

I(P)ES-5408T (IP67/IP54)

8 10/100TX + 4 10/100/1000T X-coded L2+ (8 PoE at/af) EN50155 Managed

Ethernet Switch w/ enhanced G.8032 Ring; 24VI/ 24TVI/ WVI model

- EN50155/61373/45545-2 verification
- Built-in IEC 61375-3-4 ECN (Ethernet Consist Network) to work with IEC61375-2-5 ETBN
- PoE model: IEEE802.3at/af up to 30W per port; PoE management incl. detection and scheduling
- PoE model: WVI dual input steps down to 54V output PoE max.80W; optional 24VI/24TVI input can boost to 54V output PoE max 80W
- PoE galvanic isolation (PoE models); Ethernet isolation (All models)
- 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
- Environmental Monitoring for temp., voltage, current and total PoE load (PoE model)
- Miss-wiring avoidance & node failure protection
- Support LACP link aggregation, MLD snooping, IGMP v3/router port, DHCP server & DHCP Option82; DHCP Snooping, DHCP Snooping, Port based DHCP distribution, Mac based DHCP server, QoS by VLAN, SSH v2/SSL, HTTPS, INGRESS/EGRESS ACL L2/L3, QinQ, TACACS+**
- Protocol based VLAN; IPv4 Subnet based VLAN
- Optional bypass in case of power failure (IP67 only)
- N-key configurator** for upgrading, auto/editable configuration back up and restoration without computer
- IP67/IP54 housing; User friendly UI, including auto topology drawing; Complete CLI



IP67 model



IP54 model















12V

OVERVIEW

Lantech I(P)ES-5408T (IP67/IP54) is a high performance L2+ (Gigabit uplink) Ethernet switch with 8 10/100TX (D-coded) + 4 10/100/1000T(X-coded) (w/8 PoE 802.3af/at ports 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 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 ports with advanced PoE management (PoE

model)

Lantech IPES-5408T (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.

Wide selection of input range models (24VI/ 24TVI/ WVI) w/maximum PoE budget

The Lantech I(P)ES-5408T is designed with various dual power input to feed 54V PoE. The WVI model accepts 16.8V~137.5V

Datasheet Version 1.6



wide range input and yields PoE budget max 80W (PoE model). Featured with relay contact alarm function, the I(P)ES-5408T (IP67/IP54) is able to connect with alarm system in case of power failure or port disconnection events.

The 24VI model accepts 9V~36V input and 24TVI model accepts 16.8V~56V input with PoE budget max.80W (PoE model) (A-code power connector). The switch supports Ethernet and PoE galvanic isolation.

Miss-wiring avoidance, Loop protection, Node failure protection

The I(P)ES-5408T (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 I(P)ES-5408T (IP67/IP54) 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.

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 needs 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.

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 UI, Auto topology drawing, complete CLI

The user friendly UI, innovative auto topology drawing and topology demo makes I(P)ES-5408T (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; MRP ring

Lantech I(P)ES-5408T (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. MRP (Media Redundancy Protocol) can be supported for industrial automation networks.

QoS by VLAN for legacy devices to tag with priority

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.

Built-in IEC 61375-3-4 ECN (Ethernet Consist Network) to work with IEC61375-2-5 TBN

Lantech OS1 Ethernet switches comply with IEC 61375-3-4 (ECN) standard. The support of Ethernet Consist Network allows interconnection between end devices located in single consist of train and interoperability with IEC61375-2-5 (TBN).

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.

Editable configuration file; Optional N-key auto backup, Exported text file

The configuration file of Lantech I(P)ES-5408T (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/editable configuration back up and restoration without computer by adjusting the DIP switch.

Event log & message; 1 DI + 1 DO

In case of event, the I(P)ES-5408T (IP67/IP54) is able to send an email** 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 to show switch inside info

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

EN50155, EN45545-2, EN61373 verification; High ESD protection

Lantech I(P)ES-5408T (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 I(P)ES-5408T (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 & 61373 verification, the I(P)ES-5408T (IP67/IP54) is best for railway in train/track side, vehicle and mining applications. For more usage flexibilities, I(P)ES-5408T (IP67/IP54) supports wide operating temperature from -40°C to 75°C

Optional bypass relay prevent from power lost (IP67 only)

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. Smart bypass can be activated when switch encounters power failure. (-BT/-BBT model)

FEATURES & BENEFITS

- 8 10/100TX (D-coded) + 4 10/100/1000T (X-coded)
 (w/8 PoE 802.3af/at ports) EN50155 IP67/IP54 M12
 Managed Ethernet Switch (Total 12 Ports Switch)
- EN45545-2 Fire & Smoke, EN50155 and EN61373 shock/vibration verification
- PoE model: IEEE802.3at/af feeding power up to 30W per PoE port at 45~56VDC at port 1-8
- PoE model: PoE management including PoE detection and scheduling for PD (power devices)
- PoE 24VI model accepts dual power input ranges from 9~36V and can boost up to 54V for PoE 802.3at/af max. 80W budget
- PoE 24TVI model accepts dual power input ranges from 16.8~56V and can boost up to 54V for PoE 802.3at/af max. 80W budget
- PoE WVI model accepts dual 16.8~137.5V input and feed 54V for PoE at/af at max 80W budget
- PoE galvanic isolation; Galvanic isolation from power input/Ethernet ports to system 1.5KV
- N-key** configurator for firmware upgrade, auto/editable configuration back up and restoration
- 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
- 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
 Snooping; DHCP Option 66; Basic IPv6 DHCP

server

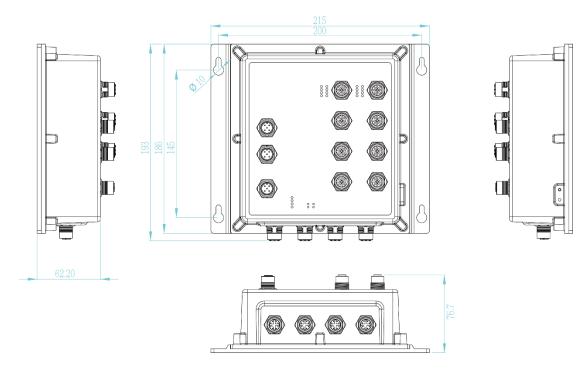
- Mac based DHCP server to assign IP address
- Bandwidth Control
 - Ingress packet filter and egress rate limit
 - Broadcast/multicast packet filter control
- Relay alarm output system events
- Miss-wiring avoidance
 - LED indicator
- Node failure protection
 - Ensure the switches in a ring to survive after power breakout is back
 - The status can be shown in NMS when each switch is back
- TFTP/ HTTP firmware upgrade
- System Event Log and SNMP Trap for alarm support; 32 RMON counters
- MLD Snooping for IPv6 Multicast stream
- 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.
 - 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;
- Watchdog design to auto reboot switch CPU is found dead
- Built-in environmental monitoring for system input voltage, current, ambient temperature
- Supports 1DI + 1DO (Digital Input/Digital Output)
- IP67/IP54 aluminum housing with DIN rail** and wall mount design
- Diagnostic including Ping / DDM information
- Bypass protection** Bypass failed switch caused by power failure of switch to protect network intactness (IP67 only)
- Built-in IEC 61375-3-4 ECN (Ethernet Consist Network) to work with IEC61375-2-5 TBN
- Auto Provision to verify switch firmware with the latest or certain version
- Configuration backup and restoration



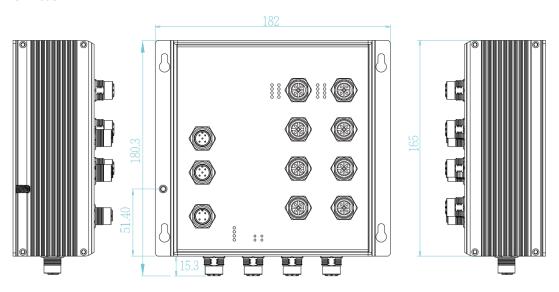
Supports editable configuration file for system quick installation N-key** for mass configuration auto-backup, editable restoration and auto firmware upgrade

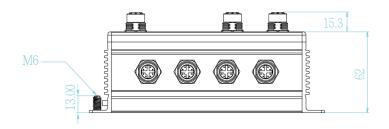
DIMENSIONS (unit=mm)

IP67 model



IP54 model







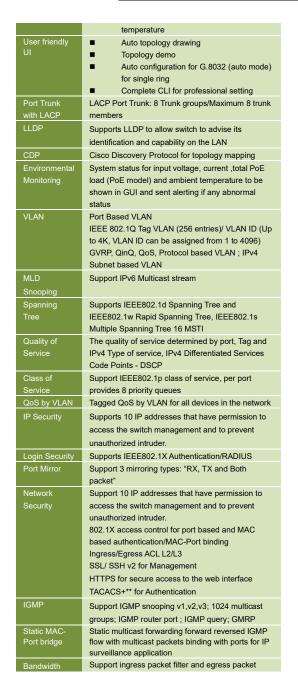
SPECIFICATION

Hardware	Specification
Standards	IEEE 802.3 10Base-T Ethernet
Starraaras	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 IEEE802.3at/af Power over Ethernet
Switch	Back-plane (Switching Fabric): 9.6Gbps
Architecture	Back-plane (Switching Fabric). 9.00bps
	14 990pps for Ethernet part
Transfer Rate	14,880pps for Ethernet port 148,800pps for Fast Ethernet port
	1,488,000pps for Gigabit Ethernet port
Mac Address	16K MAC address table
Jumbo frame	10KB
Connectors	10/100TX: 8 x ports M12 4-pole D-coded with Auto
- Connectors	MDI/MDI-X function
	10/100/1000T: 4 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 M12 5-pole A-coded Male (WV)
	Power
	PWR1 PWR2
	$V+\frac{\sqrt{2}}{\sqrt{2}}$ \bullet 1 $V+$
	3 5 4
	V- V-
	1 x M12 5-pole A-coded Male (24V)
	, , ,
	Power
	PWR1 PWR2
	$V+\frac{\sqrt{2}}{\sqrt{2}}$ $O(1)$ $V+$
	. (. •)
	V- \(\frac{3}{3} \int 5 \) \(\frac{4}{4} \) \(\frac{1}{2} \)
	.
	Relay contact : 1 x M12 5-pole A-coded
Network	10Base-T: 2-pair UTP/STP Cat. 3, 4, 5/ 5E/ 6 cable
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
Bynasa	Built-in bypass module on uplink ports to pass to
Bypass Protection**	next switch in case of power failure (two pairs)
LED	Per unit: Power 1 (Green), Power 2 (Green), FAULT
	(Red)
	Ethernet port: Link/Activity (Green), Speed (Green);
	R.M. indicator (Green)
	PoE (Green, PoE model)
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 80 VDC,
	50mA
Operating	5% ~ 95% (Non-condensing)
Humidity	

Total and the content of the conte		
Temperature Storage Temperature Power Supply Dual 9-36VDC (24VI) Dual 16.8-5VDC (24VI	Operating	-40°C~75°C / -40°F~167°F
Temperature Power Supply Dual 16.8–36VDC (24VI) Dual 16.8–36VDC (24TVI) Dual 16.8–36VDC (24TVI) Dual 16.8–36VDC (24TVI) Dual 16.8–37.5VDC (WVI) (PoE galvanic isolation for PoE models; Ethernet galvanic isolation for all models) Total 80W @ 24 VDC and above Higher PoE budget can be applied upon request. ** PoE Budget (PoE model) POE pin assignment (PoE model) 10/100TX 1:TX+ 2:RX+ 4:RX- Power Max. 11W for 24V input Max. 16W for WV input Dimensions 1P67 model: Aluminum case 215mm(W)x200mm(H)x76.7mm(D) IP54 model: Aluminum case 125mm(W)x180.3mm(H)x77.3mm(D) Weight 1.4kgs (IP67); 1.8kgs(IP54) Installation IP67 model: DIN Rail** and Wall Mount Design IP54 model: CE EN61000-4-3, CE EN61000-4-4, CE EN61000-4-3, CE EN61000-4-6, CE EN61000-4-8, CE EN61000-4-6, CE EN61000-6-4, CE EN61000-6-2, CE EN61000-6-4, CE EN61000-6-2, CE EN61000-6-8, CE EN61000-6-2, CE EN61000-6-9, CE EN61000-6-2, CE		
Power Supply Dual 9-36/DC (24/V) Dual 16.8-56/DC (24/V) Dual 16.8-56/DC (24/V) (PoE galvanic isolation for PoE models; Ethernet galvanic isolation for all models) Total 80/V (@ 24 VDC and above Higher PoE budget can be applied upon request. ** PoE pin assignment (PoE model) **PoE model) **PoE model** **PoWer Consumption Dimensions **IPOT model: Aluminum case 215mm(W)x200mm(H)x76.7mm(D) IPS4 model: Aluminum case 125mm(W)x200mm(H)x76.7mm(D) IPS4 model: Aluminum case 132mm(W)x180.3mm(H)x77.3mm(D) **Weight** **IAWS (IPG7): 1.8kgs(IPS4) **Installation** IPG7 model: DIN Rail** and Wall Mount Design IPS4 model: Wall Mount Design IPS5 model: Wall Mount Desi	Storage	-40°C~85°C / -40°F~185°F
Dual 16.8-56VDC (24TVI) Dual 16.8-137.5VDC (WVI) (POE galvanic isolation for PoE models; Ethernet galvanic isolation for all models) Total 80W @ 24 VDC and above Higher PoE budget can be applied upon request. ** M12 port #1~# 8 support IEEE 802. 3at/af Endpoint. Per port provides up to 30W M12 port #1~# 8 support IEEE 802. 3at/af Endpoint. Per port provides up to 30W 10/100TX 10/100TX 11/17X 2/17X 2/17X		D. 10.00\/D0.40\/\)
Dual 16.8–137.5VDC (WVI) (PoE galvanic isolation for PoE models; Ethernet galvanic isolation for all models) Total 80W @ 24 VDC and above Higher PoE budget can be applied upon request. ** M12 port # 1~ # 8 support IEEE 802. 3at/af Endpoint. Per port provides up to 30W 10/100TX 11:TX+ 2:RX+ 3:TX- 4:RX- Power Consumption Dimensions IP67 model: Aluminum case 215mm(W)x200mm(H)x76.7mm(D) IP54 model: Aluminum case 182mm(W)x180.3mm(H)x77.3mm(D) IP54 model: Aluminum case 182mm(W)x180.3mm(H)x77.3mm(D) Weight Installation IP67 model: DIN Rail** and Wall Mount Design IP54 model: Wall Mount Design IP55 wall Wall Mount Design IP55 wall Wall Mount Design IP56 wall Wall Mount Design IP57 wall Wall Mount Design IP58 wall Wall	Power Supply	
qalvanic isolation for all models) Total 80W @ 24 VDC and above Higher PoE budget can be applied upon request. ** M12 port # 1~ # 8 support IEEE 802. 3at/af End-point. Per port provides up to 30W 10/100TX 10/100TX 2 1:TX+ 2:RX+ 3:TX- 4:RX- Power Max. 11W for 24V input Consumption Max. 16W for WV input Dimensions IP67 model: Aluminum case 215mm(W)x200mm(H)x76.7mm(D) IP54 model: Aluminum case 182mm(W)x180.3mm(H)x77.3mm(D) IP67 model: DiN Rail** and Wall Mount Design IP67 model: Class A, CE EN55032 Class A, CE EN55024, CE EN61000-4-2, CE EN61000-4-3, CE EN61000-4-2, CE EN61000-4-5, CE EN61000-4-6, CE EN61000-4-8, CE EN61000-4-6, CE EN61000-4-8, CE EN61000-6-2, CE EN61000-6-4 Stability Testing MTBF 685,902 hrs. (IEC 62380 standards) Verifications & report EN50155EN50121-3-2/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 Warranty Syears Software Specification Warranty Syears Software Specification Management SMMP VI v2c, v3/ Web/Telnet/CLI SNMP MIB Bridge MIB IF MIB RMON MIB Private MIB ITU 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 Ring covers multicast on different ports Train mode for auto coupling ring configuration 1. PoE Detection to check if PD hangs then restart the PD POE Management (PoE model) 2. PoE Scheduling to On/OFF PD upon routine time table		, ,
qalvanic isolation for all models) Total 80W @ 24 VDC and above Higher PoE budget can be applied upon request. ** PoE pin assignment (PoE model) M12 port # 1~ # 8 support IEEE 802. 3at/af End-point. Per port provides up to 30W 10/100TX 10/100TX 2 1:TX+ 2:RX+ 3:TX- 4:RX- Power Max. 11W for 24V input Consumption Max. 16W for WV input Max. 16W for WV input Dimensions IP67 model: Aluminum case 215mm(W)x20omm(H)x76.7mm(D) IP54 model: Aluminum case 182mm(W)x180.3mm(H)x77.3mm(D) IP67 model: DiN Rail** and Wall Mount Design IP67 model: Wall Mount Design IP67 model: Wall Mount Design IP67 model: Class A, CE EN55032 Class A, CE EN55024, CE EN61000-4-2, CE EN61000-4-3, CE EN61000-4-2, CE EN61000-4-5, CE EN61000-4-6, CE EN61000-4-8, CE EN61000-4-6, CE EN61000-4-8, CE EN61000-4-6, CE EN61000-6-4 Stability Ensity Testing MTBF 685,902 hrs. (IEC 62380 standards) 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 Warranty Syears Software Specification Warranty Syears Software Specification Management SNMP VI v2c, v3/ Web/Telnet/CLI SNMP MIB Bridge MIB IF MIB RMON 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 Ring covers multicast on different ports Train mode for auto coupling ring configuration 1. PoE Detection to check if PD hangs then restart the PD PoE Management (PoE model) 2. PoE Scheduling to On/OFF PD upon routine time table		
POE Budget (PoE model) POE pin assignment (PoE model) M12 port #1~ # 8 support IEEE 802. 3at/af End-point. Per port provides up to 30W 10/100TX 11:TX+ 2:RX+ 3:TX+ 4:RX- Power Consumption Max. 11W for 24V input Max. 16W for WV input IPF6 model: Aluminum case 215mm(W)x200mm(H)x76.7mm(D) IP54 model: Aluminum case 182mm(W)x180.3mm(H)x77.3mm(D) IP54 model: Aluminum case 182mm(W)x180.3mm(H)x77.3mm(D) Weight Installation IP67 model: DIN Rail** and Wall Mount Design IP54 model: Aluminum case IP57 model: A		
Higher PoE budget can be applied upon request. ** PoE pin assignment (PoE model) 10/100TX 10/100TX 11:TX+ 2:RX+ 3:TX- 4:RX- 2:FX+ 3:TX- 4:RX- 2:FX+ 3:TX- 4:RX- 2:FX+ 3:TX- 4:RX- 2:FX- 3:TX- 4:RX- 4:RX	PoF Budget	•
POE pin assignment (PoE model) 10/100TX 10/100TX 11:TX+ 2:RX+ 3:TX- 4:RX- 4:RX- 3:TX- 4:RX- 3:TX- 4:RX- 4:RX- 3:TX- 4:RX- 4:RX- 3:TX- 4:RX- 4	_	
Poemodel 10/100TX		M12 port # 1~ # 8 support IEEE 802. 3at/af End-
Time		
Power Consumption Dimensions P67 model: Aluminum case 215mm(W)x200mm(H)x76.7mm(D) P54 model: Aluminum case 182mm(W)x180.3mm(H)x77.3mm(D) Weight P67 model: DIN Rail** and Wall Mount Design P68 model: Wall Mount Design P69 model: Wall Mount Design P60 model: Wall Mount Design P60 model: Wall Mount Design P60 model: Wall Mount Design EMI & EMS FCC Class A, CE EN55032 Class A, CE EN55024, CE EN61000-4-2, CE EN61000-4-3, CE EN61000-4-4, CE EN61000-4-3, CE EN61000-4-4, CE EN61000-4-8, CE EN61000-6-2, CE EN61000-6-4 Stability Testing MTBF 685,902 hrs. (IEC 62380 standards) Verifications & 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 Warranty Syears Software Specification Management SNMP v1 v2c, v3/ Web/Telnet/CLI SNMP MIB MIB IF MIB RMON 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 Support various ring/chain topologies 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 Ring covers multicast on different ports Train mode for auto coupling ring configuration 1. P0E Detection to check if PD hangs then restart the PD P0E Management (P0E model) 2. P0E Scheduling to On/OFF PD upon routine time table	(PoE model)	
Power Consumption Dimensions P67 model: Aluminum case 215mm(W)x200mm(H)x76.7mm(D) P54 model: Aluminum case 182mm(W)x180.3mm(H)x77.3mm(D) Weight P67 model: DIN Rail** and Wall Mount Design P68 model: Wall Mount Design P69 model: Wall Mount Design P60 model: Wall Mount Design P60 model: Wall Mount Design P60 model: Wall Mount Design EMI & EMS FCC Class A, CE EN55032 Class A, CE EN55024, CE EN61000-4-2, CE EN61000-4-3, CE EN61000-4-4, CE EN61000-4-3, CE EN61000-4-4, CE EN61000-4-8, CE EN61000-6-2, CE EN61000-6-4 Stability Testing MTBF 685,902 hrs. (IEC 62380 standards) Verifications & 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 Warranty Syears Software Specification Management SNMP v1 v2c, v3/ Web/Telnet/CLI SNMP MIB MIB IF MIB RMON 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 Support various ring/chain topologies 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 Ring covers multicast on different ports Train mode for auto coupling ring configuration 1. P0E Detection to check if PD hangs then restart the PD P0E Management (P0E model) 2. P0E Scheduling to On/OFF PD upon routine time table		
Power Consumption Dimensions IP67 model: Aluminum case 215mm(W)x200mm(H)x76.7mm(D) IP54 model: Aluminum case 182mm(W)x180.3mm(H)x77.3mm(D) IP67 model: Aluminum case 182mm(W)x180.3mm(H)x77.3mm(D) IP67 model: Aluminum case 182mm(W)x180.3mm(H)x77.3mm(D) IP64 model: Aluminum case 182mm(W)x180.3mm(H)x77.3mm(D) IP67 model: DIN Raii** and Wall Mount Design IP54 model: Aluminum Case IP56 model: Wall Mount Design IP54 model: Aluminum Case IP56 model: Aluminum IP57 model: Din IP56 model: Aluminum IP57 model: Din IP56 model: Aluminum IP57 mo		10/1001X
Power Consumption Dimensions IP67 model: Aluminum case 215mm(W)x200mm(H)x76.7mm(D) IP54 model: Aluminum case 182mm(W)x180.3mm(H)x77.3mm(D) IP67 model: Aluminum case 182mm(W)x180.3mm(H)x77.3mm(D) IP67 model: Aluminum case 182mm(W)x180.3mm(H)x77.3mm(D) IP64 model: Aluminum case 182mm(W)x180.3mm(H)x77.3mm(D) IP67 model: DIN Raii** and Wall Mount Design IP54 model: Aluminum Case IP56 model: Wall Mount Design IP54 model: Aluminum Case IP56 model: Aluminum IP57 model: Din IP56 model: Aluminum IP57 model: Din IP56 model: Aluminum IP57 mo		1 2 1:TV4
Power Consumption Dimensions IP67 model: Aluminum case 215mm(W)x200mm(H)x76.7mm(D) IP54 model: Aluminum case 182mm(W)x180.3mm(H)x73.3mm(D) Weight Installation IP67 model: DIN Raii** and Wall Mount Design IP54 model:		
Power Consumption Dimensions IP67 model: Aluminum case 215mm(W)x200mm(H)x76.7mm(D) IP54 model: Aluminum case 182mm(W)x180.3mm(H)x77.3mm(D) IP67 model: Aluminum case 182mm(W)x180.3mm(H)x77.3mm(D) IP67 model: DIN Rail** and Wall Mount Design IP67 model: DIN Rail** and Wall Mount Design IP64 model: Wall Mount Design IP64 model: Wall Mount Design IP64 model: Vall Mount Design IP64 model: DIN Rail** IP67 model: DIN Rail** IP67 model: DIN Rail** IP68 model: Aluminum Case 182 model: Vall Mount Design IP64 model: Aluminum Case 182 model: Vall Mount Design IP64 model: Aluminum Case 182 model: Aluminum Case 183 model: Aluminum Case 184 model: Aluminum Case 185 model: Aluminum 185 model: Aluminum 186 model: Aluminum 186 model: Aluminum 187 model: Aluminum 187 model: Aluminum 1		1 4 3 1
Consumption		4:RX-
Dimensions IP67 model: Aluminum case 215mm(W)x200mm(H)x76.7mm(D) IP54 model: Aluminum case 182mm(W)x180.3mm(H)x77.3mm(D) Weight 1.4kgs (IP67); 1.8kgs(IP54) Installation IP67 model: DIN Raii** and Wall Mount Design IP54 model: Wall Mount Design	Power	Max. 11W for 24V input
215mm(W)x200mm(H)x76.7mm(D) IP54 model: Aluminum case 182mm(W)x180.3mm(H)x77.3mm(D) Weight 1.4kgs (IP67); 1.8kgs(IP54) Installation IP67 model: DIN Rail** and Wall Mount Design IP54 model: Wall Mount Design IP54 model: Wall Mount Design EMI & EMS FCC Class A, CE EN55032 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 EN61000-4-8, CE EN61000-6-2, CE EN61000-6-4 Stability Testing MTBF 685,902 hrs. (IEC 62380 standards) Verifications & 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 Warranty 5 years Software Specification Management SNMP V1 v2c, v3/ Web/Telnet/CLI SNMP MIB MIBI SNMP MIB Bridge MIB IF MIB RMON 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 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 Ring covers multicast on different ports Train mode for auto coupling ring configuration PoE Management (PoE model) 2. PoE Scheduling to On/OFF PD upon routine time table	Consumption	Max. 16W for WV input
IP54 model: Aluminum case 182mm(W)x180.3mm(H)x77.3mm(D) Weight 1.4kgs (IP67); 1.8kgs(IP54) Installation IP67 model: DIN Rail** and Wall Mount Design IP54 model: Wall Mount Design EMI & EMS FCC Class A, CE EN55032 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 EN61000-4-8, CE EN61000-6-2, CE EN61000-6-4 Stability Testing MTBF 685,902 hrs. (IEC 62380 standards) Verifications & EN50155/EN50121-3-2/EN50121-4 verification report EN45545-2 R13/R22/R23/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 Bridge MIB IF MIB RMON 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 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 Ring covers multicast on different ports Train mode for auto coupling ring configuration PoE Management (PoE model) 2. PoE Scheduling to On/OFF PD upon routine time table	Dimensions	
182mm(W)x180.3mm(H)x77.3mm(D) Weight		
Neight		
Installation IP67 model: DIN Rail** and Wall Mount Design IP54 model: Wall Mount Design EMI & EMS FCC Class A, CE EN55024, CE EN55032 Class A, CE EN55024, CE EN61000-4-2, CE EN61000-4-3, CE EN61000-4-6, CE EN61000-4-5, CE EN61000-4-6, CE EN61000-4-8, CE EN61000-6-2, CE EN61000-6-4 Stability EN61373 (Shock and Vibration) MTBF 685,902 hrs. (IEC 62380 standards) Verifications & 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 Warranty 5 years Software Specification Management SNMP v1 v2c, v3/ Web/Telnet/CLI SNMP MIB MIBI SNMP MIB Bridge MIB IF MIB RMON 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 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 Ring covers multicast on different ports Train mode for auto coupling ring configuration POE Management (POE model) 1. POE Detection to check if PD hangs then restart the PD 2. POE Scheduling to On/OFF PD upon routine time table	Weight	
IP54 model: Wall Mount Design FCC Class A, CE EN55032 Class A, CE EN55024, CE EN61000-4-2, CE EN61000-4-3, CE EN61000-4-2, CE EN61000-4-5, CE EN61000-4-6, CE EN61000-4-8, CE EN61000-6-2, CE EN61000-6-4 Stability Testing MTBF 685,902 hrs. (IEC 62380 standards) 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 Warranty 5 years Software Specification Management SNMP V1 v2c, v3/ Web/Telnet/CLI SNMP MIB IF MIB RMON 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 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 Ring covers multicast on different ports Train mode for auto coupling ring configuration PoE Management (PoE model) 1. PoE Detection to check if PD hangs then restart the PD 2. PoE Scheduling to On/OFF PD upon routine time table		
CE EN55032 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 EN61000-4-8, CE EN61000-6-2, CE EN61000-6-4 EN61373 (Shock and Vibration) MTBF 685,902 hrs. (IEC 62380 standards) Verifications & 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 Warranty 5 years Software Specification Management SNMP v1 v2c, v3/ Web/Telnet/CLI SNMP MIB MIBI SNMP MIB Bridge MIB IF MIB RMON 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 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 Ring covers multicast on different ports Train mode for auto coupling ring configuration PoE Management (PoE model) 2. PoE Scheduling to On/OFF PD upon routine time table		
CE EN61000-4-2, CE EN61000-4-3, CE EN61000-4-4, CE EN61000-4-5, CE EN61000-4-6, CE EN61000-6-4 Stability Testing MTBF 685,902 hrs. (IEC 62380 standards) Verifications & 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 Warranty 5 years Software Specification Management SNMP v1 v2c, v3/ Web/Telnet/CLI SNMP MIB IF MIB RMON MIB Private MIB IF MIB RMON 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 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 Ring covers multicast on different ports Train mode for auto coupling ring configuration PoE Management (PoE model) 2. PoE Scheduling to On/OFF PD upon routine time table	EMI & EMS	FCC Class A,
CE EN61000-4-4, CE EN61000-4-5, CE EN61000-4-6, CE EN61000-4-8, CE EN61000-6-2, CE EN61000-6-4 Stability Testing MTBF 685,902 hrs. (IEC 62380 standards) Verifications & EN50155/EN50121-3-2/EN50121-4 verification EN45545-2 R13/R22/R23/R24/R25 (EN ISO 4589-2, EN ISO 6569-2, NF X70-100-1 & 2) Fire & Smoke verification Warranty 5 years Software Specification Management SNMP V1 v2c, v3/ Web/Telnet/CLI SNMP MIB MIBI SNMP MIB Bridge MIB IF MIB RMON 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 Ring covers multicast on different ports Train mode for auto coupling ring configuration PoE Management (PoE model) 2. PoE Scheduling to On/OFF PD upon routine time table		CE EN55032 Class A, CE EN55024,
CE EN61000-4-6, CE EN61000-4-8, CE EN61000-6-2, CE EN61000-6-4 Stability Testing MTBF 685,902 hrs. (IEC 62380 standards) 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 Warranty 5 years Software Specification Management SNMP MIB MIBI SNMP MIB Bridge MIB IF MIB RMON 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 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 Ring covers multicast on different ports Train mode for auto coupling ring configuration PoE Management (PoE model) 2. PoE Scheduling to On/OFF PD upon routine time table		
CE EN61000-6-2, CE EN61000-6-4 Stability Testing MTBF 685,902 hrs. (IEC 62380 standards) Verifications & 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 Warranty 5 years Software Specification Management SNMP V1 v2c, v3/ Web/Telnet/CLI SNMP MIB MIBII SNMP MIB Bridge MIB IF MIB RMON 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 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 Ring covers multicast on different ports Train mode for auto coupling ring configuration PoE Management (PoE model) 2. PoE Scheduling to On/OFF PD upon routine time table		
Stability Testing MTBF 685,902 hrs. (IEC 62380 standards) Verifications & 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 Warranty 5 years Software Specification Management SNMP v1 v2c, v3/ Web/Telnet/CLI SNMP MIB MIBI SNMP MIB Bridge MIB IF MIB RMON 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 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 Ring covers multicast on different ports Train mode for auto coupling ring configuration PoE Management (PoE model) 2. PoE Scheduling to On/OFF PD upon routine time table		
MTBF 685,902 hrs. (IEC 62380 standards) Verifications & 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 Warranty 5 years Software Specification Management SNMP v1 v2c, v3/ Web/Telnet/CLI SNMP MIB MIBI SNMP MIB Bridge MIB IF MIB RMON 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 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 Ring covers multicast on different ports Train mode for auto coupling ring configuration PoE Management (PoE model) 2. PoE Scheduling to On/OFF PD upon routine time table	Stability	
Verifications & 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 Warranty 5 years Software Specification Management SNMP v1 v2c, v3/ Web/Telnet/CLI SNMP MIB MIBI SNMP MIB Bridge MIB IF MIB RMON 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 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 Ring covers multicast on different ports Train mode for auto coupling ring configuration PoE Management (PoE model) 2. PoE Scheduling to On/OFF PD upon routine time table		· · · · · · · · · · · · · · · · · · ·
EN45545-2 R13/R22/R23/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 MIBI SNMP MIB Bridge MIB IF MIB RMON MIB Private 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 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 Ring covers multicast on different ports Train mode for auto coupling ring configuration PoE Management (PoE model) 1. PoE Detection to check if PD hangs then restart the PD 2. PoE Scheduling to On/OFF PD upon routine time table	MTBF	685,902 hrs. (IEC 62380 standards)
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 MIBI SNMP MIB Bridge MIB IF MIB RMON 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 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 Ring covers multicast on different ports Train mode for auto coupling ring configuration PoE Management (PoE model) 2. PoE Scheduling to On/OFF PD upon routine time table	Verifications &	EN50155/EN50121-3-2/EN50121-4 verification
Smoke verification Warranty 5 years Software Specification Management SNMP v1 v2c, v3/ Web/Telnet/CLI SNMP MIB MIBI SNMP MIB Bridge MIB IF MIB RMON MIB Private MIB Support ITU G.8032 v2/2012 for Ring protection in less than 20ms for self-heal recovery (basic mode) Support various ring/chain topologies 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 Ring covers multicast on different ports Train mode for auto coupling ring configuration PoE Management (PoE model) 1. PoE Detection to check if PD hangs then restart the PD 2. PoE Scheduling to On/OFF PD upon routine time table	report	·
Software Specification Management SNMP v1 v2c, v3/ Web/Telnet/CLI SNMP MIB MIB MIBI SNMP MIB Bridge MIB IF MIB RMON MIB Private MIB Support ITU G.8032 v2/2012 for Ring protection in less than 20ms for self-heal recovery (basic mode) Support various ring/chain topologies 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 Ring covers multicast on different ports Train mode for auto coupling ring configuration PoE Management (PoE model) 1. PoE Detection to check if PD hangs then restart the PD 2. PoE Scheduling to On/OFF PD upon routine time table		
Software Specification Management SNMP v1 v2c, v3/ Web/Telnet/CLI SNMP MIB MIB MIBI SNMP MIB Bridge MIB IF MIB RMON MIB Private MIB Support ITU G.8032 v2/2012 for Ring protection in less than 20ms for self-heal recovery (basic mode) Support various ring/chain topologies Support various ring/chain topologies Support various ring, auto ring, basic single ring, enhanced ring, multiple-VLAN ring Enhanced G.8032 ring configuration with ease Ring covers multicast on different ports Train mode for auto coupling ring configuration PoE Management (PoE model) 1. PoE Detection to check if PD hangs then restart the PD 2. PoE Scheduling to On/OFF PD upon routine time table	\\\\-\\\\-\\\\\\\\\\\\\\\\\\\\\\\\\\\\	
Management SNMP v1 v2c, v3/ Web/Telnet/CLI SNMP MIB MIB MIBII SNMP MIB Bridge MIB IF MIB RMON MIB Private MIB Support ITU G.8032 v2/2012 for Ring protection in less than 20ms for self-heal recovery (basic mode) Support various ring/chain topologies 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 Ring covers multicast on different ports Train mode for auto coupling ring configuration PoE Management (PoE model) 2. PoE Scheduling to On/OFF PD upon routine time table		
SNMP MIB MIB MIBII SNMP MIB Bridge MIB IF MIB RMON MIB Private MIB Support ITU G.8032 v2/2012 for Ring protection in less than 20ms for self-heal recovery (basic mode) Support various ring/chain topologies 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 Ring covers multicast on different ports Train mode for auto coupling ring configuration PoE Management (PoE model) 1. PoE Detection to check if PD hangs then restart the PD 2. PoE Scheduling to On/OFF PD upon routine time table		
MIBII SNMP MIB Bridge MIB IF MIB RMON MIB Private MIB Support ITU G.8032 v2/2012 for Ring protection in less than 20ms for self-heal recovery (basic mode) Support various ring/chain topologies 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 Ring covers multicast on different ports Train mode for auto coupling ring configuration PoE Management (PoE model) 2. PoE Scheduling to On/OFF PD upon routine time table		
Bridge MIB IF MIB RMON 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 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 Ring covers multicast on different ports Train mode for auto coupling ring configuration PoE Management (PoE model) 1. PoE Detection to check if PD hangs then restart the PD 2. PoE Scheduling to On/OFF PD upon routine time table		
IF MIB RMON MIB Private MIB Support ITU G.8032 v2/2012 for Ring protection in less than 20ms for self-heal recovery (basic mode) Support various ring/chain topologies 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 Ring covers multicast on different ports Train mode for auto coupling ring configuration PoE Management (PoE model) 2. PoE Scheduling to On/OFF PD upon routine time table		
RMON MIB Private MIB Support ITU G.8032 v2/2012 for Ring protection in less than 20ms for self-heal recovery (basic mode) Support various ring/chain topologies 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 Ring covers multicast on different ports Train mode for auto coupling ring configuration PoE Management (PoE model) 2. PoE Scheduling to On/OFF PD upon routine time table		_
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 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 Ring covers multicast on different ports Train mode for auto coupling ring configuration PoE Management (PoE model) 1. PoE Detection to check if PD hangs then restart the PD 2. PoE Scheduling to On/OFF PD upon routine time table		
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 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 Ring covers multicast on different ports Train mode for auto coupling ring configuration PoE Management (PoE model) 1. PoE Detection to check if PD hangs then restart the PD 2. PoE Scheduling to On/OFF PD upon routine time table		
less than 20ms for self-heal recovery (basic mode) Support various ring/chain topologies 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 Ring covers multicast on different ports Train mode for auto coupling ring configuration PoE Management (PoE model) 1. PoE Detection to check if PD hangs then restart the PD 2. PoE Scheduling to On/OFF PD upon routine time table	ITU 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 Ring covers multicast on different ports Train mode for auto coupling ring configuration PoE Management (PoE model) 2. PoE Scheduling to On/OFF PD upon routine time table		
Includes train ring, auto ring, basic single ring, enhanced ring, multiple-VLAN ring Enhanced G.8032 ring configuration with ease Ring covers multicast on different ports Train mode for auto coupling ring configuration PoE Management (PoE model) 2. PoE Scheduling to On/OFF PD upon routine time table		Support various ring/chain topologies
enhanced ring, multiple-VLAN ring Enhanced G.8032 ring configuration with ease Ring covers multicast on different ports Train mode for auto coupling ring configuration PoE 1. PoE Detection to check if PD hangs then restart the PD 2. PoE Scheduling to On/OFF PD upon routine time table		Support various ring/chain topologies
Enhanced G.8032 ring configuration with ease Ring covers multicast on different ports Train mode for auto coupling ring configuration PoE I. PoE Detection to check if PD hangs then restart the PD 2. PoE Scheduling to On/OFF PD upon routine time table		Includes train ring, auto ring, basic single ring,
Ring covers multicast on different ports Train mode for auto coupling ring configuration PoE 1. PoE Detection to check if PD hangs then restart the PD 2. PoE Scheduling to On/OFF PD upon routine time table		enhanced ring, multiple-VLAN ring
PoE 1. PoE Detection to check if PD hangs then restart the PD (PoE model) 2. PoE Scheduling to On/OFF PD upon routine time table		,
PoE 1. PoE Detection to check if PD hangs then restart the PD (PoE model) 2. PoE Scheduling to On/OFF PD upon routine time table		
Management (PoE model) 2. PoE Scheduling to On/OFF PD upon routine time table	PoF	
(PoE model) 2. PoE Scheduling to On/OFF PD upon routine time table		, and the second se
routine time table	-	
3 On/ Off voltage current watts		
o. On on, voltage, current, watts,		3. On/ Off, voltage, current, watts,

_antech





Control	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
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
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
DHCP	Environmental abnormal Provide DHCP Client/ DHCP Server/DHCP Option
DHCF	82/Port based DHCP; DHCP Snooping; DHCP Option 66; Basic IPv6 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	Supports TFTP firmware update, TFTP backup and
Update	restore; HTTP firmware upgrade
ECN	Complies with IEC 61375-3-4 (ECN) standard. The
	support of Ethernet Consist Network allows
	interconnection between end devices located in
	single consist of train and interoperability with IEC61375-2-5 (TBN).
Diagnostic	Support Ping, ARP table and DDM information
N-Key	RJ45 dongle for firmware upgrade, auto / editable
Configurator**	configuration backup/restoration
Configuration	Supports editable configuration file for system quick
upload and	installation
download	
Auto Donidio	T

*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 -BT/BBT model name. (only on IP67 version)

IPES-5408T-67-24VI......P/N: 8360-60493

8 10/100TX PoE at/af up to 30W + 4 10/100/1000T X-coded EN50155 M12 IP67 L2+ Managed Ethernet Switch; 9V~36V dual input w/ PoE galvanic isolation; -40°C to 75°C

IPES-5408T-54-24VI......P/N: 8360-60494

8 10/100TX PoE at/af up to 30W + 4 10/100/1000T X-coded EN50155 M12 IP54 L2+ Managed Ethernet Switch; 9V~36V dual input w/ PoE galvanic isolation; -40°C to 75°C

IPES-5408T-67-24TVI......P/N: 8360-60495

8 10/100TX PoE at/af up to 30W + 4 10/100/1000T X-coded EN50155 M12 IP67 L2+ Managed Ethernet Switch; 16.8V~56V dual input w/ PoE galvanic isolation; -40°C to 75°C

IPES-5408T-54-24TVI......P/N: 8360-60496

8 10/100TX PoE at/af up to 30W + 4 10/100/1000T X-coded EN50155 M12 IP54 L2+ Managed Ethernet Switch; 16.8V~56V dual input w/ PoE galvanic isolation; -40°C to 75°C

To verify switch firmware with the latest or certain

version



IPES-5408T-67-WVI......P/N: 8360-60497

8 10/100TX PoE at/af up to 30W + 4 10/100/1000T X-coded EN50155 M12 IP67 L2+ Managed Ethernet Switch;16.8V~137.5V dual input w/ PoE galvanic isolation; -40°C to 75°C

IPES-5408T-54-WVI......P/N: 8360-60203

8 10/100TX PoE at/af up to 30W + 4 10/100/1000T X-coded EN50155 M12 IP54 L2+ Managed Ethernet Switch; 16.8V~137.5V dual input w/ PoE galvanic isolation; -40°C to 75°C

IES-5408T-67-24VI......P/N: 8360-71813

8 10/100TX + 4 GigaT X-coded EN50155 M12 IP67 L2+ Managed Ethernet Switch; -40°C to 75°C; dual 9~36VDC w/ galvanic

IES-5408T-54-24VI......P/N: 8360-71814

8 10/100TX + 4 GigaT X-coded EN50155 M12 IP54 L2+ Managed Ethernet Switch; -40°C to 75°C; dual 9~36VDC w/ galvanic isolation

IES-5408T-67-24TVI......P/N: 8360-71815

8 10/100TX + 4 GigaT X-coded EN50155 M12 IP67 L2+ Managed Ethernet Switch; -40°C to 75°C; dual 16.8~56VDC w/ nalvanic isolation

IES-5408T-54-24TVI......P/N: 8360-71816

8 10/100TX + 4 GigaT X-coded EN50155 M12 IP54 L2+ Managed Ethernet Switch; -40°C to 75°C; dual 16.8~56VDC w/ galvanic isolation

IES-5408T-67-WVI......P/N: 8360-71817

 $8\,10/100TX+4\,GigaT\,X-coded\,EN50155\,M12\,IP67\,L2+\,Managed\,Ethernet\,Switch;\,-40^{\circ}C\,to\,75^{\circ}C;\,dual\,16.8~137.5VDC\,w/$ galvanic isolation

IES-5408T-54-WVI......P/N: 8360-71818

8 10/100TX + 4 GigaT X-coded EN50155 M12 IP54 L2+ Managed Ethernet Switch; -40°C to 75°C; dual 16.8~137.5VDC w/ galvanic isolation

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

M12 Connector & Cable

Connector

ECONM12-08A(M)-180 8 pin M12 (Male) A-coded 180 degree crimp type connector for reset/console/USB

■ ECONM12-05A(M)-C-180 5 pin M12 (Male) A-coded 180 degree crimp type connector for DI/DO

■ ECONM12-04D(M)-C-180 4 pin M12 (Male) D-coded 180 degree crimp type connector for data

Cable

■ ECABM12X83MSTP 8 pin M12 (Male) X-coded 180 degree RJ45 STP cable for data, shielded, 300cm FCAB124030MJS 4 pin M12 (Male) D-coded 180 degree RJ45 STP cable for data, 300cm

ECONM12-5P(F)1.5M CABLE 5 Pin M12 Power Female 90° angle Connector+ 1.5 M CABLE

Lantech Communications Global Inc.

www.lantechcom.tw info@lantechcom.tw

© 2024 Copyright Lantech Communications Global Inc. all rights reserved. The revise authority rights of product specifications belong to Lantech Communications Global Inc. In a continuing effort to improve and advance technology, product specifications are subject to change without notice.