

IGS-5008T-X (IP67/IP54)

8 10/100/1000T X-coded L2+ Industrial Managed Switch
 w/ Enhanced G.8032 Ring & PTP one step

- EN50155/61373/45545-2 verification; 24~110V (WV) or 9.5~57VDC(12V) input selection
- Galvanic isolation between input and system
- IP67 / IP54 Aluminum housing for best heat dissipation and preventing moist ingress
- Optional bypass protection for 2 GigaT ports
- Enhanced G.8032 ring protection < 20ms with auto mode, enhanced mode, train mode and basic mode; Enhanced G.8032 ring covers multicast packets; MSTP 16MSTI /RSTP
- Support one step PTP v2, relay contact & environmental monitoring
- Miss-wiring avoidance; Repowered auto ring restore (node failure protection)
- User friendly UI, including auto topology drawing; Complete CLI
- Support LACP link aggregation, IGMP v3/router port, DHCP server & DHCP Option82 for Port & VLAN based DHCP distribution, Mac based DHCP server, QoS by VLAN, SSH/SSL, HTTPS, INGRESS/EGRESS ACL L2/L3, IPv6, SMS
- N-key configurator** for upgrading, auto back up /editable restoration without computer



IP67 model



IP54 model



OVERVIEW

Lantech IGS-5008T-X (IP67/IP54) is a high performance L2+ All Gigabit switch with 8 10/100/1000T at M12 X-coded providing L2 wire speed and advanced security function for network aggregation deployment. It houses in an IP67/IP54 aluminum compact enclosure that is waterproof and will prevent moisture ingress due to temperature fluctuations.

Dynamic train ring, G.8032 & Smart DHCP

It delivers ITU G.8032 enhanced ring recovery less than 20ms including train coupling ring, enhanced mode for easy configuration, comprehensive QoS, QoS by VLAN, advanced security including INGRESS/EGRESS ACL L2/L3, SSH/SSL, Mac based DHCP server, DHCP Option 82, DHCP server, IGMPv1/v2/v3/router port, QinQ* (double tag VLAN) which are important features required in train and large network. It also supports Cisco Discovery Protocol (CDP) and LLDP for Ciscosw to detect the switch info and show on L2 map topology.

Hardware one-step PTP, transparent clock

Lantech IGS-5008T-X (IP67/IP54) features hardware-based one step PTP IEEE1588 v2 transparent clock function which can allow all Gigabit ports to synchronize the network with precise accuracy.

Galvanic isolation for WV input & 12V input model

The IGS-5008T-X (IP67/IP54) provides galvanic isolation between DC input and system for both 12V & WV models.

Relay alarm, High ESD protection

Featured with relay contact alarm function, the IGS-5008T-X (IP67/IP54) is able to connect with alarm system in case of power failure or port disconnection events. The IGS-5008T-X (IP67/IP54) also provides $\pm 2000V$ EFT and $\pm 6000V$ ESD protection, which can reduce unstable situation caused by power line and Ethernet.

Enhanced G.8032 <20ms recovery, Train Ring, MSTP, RSTP

Lantech IGS-5008T-X (IP67/IP54) features enhanced G.8032

ring which can be self-healed in less than 20ms for single ring topology protection covering Multicast packets. It also supports various ring topologies that covers double ring, multi-chain (under enhanced ring), train ring, basic ring by easy setup than others. The innovative auto-Ring configurator (auto mode) can calculate owner and neighbor in one step. It supports MSTP that allows RSTP over VLAN for redundant links with 16 MSTI. The ITU G.8032 Ring and RSTP can be co-existed in the same switch with different ports for the most flexible protection.

The train ring (Train mode) is specially designed for auto coupling topology that is required in train car interchange application.

Re-powered ring restoration, Miss-wiring alert, Loop protection

The IGS-5008T-X (IP67/IP54) 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-5008T-X (IP67/IP54) is able to alert with the LED indicator. Repowered auto ring restore function (node failure protection) ensures the switches in a ring to survive after power breakout is back. The status can be shown in NMS when each switch is back. This feature prevents the broken ring and keep ring alive without any re-configuration needed. Loop protection is also available to prevent the generation of broadcast storm when a dumb switch is inserted in a closed loop connection. The built-in watchdog design can automatically reboot the switch when CPU is found dead.

Smart DHCP (Port based DHCP; Option 82 DHCP Relay; Option 82 DHCP server; Mac based DHCP)

DHCP port based and option 82 function (port & VLAN based DHCP distribution) can offer the same IP address on port base or VLAN base where there is need to replace the new device connecting to Lantech switches to avoid any network disruption. The built-in DHCP Option 82 server offers the convenience of policy setting on the switch. Mac based DHCP server function assigns an IP address according to its MAC address to include dumb switches in DHCP network.

QoS by VLAN

QoS by VLAN can allow switch to prioritize packets by VLAN tag regardless the devices acknowledge QoS or not in which greatly enhance the bandwidth management in a network.

Optional InstaConfig; Web GUI & CLI

Lantech InstaConfig software** provides easy configuration for mass deployment. The embedded user friendly UI, innovative auto topology drawing and topology demo makes IGS-5008T-X (IP67/IP54) much easier to get hands-on. The switch also equips the RTC (real time clock) which can keep track of time always. The complete CLI enables professional engineer to configure setting by command line.

Optional N key auto backup, Exported text file

The configuration file of Lantech IGS-5008T-X (IP67/IP54) can be exported in text file so that it can be edited and configured back to switch with ease for mass deployment. The optional N-key configurator offers firmware upgrade, auto backup/editable configuration restore without computer by adjusting the DIP switch.

Event log & message; 4 DI + 3DO

In case of event alarm, the IGS-5008T-X (IP67/IP54) will immediately send an email & SMS text message to pre-defined addresses as well as SNMP Traps out. It provides 4DI and 3DO 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.

Environmental monitoring for inside switch info

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

EN50155, 45545-2, 50121-3-2, 61373 verification

The IGS-5008T-X (IP67/IP54) passed serious tests under extensive Industrial EMI and Safety standards. With EN45545-2 Fire & Smoke, and EN50155 verification, the IGS-5008T-X (IP67/IP54) is best for railway in train/track side, vehicle and mining applications. For more usage flexibilities, IGS-5008T-X (IP67/IP54) supports wide operating temperature from -40°C to 75°C.

Optional GigaT bypass

The optional bypass relay is set to bypass the switch to the next one when power is off in order to protect the network from crashing. Lantech bypass caters to remain in bypass mode until the switch is completely booting up when power is back to avoid another network lost. The bypass is also activated when detecting the CPU watchdog is ON.

FEATURES & BENEFITS

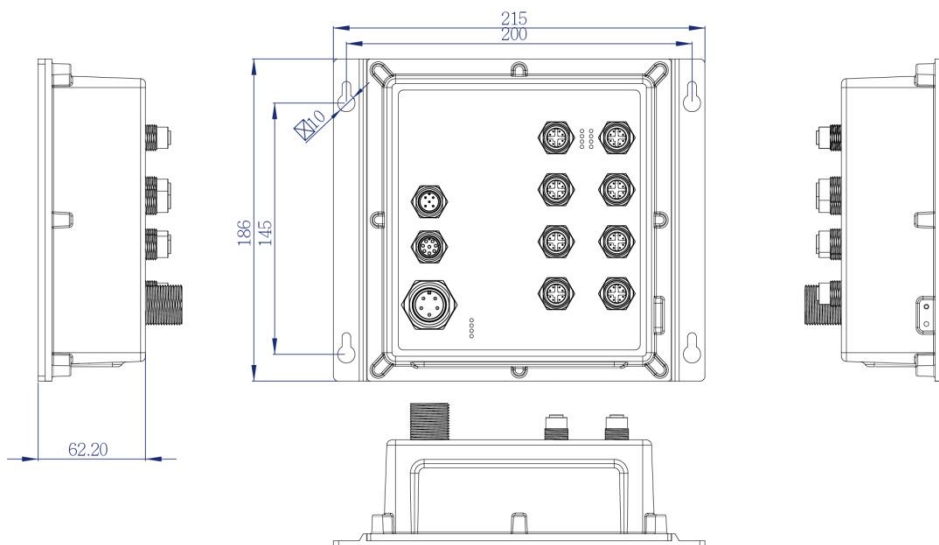
- **8 10/100/1000T X-coded Industrial Managed IP67/IP54 M12 Switch (Total 8 Ports Gigabit Switch)**
- **EN45545-2 Fire & Smoke, EN50155 and EN61373 shock/vibration verification**
- **WV model can accept two isolated 16.8V~137.5V input**
- **12V model can accept dual isolated input 9.5V~57V**
- **IEEE 1588 PTP one step v2 transparent clock at all Giga ports**
- **Back-plane (Switching Fabric): 16Gbps**
- **16K MAC address table**
- **10KB Jumbo frame supported on all ports**
- **User friendly UI, auto topology drawing, topology demo, complete CLI for professional setting**
- **Enhanced G.8032 Ring protection in 20ms < 256 switches**
 - Support various ring/chain topologies, including train dynamic coupling ring
 - Enhanced G.8032 ring configuration with ease
 - Auto ring configuration(auto mode) for single

ring

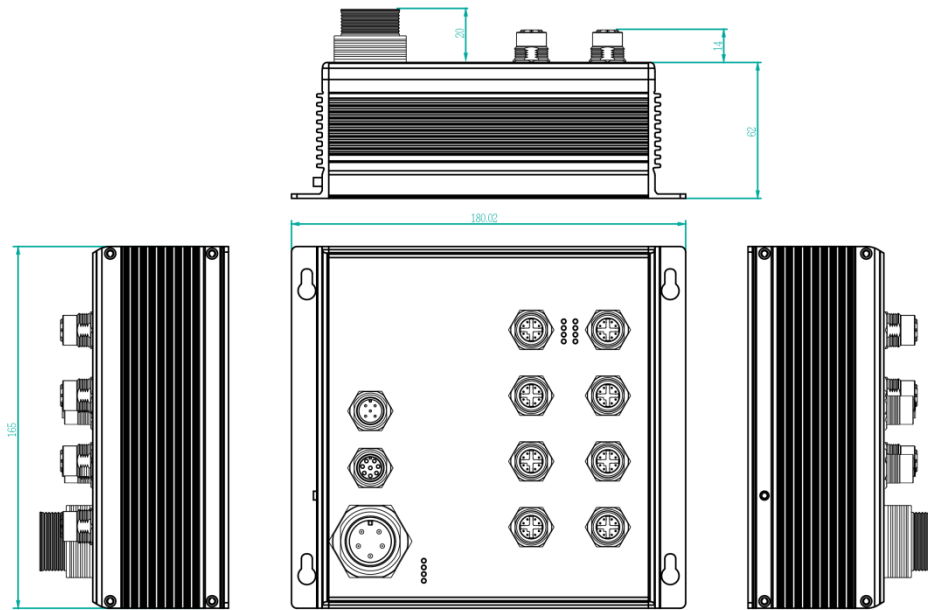
- Co-exist with RSTP on different ports
- Provides EFT protection ± 2000 VDC for power line.
- Supports ± 6000 VDC Ethernet ESD protection
- Built-in RTC (Real Time Clock) to keep track of time
- Supports IEEE 802.1p Class of Service, per port provides 8 priority queues Port base, Tag Base and Type of Service Priority
- IEEE 802.1d STP, IEEE 802.1w RSTP, 802.1s MSTP VLAN redundancy
- 4K 802.1Q VLAN, Port based VLAN, GVRP**, QinQ*
- QoS by VLAN tag to prioritize all devices in network
- Supports IEEE 802.1ab LLDP, Cisco CDP; LLDP info can be viewed via Web/ Console/ Lantech™ InstaConfig**/ Lantech™ InstaView**
- DHCP server / client / DHCP Option 82 relay / DHCP Option 82 server for Port & VLAN based DHCP distribution
- Mac based DHCP server to assign IP address that includes dumb switches in DHCP network
- Bandwidth Control
 - Ingress packet filter and egress rate limit
 - Broadcast/multicast packet filter control
- Relay alarm output system events
- Miss-wiring avoidance
 - LED indicator
- Repowered auto ring restore
 - Ensure the switches in a ring to survive after power breakout is back
 - The status can be shown in NMS when each switch is back
- TFTP/HTTP firmware upgrade; Lantech™ InstaConfig** for multiple upgrade
- System Event Log, SMTP Email alert, SMS mobile (text) and SNMP Trap for alarm support; 32 RMON counters
- Security
 - SSL/SSH/INGRESS/EGRESS ACL L2/L3
 - Port Security: MAC address entries/Filter/MAC-Port binding
 - IP Security: IP address security management to prevent unauthorized intruder.
 - Management access control with priority
 - Login Security: IEEE802.1X/RADIUS
- Static multicast forwarding forward reversed IGMP flow (MVR) with multicast packets binding with ports for IP surveillance application
- Multicast static route for non- IGMP camera to prevent flooding; IGMP router port to assign query in ring and for reversed multicast video flow
- IGMPv1,v2,v3 with Query mode for multimedia; GMRP**
- Watchdog design to auto reboot switch CPU is found dead
- Built-in environmental monitoring for system input voltage, current, ambient temperature
- Supports 4 DI+ 3DO (Digital Input/Digital Output)
- IP67/IP54 aluminum housing with DIN rail** and wall mount design
- Bypass protection** - Bypass failed switch caused by power failure of switch to protect network intactness
- N-key** configurator for firmware upgrade, auto back up /editable configuration restore

DIMENSIONS (unit=mm)

IP67 model



IP54 model



SPECIFICATION

Hardware Specification

| | |
|---------------------|--|
| Standards | IEEE 802.3 10Base-T Ethernet IEEE 802.3u 100Base-TX IEEE802.3ab 1000Base-T 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 |
| Switch Architecture | Back-plane (Switching Fabric): 16Gbps |
| Transfer Rate | 14,880pps for Ethernet port 148,800pps for Fast Ethernet port 1,488,000pps for Gigabit Ethernet port |
| CPU | Marvell 800Mhz |
| RAM | 256M Byte |
| Flash | 128M Byte |
| Mac Address | 16K MAC address table |
| Jumbo frame | 10KB on all ports |
| Connectors | 10/100/1000T: 8 x ports M12 8-pole X-coded with Auto MDI/MDI-X function RS-232 connector: 1 x M12 5-pole A-coded Power Input connector : 1 x M23 5-pole A-coded Relay contact : 1 x M12 5-pole A-coded |
| 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) |
| Bypass | High-speed copper switching |

| | |
|-------------------------------|--|
| Protection** | Minimal insertion loss (Max 1.6dB as Bypass Mode) |
| Protocol | CSMA/CD |
| LED | Per unit: Power 1 (Green), Power 2 (Green), FAULT (Red), RM(Green) Ethernet port: Link/Active(Green) R.M. indicator (Green) |
| DI/DO | 4 Digital Input (DI) : Level 0: -30~2V / Level 1: 10~30V Max. input current:8mA 3 Digital Output(DO): Open collector to 40 VDC, 200mA |
| Operating Humidity | 5% ~ 95% (Non-condensing) |
| Operating Temperature | -40°C~75°C / -40°F~167°F |
| Storage Temperature | -40°C~85°C / -40°F~185°F |
| Power Supply | Isolated 16.8~137.5VDC on WV model Isolated 9.5~57VDC on 12V model |
| Power Consumption | Max. 13W |
| Case Dimension | IP67 model: Aluminum case 215mm(W)x200mm(H)x84.4mm(D) IP54 model: Aluminum case 180mm(W)x165mm(H)x82mm(D) |
| Weight | 1.4kgs(IP67); 980gs (IP54) |
| Installation | Wall Mount Design |
| EMI & EMS | FCC Class A, CE EN55022 Class A, CE EN55024, CE EN61000-4-2, CE EN61000-4-3, CE EN61000-4-4, CE EN61000-4-5, CE EN61000-4-6, CE N61000-4-8 |
| Stability Testing | EN61373 (Shock and Vibration) |
| Verifications & report | EN50155/EN50121-3-2/EN50121-4 verification EN45545-2 R24/R25 (EN ISO 4589-2, EN ISO 5659-2, NF X70-100-1 & 2) Fire & Smoke verification |
| Warranty | 5 years |
| Software Specification | |

| | |
|--------------------------|--|
| Management | SNMP v1 v2c, v3/ Web/Telnet/CLI |
| SNMP MIB | RFC 1215 Traps MIB*, RFC 1213 MIBII RFC 1158 MIBII RFC 1157 SNMP MIB*, RFC 1493 Bridge MIB*, RFC 1573 IF MIB RFC 2674 VLAN MIB, Partial RFC 1757 RMON, RFC 2674 Q-Bridge MIB*, Bridge MIB*, LLDP MIB* RSTP MIB* Private MIB |
| Enhanced ITU G.8032 | Support ITU G.8032 v2/2012 for Ring protection in less than 20ms for self-heal recovery (basic mode) Support various ring/chain topologies Includes train dynamic coupling ring Enhanced G.8032 ring configuration with ease Co-exist with RSTP on different ports Train mode for auto coupling ring configuration |
| PTP v2 one step | Support hardware-based one step IEEE1588 PTPv2 transparent clock with all Gigabit ports |
| User friendly UI | <ul style="list-style-type: none"> ■ Auto topology drawing ■ Topology demo ■ Auto configuration for G.8032(auto mode) for single ring ■ Complete CLI for professional setting |
| Port Trunk with LACP | LACP Port Trunk: 8 Trunk groups/Maximum 8 trunk members |
| LLDP | Supports LLDP to allow switch to advise its identification and capability on the LAN |
| CDP | Cisco Discovery Protocol for topology mapping |
| Environmental Monitoring | System status for input voltage, current, ambient temperature to be shown in GUI and sent alerting if any abnormal status |
| 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.) |
| IPv6/4 | Present |
| Spanning Tree | Supports IEEE802.1d Spanning Tree and IEEE802.1w Rapid Spanning Tree, IEEE802.1s Multiple Spanning Tree |
| Quality of Service | The quality of service determined by port, Tag and IPv4 Type of service, IPv4 Differentiated Services Code Points - DSCP |
| Class of Service | Support IEEE802.1p class of service, per port provides 8 priority queues |
| QoS by VLAN | QoS by VLAN tag for all devices in the network |
| 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/MAC-Port binding Management access control with priority Ingress/Egress INGRESS/EGRESS ACL L2/L3 L2/L3 SSL/ SSH for Management HTTPS for secure access to the web interface TACACS+ for Authentication |

| | |
|-----------------------------------|---|
| IGMP | Support IGMP snooping v1,v2,v3; Supports IGMP static route(MVR); 256 multicast groups; IGMP router port ; IGMP query; GMRP** |
| MVR | Static multicast forwarding forward reversed IGMP flow (MVR) with multicast packets binding with ports for IP surveillance application |
| Bandwidth Control | Support ingress packet filter and egress packet limit. The egress rate control supports all of packet type. Ingress filter packet type combination rules are Broadcast/Multicast/Flooded Unicast packet, Broadcast/Multicast packet, Broadcast packet only and all types of packet. The packet filter rate can be set an accurate value through the pull-down menu for the ingress packet filter and the egress packet limit. |
| RTC | Built-in Real Time Clock to keep track of time always |
| Flow Control | Supports Flow Control for Full-duplex and Back Pressure for Half-duplex |
| System Log | Supports System log record and remote system log server |
| SMTP/Text SMS | Supports SMTP Server and 8 e-mail accounts for receiving event alert; can send SMS text alert via mobile |
| Relay Alarm | Provides one relay output for port breakdown, power fail and alarm. Alarm Relay current carry ability: 1A @ DC24V |
| Protection | <ul style="list-style-type: none"> ■ Miss-wiring avoidance ■ Repowered auto ring restore ■ Loop protection |
| 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 ● Typology change(ITU ring) ● Power failure ● Environmental abnormal |
| DHCP | Provide DHCP Client/ DHCP Server/DHCP Option 82 Relay/ DHCP Option 82 server for Port based & VLAN based DHCP distribution |
| Mac based DHCP Server | Assign IP address by Mac that can include dumb switch in DHCP network |
| 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; HTTP firmware upgrade; Lantech™ InstaConfig** for multiple upgrade |
| N-Key Configurator** | RJ45 dongle for firmware upgrade, autobackup / editable restoration |
| Configuration upload and download | Supports text configuration file for system quick installation |
| 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

All model packages include M12 caps and wall mount bracket. All standard models are non-coating, optional coating models are available with -C model name. Optional bypass models are available with -B model name.

- **IGS-5008T-X-67-WV.....P/N: 8361-425**
8 10/100/1000T X-coded PTP L2+ Managed Industrial Gigabit IP67 Switch; 16.8V~137.5VDC dual input ;-40°C to 75°C
- **IGS-5008T-X-54-WV.....P/N: 8361-4252**
8 10/100/1000T X-coded PTP L2+ Managed Industrial Gigabit IP54 Switch; 16.8V~137.5VDC dual input;-40°C to 75°C
- **IGS-5008T-X-67-12V.....P/N: 8361-427**
8 10/100/1000T X-coded PTP L2+ Managed Industrial Gigabit IP67 Switch; 9.5V~57VDC dual input;-40°C to 75°C
- **IGS-5008T-X-54-12V.....P/N: 8361-4272**
8 10/100/1000T X-coded PTP L2+ Managed Industrial Gigabit IP54 Switch; 9.5V~57VDC dual input;-40°C to 75°C
- **N-key Configurator.....P/N: 8850-100**
RJ45 connector dongle for firmware upgrade, auto/editable configuration backup and restoration; -20°C to 60°

OPTIONAL ACCESSORIES

M23/M12 Connector & Cable

- **ECONM23-5P(F)70CM CABLE** M23 power cable 90 degree angle, 70cm, 5 pin
- **ECABM12X83MSTP** 8 Pin M12 X-coded RJ45 Male 3 METER, STP CABLE w/ Shielding

Lantech Communications Global Inc.

www.lantechcom.tw
info@lantechcom.tw

© 2017 Copyright Lantech Communications Global Inc. all rights reserved.
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.