DIN Rail Power

- **NDR-480 Series** 480W 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)
- **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)
- **NDR-120 Series** 120W 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; For 115VAC, please refer to derating curve on NDR-120 Series datasheet)
- **NDR-75 Series** 75W 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; For 115VAC, please refer to derating curve on NDR-120 Series datasheet)

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