

Lantech

# IPGS-5408DFT

2 10/100/1000T + 2 100/1000 SFP + 8 10/100/1000T w/8 PoE at/af

### L2+ Industrial Managed Ethernet Switch w/ Enhanced G.8032 Ring

- Enhanced G.8032 ring protection < 20ms for single ring. Supports auto mode, enhanced mode, train mode, multi-VLAN and basic mode; Enhanced G.8032 ring covers multicast packets; MSTP 16MSTI / RSTP; support MRP
- Support IEEE802.3at/af up to 30W per port
- 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, DHCP Snooping; QoS by VLAN, SSH v2/SSL, HTTPS, INGRESS/EGRESS ACL L2/L3, TACACS+\*\*, QinQ
- Protocol based VLAN; IPv4 Subnet based VLAN
- Optional Environmental Monitoring for temp, voltage and current (-M model)
- Wide range dual DC input from ±44V~56V
- USB port to backup, restore the configuration file
- FN50121-4/50121-5 verification





















Lantech IPGS-5408DFT is a high performance L2+ (All Gigabit) industrial Ethernet switch with 8 10/100/1000T PoE at/af + 2 10/100/1000T + 2 Dual Speed SFP which provides L2 wire speed and advanced security function for network aggregation deployment. It delivers ITU G.8032 enhanced ring recovery less than 20ms in single ring while also supports train ring, enhanced mode, multiple VLAN mode with easy configuration. The comprehensive QoS, QoS by VLAN, advanced security including INGRESS/EGRESS ACL L2/L3, TACACS+\*\*, SSH v2/SSL, Mac based DHCP server, DHCP Option 82, DHCP server, IGMPv1/v2/v3/router port, QinQ are supported and also required in large network. It also supports Cisco Discovery Protocol (CDP) for Ciscoworks to detect the switch info and show on L2 map topology.

#### Up to 8 PoE at/af ports w/advanced PoE management

Compliant with 802.3af/at standard, the Lantech IPGS-5408DFT is able to feed each PoE port up to 30 Watt, total PoE budget 240W. Lantech IPGS-5408DFT 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, Node failure protection, Loop protection

The IPGS-5408DFT 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-5408DFT is 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.

### Enhanced G.8032 ring, 16 MSTI MSTP; MRP ring

Lantech IPGS-5408DFT 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 multiple-VLAN ring and auto-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 each spanning tree for each VLAN for redundant links with 16 MSTI.

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





# DHCP option 82 & Port based, Mac based DHCP, Option66, DHCP Snooping; 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. DHCP Snooping is supported. 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.

#### QoS by VLAN for legacy devices

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 and GVRP supported

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

# 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.

#### 802.1X security by MAC address

MAC-based port authentication is an alternative approach to 802.1x for authenticating hosts connected to a port. By authenticating based on the host's source MAC address, the host is not required to run a user for the 802.1x protocol. The RADIUS server that performs the authentication will inform the switch if this MAC can be registered in the MAC address table of switch.

#### Auto-provisioning for firmware/configuration update

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

#### User friendly GUI, Auto topology drawing

The user-friendly UI, innovative auto topology drawing and topology demo makes IPGS-5408DFT much easier to get hands-on. The IPGS-5408DFT 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.

#### Editable configuration file; Factory reset button

The configuration file of Lantech IPGS-5408DFT can be exported and edited with word processor for the other switches' configuration with ease. 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.

#### USB port for configuration upload & download

The built-in USB port can have configuration upload & download by USB dongle.

#### Event log & message; 2 DI / 2DO

In case of event, the IPGS-5408DFT is 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.

## Optional environmental monitoring for switch inside information (-M model)

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

#### Wide range dual DC powered input; Relay contact alarm, High ESD protection

The Lantech IPGS-5408DFT is designed with wide range dual power input from  $\pm 44 \text{V} \sim 56 \text{VDC}$ . Featured with relay contact alarm function, the IPGS-5408DFT is able to connect with alarm system in case of power failure or port disconnection. The IPGS-5408DFT also provides  $\pm 2000 \text{V}$  EFT and  $\pm 4000 \text{VDC}$  (Contact) /  $\pm 8000 \text{ VDC}$  (Air) Ethernet ESD protection, which can reduce unstable situation caused by power line and Ethernet.

# Industrial hardened design for extended temperature operation

Lantech IPGS-5408DFT features high reliability and robustness coping with extensive EMI/RFI phenomenon, environmental vibration and shocks usually found in factory, substation, steel automation, mining, process control and railway (EN50121-4). It is the best solution for 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 10/100/1000T + 2 Dual Speed SFP w/8 PoE 802.3af/at Injectors (Total 12 Ports Switch)
- Embedded 8 PoE Injectors IEEE802.3af/at function
- to feed power up to 30W for active mode operation.

  Max. PoE budget: 240W
- PoE management including PoE detection and scheduling for PD (power devices)

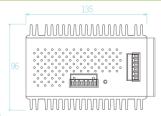


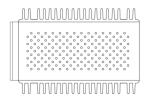
- Back-plane (Switching Fabric): 24Gbps
- Packet Buffer: 2Mbit
- Store-and-Forward Switching Architecture
- 16K MAC address table
- DDM to support SFP diagnostic function\*\*\*
  - Automatically convert the raw data into dB values for TX power/RX power, making it easier to measure the fiber distance
- 10KB Jumbo frame
- User friendly UI, auto topology drawing, topology demo, complete CLI for professional setting
- Enhanced G.8032 Ring recovery < 20ms in single ring
  - Support various ring/chain topologies, including train ring, enhanced ring, basic ring, auto ring & multiple VLAN ring
  - Enhanced G.8032 ring configuration with ease
  - Auto ring configuration (auto mode) for single ring
  - Covers multi-cast and data packets
- Provides EFT protection ±2000 VDC for power line.
- Supports ±4000 VDC (Contact) and ±8000 VDC (Air)
   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 with 16 MSTI
- 4K 802.1Q VLAN, Port based VLAN, GVRP, QinQ, QoS
- Supports IEEE 802.1ab LLDP, Cisco CDP; LLDP info can be viewed via Web/ Console
- DHCP server / client / DHCP Option 82 relay / DHCP Option 82 server Port based DHCP server; DHCP Option 66; DHCP Snooping; basic IPv6 DHCP server
- Mac based DHCP server to assign IP address
- 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

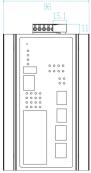
- The status can be shown in NMS when each switch is back
- TFTP/HTTP firmware upgrade
- Configuration backup and restoration
  - Supports text configuration file for system quick installation
  - USB port for upload / download configuration by
     USB dongle
- System Event Log and SNMP Trap for alarm support; 32 RMON counters
- Security
  - SSL/SSH v2/INGRESS/EGRESS ACL L2/L3
  - MAC address table: MAC address entries/Filter/MAC-Port binding
  - IP Security: IP address security management to prevent unauthorized intruder
  - Login Security: IEEE802.1X/RADIUS
  - TACACS+\*\*
  - 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 to assign query in ring for reversed multicast video flow
- IGMPv1,v2,v3 with Query mode for multimedia;
  GMRP\*\*
- Factory reset button to restore setting to factory default
- Watchdog design to auto reboot switch CPU is found dead
- Supports DIDO (2 Digital Input / 2 Digital Output)
- Wide range dual input power from ±44V to 56V
- Environmental monitoring\*\* for system input voltage, current, total PoE load and ambient temperature (-M model)
- IP30 metal housing with DIN rail and Wall-mount\*\* design
- MLD Snooping for IPv6 Multicast stream
- Diagnostic including Ping / DDM information
- used in extreme environments with an operating temperature range of -40°C to 75°C (-E model)
- Auto Provision to verify switch firmware with the latest or certain version

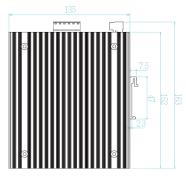


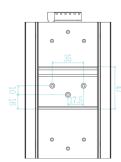
# **DIMENSIONS** (unit=mm)

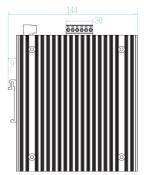












## **SPECIFICATION**

| Hardware Sp         | ecification                                    |  |  |  |
|---------------------|--|--|--|--|
| 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): 24Gbps          |  |  |  |
| Packet Buffer       | 2Mbit  |  |  |  |
| Transfer Rate       | 14,880pps for Ethernet port                    |  |  |  |
|                     | 148,800pps for Fast Ethernet port              |  |  |  |
|                     | 1,488,000pps for Gigabit Ethernet / Gigabit    |  |  |  |
|                     | Fiber port                                     |  |  |  |
| Mac Address         | 16K MAC address table                          |  |  |  |
| Jumbo frame         | 10KB   |  |  |  |
| Connectors          | 10/100/1000T:10 x ports RJ-45 PoE with Auto    |  |  |  |
|                     | MDI/MDI-X function                             |  |  |  |
|                     | Mini-GBIC: 2 x 100/1000 SFP socket with        |  |  |  |
|                     | DDM  |  |  |  |
|                     | RS-232 connector: RJ-45 type                   |  |  |  |
|                     | USB x 1  |  |  |  |
|                     | Power & Relay connector: 1 x 6-pole terminal   |  |  |  |
|                     | block  |  |  |  |
|                     | DIDO: 1 x 6-pole terminal block                |  |  |  |
| 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                 |  |  |  |
| 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 |  |  |  |

|                    | FIA TIA 500 400 1 (400 )  |  |  |
|--------------------|---|--|--|
|                    | EIA/TIA-568 100-ohm (100m)<br>1000Base-TX: 2-pair UTP/STP Cat. 5/ 5E/ 6 |  |  |
|                    | cable   |  |  |
|                    | EIA/TIA-568 100-ohm (100m)  |  |  |
| Optical Cable      | 1.25Gbps:   |  |  |
| Option Cabio       | 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)  |  |  |
|                    | 125Mbps:  |  |  |
|                    | Multi-mode: 0 to 2 km/ 5 km, 1310 nm                                    |  |  |
|                    | (62.5/125 μm)   |  |  |
|                    | Single mode: 0 to 30 km, 1310 nm (62.5/125                              |  |  |
|                    | 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 125Mbps:  |  |  |
|                    | Single mode: 0 to 20 km/ 40 km/ 60 km/ 80                               |  |  |
|                    | km, 1310 nm (9/125 µm); 0 to 20 km/ 40 km/                              |  |  |
|                    | 60 km/ 80 km, 1550 nm (9/125 μm)  |  |  |
| LED                | Per unit: Power 1 (Green), Power 2 (Green),                             |  |  |
|                    | FAULT (Red), RM(Green)  |  |  |
|                    | 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 Humidity | 5% ~ 95% (Non-condensing)   |  |  |
| Operating          | -20°C~60°C / -4°F~140°F (Standard model)                                |  |  |
| Temperature        | -40°C~75°C / -40°F~167°F(-E model)                                      |  |  |
| Storage            | -40°C~85°C / -40°F~185°F  |  |  |
| Temperature        |   |  |  |
| Power Supply       | ±44 to 56 VDC   |  |  |
| Power Consumption  | 10W   |  |  |
| PoE Budget         |   |  |  |
|                    | (50-56VDC input is recommended for 802.3at                              |  |  |
|                    | 30W applications) Higher PoE budget can be applied upon                 |  |  |
|                    | request. **   |  |  |
|                    |   |  |  |



| Modigit   Modigit   Modify     | Case Dimension      | Metal case. IP-30,   | Class of Service  | Support IEEE802.1p class of service, per      |
|--|---------------------|--|-------------------|---|
| Bill & EMS   PCC Class A   CE H 55002, CE R 150024, CE    | Weight              | 96 (W) x 135 (D) x 152 (H) mm  | Login Socurity    | port provides 8 priority queues               |
| FOC Base A   CE PM 5902 CE PM 59024 CE PM 59024 CE PM 1000-45, CE PM 1000-44 CE PM 1000-45, CE PM 1000-45 CE   |                     | 9  | Login Security    | **  |
| CE EM 5032.C EN 5032.C EN 5034. CE EM 1000-4-1. CE EM 1000-4-5. CE EM 1000-4-1. CE EM 1000-4-8. SE EM5032.E SE 165302.4 BS EM5032.E SE 165302.4 BS EM51000-4-2. BS EM51000-4-3. BS EM51000-4-4. BS EM51000-4-3. BS EM51000-4-5. BS EM51000-4-3. BS EM51000-4-5 |                     | ·  | Port Mirror       |   |
| CE EN 10004-4. CE EN 10004-8. CE EN 10004-1. CE EN 100004-8. CE EN 10004-1. CE EN 100004-8. SE SEN 10004-2. BS EN 10004-8. BS EN 10004-2. BS EN 10004-8. BS EN 10004-9. BE EN 10004-9. BS EN 10004-9. EN 10004-9. BY EN 100 | Livii d Livio       | ,  |                   |   |
| CE EN 61000-4-6, CE EN 61000-6-2 BS EN50302-BS EN50302-4 BS EN50302-BS EN50302-4 BS EN1000-4-1, BS EN1000-4-3, BS EN1000-4-3, BS EN1000-4-3, BS EN1000-4-3, BS EN1000-4-8, BS EN1000-4, BS EN1000-4-8, BS EN1000-4-8, BS EN1000-4-8, BS EN1000-4-8, BS |                     |  | Network Security  | Support 10 IP addresses that have             |
| CCE EN 61000-4-11, CE EN 61000-6-2 BS EN 61000-4-2, BS EN 61000-4-3, BS EN |                     | CE EN 61000-4-4, CE EN 61000-4-5,  |                   | permission to access the switch management    |
| BS ENSOSQUE BE ENSOSQUE BS ENSOSQUE BS ENSOSQUE BS ENSOSQUE BS ENSOSQUE BS ENSOSQUE BE ENSOSQUE BS ENSOSQUE BE ENSOSQUE BS ENSOSQUE BE ENSOSQUE BS ENSOSQUE BRIDGE BS ENSOSQU |                     |  |                   | and to prevent unauthorized intruder.         |
| B SE NIN10004-2, BS EN 10004-5, BS SE NIN10004-6, BS SEN 10004-6, BS S |                     |  |                   | 802.1X access control for port based and      |
| BS EN 1000-4-4, BS EN 1000-4-6, BS EN 1000-4   |                     |  |                   | MAC based authentication/MAC-Port binding     |
| SENSITION—46, BE ENSITION—46 REC 60088-227 (Shock) RES 10 10 10 10 10 10 10 10 10 10 10 10 10  |                     |  |                   | Ingress/Egress ACL L2/L3                      |
| Stability Testing   SEC 60088-22 (Prine fall), IEC 6008-22 (Pri   |                     |  |                   | SSL/ SSH v2 for Management                    |
| IEC 60088-227 (Shock)   IEC 60088-247 (Mircaton)   IEC 60088-24 (Mircaton)   IEC 80082-24 (Mircaton)   IEC 80082-25 (IEC 80081)   I   | Stability Testing   |  |                   | HTTPS for secure access to the web            |
| Body      |                     |  |                   | interface                                     |
| Safety IEC/BS N IEC 62386-1 2020/A11-2020 MTB  |                     | IEC 60068-2-64 (Vibration)   |                   | TACACS+** for Authentication                  |
| IECRS EN IF.C e2286-1 2020/4-11-2020   NITSP   830.599 hrs. (standards IEC 62800)   System    | Railway compliance  |  | IGMP              |   |
| Static MAC-Port   Static multicast forwarding forward reverse de tridge   Static multicast forwarding forward reverse details   Static multicast forwarding forward reverse de tridge   Static multicast forwarding forward reverse details   Static multicast packet   Bracket forwarding forward reverse packet   Static multicast packet   Support packet tridge   Support packet forwarding forward reverse packet   Support packet forwarding with a packet forwarding with an expected packet   Static multicast   Static multi   |                     |  |                   |   |
| Software Specification  Management  SNMP V 1/2c, v3/ Web/Teinet/CLI  NMP MIB  Milb  SNMP MIB  Milb  SNMP MIB  SNMP MIB  Brigs MIB  First MB  RMON MIB  Private MIB  Private MIB  Private MIB  Private MIB  Private MIB  Support IT U G 8032 v2/2012 for Ring protection in less than 20ms for self-heal recovery (single ring)  Support various nighchain topologies Includes train ring, autor ring, basic single ring, enhanced ring, multiple vLAN ning  Enhanced G 8032 ring configuration with ease. Protect multicast & wincast data value brought her pull-down menu for the ingress packet filter and expess packet. Broadcasts/Multicast packet, Broadcasts packet, produces the ring, with the pull-down menu for the ingress packet filter and the gress packet filter and expess packet. The packet filter rate can be set an accurate value through the pull-down menu for the ingress packet filter and the gress packet filter and the gress packet. The packet filter rate can be set an accurate value through the pull-down menu for the ingress packet filter and the gress packet. Here are the gress packet. The packet filter rate can be set an accurate value through the pull-down menu for the ingress packet filter and the gress packet. Broadcasts/Multicast packet, Broadcasts/Multicast packet, Broadcasts/Multicast packet, Broadcasts/Multicast packet, Broadcasts/Multicast packet. However, provides packet. The packet filter rate can be set an accurate value through the pull-down menu for the ingress packet filter and the gress packet. The packet filter rate can be set an accurate value through the pull-down menu for the ingress packet. Broadcasts/Multicast packet, Broadcasts/Multicast packet, Broadcasts/Multicast packet.  Flow Control Supports Flow Control for Full-duplex and Back Pressure for Individual Provides on relay output for port walue through the packet filter and the gress packet. Flow for packet walue through the packet filter and the gress packet. Flow for packet walue through the packet. Flow for packet walue through the packet filter  |                     |  |                   | query; GMRP**                                 |
| Software Specification  Management SNMP vtl V2c, V3 Web/Teinet/CLI  MB MBI  SNMP MIB  RMGN MIB  RMGN MIB  Private MIB  Private MIB  Private MIB  Private MIB  Private MIB  Support IT G 8032 v2/2012 for Ring protection in less than 20ms for self-heal recovery (regise ring) Support various ring/chain topologies Includes train ring, auto ring, basic single ring, enhanced ring, multiple-VLAN ring Enhanced G 8032 ring configuration with ease. Protect multicast & unicast data value through the pullidown menu for the ingress packet filter rate can be set an accurate value through the pullidown menu for the ingress packet filter rate can be set an accurate value through the pullidown menu for the ingress packet filter and the egress packet Ilmit.  Flow Centrel  Supports Flow Control for Full-duplex and Back Pressure for Half-duplex Supports System log grecord and remote system log server  Flow Centrel  Support System log record and remote system log server  Protection  Pot Trunk with LCCP Complete CLI for professional setting  DOM threshold monitoring with da values***  Complete CLI for professional setting  Pot Trunk with LCCP  Cisco Boscovery Protocol for topology mapping  Pot It and a dambent temperature to be shown in CUI and sent alerting if any abnormal status (Alm models)  VLAN  Pot Based VLAN  EEE 802.10 Tag VLAN (256 enthics) VLAN ID (Up to 4K, VLAN ID can be assigned from 1 to 4096) GVPP, Gind, Protocol based VLAN; IPv4 Subnet based VLAN  EEE 802.10 Tag VLAN (256 enthics) VLAN ID (Up to 4K, VLAN ID can be assigned from 1 to 4096) GVPP, Gind, Protocol based VLAN; IPv4 Subnet based VLAN  EEE 802.14 Spanning Tree  EEE802.15 Shuttiple Spanning Tree  EEE802.15 Multiple Spanning Tree  EEE802.16 Spanning Tree  EEE802 |                     | · ·  |                   | Static multicast forwarding forward reversed  |
| SNMP MIB     |                     |  | bridge            | IGMP flow with multicast packets binding with |
| SMUP MIB     |                     |  |                   | ports for IP surveillance application         |
| MIEB SNIMP MIB Bridge MIB IF MIB RMOM MIB Private MIB  Support ITU G.8032  Support ITU G.8032 v2/2012 for Ring protection in less than 20ms for self-heal recovery (single ring) Support various mightain topologies Includes train ring, auto ring, basic single ring, enhanced G.8032 ring configuration with ease. Protect multicast & unicast data  Support Suppor |                     |  | Bandwidth Control |   |
| Special Mile   IF Mile     | OTAMI WILD          |  |                   |   |
| IF MIB RIMON MIB Private MIB Private MIB Private MIB Support ITU G.8032 v2/2012 for Ring protection in less than 20ms for self-heal recovery (single ring) Support various ring/chain topologies Includes train ring, auto ring, basic single ring, enhanced ring, multiple-VLAN ring Enhanced G.8032 ring configuration with ease, Protect multicast & unicast data  User friendly UI  I Auto topology drawing I Topology demo Auto configuration for G.8032(auto mode) for single ring D DbM threshold monitoring with dB values*** I Complete CLI for professional setting LACP Port Trunk & Trunk groups LACP LLDP Supports Place VLAN ing Environmental Monitoring**  Environmental Monitoring**  Environmental Monitoring**  PORT Trunk With LACP Port Based VLAN ID (Up to 4K, VLAN ID can be assigned from 1 to 4096.) GVRP, GinQ, Protocol based VLAN; IP-4 Subnot saed VLAN ID (Up to 4K, VLAN ID can be assigned from 1 to 4096.) GVRP, GinQ, Protocol based VLAN; IP-4 Subnot saed VLAN ID (Up to 4K, VLAN ID can be assigned from 1 to 4096.) GVRP, GinQ, Protocol based VLAN; IP-4 Subnot saed VLAN ID (Up to 4K, VLAN ID can be assigned from 1 to 4096.) GVRP, GinQ, Protocol based VLAN; IP-4 Subnot saed VLAN ID (Up to 4K, VLAN ID can be assigned from 1 to 4096.) GVRP, GinQ, Protocol based VLAN; IP-4 Subnot saed VLAN ID (Up to 4K, VLAN ID can be assigned from 1 to 4096.) GVRP, GinQ, Protocol based VLAN; IP-4 Subnot saed VLAN ID (Up to 4K, VLAN ID can be assigned from 1 to 4096.) GVRP, GinQ, Protocol based VLAN; IP-4 Subnot saed VLAN ID (Up to 4K, VLAN ID can be assigned from 1 to 4096.) GVRP, GinQ, Protocol based VLAN; IP-4 Subnot saed VLAN ID (Up to 4K, VLAN ID can be assigned from 1 to 4096.) GVRP, GinQ, Protocol based VLAN; IP-4 Subnot saed VLAN ID (Up to 4K, VLAN ID can be assigned from 1 to 4096.) GVRP, GinQ, Protocol based VLAN; IP-4 Subnot saed VLAN ID (Up to 4K, VLAN ID can be assigned from 1 to 4096.) GVRP, GinQ, Protocol based VLAN; IP-4 Subnot saed VLAN ID (Up to 4K, VLAN ID can be assigned from 1 to 4096.) GVRP, GinQ, Protocol based VLAN; IP-4 |                     | SNMP MIB   |                   |   |
| Private MB   |                     | Bridge MIB   |                   | **  |
| Private MB Support ITU G.8032 v2/2012 for Ring protection in less than 20ms for self-heal recovery (single ring) Support various ring/chain topologies Includes train ring, auto ring, basic single ring, enhanced ring, multiple-VLAN ring Enhanced G.8032 ring configuration with ease. Protect multicast & unicast data    Auto topology drawing     Topology dremo     Auto topology drawing     Topology dremo     Auto configuration for G.8032(auto mode) for single ring     DDM threshold monitoring with dB values***   Complete CLI for professional setting     LACP Port Trunk: 8 Trunk groups     LACP Glossovery Protocol for topology mapping     Environmental     System status for input voltage, current, total polomy abnormal status (fM models)     Poel Gad and ambient temperature to be shown in GUI and sent alerting if any abnormal status (fM models)     VLAN   |                     |  |                   | , ,,  |
| True   Grant   Support ITU Grant   Support ITU Grant   Support   Grant   Grant   Support   Grant   G   |                     |  |                   |   |
| Support I volted in less than 20ms for self-heal recovery (single ing) Suport various ringichain topologies Includes train ring, auto ring, basic single ring, enhanced ring, multiple-VLAN ring Enhanced G-8032 ring configuration with ease. Protect multicast & unicast data  User friendly UI  I Auto topology drawing DI DI DMI threshold monitoring with disvalues**  I Complete CLI for professional setting LACP Port Trunk: 8 Trunk groups LACP Port Trunk: 8 Trunk groups LACP LLDP Supports LLDP to allow switch to advise its identification and capability on the LAN ODP Cisco Discovery Protocol for topology mapping Environmental Monitoring**  VLAN Port Based VLAN Port Based VLAN I (EEE 802.10 Tag VLAN (256 entries) VLAN ID (Up to 4K, VLAN ID Can be assigned from 1 to 4096.) GVRP, QinO, Protocol based VLAN; IPv4 Subnet based VLAN Supports IEEE802.1d Spanning Tree and IEEE802.1s Multiple Spanning Tree, IEEE802.1s Multiple Spanning Tree with 16 MST1  Quality of Service  Post Trunk with LAN ID can be assigned from 1 In 4098.) Guilly of Service  The packet filter rate can be set an accurate value through the pull-down menu for the ingress 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 of Pull-duplex and Back Pressure for Half-duplex Supports Flow Control of Full-duplex and Back Pressure for Half-duplex Supports Flow Control of Full-duplex Supports Flow Control of Full-d | ITIL O COCO         |  |                   |   |
| recovery (single ring) Support various ring/chain topologies Includes train ring, auto ring, basic single ring, enhanced ring, multiple-VLAN ring Enhanced G.8032 ring configuration with ease. Protect multicast & unicast data  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 Complete CLI for professional set | 110 G.8032          |  |                   |   |
| Support various ring/chain topologies Includes train ring, auto ring, basic single ring, enhanced ring, multiple-VLAN ring Enhanced G. 8032 ring configuration with ease. Protect multicast & unicast data  User friendly UI   |                     |  |                   | The packet filter rate can be set an accurate |
| Includes train ring, auto ring, basic single ring, enhanced ring, multiple-VLAN ring Enhanced G.8032 ring configuration with ease. Protect multicast & unicast data  User friendly UI  |                     |  |                   | value through the pull-down menu for the      |
| Flow Control Supports Flow Control for Full-duplex and Back Pressure for Half-duplex and Provides one relay output for port between system log server.  Relay Alam Provides one relay output for port between half and and mandant and capability on the Lan Provides one relay output for port between system log server.  Relay Alam Provides one relay output for port between half and and mandant and   |                     |  |                   |   |
| Enhanced G.8032 ring configuration with ease. Protect multicast & unicast data  User friendly UI  I Auto topology demo Auto configuration for G.8032(auto mode) for single ring DDM threshold monitoring with dB values*** Complete CLI for professional setting LACP Port Trunk: 8 Trunk groups LLCP Port Trunk: 8 Trunk groups LLCP Supports LLDP to allow switch to advise its identification and capability on the LAN configuration for Dilpion Open/close mapping Environmental Monitoring** PoE load and ambient temperature to be shown in GUI and sent alerting if any abnormal status (-M models) VLAN Port Based VLAN LEEE 802.10 Tag VLAN (256 entries) VLAN ID (Up to 4K, VLAN ID can be assigned from 1 to 4096). GVRP, QinQ, Protocol based VLAN; IPv4 Subnet based VLAN Subnet based VLAN Supports IEEE802.1d Spanning Tree and IEEE802.1w Rapid Spanning Tree with 16 MSTI Quality of Service  Enhanced G.8032 ring configuration with data support Syrpe to Juptud For Povides one relay output for port breakdown, power fail and alarm. Alarm Relay current carry shilty: 1a @ Support Sirg avoidance Node fairure protection  SNMP Trap Up to 10 trap stations; trap types including: Derot Inrunk with LACP Port Inrunk: 8 Trunk groups Dilp Dopen/close Dilp Dopen/c |                     |  | 51 0 1 1          |   |
| User friendly UI  ■ Auto topology drawing ■ Topology dem ■ Auto configuration for G.8032(auto mode) for single ring ■ DDM threshold monitoring with dB values*** ■ Complete CLI for professional setting LACP ULDP ULDP ULDP USupports LLDP to allow switch to advise its identification and capability on the LAN CDP Cisco Discovery Protocol for topology mapping Environmental Monitoring** Poet Based VLAN IPEE 802.1Q Tag VLAN (256 entries) VLAN ID (Up to 4K, VLAN ID Can be assigned from 1 to 4096.) GVRP, QinQ, Protocol based VLAN; IPV4 Subnet based VLAN Supports System log record and remote system log server Relay Alarm Provides one relay output for port breakdown, power fail and alarm. Alarm Relay current carry ability: 1A @ DC24V  Protection ■ Miss-wiring avoidance ■ Node failure protection ■ Loop protection ■ Node failure protection ■ Loop protection ■ Outpoor optoetion  SNMP Trap Up to 10 trap stations; trap types including: ■ Device cold start ■ Authorization failure ■ Port link up/link down ■ DI/DO open/close ■ Typology change (ITU ring) ■ Power failure ■ Environmental abnormal**  DHCP Provide DHCP Client/ DHCP Server/DHCP Option 82/Port based DHCP; DHCP Option 66; DHCP Snooping; basic IPv6 DHCP server  DNS Provide DNS client feature  Diagnostic  SNIPT Supports SNTP to synchronize system clock in Internet  Firmware Update  SNIPT Supports FTP firmware update, TFTP backup & restore  Genfiguration backup & restore  USB port to upload/download configuration file by USB dongle  Auto Provision  Auto Provision  To verify switch firmware with the latest or  |                     |  | Flow Control      |   |
| System log server   System log server  |                     |  | System Log        | · ·   |
| ■ 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  LLDP Supports LLDP to allow switch to advise its identification and capability on the LAN CDP Cisco Discovery Protocol for topology mapping  Environmental Monitoring**  Port Based VLAN IPOR BASED B  | Liser friendly I II |  | Gystelli Log      |   |
| ■ Auto configuration for G.8032(auto mode) for single ring DDM threshold monitoring with dB values*** ■ Complete CLI for professional setting Setting LACP Port Trunk with LACP LLDP Supports LLDP to allow switch to advise its identification and capability on the LAN CDP Cisco Discovery Protocol for topology mapping Environmental Monitoring**  VLAN Port Based VLAN ID (up to 4K, VLAN ID can be assigned from 1 to 4096.) GVRP, QinQ, Protocol based VLAN; IPv4 Subnet based VLAN Support IPv6 Multicast stream  ■ Auto or overlink up/link drow DHCP  Mac based DHCP Support Based VLAN Diagnostic Support IPv6 Multicast stream  ■ Configuration Drovision  MEEE802.1 k Rapid Spanning Tree and IEEE802.1 k Matiple Spanning Tree with 16 MSTI  Quality of Service  The quality of service determined by port /  Auto Provision  Drover fail and alarm. Alarm Relay current carry ability: 1A @ DC24V DC24V DC24V DC24V DC24V  Protection  ■ Miss-wiring avoidance Node failure protection  ■ Miss-wiring avoidance  ■ Node failure protection  ■ Copp rotroction  ■ Node failure protection  ■ Copp rotroction  ■ Ovale failure protection  ■ Copp rotroction  ■ Ovale failure protection  ■ Copp rotroction  ■ Node failure protection  ■ Copp rotroction  ■ Copp rotroction  ■ Copp rotroction  ■ Copp rotroction  ■ Node failure protection  ■ Copp rotroction  ■ Copp rotroction  ■ Copp rotroction  ■ Copp rotroction  ■ Device cold start  ■ Authorization failure  ● Port link up/link drow  ● Port link   | Osci menuly of      |  | Relay Alarm       |   |
| DDM threshold monitoring with dB values***  Complete CLI for professional setting  Port Trunk with LACP  LLDP LLDP Supports LLDP to allow switch to advise its identification and capability on the LAN  CDP Cisco Discovery Protocol for topology mapping  Environmental System status for input voltage, current, total PoE load and ambient temperature to be shown in GUI and sent alerting if any abnormal status (-M models)  VLAN Port Based VLAN  ID (Up to 4K, VLAN ID can be assigned from 1 to 4096.)  GVRP, QinQ, Protocol based VLAN; IPv4 Subnet based VLAN  MLD Snooping  WLD Snooping  Supports IEEE802.1d Spanning Tree and IEEE802.1 Mapid Spanning Tree, IEEE802.1s Multiple Spanning Tree, IEEE802.1s Multiple Spanning Tree with 16 MSTI  Quality of Service  The quality of service determined by port /  Auto Provision To verify switch firmware with the latest or  |                     | , ,,,  |                   | breakdown, power fail and alarm.              |
| Values***   Complete CLI for professional setting  |                     | mode) for single ring  |                   |   |
| Port Trunk with 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  Environmental Monitoring** Pole load and ambient temperature to be shown in GUI and sent alerting if any abnormal status (-M models)  VLAN Port Based VLAN  IEEE 802.10 Tag VLAN (256 entries)/ VLAN ID (Up to 4K, VLAN ID can be assigned from 1 to 4096.)  GVPR, QinQ, Protocol based VLAN; IPv4 Subnet based VLAN  MLD Snooping Support IPv6 Multicast stream  ■ Node failure protection Loop protection  Port im uplink dwm  DI/DO open/close  Provide DHCP Clent/ DHCP Server/DHCP  Option 82/Port based DHCP, DHCP Server/DHCP  DI/DO option 82/Port based DHCP, DHCP Server/DHCP  DI/DO option 82/Port based DHCP, DHCP Server/DHCP  Option 82/Port based DHCP, DHCP Server/DHCP  DI/DO option 82/Port bas  |                     |  |                   |   |
| Port Trunk with LACP LLDP Supports LLDP to allow switch to advise its identification and capability on the LAN CDP Cisco Discovery Protocol for topology mapping Environmental Monitoring** VIAN Port Based VLAN ID (Up to 4K, VLAN ID can be assigned from 1 to 4096.) GVRP, QinQ, Protocol based VLAN; IPv4 Subnet based VLAN IEEE 802.1 d Spanning Tree and IEEE802.1 w Rapid Spanning Tree, IEEE802.1 s Multiple Spanning Tree with 16 MSTI  Quality of Service  The quality of service  Supports LLDP to allow switch to advise its identification and capability on the LAN Subnet based vide to advise its identification and capability on the LAN  Supports IEEE802.1 d Spanning Tree with 16 MSTI  Auto Provision  SNMP Trap  Up to 10 trap stations; trap types including:  Device cold start  Authorization allure  Port link up/link down  Port link up/link down  Port link up/link down  DI/DO open/close  Typology change (ITU ring)  Power failure  Provide DHCP Client/ DHCP Server/DHCP Option 82/Port based DHCP; DHCP Option 66; DHCP Snooping; basic IPv6 DHCP Server  DHCP  Mac based DHCP Server  DNS Provide DNS client feature  Diagnostic Support SNTP to synchronize system clock in Internet  Firmware Update  Firmware update  Configuration backup & restore  Quality of Service  The quality of service determined by port /  Auto Provision  To verify switch firmware with the latest or   |                     |  | Protection        | · ·   |
| Port Trunk with LACP  LLDP  Supports LLDP to allow switch to advise its identification and capability on the LAN  CDP  Cisco Discovery Protocol for topology mapping  Environmental  Monitoring**  Post lased 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, Protocol based VLAN; IPv4  Subnort based VLAN  MLD Snooping  Supports IEEE802.1d Spanning Tree and IEEE802.1w Rapid Spanning Tree and IEEE802.1s Multiple Spanning Tree with 16 MSTI  Quality of Service  Tup to 10 trap stations; trap types including:  Device cold start  Authorization failure  Dury Option 2/Port Lased Authorization failure  Dury Option 82/Port based (ITU ring)  Provide DHCP Client/ DHCP Server/DHCP Option 66; DHCP Snooping; basic IPv6 DHCP server  DHCP  Provide DHCP Snooping; basic IPv6 DHCP server  Mac based DHCP Server  Mac based DHCP Server  DNS  Provide DNS client feature  Diagnostic  Support IPv6 Multicast stream  Configuration backup & restore  US port to upload/download configuration file by USB dongle  Configuration file by USB dongle  To verify switch firmware with the latest or   |                     |  |                   | ·   |
| LACP  LLDP Supports LLDP to allow switch to advise its identification and capability on the LAN  CDP Cisco Discovery Protocol for topology mapping  Environmental Monitoring**  Monitoring** System status for input voltage, current, total PoE load and ambient temperature to be shown in GUI and sent alerting if any abnormal status (-M models)  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, Protocol based VLAN; IPv4 Subnet based VLAN  MLD Snooping  MLD Snooping  MLD Snooping  Support IPv6 Multicast stream  ■ Device cold start  ♣ Authorization failure  ♣ Port link up/link down  ♣ DI/DO open/close  ♣ Typology change (ITU ring)  ♣ Power failure  ♣ Environmental abnormal**  ♣ DHCP  Provide DHCP Client/ DHCP Server/DHCP  Option 82/Port based DHCP; DHCP Dption 66; DHCP Snooping; basic IPv6 DHCP server  Mac based DHCP  Server  DNS  Provide DNS client feature  Diagnostic  Support SNTP to synchronize system clock in Internet  Firmware Update  Firmware Update  Supports FTFP firmware update, TFTP backup and restore; HTTP firmware upgrade  Configuration backup and restore; HTTP firmware upgrade  Configuration  backup & restore  Quality of Service  The quality of service determined by port /  Auto Provision  To verify switch firmware with the latest or  | Port Trunk with     |  | SNMP Trap         |   |
| identification and capability on the LAN  CDP Cisco Discovery Protocol for topology mapping  Environmental Monitoring** PoE load and ambient temperature to be shown in GUI and sent alerting if any abnormal status (-M models)  VLAN Port Based VLAN IEEE 802.10 Tag VLAN (256 entries)/ VLAN ID (Up to 4K, VLAN ID can be assigned from 1 to 4096.) GVRP, QinQ, Protocol based VLAN; IPv4 Subnet based VLAN  MLD Snooping Support IPv6 Multicast stream  MLD Snooping Support IEEE802.1d Spanning Tree and IEEE802.1w Rapid Spanning Tree, IEEE802.1s Multiple Spanning Tree, IEEE802.1s Multiple Spanning Tree with 16 MSTI  Quality of Service The quality of service determined by port /  Auto Provision  Port link up/link down DI/DO open/close Typology change (ITU ring) Power failure Environmental abnormal**  DHCP Provide DHCP Client/ DHCP Server/DHCP Option 82/Port based DHCP; DHCP Option 66; DHCP Server  DHCP  Provide DHCP Snooping; basic IPv6 DHCP Server  DNS Provide DNS client feature  Support SNTP to synchronize system clock in Internet  Firmware Update Supports TFTP firmware update, TFTP backup and restore; HTTP firmware upgrade  Configuration backup & restore  USB port to upload/download configuration file for system quick installation USB port to upload/download configuration file by USB dongle  To verify switch firmware with the latest or   |                     | LACE FOR Hunk, & Hunk groups   |                   |   |
| identification and capability on the LAN  CDP Cisco Discovery Protocol for topology mapping  Environmental System status for input voltage, current, total  Monitoring** PoE load and ambient temperature to be shown in GUI and sent alerting if any abnormal status (·M models)  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, Protocol based VLAN  MLD Snooping Support IPv6 Multicast stream  MLD Snooping Support IEEE802.1d Spanning Tree and IEEE802.1w Rapid Spanning Tree, IEEE802.1s Multiple Spanning Tree, IEEE802.1s Multiple Spanning Tree with 16 MSTI  Quality of Service The quality of service determined by port /  Auto Provision  Port link up/link down DI/DO open/close Di/Pot open/close Di/Do Open/close Di/Pot open/close   | LLDP                | Supports LLDP to allow switch to advise its  |                   | Authorization failure                         |
| mapping  Environmental System status for input voltage, current, total Monitoring**  PoE load and ambient temperature to be shown in GUI and sent alerting if any abnormal status (-M models)  VLAN Port Based VLAN ID (D (Up to 4K, VLAN ID can be assigned from 1 to 4096.) GVRP, QinQ, Protocol based VLAN; IPv4 Subnet based VLAN  MLD Snooping Support IPv6 Multicast stream  MLD Snooping Support IPv6 Multicast stream  MLD Snooping Supports IEEE802.1d Spanning Tree and IEEE802.1w Rapid Spanning Tree, IEEE802.1s Multiple Spanning Tree with 16 MSTI  Quality of Service The quality of service determined by port /  Auto Provision Typology change (ITU ring) Power failure Environmental bnormal**  Power failure Environmental abnormal**  Provide DHCP Client/ DHCP Server/DHCP Option 82/Port based DHCP; DHCP Option 82/Port based DHCP; DHCP Option 66; DHCP Server  DNS Provide DNS client feature  Supports SNTP to supports SNTP to synchronize system clock in Internet  Firmware Update  Configuration backup and restore; HTTP firmware updrade, TFTP backup and restore; HTTP firmware upgrade  Configuration USB port to upload/download configuration file by USB dongle  Quality of Service The quality of service determined by port /  Auto Provision To verify switch firmware with the latest or   |                     | identification and capability on the LAN   |                   | ·   |
| Environmental  System status for input voltage, current, total PoE load and ambient temperature to be shown in GUI and sent alerting if any abnormal status (-M models)  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, Protocol based VLAN; IPv4 Subnet based VLAN  MLD Snooping  Support IPv6 Multicast stream  MLD Snooping  Supports IEEE802.1d Spanning Tree and IEEE802.1w Rapid Spanning Tree, IEEE802.1s Multiple Spanning Tree with 16 MSTI  Quality of Service  The quality of service determined by port /  Auto Provision  Power failure Environmental abnormal**  Power failure Environmental abnormal**  Power failure Environmental abnormal**  Power failure Environmental abnormal**  Provide DHCP Client/ DHCP Server/DHCP Option 82/Port based DHCP; DHCP Option 82/Port based DHCP; DHCP Option 82/Port based DHCP; DHCP Option 82/Port based DHCP Server  DNS Provide DHCP Client/ DHCP Server/DHCP Option 82/Port based DHCP; DHCP Option 82/Port bas | CDP                 | , ,  |                   | ·   |
| Monitoring**  PoE load and ambient temperature to be shown in GUI and sent alerting if any abnormal status (-M models)  VLAN  Port Based VLAN  IEEE 802.10 Tag VLAN (256 entries)/ VLAN  ID (Up to 4K, VLAN ID can be assigned from 1 to 4096.)  GVRP, QinQ, Protocol based VLAN; IPv4  Subnet based VLAN  MLD Snooping  Support IPv6 Multicast stream  Mac based DHCP  Server  DNS  Provide DNS client feature  Diagnostic  Support Ping and DDM information  SNTP  Supports SNTP to synchronize system clock in Internet  Firmware Update  Configuration backup and restore; HTTP firmware update, TFTP backup and restore; HTTP firmware upgrade  Configuration backup & restore  USB port to upload/download configuration file by USB dongle  Quality of Service  The quality of service determined by port /  Auto Provision  To verify switch firmware with the latest or  |                     |  |                   |   |
| Monitoring.**  PoE load and ambient temperature to be shown in GUI and sent alerting if any abnormal status (-M models)  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, Protocol based VLAN; IPv4 Subnet based VLAN  MLD Snooping  Support IPv6 Multicast stream  MLD Snooping  Supports IEEE802.1d Spanning Tree and IEEE802.1w Rapid Spanning Tree, IEEE802.1s Multiple Spanning Tree with 16 MSTI  Quality of Service  DHCP Provide DHCP Client/ DHCP Server/DHCP Option 82/Port based DHCP; DHCP Option 66; DHCP Snooping; basic IPv6 DHCP server  DMac based DHCP Server  Mac based DHCP Server  DNS Provide DNS client feature Support Provide DNS client feature Support Provide DNS client feature Supports SNTP Support Po synchronize system clock in Internet  Firmware Update  Configuration backup & restore USB port to upload/download configuration file by USB dongle  Quality of Service  The quality of service determined by port /  Auto Provision  To verify switch firmware with the latest or   |                     |  |                   |   |
| shown in GUI and sent alerting if any abnormal status (-M models)  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, Protocol based VLAN; IPv4 Subnet based VLAN  MLD Snooping  Support IPv6 Multicast stream  MLD Snooping  Support IPv6 Multicast stream  MLD Snooping  Supports IEEE802.1d Spanning Tree and IEEE802.1w Rapid Spanning Tree, IEEE802.1s Multiple Spanning Tree with 16 MSTI  Quality of Service  Option 82/Port based DHCP; DHCP Option 66; DHCP Snooping; basic IPv6 DHCP server  Mac based DHCP Server  DNS  Provide DNS client feature  Support Provide DNS client feature  Support Provide DNS client feature  Support SNTP to synchronize system clock in Internet  Firmware Update  Configuration backup and restore; HTTP firmware upgrade  Supports TFTP firmware upgrade  Configuration backup and restore; HTTP firmware upgrade  Supports text configuration file for system quick installation  USB port to upload/download configuration file by USB dongle  Auto Provision  To verify switch firmware with the latest or  | Monitoring**        |  | DHCP              |   |
| 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, Protocol based VLAN; IPv4 Subnet based VLAN  MLD Snooping Support IPv6 Multicast stream  MLD Snooping Support IPv6 Multicast stream  Support IPv6 Multicast stream  SNTP Supports SNTP to synchronize system clock in Internet  Firmware Update Supports TFTP firmware update, TFTP backup and restore; HTTP firmware upgrade  Configuration backup & restore IEEE802.1w Rapid Spanning Tree, IEEE802.1s Multiple Spanning Tree with 16 MSTI  Quality of Service  The quality of service determined by port /  Auto Provision  Nasign IP address by Mac Support Support Support Ping and DDM information Supports SNTP to synchronize system clock in Internet  Configuration backup & restore USB port to upload/download configuration file by USB dongle  Auto Provision  To verify switch firmware with the latest or  |                     |  |                   |   |
| IEEE 802.1Q Tag VLAN (256 entries)/ VLAN ID (Up to 4K, VLAN ID can be assigned from 1 to 4096.)  GVRP, QinQ, Protocol based VLAN; IPv4 Subnet based VLAN  MLD Snooping  Support IPv6 Multicast stream  MLD Snooping  Support IPv6 Multicast stream  Support IPv6 Multicast stream  RSTP/MSTP  Supports IEEE802.1d Spanning Tree and IEEE802.1w Rapid Spanning Tree, IEEE802.1s Multiple Spanning Tree with 16 MSTI  Quality of Service  Mac based DHCP Server  DNS  Provide DNS client feature  Support SNTP to synchronize system clock in Internet  Firmware Update  Configuration backup and restore; HTTP firmware update, TFTP backup and restore; HTTP firmware upgrade  USB port to upload/download configuration file by USB dongle  Quality of Service  The quality of service determined by port /  Auto Provision  To verify switch firmware with the latest or   | \/I ANI             |  |                   | 66; DHCP Snooping; basic IPv6 DHCP            |
| ID (Up to 4K, VLAN ID can be assigned from 1 to 4096.) GVRP, QinQ, Protocol based VLAN; IPv4 Subnet based VLAN  MLD Snooping Support IPv6 Multicast stream  Mac based DHCP Server  DNS Provide DNS client feature Support Ping and DDM information  SNTP Supports SNTP to synchronize system clock in Internet Firmware Update Supports TFTP firmware update, TFTP backup and restore; HTTP firmware upgrade  Configuration backup & restore  IEEE802.1 w Rapid Spanning Tree, IEEE802.1 s Multiple Spanning Tree with 16 MSTI  Quality of Service  The quality of service determined by port /  Auto Provision  To verify switch firmware with the latest or  | VLAIN               |  |                   | server  |
| Auto Provision  1 to 4096.) GVRP, QinQ, Protocol based VLAN; IPv4 Subnet based VLAN  Subnet based VLAN  Support IPv6 Multicast stream  MLD Snooping  Support IPv6 Multicast stream  Support IPv6 Multicast stream  SNTP  Supports SNTP to synchronize system clock in Internet  Firmware Update  Supports IFTP firmware update, TFTP backup and restore; HTTP firmware upgrade  Configuration backup & restore  USB port to upload/download configuration file by USB dongle  Quality of Service  The quality of service determined by port /  Auto Provision  To verify switch firmware with the latest or  |                     |  |                   | Assign IP address by Mac                      |
| GVRP, QinQ, Protocol based VLAN; IPv4 Subnet based VLAN Subnet based VLAN  MLD Snooping Support IPv6 Multicast stream Support IPv6 Multicast stream Support IPv6 Multicast stream Support IPv6 Multicast stream SNTP Supports SNTP to synchronize system clock in Internet Supports TFTP firmware update, TFTP backup and restore; HTTP firmware upgrade Supports IEEE802.1d Spanning Tree and IEEE802.1w Rapid Spanning Tree, IEEE802.1s Multiple Spanning Tree with 16 MSTI  Quality of Service The quality of service determined by port /  Auto Provision To verify switch firmware with the latest or   |                     |  |                   |   |
| MLD Snooping  Support IPv6 Multicast stream  Firmware Update  Supports TFTP firmware update, TFTP backup and restore; HTTP firmware upgrade  Configuration backup & restore  IEEE802.1w Rapid Spanning Tree, IEEE802.1s Multiple Spanning Tree with 16 MSTI  Quality of Service  The quality of service determined by port /  Auto Provision  Supports SNTP to synchronize system clock in Internet  Supports TFTP firmware update, TFTP backup and restore; HTTP firmware upgrade  Supports text configuration file for system quick installation USB port to upload/download configuration file by USB dongle  Auto Provision  To verify switch firmware with the latest or  |                     |  |                   |   |
| MLD Snooping  Support IPv6 Multicast stream  in Internet  Supports TFTP firmware update, TFTP backup and restore; HTTP firmware upgrade  Configuration backup & restore  IEEE802.1w Rapid Spanning Tree, IEEE802.1s Multiple Spanning Tree with 16 MSTI  Quality of Service  The quality of service determined by port /  Auto Provision  in Internet  Supports TFTP firmware update, TFTP backup and restore; HTTP firmware upgrade  Supports text configuration file for system quick installation USB port to upload/download configuration file by USB dongle  To verify switch firmware with the latest or  |                     | Subnet based VLAN  |                   | •   |
| RSTP/MSTP Supports IEEE802.1d Spanning Tree and IEEE802.1w Rapid Spanning Tree, IEEE802.1s Multiple Spanning Tree with 16 MSTI  Quality of Service  Supports IFTP firmware update, TFTP backup and restore; HTTP firmware upgrade  Configuration backup & restore  Supports text configuration file for system quick installation USB port to upload/download configuration file by USB dongle  Auto Provision  To verify switch firmware with the latest or   | MLD Snooping        | Support IPv6 Multicast stream  | SNIP              |   |
| RSTP/MSTP Supports IEEE802.1d Spanning Tree and IEEE802.1w Rapid Spanning Tree, IEEE802.1s Multiple Spanning Tree with 16 MSTI  Quality of Service The quality of service determined by port /  Auto Provision  backup and restore; HTTP firmware upgrade Supports text configuration file for system quick installation USB port to upload/download configuration file by USB dongle  Auto Provision  To verify switch firmware with the latest or  |                     |  | Firmware Undate   |   |
| IEEE802.1w Rapid Spanning Tree,   IEEE802.1s Multiple Spanning Tree with 16   MSTI   | RSTP/MSTP           | Supports IEEE802 1d Spanning Tree and  | Timiware Opuale   |   |
| IEEE802.1s Multiple Spanning Tree with 16 MSTI  Quality of Service  The quality of service determined by port /  Auto Provision  To verify switch firmware with the latest or  |                     |  |                   |   |
| MSTI  Quality of Service  The quality of service determined by port /  Auto Provision  To verify switch firmware with the latest or  |                     |  | backup & restore  |   |
| Quality of Service The quality of service determined by port / Auto Provision To verify switch firmware with the latest or   |                     | The state of the s |                   |   |
| CoS / ToS / VLAN / 61375-3-4 certain version   | Quality of Service  |  | Auto Provision    | , ,   |
|  |                     | CoS / ToS / VLAN / 61375-3-4   |                   | certain version                               |



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

## **ORDERING INFORMATION**

■ IPGS-5408DFT......P/N: 8350-570

2 10/100/1000T+2x100/1000 SFP + 8 10/100/1000T PoE at/af L2+ Industrial Managed Ethernet Switch w/USB slot & dual  $\pm$  44 ~ 56VDC input; -20°C to 60°C

■ IPGS-5408DFT-E......P/N: 8350-571

2 10/100/1000T+2x100/1000 SFP + 8 10/100/1000T PoE at/af L2+ Industrial Managed Ethernet Switch w/USB slot &dual  $\pm 44 \sim 56$ VDC input; -40°C to 75°C

■ IPGS-5408DFT-M......P/N: 8350-572

2 10/100/1000T+2x100/1000 SFP + 8 10/100/1000T PoE at/af L2+ Industrial Managed Ethernet Switch w/USB slot, environmental monitoring & dual  $\pm 44 \sim 56$ VDC input; -20°C to 60°C

■ IPGS-5408DFT-M-E......P/N: 8350-573

2 10/100/1000T+2x100/1000 SFP + 8 10/100/1000T PoE at/af L2+ Industrial Managed Ethernet Switch w/USB slot, environmental monitoring & dual  $\pm 44 \sim 56$ VDC input; -40°C to 75°C

## **OPTIONAL ACCESSORIES**

#### **DIN Rail Power**

■ NDR-120 Series 120W Single Output Industrial Din Rail Power; 90-264VAC / 127-370VDC Input Range; Cooling by free air convection; RoHS2;

Operating Temp.  $-20^{\circ}\text{C} \sim 70^{\circ}\text{C}$  (ambient, derating each output at 2.5% per degree from  $50^{\circ}\text{C} \sim 70^{\circ}\text{C}$ ; For 115VAC, please refer to derating curve on NDR-120 Series datasheet)

### Mini GBIC (SFP)

| 8330-162-V1  | MINI GBIC 1000SX (LC/MM/0.5KM) Transceiver     | 8330-187-V1                                 | 1.25Gbps BiDi SFP 20KM Transceiver (WDM 1550) |  |
|--------------|--|---|---|--|
| 8330-163-V1  | MINI GBIC 1000SX2 (LC/MM/2KM) Transceiver      | 8330-180-V1                                 | 1.25Gbps BiDi SFP 40KM Transceiver (WDM 1310) |  |
| 8330-165-V1  | MINI GBIC 1000LX (LC/SM/10KM) Transceiver      | 8330-182-V1                                 | 1.25Gbps BiDi SFP 40KM Transceiver (WDM 1550) |  |
| 8340-0591-V1 | MINI GBIC 1000LHX (LC/SM/40KM) Transceiver     | 8330-181-V1                                 | 1.25Gbps BiDi SFP 60KM Transceiver (WDM 1310) |  |
| 8330-166-V1  | MINI GBIC 1000XD (LC/SM/50KM) Transceiver      | 8330-183-V1                                 | 1.25Gbps BiDi SFP 60KM Transceiver (WDM 1550) |  |
| 8330-169-V1  | MINI GBIC 1000XD (LC/SM/60KM) Transceiver      | 8330-184-V1                                 | 1.25Gbps BiDi SFP 80KM Transceiver (WDM 1490) |  |
| 8330-167-V1  | MINI GBIC 1000ZX (LC/SM/80KM) Transceiver      | 8330-185-V1                                 | 1.25Gbps BiDi SFP 80KM Transceiver (WDM 1550) |  |
| 8330-170-V1  | MINI GBIC 1000EZX (LC/SM/120KM) Transceiver    | 8330-071-V1                                 | 125Mbps BiDi SFP 2KM (WDM 1310) Transceiver   |  |
| 8330-168-V1  | MINI GBIC 10/100/1000T (100m) Transceiver      | 8330-072-V1                                 | 125Mbps BiDi SFP 2KM (WDM 1550) Transceiver   |  |
| 8330-060-V1  | MINI GBIC 100Base (LC/MM/2KM) Transceiver      | 8330-069-V1                                 | 125Mbps BiDi SFP 20KM (WDM 1310) Transceiver  |  |
| 8330-065-V1  | MINI GBIC 100Base (LC/MM/5KM) Transceiver      | 8330-068-V1                                 | 125Mbps BiDi SFP 20KM (WDM 1550) Transceiver  |  |
| 8330-061-V1  | MINI GBIC 100Base (LC/SM/30KM) Transceiver     | 8330-080-V1                                 | 125Mbps BiDi SFP 40KM (WDM 1310) Transceiver  |  |
| 8330-197-V1  | 1.25Gbps BiDi SFP 0.5KM Transceiver (WDM 1310) | 8330-082-V1                                 | 125Mbps BiDi SFP 40KM (WDM 1550) Transceiver  |  |
| 8330-198-V1  | 1.25Gbps BiDi SFP 0.5KM Transceiver (WDM 1550) | 8330-081-V1                                 | 125Mbps BiDi SFP 60KM (WDM 1310) Transceiver  |  |
| 8330-195-V1  | 1.25Gbps BiDi SFP 2KM Transceiver (WDM 1310)   | 8330-083-V1                                 | 125Mbps BiDi SFP 60KM (WDM 1550) Transceiver  |  |
| 8330-196-V1  | 1.25Gbps BiDi SFP 2KM Transceiver (WDM 1550)   | 8330-084-V1                                 | 125Mbps BiDi SFP 80KM (WDM 1310) Transceiver  |  |
| 8330-188-V1  | 1.25Gbps BiDi SFP 10KM Transceiver (WDM 1310)  | 8330-085-V1                                 | 125Mbps BiDi SFP 80KM (WDM 1550) Transceiver  |  |
| 8330-189-V1  | 1.25Gbps BiDi SFP 10KM Transceiver (WDM 1550)  | 8330-191-V1                                 | Dual Speed SFP 100M/1000M-LX 10KM Transceiver |  |
| 8330-186-V1  | 1 25Gbps RiDi SEP 20KM Transceiver (WDM 1310)  | All SEP# ended with D are with DDM function |   |  |

#### Wall Mount Bracket

MBAK19003 Wall mount bracket for 74(W) x 105 (D) x 152 (H) mm / 96 (W) x 105 (D) x 152 (H) mm Industrial switches

### Lantech Communications Global Inc.

www.lantechcom.tw info@lantechcom.tw

© 2025 Copyright Lantech Communications Global Inc. all rights reserved. Updated on 7 January 2025. 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.