

IES-3408GSFP

4 1000 SFP +8 10/100TX L2 +Industrial Managed Switch w/Pro-Ring IIs & ITU G.8032

- IEC-61850-3 & 1613 compliant
- Support Pro-Ring IIs self healing recovery < 20ms ; ITU G.8032 ring protection < 10ms & MSTP
- Support ACL*, IGMP v3, QinQ, SSH/SSL, TACAS+*, IPv6
- Support DIDO (Digital Input/Digital Output)& DDM for SFP
- Environmental Monitoring for temp. voltage & current**
- EEE (Efficient Energy Ethernet) /10KB jumbo frame



OVERVIEW

Lantech IES-3408GSFP is a high performance L2+ industrial switch provides 8x10/100TX + 4 1000 SFP uplinks which complies with IEC61850-3 and IEEE1613. It delivers Pro-Ring IIs self-recovery in less than 10ms, ITU G.8032 ring protection < 10ms, comprehensive QoS, advanced security including ACL*, TACAS+*, SSH/SSL, IGMPv3 & proxy, DHCP Option 82* and QinQ(double tag VLAN) , MVR(multiple vlan registration) which are important features required in large network. It also supports Cisco Discovery Protocol(CDP) and LLDP for Ciscoworks to detect the switch info and show on L2 map topology. The supported PTP v2 can allow switch synchronize the network clock approx. 1ms, the switch also build in the RTC(real time clock) which can keep track of time.

Lantech Pro-Ring IIs can be self-healed in less than 20ms beyond the limitation of redundant ports and include the ring and chain** topologies. The standard ITU G.8032 ring protection can work with other metro switches for ring protection in less than 10ms. It supports MSTP that allows RSTP over Vlan for redundant links.

Lantech IES-3408GSFP designs with redundant firmware where can survive if the primary firmware is crashed due to improper upgrading. The configuration file can also be exported in text file so that it can be edited and configured back to switch with ease. The factory reset button can restore the setting back to factory default and built-in watchdog design can automatically reboot the switch under certain circumstances.

The IES-3408GSFP DIDO function can support additional open/close physical contact for designate applications besides Port / Power events, for example, DIDO function can trigger alarm if the switch was moved or stolen. In case of events, the IES-3408GSFP will immediately send an email to pre-defined addresses as well as SNMP Traps out. It provides 2DI and 2DO while disconnection of the specific port was detected; DO will activate the signal LED to alarm. DI can integrate the sensors for events and DO will trigger the alarm while sending alert information to IP network with email and traps.

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

The Lantech IES-3408GSFP is designed with dual power input and 1500VDC isolation for 24~48VDC. Featured with relay contact alarm function, the IES-3408GSFP is able to connect with alarm system in case of power failure. The IES-3408GSFP also provides 3000V EFT and 6000V ESD protections, which can reduce unstable condition caused by power line and Ethernet.

Lantech IES-3408GSFP features high reliability and robustness compliant with extensive EMI/RFI phenomenon, inductive load switching environment usually found in Sub station, Steel automation, Gas station, Mining and Process control. Widely operational temperature capacity (-40°C~75°C) ensures IES-3408GSFP runtime during the harsh environment.

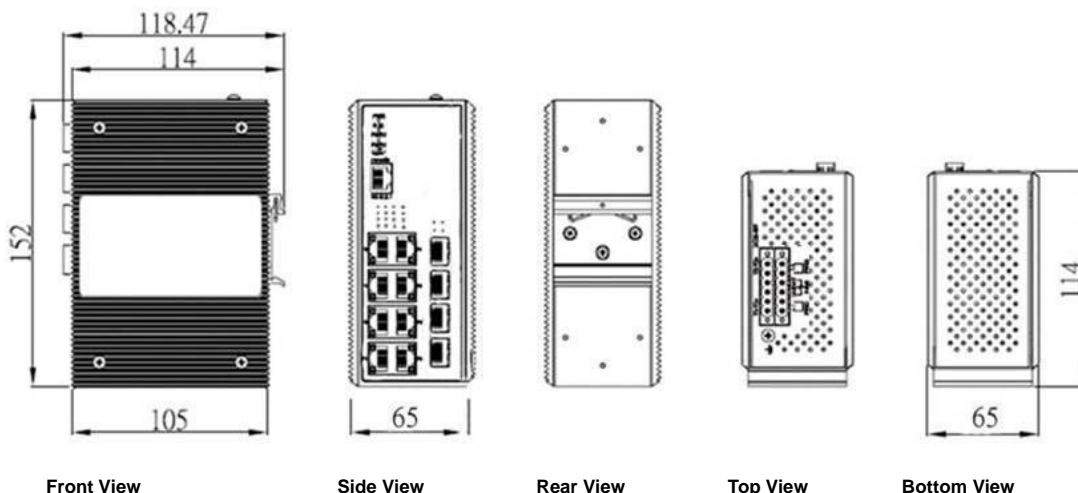
FEATURES & BENEFITS

- 4 1000 SFP +8 10/100TX L2 plus Managed Industrial Switch (Total 12 Ports Switch)
- Compliant with IEC61850-3 & IEEE1613
- Back-plane (Switching Fabric):9.6Gbps
- 16K MAC address table
- Wide-range redundant power design with 24~48VDC
- DDM to support SFP diagnostic function
- 10KB Jumbo frame supported on 10/100MTX

- Pro-Ring IIs
 - Self-healing recovery in less than 20ms
 - Ring and Chain** topologies
- ITU G.8032 Ring protection in 10 ms compatible with other ITU G.8032 metro switches
- Provides EFT protection 3000 VDC for power line.
- Supports 6000 VDC Ethernet ESD protection
- Provides ground isolation & DC to DC power isolation with 1500VDC
- Supports PTP v2 IEEE1588 around 1ms and RTC
- 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 Spanning Tree IEEE 802.1w RSTP
- 4K 802.1Q VLAN, Port based VLAN, GVRP, QinQ, MVR
- Supports IEEE 802.1ab LLDP, Cisco CDP, GMRP; LLDP info can be viewed via Web/Console/IntriView**
- DHCP server / client / DHCP Option 82* supported
- Bandwidth Control
 - Ingress Packet Filter and Egress Rate Limit
 - Broadcast/Multicast Packet Filter Control
- TFTP/HTTPs firmware upgrade, DHCP based text file with auto provision; Redundant firmware to avoid crashing in case of upgrading failure
- System Event Log, SMTP Email alert, SMS(mobile text)

- and SNMP Trap for alarm support; 32 RMON
- Relay Alarm Output System Events
- Security
 - SSL/SSH/TACAS+*/ACL*
 - Port Security: MAC address entries/Filter
 - IP Security: IP address security management to prevent unauthorized intruder.
 - Login Security: IEEE802.1X/RADIUS
 - Disable/enable WEB MMI via console/Telnet/IntriView**
- IGMPv3/ Proxy with Query mode for Multi Media
- Support dynamic IGMP router port for non IGMP camera
- Factory reset button to restore setting to factory default
- Watchdog design to auto reboot switch under certain circumstances
- Supports DIDO(Digital Input/Digital Output)
- IP30 metal housing with DIN rail and wall mount design
- Environmental sensor to detect temperature, voltage and current and send out SNMP traps and emails if there is abnormal events**

DIMENSIONS (unit=mm)



SPECIFICATION

Hardware Specification	
Standards	IEEE 802.3 10Base-T Ethernet IEEE 802.3u 100Base-TX IEEE802.3z Gigabit fiber IEEE802.3x Flow Control and Back Pressure IEEE802.3ad Port trunk with LACP IEEE802.1d Spanning Tree IEEE802.1w Rapid Spanning Tree IEEE802.1s Multiple Spanning Tree IEEE 802.3ad Link Aggregation Control Protocol (LACP) IEEE 802.1AB Link Layer Discovery Protocol (LLDP) IEEE 802.1x User Authentication (Radius) IEEE802.1p Class of Service IEEE802.1Q VLAN Tag EEE 802.3az Efficient Energy Ethernet
Switch Architecture	Back-plane (Switching Fabric): 9.6Gbps Packet throughput ability (Full-Duplex): 23.8Mpps @64bytes
Transfer Rate	14,880pps for Ethernet port

Mac Address	148,800pps for Fast Ethernet port 1,488,000pps for Gigabit Fiber Ethernet port
Jumbo frame	16K MAC address table
Connectors	10KB for 10/100TX ports 10/100TX: 8 x RJ-45 type connector Mini-GBIC: 4 x 1000 SFP Sockets Power & P-Fail connector: 1 x 6-pole terminal block RS-232 connector: 1 x RJ-45 type connector
Network Cable	10Base-T: 2-pair UTP/STP Cat. 3, 4, 5 cable EIA/TIA-568 100-ohm (100m) 100Base-TX: 2-pair UTP/STP Cat. 5/ 5E cable EIA/TIA-568 100-ohm (100m)
Optical Cable	Multi-mode: 50/125um-62.5/125um; Single mode: 9/125um Wavelength: 850nm (Multi-mode) / 1310nm (Single-mode)
Protocol	CSMA/CD
LED	Per unit: Power 1 (Green), Power 2 (Green), P-Fail (Red) Ethernet port: Link/Activity (Green), Speed (Green); Mini-GBIC: Link/Activity (Green)

DI/DO	2 Digital Input (DI) : Level 0: -30~2V / Level 1: 10~30V Max. input current:8mA 2 Digital Output(DO): Open collector to 40 VDC, 200mA
Operating 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	24~48VDC, Redundant power input with 1500VDC isolation -48VDC only single power input
Power Consumption	12W
Case Dimension	Metal case. IP-30, 65 (W) x 105 (D) x 152 (H) mm
Weight	900 g
Installation	DIN Rail and Wall Mount Design
EMI & EMS	FCC Class A, CE EN61000-6-2, CE EN61000-6-4, CE EN61000-4-2, CE EN61000-4-3, CE EN61000-4-4, CE EN61000-4-5, CE EN61000-4-6, CE N61000-4-8, EN61000-4-11
Safety	CE EN60950
Stability Testing	IEC60068-2-32 (Free fall), IEC60068-2-27 (Shock), IEC60068-2-6 (Vibration)
MTBF	289,385 hrs
Warranty	5 years
Software Specification	
Management	SNMP v1 v2c, v3/ Web/Telnet/CLI
SNMP MIB	RFC 1215 Traps MIB, RFC 1213 MIBII, RFC 1157 SNMP MIB, RFC 1493 Bridge MIB, RFC 2674 VLAN MIB, RFC 1643 EtherLike, RFC 1757 RMON, RSTP MIB, Private MIB, LLDP MIB
Pro-Ring IIs	Self-healing recovery in less than 20ms for SingleRing,Dual Homing,MultiRing and Chain** topology
ITU G.8032	Less than 10ms recovery, compatible with other ITU G.8032 metro switches
Port Trunk with LACP	LACP Port Trunk: 4 Trunk groups/Maximum 4 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 (256 Groups), MVR (Multi VLAN Registration), QinQ
IPv6	Support dual stack for IPv4 and IPv6 Support Plug and Play function IPv6 Logo Committee certified Perform with following RFCs: ● RFC 2460 - IPv6 Specification ● RFC 4861 - Neighbor Discovery for IPv6 ● RFC 4862 - IPv6 Stateless Address Auto-configuration ● RFC 1981 - Path MTU Discovery for IPv6
Spanning Tree	Supports IEEE802.1d Spanning Tree and IEEE802.1w Rapid Spanning Tree, IEEE802.1s Multiple Spanning Tree
Quality of Service	The quality of service determined by port, Tag and IPv4 Type of service, IPv4 Different Service
Class of Service	Support IEEE802.1p class of service, per port provides 8 priority queues
IP Security	Supports 10 IP addresses that have permission to

	access the switch management and to prevent unauthorized intruder.
Login Security	Supports IEEE802.1X Authentication/RADIUS
Port Mirror	Support 3 mirroring types: "RX, TX and Both packet"
Network Security	Support 10 IP addresses that have permission to access the switch management and to prevent unauthorized intruder. 802.1X access control for port based and MAC based authentication Management Access Policy Control 256 Policy based Access Control Lis*t IP-MAC-Port binding DHCP snooping and DHCP option 82* SSL/ SSH for Management TACACS+* for Management Authentication <i>Disable/enable WEB MMI via console / Telenet/IntriView**</i>
Multicast Filtering & IGMP	<i>Dynamic:</i> Support IGMP snooping v1, v2,v3 and MLD snooping v1. Support 256 multicast groups Support IGMP and MLD query Support Dynamic IGMP router port for non-IGMP camera <i>Static:</i> Support 256 static multicast groups
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.
PTP v2	Support IEEE1588 PTPv2 around 1ms and RTC(Real Time Clock) which keep track of time
Flow Control	Supports Flow Control for Full-duplex and Back Pressure for Half-duplex
System Log	Supports System log record and remote system log server
SMTP/Text SMS	Supports SMTP Server and 6 e-mail accounts for receiving event alert; can send SMS text alert via mobile
Environmental Monitoring**	Internal sensor to detect temperature, voltage and current and send SNMP traps and emails if any abnormal events
Relay Alarm	Provides one relay output for port breakdown, power fail and alarm. Alarm Relay current carry ability: 1A @ DC24V
SNMP Trap	Up to 3 trap stations; trap types including: ● Device cold start ● Authorization failure ● Port link up/link down ● DI/DO open/close ● Abnormal environmental monitoring**
DHCP	Provide DHCP Client/ DHCP Server/ Port-IP Binding
DNS	Provide DNS client feature and support Primary and Secondary DNS server.
SNTP	Supports SNTP to synchronize system clock in Internet
Firmware Update	Supports TFTP firmware update, TFTP backup and restore.
Configuration upload and download	Supports text configuration file for system quick installation; Support factory reset button to restore all settings back to factory default
IfAlias	Each port allows an alphabetic string of 128-byte assigned as its own unique name via the SNMP or CLI interface

*Future release
**Optional

ORDERING INFORMATION

- **IES-3408GSFP.....P/N: 8350-530**
4 1000 SFP + 8 10/100TX L2 +Industrial Managed Switch w/isolation; -20°C to 60°C
- **IES-3408GSFP-EP/N: 8350-531**
4 1000 SFP + 8 10/100TX L2 +Industrial Managed Switch w/isolation; -40°C to 75°C
- **IES-3408GSFP-M.....P/N: 8350-532**
4 1000 SFP + 8 10/100TX L2 +Industrial Managed Switch w/isolation & environmental monitoring; -20°C to 60°C
- **IES-3408GSFP-M-E.....P/N: 8350-533**
4 1000 SFP + 8 10/100TX L2 +Industrial Managed Switch w/isolation & environmental monitoring; -40°C to 75°C

OPTIONAL ACCESSORIES

DIN Rail Power

- **AD1048-24FS** 24VDC, 2A, Wide AC Input, Convection Cooled, DIN Rail or Wall Mounted, RoHS, Operating Temp. -20°C~50°C
(ambient, derating each output at 2.5% per degree from 50°C ~ 75°C, which means the output is 18 Watts at 75°C.)
- **AD1024-24F** 24VDC, 1A, Wide AC Input, Build-in fan Cooled, DIN Rail or Wall Mounted, RoHS, Operating Temp. -20°C~50°C
(ambient, derating each output at 2.5% per degree from 50°C ~ 70°C)

Mini GBIC (SFP)

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|--|---|
| <ul style="list-style-type: none"> ■ 8330-162 MINI GBIC 1000SX (LC/0.5km) Transceiver ■ 8330-163 MINI GBIC 1000SX2 (LC/2km) Transceiver ■ 8330-165 MINI GBIC 1000LX (LC/10km) Transceiver ■ 8340-0591 MINI GBIC 1000LHX (LC/40km) Transceiver ■ 8330-166 MINI GBIC 1000XD (LC/50km) Transceiver | <ul style="list-style-type: none"> ■ 8330-169 MINI GBIC 1000XD (LC/60km) Transceiver ■ 8330-167 MINI GBIC 1000ZX (LC/80km) Transceiver ■ 8330-170 MINI GBIC 1000EZ (120km) Transceiver ■ 8330-168 MINI GBIC 10/100/1000T (100m) Transceiver |
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