IPES-5408DFT-QODC

8 10/100TX + 2 100/1000FX Dual Speed Q-ODC Fiber + 2 GigaT X-coded L2+ 8 PoE at/af EN50155 Managed Ethernet Switch w/enhanced G.8032 Ring & LTDP**

- *EN50155/61373/45545-2 verification*
- *IEEE802.3at/af up to 30W per port; PoE management incl. detection and scheduling*
- *Optional 12V input can boost to 54V output PoE max. 120W; optional 72V/110V input can step down to 54V output PoE max.120W; optional WV input supports PoE output max.120W*
- *Optional bypass in case of power failure, watchdog loss or LTDP** time out protection*
- *LTDP** (Link Train Discovery Protocol) to auto-assign IP as well as inherit the configuration in replaced switch*
- *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 ring***
- *Miss-wiring avoidance & node failure protection; User friendly UI, including auto topology drawing; 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/SSL, HTTPS, INGRESS/EGRESS ACL L2/L3, TACACS+, QinQ, SMS***
- *User friendly UI, including auto topology drawing; Complete CLI*
- *Protocol based VLAN** ; IPv4/IPv6 Subnet based VLAN***
- *Built-in environmental monitoring to show switch inside info*
- *Optional InstaView** for centralized backup, editing the configuration file and upgrade firmware*
- *N-key configurator** for upgrading, auto/editable configuration back up and restoration without computer; good for multiple switches*

IP67 model (M23)

IP54 model (M23)

IP67 model (M12)

IP54 model (M12)

OVERVIEW

Lantech IPES-5408DFT (IP67/IP54) is a high performance L2+ (Gigabit uplink) switch with 8 10/100TX + 2 Dual Speed Fiber (Q-ODC) + 2 10/100/1000T (total 12 ports) w/8 PoE 802.3af/at Injectors by M12 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/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.

Innovative LTDP** (Link Train Discovery Protocol) to assign proper IP address as well as inherit configuration for replaced switch

With port-based DHCP server, LTDP** allows Lantech EN50155 switch series in single ring discover the current IP addresses and to assign the same IP address and

configuration. Furthermore, LTDP** can inherit the same configuration to new replaced switch.

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.

User friendly GUI, Auto topology drawing

The user friendly UI, innovative auto topology drawing and topology demo makes IPES-5408DFT (IP67/IP54) much easier to get hands-on. The complete CLI enables professional engineer to configure setting by command line.

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

Lantech IPES-5408DFT (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 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.

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

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 and GVRP supported

It supports the QinQ, QoS, 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.

PoE +, Advanced PoE management

Lantech IPES-5408DFT (IP67/IP54) supports IEEE802.3at/af standard which can feed HI-power up to 30W at each PoE port for big power consumption devices like PTZ IP camera, High power wireless AP etc. The advanced PoE management includes PoE detection and scheduling besides the regular PoE per port status. 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. Per port PoE status can remotely On/Off the power and display information of voltage, current, watt and PoE temperature.

Various input models; 12V/72V/110V/WV dual input; High

PoE budget

The Lantech IPES-5408DFT (IP67/IP54) is designed with various dual power input to feed 54V PoE. The 12V model accepts 9~56V input and yields PoE budget 120W (24V input) while 72V model allows 50.4~90V input and yields PoE budget max 120W. The 110V model accepts 43~137.5V input while the WV model allows 16.8V~137.5V input to yield PoE budget max 120W.Featured with relay contact alarm function, the IPES-5408DFT (IP67/IP54) is able to connect with alarm system in case of power failure or port disconnection events.

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

The IPES-5408DFT (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 IPES-5408DFT (IP67/IP54) is able to alert with the LED indicator and send out an email**, traps or a SMS** text. Repowered auto ring restore function (node failure protection) ensures the switches in a ring to survive after power breakout is back. The status can be shown in NMS when each switch is back. This feature prevents the broken ring and keep ring alive without any re-configuration needed. Loop protection is also available to prevent the generation of broadcast storm when a dumb switch is inserted in a closed loop connection.

Optional hardware bypass for GigaT

The optional hardware bypass function (not available on 110V model) provides redundant GigaT connection when power or switch fails in a ring or bus structure. The bypass replay 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.

Editable configuration file; InstaView** for mass deployment
Optional N key auto backup, Exported text file

The configuration file can also be exported in text file so that it can be edited and configured back to switch with ease for mass deployment. The built-in watchdog design can automatically reboot the switch when CPU is found dead. The optional N-key configurator offers firmware upgrade, auto/editable configuration back up and restoration without computer by adjusting the DIP switch.

With optional InstaView, the configuration files can be mass backup, mass-editable deployed and auto upgrading firmware in batch make maintenance easy

Event email**, trap and SMS**; 1DI+1DO

In case of event alarm, the IPES-5408DFT (IP67/IP54) is able to send an email** & SMS** text message to pre-defined addresses as well as SNMP Traps out immediately. It provides 1DI and 1DO 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.

Built-in environmental monitoring

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

EN50155, EN50121, EN61373 & EN45545 verification; High ESD protection

Lantech IPES-5408DFT (IP67/IP54) features high reliability and robustness coping with extensive EMI/RFI phenomenon, environmental vibration and shocks usually found in factory, substation, steel automation, aviation, mining and process control. It is the best solution for Automation, transportation, surveillance, Wireless backhaul, Semi-conductor factory and assembly lines.

The IPES-5408DFT (IP67/IP54) is designed to meet with critical network environment with IP67/IP54 aluminum enclosure and M12 connectors for water proof. With EN45545-2 Fire & Smoke, and EN50155 & EN61373 verification, the IPES-5408DFT (IP67/IP54) is best for railway in train/track side, vehicle and mining applications. For more usage flexibilities, IPES-5408DFT (IP67/IP54) supports wide operating temperature from -40°C to 75°C.

IPES-5408DFT (IP67/IP54)also provides ±2000V EFT and ±6000V ESD contact protection, which can reduce unstable situation caused by power line and Ethernet.
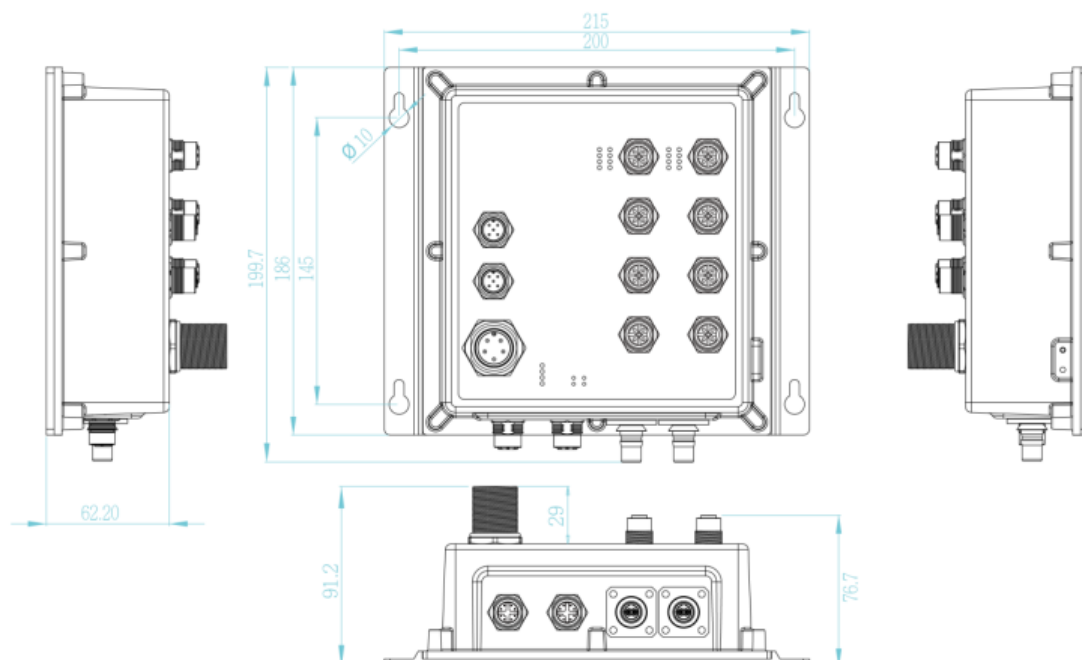
FEATURES & BENEFITS

- **8 10/100TX + 2 Dual Speed Fiber Q-ODC + 2 10/100/1000T w/8 PoE 802.3af/at Injectors IP67/IP54 M12 EN50155 Managed Ethernet Switch (Total 12 Ports Switch)**
- **EN45545-2 Fire & Smoke, EN50155/EN50121 and EN61373 shock/vibration verification**
- **IEEE802.3at/af feeding power up to 30W per PoE port at 45~56VDC at port 1-8**
- **PoE management including PoE detection and scheduling for PD (power devices)**
- **12V model accepts dual 9~56VDC power input and boost to 54V for PoE 802.3at/af at max 120W (24V input) budget**
- **72V model accepts dual 50.4~90VDC power input and feed 54V for PoE at/af at max 120W budget**
- **110V model accepts dual 43~137.5VDC power input and feed 54V for PoE at/af at max 120W budget**
- **WV model accepts dual 16.8~137.5VDC power input and feed 54V for PoE at/af at max 120W budget**
- **Back-plane (Switching Fabric): 9.6Gbps**
- **16K MAC address table**
- **10KB Jumbo frame**
- **User friendly UI, auto topology drawing, topology demo, complete CLI for professional setting**
- **Enhanced G.8032 Ring protection in 20ms for 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*
  - *Cover multicast and data packets protection*
- **LTDP** (Link Train Discovery Protocol) with Port**

based DHCP can assign the same IP address and configuration to switch in single ring. It can also keep the config file when switches being swapped
- **Provides EFT protection ±2000 VDC for power line.**
- **Supports 6000 VDC 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 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/ Lantech™ InstaView****
- **DHCP server / client / DHCP Option 82 relay / DHCP Option 82 server; Port based DHCP server; DHCP Option 66; IPv6 address resolution for DHCP server****
- **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*
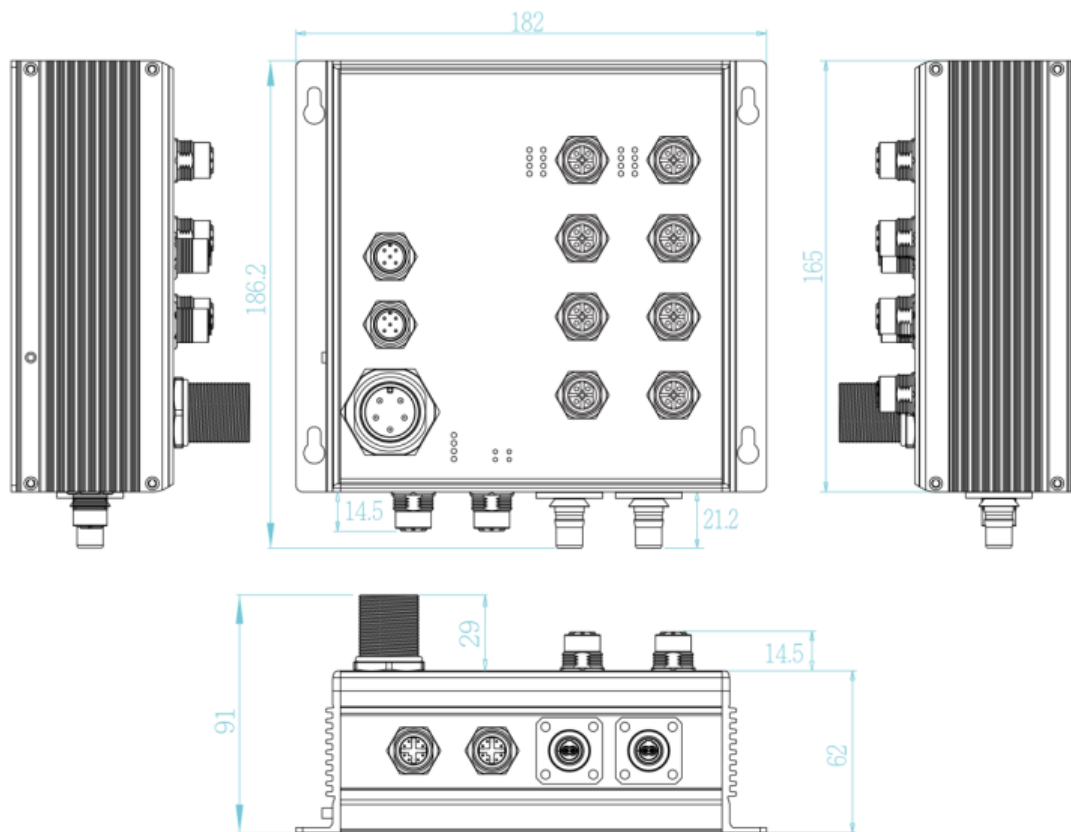- **TFTP/SFTP**/HTTP firmware upgrade; Lantech™ InstaView** for multiple upgrade**

- **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.*
  - *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**
- **Multicast static route for non- IGMP camera to prevent flooding; IGMP router port to assign query in ring 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 and total PoE load**
- **Supports 1DI + 1DO (Digital Input/Digital Output)**
- **IP67 aluminum housing with DIN rail** and wall mount design**
- **Bypass protection****
  - *Solid GigaT bypass*
  - *Bypass failed switch caused by power failure of switch to protect network intactness in a bus structure*
  - *Wait until switch is completely booting to swift back to normal mode*
- **Configuration backup and restoration**
  - *Supports editable configuration file for system quick installation*
  - *N-key** for mass configuration auto-backup, editable restoration and auto firmware upgrade*
  - *InstaView** for centralized configuration deployment, backup & upgrade*
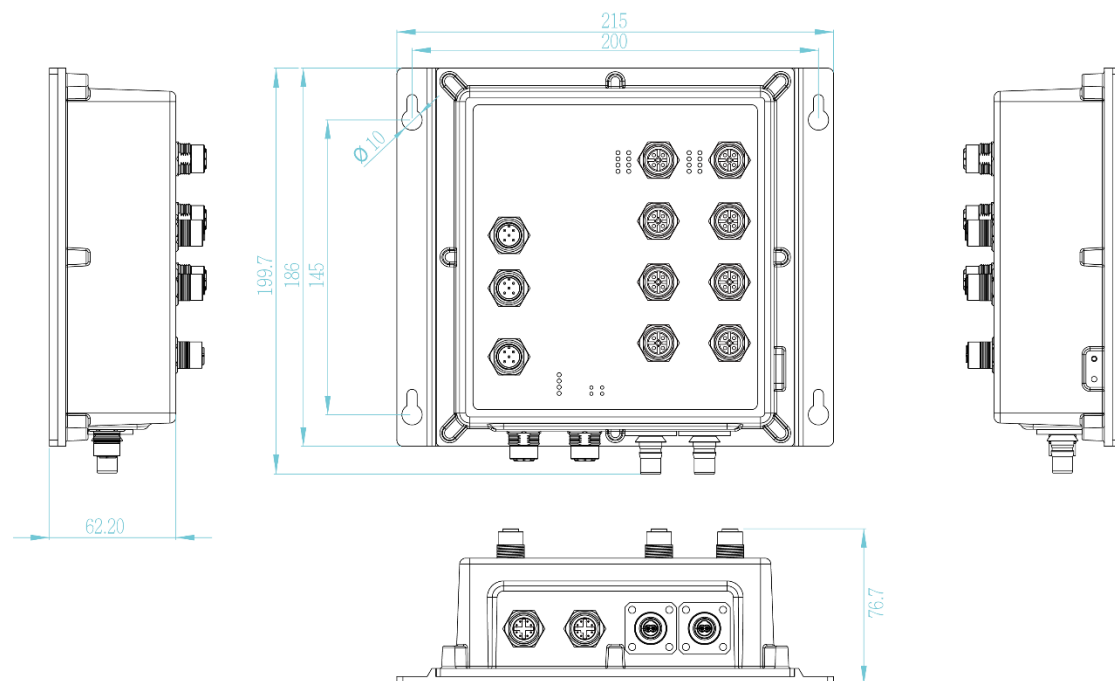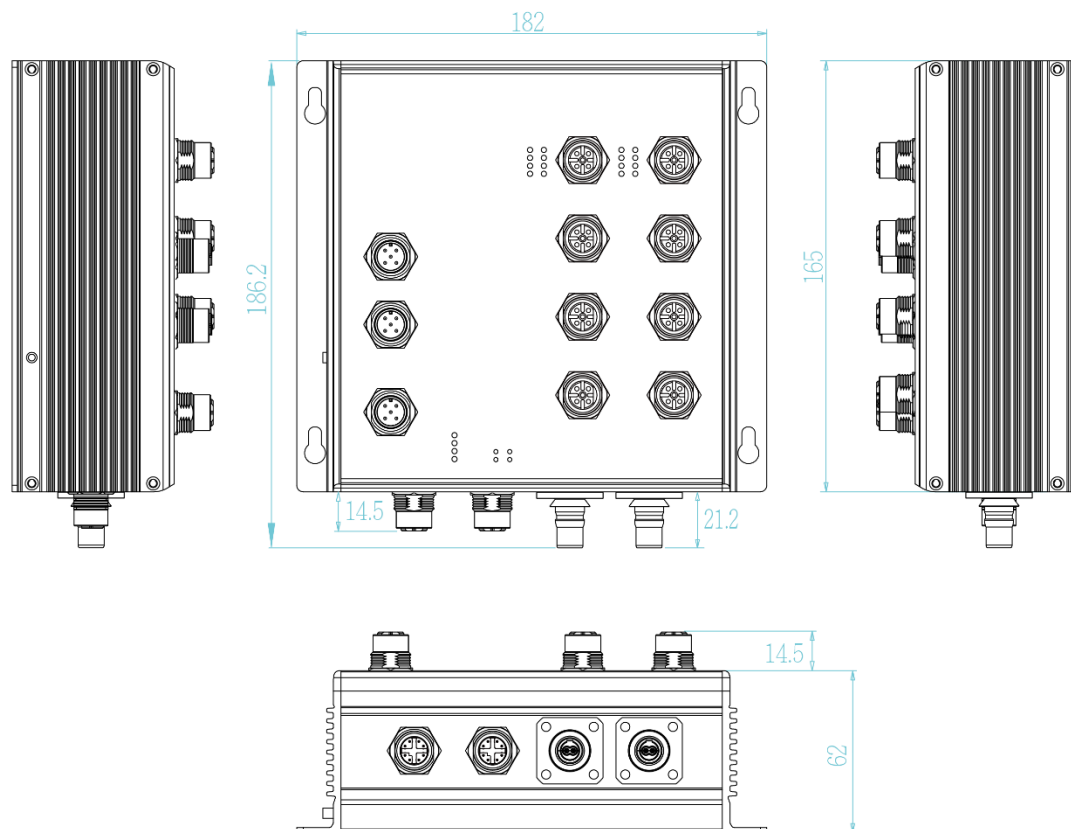
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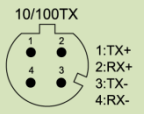
IP67 model (M23)

IP54 model (M23)

IP67 model (M12)

IP54 model (M12)

SPECIFICATION

Hardware Specification

Standards	IEEE 802.3 10Base-T Ethernet
	IEEE 802.3u 100Base-TX
	IEEE 802.3ab 1000BaseT
	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
	IEEE802.3at/af Power over Ethernet
Switch Architecture	Back-plane (Switching Fabric): 9.6Gbps
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	10/100TX: 8 x ports M12 4-pole D-coded with Auto MDI/MDI-X function
	100/1000 Dual Speed Fiber: 2 x IP67 LC Q-ODC connector for single-mode or multi-mode type fiber cable
	10/100/1000T: 2x 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 (12V model) ; 1xM12 5-pole A-coded (72V/110V/WV)
	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)
Giga Optical Cable	Multi-mode: 50/125um~62.5/125um
	Single mode: 9/125um
	Available distance: 550m (Multi-mode)/10km (Single-mode)
	Wavelength: 850nm (Multi-mode)/1310nm (Single-mode)
100M Optical Cable	Multi-mode: 50/125um~62.5/125um
	Single mode: 9/125um
	Available distance: 2km (Multi-mode)/10km (Single-mode)
	Wavelength: 850nm (Multi-mode)/1310nm (Single-mode)
Bypass Protection**	Built-in bypass module on uplink ports to pass to next switch in case of power failure
LED	Per unit: Power 1 (Green), Power 2 (Green), FAULT (Red)
	Ethernet port: Link/Activity (Green), Speed (Green);
	Optical fiber: Link/Activity (Green)
	R.M. indicator (Green)
	PoE (Green)
DI/DO	1 Digital Input (DI) :
	Level 0: -30~2V / Level 1: 10~30V

	Max. input current:8mA 1 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 (72V/110V model: -40°C~60°C / -40°F~140°F)
Storage Temperature	-40°C~85°C / -40°F~185°F
Power Supply	9~56VDC on 12V model 50.4~90VDC on 72V model 43~137.5VDC on 110V model 16.8~137.5VDC on WV model
PoE Budget	80W for 802.3af 12V input 120W for 24V input 120W for 72V/110V/WV input
PoE pin assignment	M12 port # 1~ # 8 support IEEE 802.3at/af End-point. Per port provides up to 30W 10/100TX 1:TX+ 2:RX+ 3:TX- 4:RX-
Power Consumption	Max. 13W 12V~48VDC input Max. 16W 72VDC/110VDC/WV input
Dimensions	IP67 model: Aluminum case 215mm(W)x199.7mm(H)x91.2mm(D) (M23 model) 215mm(W)x199.7mm(H)x79.7mm(D) (M12 model) IP54 model: Aluminum case 182mm(W)x186.2mm(H)x91mm(D) (M23 model) 182mm(W)x186.2mm(H)x76.5mm(D) (M12 model)
Weight	1.6kgs (IP67) ; 1.3kgs (IP54)
Installation	DIN Rail** and 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
MTBF	705,800 hrs (standards: IEC 62830)
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 1493 Bridge 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
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 ring, auto ring, basic single ring, enhanced ring, multiple-VLAN ring Enhanced G.8032 ring configuration with ease Cover multicast & data packets protection
LTDP**(optional)	Link Train Discovery Protocol with Port based DHCP server to assign the same IP address. It can also keep the config file when switch is swapped.
PoE	1. PoE Detection to check if PD hangs then

Management	restart the PD 2. PoE Scheduling to On/OFF PD upon routine time table 3. On/ Off, voltage, current, watts, temperature
User friendly UI	▪ 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
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 and total PoE load 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) GVRP, QinQ, QoS, Protocol based VLAN** ; IPv4/IPv6 Subnet based VLAN**
IPv6/4	Present
Spanning Tree	Supports IEEE802.1d Spanning Tree** and IEEE802.1w Rapid Spanning Tree, IEEE802.1s Multiple Spanning Tree 16 MSTI
Quality of Service	The quality of service determined by 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	Tagged QoS by VLAN 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 Ingress/Egress ACL 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; 1024 multicast groups; IGMP router port ; IGMP query; GMRP
Static multicast forwarding	Static multicast forwarding forward reversed IGMP flow with multicast packets binding with ports for IP surveillance application
Bandwidth Control	Support ingress packet filter and egress packet limit. The egress rate control supports all of packet type. Ingress filter packet type combination rules are Broadcast/Multicast/Flooded Unicast packet, Broadcast/Multicast packet, Broadcast packet only and all types of packet. The packet filter rate can be set an accurate value through the pull-down menu for the ingress packet filter and the egress packet limit.
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	■ Miss-wiring avoidance ■ Repowered auto ring restore ■ Loop protection
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; IPv6 address resolution for DHCP server**
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/SFTP** firmware update, TFTP backup and restore; HTTP firmware upgrade; Lantech™ InstaView** for multiple upgrade
N-Key Configurator**	RJ45 dongle for firmware upgrade, auto / editable configuration backup/restoration
Configuration upload and download	Supports text configuration file for system quick installation Optional InstaView for mass backup, editing configuration and upgrade

*Future release

**Optional

ORDERING INFOMATION

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.

■ **IPES-5408DFT-67-QMM-12V..…………...........P/N: 8361-201**
8 10/100TX PoE at/af up to 30W + 2 100M 2KM / Giga SX 550M Q-ODC + 2 10/100/1000T X-coded EN50155 M12 IP67 L2+ PoE Managed Ethernet Switch;9~56V input; -40°C to 75°C

■ **IPES-5408DFT-67-QSM-12V..………..………...P/N: 8361-202**
8 10/100TX PoE at/af up to 30W + 2 100M 10KM / Giga LX 10KM Q-ODC + 2 10/100/1000T X-coded EN50155 M12 IP67 L2+ PoE Managed Ethernet Switch; 9~56V input; -40°C to 75°C

■ **IPES-5408DFT-67-QMM-72V……..………........P/N: 8361-203**
8 10/100TX PoE at/af up to 30W + 2 100M 2KM / Giga SX 550M Q-ODC + 2 10/100/1000T X-coded EN50155 M12 IP67 L2+ PoE Managed Ethernet Switch; 50.4~90V input; -40°C to 60°C

■ **IPES-5408DFT-67-QSM-72V..………....………......P/N: 8361-204**
8 10/100TX PoE at/af up to 30W + 2 100M 10KM / Giga LX 10KM Q-ODC + 2 10/100/1000T X-coded EN50155 M12 IP67 L2+ PoE Managed Ethernet Switch; 50.4~90V input; -40°C to 60°C

■ IPES-5408DFT-67-QMM-110V……..………….…..P/N: 8361-205
8 10/100TX PoE at/af up to 30W + 2 100M 2KM / Giga SX 550M Q-ODC + 2 10/100/1000T X-coded EN50155 M12 IP67 L2+ PoE Managed Ethernet Switch; 43~137.5V input; -40°C to 60°C

■ **IPES-5408DFT-67-QSM-110V..………...…..............P/N: 8361-206**
8 10/100TX PoE at/af up to 30W + 2 100M 10KM / Giga LX 10KM Q-ODC + 2 10/100/1000T X-coded EN50155 M12 IP67 L2+ PoE Managed Ethernet Switch; 43~137.5V input; -40°C to 60°C

■ **IPES-5408DFT-67-QMM-WV..………...............P/N:8361-207**
8 10/100TX PoE at/af up to 30W + 2 100M 2KM / Giga SX 550M Q-ODC + 2 10/100/1000T X-coded EN50155 M12 IP67 L2+ PoE Managed Ethernet Switch; 16.8~137.5V input; -40°C to 75°C

■ **IPES-5408DFT-67-QSM-WV..………...………….P/N:8361-2071**
8 10/100TX PoE at/af up to 30W + 2 100M 10KM / Giga LX 10KM Q-ODC + 2 10/100/1000T X-coded EN50155 M12 IP67 L2+ PoE Managed Ethernet Switch; 16.8~137.5V input; -40°C to 75°C

■ **IPES-5408DFT-54-QMM-12V..………….............P/N:8361-2011**
8 10/100TX PoE at/af up to 30W + 2 100M 2KM / Giga SX 550M Q-ODC + 2 10/100/1000T X-coded EN50155 M12 IP54 L2+ PoE Managed Ethernet Switch; 9~56V input; -40°C to 75°C

■ **IPES-5408DFT-54-QSM-12V..………..………......P/N:8361-2021**
8 10/100TX PoE at/af up to 30W + 2 100M 10KM / Giga LX 10KM Q-ODC + 2 10/100/1000T X-coded EN50155 M12 IP54 L2+ PoE Managed Ethernet Switch; 9~56V input; -40°C to 75°C

■ **IPES-5408DFT-54-QMM-72V……..………..........P/N:8361-2031**
8 10/100TX PoE at/af up to 30W + 2 100M 2KM / Giga SX 550M Q-ODC + 2 10/100/1000T X-coded EN50155 M12 IP54 L2+ PoE Managed Ethernet Switch; 50.4~90V input; -40°C to 60°C

■ **IPES-5408DFT-54-QSM-72V..………....………......P/N:8361-2041**
8 10/100TX PoE at/af up to 30W + 2 100M 10KM / Giga LX 10KM Q-ODC + 2 10/100/1000T X-coded EN50155 M12 IP54 L2+ PoE Managed Ethernet Switch; 50.4~90V input; -40°C to 60°C

■ **IPES-5408DFT-54-QMM-110V……..………….....P/N:8361-2051**
8 10/100TX PoE at/af up to 30W + 2 100M 2KM / Giga SX 550M Q-ODC + 2 10/100/1000T X-coded EN50155 M12 IP54 L2+ PoE Managed Ethernet Switch; 43~137.5V input; -40°C to 60°C

- **IPES-5408DFT-54-QSM-110V...…….....................P/N:8361-2061**
  8 10/100TX PoE at/af up to 30W + 2 100M 10KM / Giga LX 10KM Q-ODC + 2 10/100/1000T X-coded EN50155 M12 IP54 L2+ PoE Managed Ethernet Switch; 43~137.5V input; -40°C to 60°C
- **IPES-5408DFT-54-QMM-WV...……......….......…......P/N:8361-2074**
  8 10/100TX PoE at/af up to 30W + 2 100M 2KM / Giga SX 550M Q-ODC + 2 10/100/1000T X-coded EN50155 M12 IP54 L2+ PoE Managed Ethernet Switch; 16.8~137.5V input; -40°C to 75°C
- **IPES-5408DFT-54-QSM-WV...……...…..:…….........P/N:8361-2075**
  8 10/100TX PoE at/af up to 30W + 2 100M 10KM / Giga LX 10KM Q-ODC + 2 10/100/1000T X-coded EN50155 M12 IP54 L2+ PoE Managed Ethernet Switch; 16.8~137.5V 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 for multiple switches; -20°C to 60°

OPTIONAL ACCESSORIES

M12/M23 Connector & Cable

- **ECONM23-5P(F)70CM CABLE**   M23 power cable 90 degree angle, 70cm, 5 pin, Made in Taiwan
- **ECONM23-5P(F)70CM CABLE-C**   M23 power cable 90 degree angle, 70cm, 5 pin, Made in China
- **ECONM12-5P(M)-W-180**   M12 5P(Male) 180 Degree Wire Type Connector (DI/DO)
- **ECAB124030MJS**   4 Pin M12 RJ45 Male 3 Meters; STP Cable
- **ECABM12X83MSTP**   8 Pin M12 X-coded RJ45 Male 3 METER, STP CABLE w/ Shielding