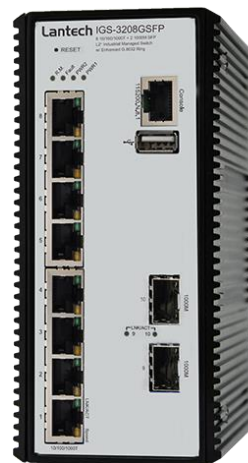


IGS-3208GSFP

8 10/100/1000T + 2 1000M SFP L2+ Industrial Managed Switch w/ Enhanced G.8032 Ring

- SFP cage support 1G Mbps SFP
- Enhanced G.8032 ring protection < 20ms for single ring. Supports enhanced mode and basic mode; Enhanced G.8032 ring covers multicast packets; MSTP 8/16**MSTI /RSTP ; support MRP ring**
- Miss-wiring avoidance & node failure protection
- User friendly UI, including auto topology drawing and DDM threshold monitoring with dB values***; Complete CLI
- Support LACP link aggregation, IGMP v3/router port, DHCP server & DHCP Option82; Port based DHCP distribution, Mac based DHCP server, QoS by VLAN**, SSH v2/SSL, HTTPS, INGRESS ACL L2/L3, TACACS+**, QinQ**, SMS**
- Protocol based VLAN** ; IPv4/IPv6 Subnet based VLAN**
- Optional Environmental Monitoring** for temp., voltage and current
- USB port for backup, restore the configuration file
- Wide range operation temperature (-E model):-40~75C/-40~167F
- EN50155/50121-3-2/50121-4 and EN45545-2 Fire & Smoke verification



OVERVIEW

Lantech IGS-3208GSFP is a high performance L2+ all Gigabit switch with 8 10/100/1000T + 2x 1G multi-Giga- rate 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 by VLAN**, advanced security including INGRESS ACL L2/L3, TACACS+**, SSH/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 10K Jumbo frame.

Miss-wiring avoidance, Node failure protection, Loop protection

The IGS-3208GSFP 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 IGS-3208GSFP 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. 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 GUI, Auto topology drawing

The user friendly UI, innovative auto topology drawing and topology demo makes IGS-3208GSFP much easier to get

hands-on. The complete CLI enables professional engineer to configure setting by command line.

Enhanced G.8032 ring, 8/16 MSTI MSTP; Optional MRP ring****

Lantech IGS-3208GSFP features enhanced G.8032 ring which can be self-healed in less than 20ms for single ring topology protection covering multicast packets. It also supports various ring topologies that covers enhanced ring and basic ring by easy setup than others. 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 8/16** MSTI

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

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

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

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.

Editable configuration text file; Factory reset button; CPU watchdog

The configuration file of Lantech IGS-3208GSFP 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. IGS-3208GSFP also supports dual image firmware function**

USB port for back up, restore configuration and upgrade firmware

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

Event log & message; 2DI / 2DO

In case of event, the IGS-3208GSFP is able to send email & SMS** text message 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.

Relay alarm and email/trap/SMS alerting**

Featured with relay contact alarm function, the IGS-3208GSFP 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.

Optional environmental monitoring for switch inside information

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

Dual power input 9.5V~60VDC; EFT and ESD protection

The Lantech IGS-3208GSFP is designed with dual power input from 9.5V to 60VDC. Featured with relay contact alarm function, the IGS-3208GSFP is able to connect with alarm system in case of power failure. The IGS-3208GSFP also provides ±2000V EFT and ±4000 VDC (Contact) / ±8000 VDC (Air) Ethernet ESD protection, which can reduce unstable situation caused by power line and Ethernet.

Industrial hardened design for extended temperature operation

Lantech IGS-3208GSFP provides ±2000V EFT/SURGE and ±4000 VDC (Contact) / ±8000 VDC (Air) Ethernet 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, Semiconductor factory and assembly lines.

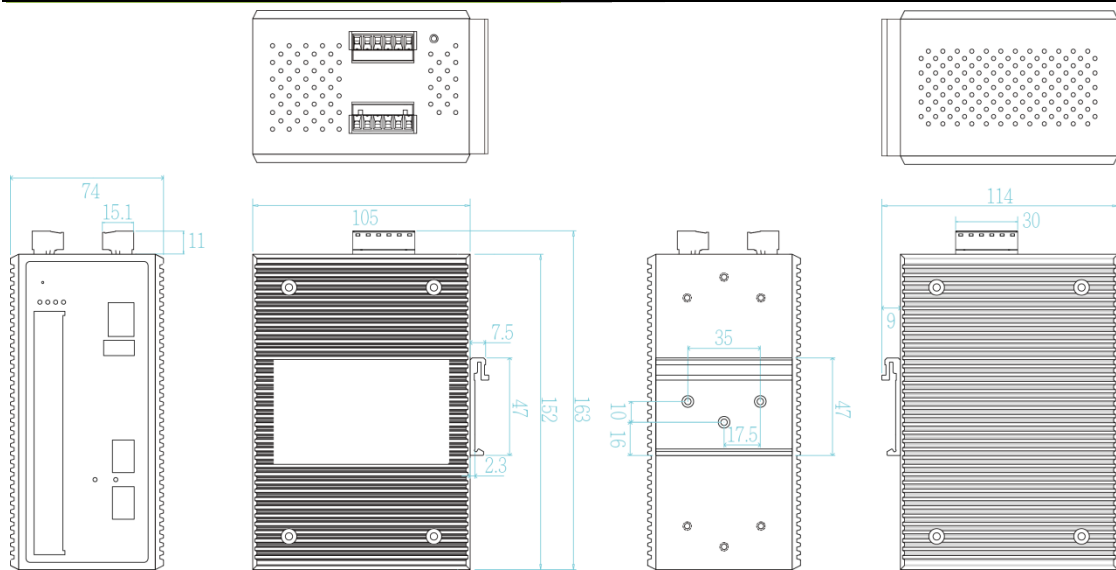
The -E model can be used in extreme environments with an operating temperature range of -40°C to 75°C.

FEATURES & BENEFITS

- 8 10/100/1000T + 2 1G SFP (Total 10 Ports Switch)
- Support 10K bytes jumbo frames
- 9.5V~60VDC dual power inputs
- Back-plane (Switching Fabric): 20Gbps
- 16K MAC address table
- DDM to support SFP diagnostic function***
 - Automatically convert the raw data into dB values for TX power/RX power, making it easier to measure the fiber distance
- 10KB Jumbo frame
- User friendly UI, auto topology drawing, topology demo, complete CLI for professional setting
- Enhanced G.8032 Ring protection in 20ms (single ring)
 - Support various ring/chain topologies, including enhanced ring and basic ring
 - Enhanced G.8032 ring configuration with ease
 - Auto ring configuration(auto mode) for single ring
 - Cover multicast and data packets protection
- Provides EFT/SURGE 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, IEEE 802.1s MSTP VLAN redundancy with 16 MSTI
- 4K 802.1Q VLAN, Port based VLAN, GVRP**, QinQ**, QoS QinQ**
- 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; IPv6 address resolution for DHCP server**
- Bandwidth Control
 - Ingress packet filter
 - 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
- **System Event Log, SMTP Email alert, SMS** mobile (text) and SNMP Trap for alarm support; 32 RMON counters**
- **Security**
 - SSL**/SSH v2/ INGRESS ACL L2/L3**
 - Port Security: MAC address entries/Filter/MAC-Port binding
 - Remote Admin: IP address security management to prevent unauthorized intruder.
 - Management access control with priority
 - TACACS+**
 - Login Security: IEEE802.1X/RADIUS**
 - HTTPS for secure access to the web interface**
- **Static multicast forwarding forward reversed IGMP flow with multicast packets binding with ports for IP surveillance application**
- **IGMP router port to assign query in ring for reversed multicast video flow**
- **IGMPv1,v2,v3 with Query mode for multimedia; GMRP**
- **Dual image firmware support**
- **Factory reset button to restore setting to factory default**
- **Optional environmental monitoring for system input voltage, current, ambient temperature**
- **TFTP/SFTP**/HTTP firmware upgrade**
- **Configuration backup and restoration**
 - Supports editable configuration file for system quick installation
 - USB port for upload / download configuration by USB dongle
- **Watchdog design to auto reboot switch CPU is found dead**
- **EN50155/50121-3-2/50121-4 and EN45545-2 Fire & Smoke verification**
- **IP30 metal housing with DIN rail and Wall-mount** design**

DIMENSIONS (unit=mm)



SPECIFICATION

Hardware Specification		Software 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	Stability Testing	IEC60068-2-32 (Free fall), IEC60068-2-27 (Shock), IEC60068-2-6 (Vibration)
Switch Architecture	Back-plane (Switching Fabric): 20Gbps	MTBF	807,933 Hrs (standards: IEC 62380)
Transfer Rate	14,880pps for Ethernet port 148,800pps for Fast Ethernet port 1,488,000pps for Gigabit Fiber / Gigabit Ethernet port	Warranty	5 years
Mac Address	16K MAC address table	Software Specification	
Jumbo frame	10KB	Management	SNMP v1 v2c, v3/ Web/Telnet/CLI
Connectors	10/100/1000T: 8 x ports RJ-45 with Auto MDI/MDI-X function SFP port: 2 x 1G SFT cage by software with DDMI supported RS-232 connector: RJ-45 type; USB x 1 Power & Relay connector: 1 x 6-pole terminal block	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
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)	Enhanced G.8032 ring	Support ITU G.8032 v2/2012 for Ring protection in less than 20ms for self-heal recovery (single ring enhanced mode) Support various ring/chain topologies Includes basic single ring and enhanced ring Enhanced G.8032 ring configuration with ease Cover multicast & data packets protection
Optical Cable	1Gbps: 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) WDM 1Gbps: 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)	User friendly UI	<ul style="list-style-type: none"> ■ 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
LED	Per unit: Power 1 (Green), Power 2 (Green), FAULT (Red); RM(Green) Ethernet port: Link/Activity (Green), Speed (Amber);	Port Trunk with LACP	LACP Port Trunk: 8 Trunk groups
Operating Humidity	5% ~ 95% (Non-condensing)	LLDP	Supports LLDP to allow switch to advise its identification and capability on the LAN
Operating Temperature	-20°C~60°C / -4°F~140°F (Standard model) -40°C~75°C / -40°F~167°F (-E model)	CDP	Cisco Discovery Protocol for topology mapping
Storage Temperature	-40°C~85°C / -40°F~185°F	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**, Protocol based VLAN** ; IPv4/IPv6 Subnet based VLAN**
Power Supply	9.5V~60VDC dual input	IPv6/4	Present
Power Consumption	10W	RSTP/MSTP	Supports IEEE802.1d Spanning Tree and IEEE802.1w Rapid Spanning Tree, IEEE802.1s Multiple Spanning Tree with 8/16** MSTI
Case Dimension	IP-30, 74 (W) x 114 (D) x 152 (H) mm	Quality of Service	The quality of service determined by port, Tag and IPv4 Type of service, IPv4 Differentiated Services Code Points - DSCP
Weight	900 g	Class of Service	Support IEEE802.1p class of service, per port provides 8 priority queues
Installation	DIN Rail and Wall Mount** Design	Remote Admin	Supports 10 IP addresses that have permission to access the switch management and to prevent unauthorized intruder.
Verifications & Report	EN50155/EN50121-3-2/EN50121-4 verification EN45545-2 R13/R22/R23/R24/R25 (EN ISO 4589-2, EN ISO 5659-2, NF X70-100-1 & 2) Fire & Smoke verification; E-mark certificate	Login Security	Supports IEEE802.1X Authentication/RADIUS**
EMI & EMS	FCC Part 15 Class A CE EN55011, 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	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+** for Authentication INGRESS ACL L2/L3** SSL**/ SSH v2 for Management HTTPS** for secure access to the web interface
		IGMP	Support IGMP snooping v1,v2,v3; 1024 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. 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.		<ul style="list-style-type: none"> Power failure Environmental abnormal
Flow Control	Supports Flow Control for Full-duplex and Back Pressure for Half-duplex	DHCP	Provide DHCP Client/ DHCP Server/DHCP Option 82 (Client & Server)/Port based DHCP; DHCP Option 66; IPv6 address resolution for DHCP server**
System Log	Supports System log record and remote system log server	DNS	Provide DNS Client feature and support Primary and Secondary DNS server.
SMTP/Text SMS**	Supports SMTP Server and 8 e-mail accounts for receiving event alert; can send SMS** text alert via mobile	SNTP	Supports SNTP to synchronize system clock in Internet
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 Node failure protection Loop protection 	Firmware Update	Supports TFTP/SFTP** firmware update, TFTP backup and restore; HTTP firmware 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 DI/DO open/close Topology change(ITU ring) 	Configuration upload and download	Supports editable configuration file for system quick installation; Support factory reset button to restore all settings back to factory default; USB port for upload/download configuration by USB dongle
		Dual Image Firmware	Support dual image firmware function

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

ORDERING INFORMATION

- **IGS-3208GSFP.....P/N: 8350-9905**
8 10/100/1000T + 2 1Gbps SFP L2+ Industrial Managed Ethernet Switch; dual 9.5~60VDC input; -20°C to 60°C
- **IGS-3208GSFP-E.....P/N: 8350-9906**
8 10/100/1000T + 2 1Gbps SFP L2+ Industrial Managed Ethernet Switch; dual 9.5~60VDC input; -40°C to 75°C
- **IGS-3208GSFP-M.....P/N: 8350-9907**
8 10/100/1000T + 2 1Gbps SFP L2+ Industrial Managed Ethernet Switch w/Environmental monitoring; dual 9.5~60VDC input; -20°C to 60°C
- **IGS-3208GSFP-M-E.....P/N: 8350-9908**
8 10/100/1000T + 2 1Gbps SFP L2+ Industrial Managed Ethernet Switch w/Environmental monitoring; dual 9.5~60VDC input; -40°C to 75°C

OPTIONAL ACCESSORIES

DIN Rail Power

- **MDR-40 Series** 40W Single Output Industrial Din Rail Power; 85-264VAC / 120-370VDC Input Range; Cooling by free air convection; RoHS2 ; Operating Temp. -20°C~70°C (ambient, derating each output at 4% per degree from 60°C ~ 70°C)
- **MDR-20 Series** 20W Single Output Industrial Din Rail Power; 85-264VAC / 120-370VDC Input Range; Cooling by free air convection; RoHS2 ; Operating Temp. -20°C~70°C (ambient, derating each output at 2.5% per degree from 50°C ~ 70°C)

Mini GBIC (SFP)

- | | |
|--|--|
| ■ 8330-162X MINI GBIC 1000SX (LC/0.5km) Transceiver | ■ 8330-189 LTSFP-1000BX-10KM Transceiver (WDM 1550) |
| ■ 8330-163X MINI GBIC 1000SX2 (LC/2km) Transceiver | ■ 8330-186 LTSFP-1000BX-20KM Transceiver (WDM 1310) |
| ■ 8330-165X MINI GBIC 1000LX (LC/10km) Transceiver | ■ 8330-187 LTSFP-1000BX-20KM Transceiver (WDM 1550) |
| ■ 8340-0591 MINI GBIC 1000LHX (LC/40km) Transceiver | ■ 8330-180 LTSFP-1000BX-40KM Transceiver (WDM 1310) |
| ■ 8330-166 MINI GBIC 1000XD (LC/50km) Transceiver | ■ 8330-182 LTSFP-1000BX-40KM Transceiver (WDM 1550) |
| ■ 8330-169 MINI GBIC 1000XD (LC/60km) Transceiver | ■ 8330-181 LTSFP-1000BX-60KM Transceiver (WDM 1310) |
| ■ 8330-167 MINI GBIC 1000ZX (LC/80km) Transceiver | ■ 8330-183 LTSFP-1000BX-60KM Transceiver (WDM 1550) |
| ■ 8330-170 MINI GBIC 1000EZ (120km) Transceiver | ■ 8330-184 LTSFP-1000BX-80KM Transceiver (WDM 1490) |
| ■ 8330-168 MINI GBIC 1000T (100m) Transceiver | ■ 8330-185 LTSFP-1000BX-80KM Transceiver (WDM 1550) |
| ■ 8330-188 LTSFP-1000BX-10KM Transceiver (WDM 1310) | |

All SFP ended with D are with Diagnostic function

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