

# IPGS-6416XSFP

16 10/100/1000T PoE at/af + 4 1G/2.5G/10G SFP<sup>+</sup> L2+ Industrial

### Managed Ethernet Switch w/ Enhanced G.8032 Ring, PXE, 24V/48V

### input models

- Auto-sensing triple speed1G/2.5G/10G SFP+ Uplink Cage
- Support IEEE802.3at/af up to 30W per port PoE management incl. Detection and Scheduling
- Support PXE to verify switch firmware with the latest or certain version on server
- Enhanced G.8032 ring protection < 20ms for single ring. Supports enhanced mode and basic mode; Enhanced G.8032 ring covers multicast packets; MSTP 8 MSTI /RSTP ; support MRP ring



- Miss-wiring avoidance & node failure protection
- User friendly UI, including auto topology drawing and DDM threshold monitoring with dB values\*\*\*; Complete CLI
- Support LACP link aggregation, IGMP v3/router port, MLD snooping, DHCP server & DHCP Option82; Port based DHCP distribution, Mac based DHCP server, SSH v2/SSL, HTTPS, INGRESS ACL L2/L3, TACACS+, subnet VLAN and protocol VLAN
- Enhanced Environmental Monitoring for temp., actual input voltage, current & total power load
- Optional L3Lite/L3\* to be upgradable
- Wide range operation temperature (-E model):-40~75C/-40~167F; Fan-less design



### **OVERVIEW**

Lantech IPGS-6416XSFP-16 is a high performance L2+ (All Gigabit) Ethernet switch with 16 100/1000T + 4 1G/2.5G/10G auto sensing SFP<sup>+</sup> w/16 PoE 802.3af/at ports which provides advanced security function for network aggregation deployment. It delivers ITU G.8032 enhanced ring recovery less than 20ms in single ring while also supports enhanced mode with easy configuration, comprehensive QoS, advanced security including INGRESS L2/L3, TACACS+, SSH v2/SSL, Mac based DHCP server, DHCP Option 82, DHCP server, IGMPv1/v2/v3/router port which are important features required in large network. The Cisco Discovery Protocol (CDP) and LLDP are supported for Ciscoworks to detect the switch info and show on L2 map topology.

Up to 16 PoE at/af ports w/advanced PoE management Compliant with 802.3af/at standard, the Lantech IPGS-6416XSFP-16 being able to feed each PoE port up to 30 Watt. Lantech IPGS-6416XSFP-16 supports advanced PoE management including PoE detection and scheduling. 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. Each PoE ports can be Enabled/disabled, get the voltage, current, Watt, and temperature info displayed on WebUI.

# Miss-wiring avoidance, Loop protection, node failure protection

The IPGS-6416XSFP-16 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 IPGS-6416XSFP-16 being 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.

# Support PXE to verify switch firmware with the latest or certain version

The switch can check its firmware version during booting time via PXE protocol. If switch finds any newer version, it will upload automatically.

### Optional L3Lite/L3 to be upgradable

Lantech OS3 is optional upgradable to L3 Lite for future expansion. The optional L3Lite includes editable routing table, VRRP, Router-on-a-stick, Inter- VLAN routing.

#### Enhanced Storm control\*

Storm control prevents traffic on a LAN from being disrupted by a broadcast, multicast, or unicast storm on one of the physical interfaces and the detection is more precise and reaction is more efficient.

#### 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. Basic IPv6 DHCP service can be supported.

#### User friendly GUI, Auto topology drawing

The user-friendly UI, innovative auto topology drawing and topology demo makes IPGS-6416XSFP-16 much easier to get hands-on. The complete CLI enables professional engineer to configure setting by command line.

### Enhanced G.8032 ring, 8 MSTI MSTP; MRP ring

Lantech IPGS-6416XSFP-16 features enhanced G.8032 ring which can be self-healed in less than 20ms for single ring topology protection covering multicast packets. It also supports various ring topologies that covers enhanced ring and basic ring by easy setup than others. It supports MSTP that allows RSTP over VLAN for redundant links with 8 MSTI.

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

### 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.

# Editable configuration file; USB port for upload/download configuration

The configuration file of Lantech IPGS-6416XSFP-16 can be exported and edited with word processor for the following switches to configure with ease.

The USB port can upload/download the configuration from/to USB dongle.

# 2DI/2DO for relay contact and event alerting by email & traps

In case of event, the IPGS-6416XSFP-16 being able to send an email to pre-defined addresses as well as SNMP Traps out immediately. It provides 2DI and 2DO. When disconnection of the specific port was detected; DO will activate the signal LED to alarm. DI can integrate the sensors for events and DO will trigger the alarm while sending alert information to IP network with email and traps.

## Enhanced environmental monitoring for switch inside information

The enhanced environmental monitoring can detect switch overall temperature, total PoE load, voltage and current where can send the SNMP traps, email when abnormal.

#### Dual power 24V/48V input, high PoE budget

The Lantech IPGS-6416XSFP-16 is designed with dual power supply at 48VDC (48V model) or 12V~57VDC input (24V model). The 48V model can have 240W PoE budget while 24V model can have 80W (12V input) or 120W (24V input) budget.

# Industrial hardened design with high EFT and ESD protection

Lantech IPGS-6416XSFP-16 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. Featured with relay contact alarm function, the IPGS-6416XSFP-16 being able to connect with alarm system in case of power failure or port disconnection.

It is the best solution for Automation, transportation, surveillance, Wireless backhaul, Semi-conductor factory applications. The -E model can be used in extreme environments with an operating temperature range of -40°C to 75°C.

### **FEATURES & BENEFITS**

- 16 100/1000T + 4 1G/2.5G/10G auto sensing SFP<sup>+</sup> w/16 PoE 802.3af/at ports (Total 20 Ports Switch)
- Embedded 16 PoE IEEE802.3af/at function to feed power up to 30W for active mode operation
- 48V input for PoE budget 240W; 24V input for PoE budget 80W/ 24V input for PoE budget 120W
- PoE management including PoE detection and scheduling for PD (power devices)
- Back-plane (Switching Fabric): 112Gbps
- 16K MAC address table
- DDM to support SFP diagnostic function\*\*\*

Automatically convert the raw data into dB values for TX power/RX power, making it easier to measure the fiber distance

#### 10KB Jumbo frame

- User friendly UI, auto topology drawing, topology demo, complete CLI for professional setting
- Enhanced G.8032 Ring protection in 20ms for single ring
  - Support various ring/chain topologies, including enhanced ring & basic ring
    - Enhanced G.8032 ring configuration with ease

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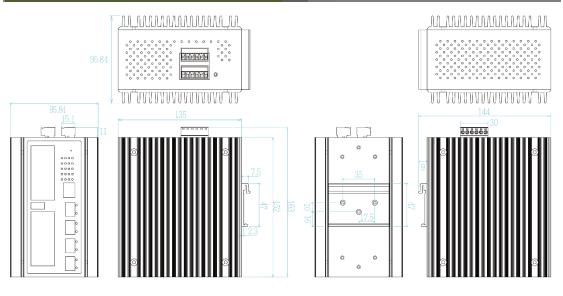


- Cover multicast and data packets protection
- Supports IEEE 802.1p Class of Service, per port provides 8 priority queues Port base, Tag Base and Type of Service Priority
- IEEE 802.1d STP, IEEE 802.1w RSTP,802.1s MSTP VLAN redundancy with 8 MSTI
- 4K 802.1Q VLAN, Port based VLAN, GVRP
- Supports IEEE 802.1ab LLDP, Cisco CDP; LLDP info can be viewed via Web/ Console
- Support PXE to verify switch firmware with the latest or certain version
- DHCP server / client / DHCP Option 82 relay / DHCP Option 82 server; Port based DHCP server; Basic DHCP Option 66
- 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
- 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, SMTP Email alert and SNMP Trap for alarm support; 32 RMON counters
- Security
  - SSL/SSH v2/INGRESS ACL L2/L3
  - MAC address table: MAC address
  - entries/Filter/static MAC-Port binding Remote Admin: 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 for Multicast protection
- IGMPv1, v2, v3 with Query mode for multimedia;
   GMRP
- Dual image firmware support
- MLD Snooping for IPv6 Multicast stream
- Factory reset button to restore setting to factory default
- Watchdog design to auto reboot switch when CPU is found dead
- Enhanced environmental monitoring for system actual input voltage, current, ambient temperature, and total power load
- Supports DIDO (Digital Input/Digital Output)
- Configuration backup and restoration
  - Supports editable configuration file for system
     quick installation
  - USB port to upload/download firmware by USB dongle
- Wide operation temperature (-E model): -40C~70C/-40F~158F; Fan-less design
- Diagnostic including Ping / ARP table / DDM information
- Optional L3Lite/L3\* to be upgradable
- IP30 metal housing with DIN rail and Wall-mount\*\* design

### DIMENSIONS (unit=mm)



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Hardware         Specific Calibon           Danaware         Bits Edited 23 (Data Action Eliteration Eliteratio Eliteration Eliteration Eliteration Eliteration Elitera	SPECIFICATION					
Standards         IEEEB20.3 1008as-T Klashers TK EEEB20.3 1008as-TK EEEB20.3 100000000000000000000000000000000000	Hardware	Specification	Operating	5% ~ 95% (Non-condensing)		
Interpretation         40°C-75°C / 40°C-10°C /			Humidity	· · · · · · · · · · · · · · · · · · ·		
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IEEE 802.10 VLAN Tag         Electronic Survey         Electronic Survey         Electronic Survey           Switch         Back-plane (Wintching Fabric): 112Gbps         Positive (VCC-): RL45 pin 3.6           Main Address         16K MAC address table         Main Address           Jumbo fame         16K MAC address table         Main Address           Main Address         14K AC address table         Main Address           Main Address         14K AC address table         Main Address           Main Address         14K AC address         Main Address           Main Address         14K AC address         Main Address           Main Address         14K Stass         Feed 2 constantion           Vortal Cable         1006as-TX - 2pain STP CableSC addres         Feed 2 constantion           1006as-TX - 2pain STP CableSC addres         Feed 133 Millin           Stass Pain Strate STP CableSC addres         Feed 133 Millin           Main-mode to to 10 km 20 km 40 km, 130 nm (R2125 µm)         Stass Map Y VA va 200 Web/TeshceUL1           Stass Pain Strate Main Main Mode to 10 km 20 km 40 km, 130 nm (R2125 µm)			PoE pin	RJ-45 port # 1~#16 support IEEE 802.3at/af		
IEEEB02 3atiaf Power over Elternet           Switch Architecture         Peaklew (VCC): RL43 pin 1.2           Meck Address Jumbo frame         10K M2 address table           Jumbo frame         10K M2 address table           Comeacions         10K M2 address table           Jumbo frame         10K M2 address table           Res222 commentor         Max (J2CK) (RL43 pin 1.2           Max (J2CK)         Max (J2CK) (RL43 pin 1.2           Max (J2CK)         Max (J2CK)           Mar			assignment	End-point, Alternative A mode.		
Switch         Back-plane (Switching Fabric): 112Gbps           Mack Address         145 MAC address table           Unten frame         Mack Address           Unten frame         1058           Connectors         1010/0007: 16 x pots RU45 with Auto MOIMDLX Munction           Mile Address         1010/0007: 16 x pots RU45 with Auto MOIMDLX Munction           Mile Address         1010/0007: 16 x pots RU45 with Auto MOIMDLX Munction           Mile Address         1010/0007: 16 x pots RU45 with Auto MOIMDLX Munction           Mile Address         10008-02 x 1000 x 100 x 10		-	3			
Additional         Field MAC address table           Jumbo Trame         10KB           Jumbo Trame         10KB           Connectors         10100/1000011: 65 ports RJ-45 with Auto MDIADDX Kinection         Media case. IP-30.           Min-GBIC: 44, K1022 SUTIOS SPF+ auto-sensing socket with DDMI         SSA (W) 155 (D) 152 (D) 112 (D	Switch					
Mack Address         Text MAC address table           Jundo farme         10KB           Connectors         10/060071 16 x ports RJ-45 with Auto MDMML5X function           Mol Address         10/060071 16 x ports RJ-45 with Auto MDML5X function           Mol Address         10/060071 16 x ports RJ-45 with Auto MDML5X function           Mol Address         10/060071 16 x ports RJ-45 with Auto MDML5X function           Mol Address         10/060071 16 x ports RJ-45 with Auto MDML5X function           Mol Mol Address         10/060071 16 x ports RJ-45 with Auto MDML5X function           Mol Mol Address         10/060071 16 x ports RJ-45 with Auto MDML5X function           Mol Mol Address         10/060071 16 x ports RJ-45 with Auto-sensing socket with Dohm (10/07100071 18 x ports RJ-45 with Address MDDML5X function           Mol Mol Address         10/060071 18 x ports RJ-45 with Address MDDML5X function           10/07100071 10 x ports RJ-45 with Address MDDML5X function         10/07125 µm, 10 to 30 km (30 km (125 µm) MDM 160052 mm (3/125 µm)           200pt 11 x 20007 RJ 20 km (30 k	Architecture		Power			
Jumbe frame         10KB           Connectors         10/100/1000:116 x ports RJ-45 with Auto MDUMD-X function         Metal case. (P-30, S0, 54 (W) x 135 (D) x 152 (P) mm           Connectors         10/100/1000:116 x ports RJ-45 with Auto-sensing socket with DDMI         Metal case. (P-30, S0, 54 (W) x 135 (D) x 152 (P) mm           R3:232 connector: 1 x 6-pole terminal boot         Down A Relay connector: 1 x 6-pole terminal boot         DOW Rail and Wial Mount* Design           Network Cable         1000: 1: A pole terminal bock         DOW Rail and Wial Mount* Design           Doto: 1: A pole terminal bock         1000: 1: A pole terminal bock         CE EN61000-4-2; CE N61000-4-3; CE EN61000-4-4; CE EN61000-4-3; CE EN61000-4-2; CE N61000-4-3; CE EN61000-4-2;           Doto: 1: A pole terminal bock         1000/sear: A -pair STP Cat6(6A7 cable         Stability Testing           Multi-mode: 0: to 50 m, 860 nm (50/125 µm); Single mode: 0: to 16 km/ 30 km/ 40 km, 1310 nm (9/125 µm); 0: to 30 m, 860 nm (50/125 µm); Single mode: 0: to 12 km/ 30 km/ 40 km, 1310 nm (9/125 µm); 0: to 30 m, 80 nm (70/125 µm); Single mode: 0: to 20 m, 80 nm (70/125 µm); Single mode: 0: to 20 m, 80 nm (70/125 µm); Single mode: 0 to 16 km/ 30 km/ 40 km, 130 nm (9/125 µm); MUM + M0B         TU C 80022         System Mills RFC 1176 SNMP MIIS RFC 1213 MIBI RFC 1215 SINP MIB RFC 2217 RMON MIS Private MIS           UDD         MDM 20125 µm MIBI-mode:	Mac Address	16K MAC address table				
MDIMD: X function         Weight         Door           Mini-GBC: X 1/G2.5G/10G SFP- auto-sensing socket with DDMI         Socket With DDMI         Socket With DDMI           RS-222 connector: R-H-45 type         DIN Reil and Wall Mount** Design         Focket With DDMI           RS-222 connector: R-H-45 type         USB x 1         Power & Relay connector: 1 x 6-pole terminal block         DIN Reil and Wall Mount** Design           DIDD: 1: K 5-pole terminal block         100Base-T-X: 2-pair STP Cat5/5E cable; ELATTA-65 to 150-chm (100m)         CE EM51002-43.2 CE EM51002-43.2 CE EM51002-44.2 CE EM51002-43.2 CE EM51002-44.2 CE EM51002-43.2 CE EM51002-44.2 CE EM51002-43.2 CE EM51002-44.2 CE EM51002-43.2 CE EM51002-42.2 CE EM51002-42.2 CE EM51002-42.2 CE				Metal case. IP-30,		
Mmin-GBIC: 4.x 102.250/10G SFP+ auto-sensing socket with DOMI         DMR all and Wall Mount** Design           R3-232 connector: R-M-35 type USB x 1         DMR all and Wall Mount** Design         DMR all and Wall Mount** Design           VBS x 1         Power & Relay connector: 1.x 6-pole terminal block         CE EMS002 Class A, CE EMS002.4, CE EMS1002-44., CE EMS1002-43, CE EMS1002-44., CE EMS1002-44, CE EMS1002-44., CE EMS1002-44, CE EMS1002-44., CE EMS1002-44, CE EMS1002-42, CE EMS1002-44, CE EMS102-42, CE EMS1002-44, CE EMS102-42, CE EMS102-42, CE EMS102-42, CE EMS102-42, MILEROP MICH 100, CE EMS102-42, CE EMS102-42, CE EMS102-42, CE EMS102-42, CE EMS102-42, MILEROP MICH 104, CE EMS102-42, MILEROP MICH 104, CE EMS102-42, MILEROP MICH 104, CE EMS102-42, CE EMS102-42, CE EMS102-42, CE EMS102-42, CE EMS102-42, CE EMS102-42, CE EMS102-42, CE EMS102-42, CE EMS102-42, MILEROP MICH 104, MILEROP MICH 104, MILEROP MILEROP MILE	Connectors	-		95.84 (W) x 135 (D) x 152 (H) mm		
Installation         Installation           B3-32 connector: R1-45 type US8 x 1         ENIX EMS           Power & Relay connector: 1 x 6-pole terminal block         ENIX EMS           DID0: 1 x 6-pole terminal block         1003ase-Tx: 2-pair STP Catt 5/ E/F catble; ENIXTL-684 DiO-bm (100m) 1000Base-Tx-4-pair STP Catt5/F catble; ENIXTL-684 DiO-bm (100m) 100Base-Tx-4-pair STP Catt5/F catble; Catble; DiO-bm (2125 µm); Di Catbm (			Weight	900g		
EMIL & EMS         CPC Class A, CE EMS5024, CE FMS5024, CE		-		DIN Rail and Wall Mount** Design		
USB x 1         CE ENSIGO2-4.2, CE ENSIGO24.           Power & Relax connector: 1 x 6-pole terminal block         CE ENSIGO2-4.2, CE ENSIGO2-4.3, CE ENSIGO2-4.3, CE ENSIGO24.4, CE			EMI & EMS			
Provent & Keary Contention         1.5 Public Minimal Mode.           DioCo.         1.5 Public Laminal Mode.           DioDo.         1.5 Public Laminal Mode.           DioDo.         1.5 Public Laminal Mode.           DioDesen 74-pair STP CatB/26 cable;         1.5 EV 1000-4-6, CE EN1000-4-6, CE EN100-4-6, CE EN100-4-6, CE EN100-4, CE EN1000-4-6, CE EN100-4, CE						
LED       Links       C EL ENF1000-4-8, CE ENF100-4-4, CE ENF100-40, CE ENF100-40, CE ENF100-40, CE ENF100-4-4, CE ENF1		Power & Relay connector: 1 x 6-pole terminal				
Network Cable       D008acr12, Spain STP Cat5 / SE/ 6 cable; ELATTA-568 100-518         1008acr12, Spain STP Cat6 / SE/ 6 cable; ELATTA-568 100-518       EC60068-2-32 (Free fail), EC60068-2-32 (Free fail), EC6006-2 (Free fail), E						
VetWork Calibbe       100 base 17. 4-pil al 1P Calib 9 bef 0 cable, EVATA-66 100-bm (1000) 100 Base 17. 4-pair STP CatSE/6 cable; 100						
1000Base-T-4-pair STP CatE/6 cable:       IEC60088-22 (Shock),         Optical Cable       106ps:         Multi-mode: 0 to 550 m, 650 m (50/125 µm); 0 to 2 km, 130 m (50/125 µm); 0 to 2 km, 1550 m (9/125 µm); 0 to 2 km, 1500 m (9/125 µm); 0 to 50 km/ 60 km/ 80 km, 1310 mm (9/125 µm); 0 to 40 km/ 80 km/ 100 km, 1550 mm (9/125 µm); 0 to 40 km/ 40 km/ 60 km, 1310 mm (9/125 µm); 0 to 40 km/ 40 km/ 60 km, 1310 mm (9/125 µm); 0 to 40 km/ 40 km/ 60 km, 1310 mm (9/125 µm); 0 to 40 km/ 40 km/ 60 km, 1310 nm (9/125 µm); 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 µm); 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 µm); 0 to 30 km, 1400 nm (9/125 µm); 0 to 30 km, 1400 nm (9/125 µm); 0 to 30 km, 1400 nm (9/125 µm); 0 to 30 km, 1310 nm (9/125 µm); 0 to 30 km, 1310 nm (9/125 µm); 0 to 30 km, 1310 nm (9/125 µm); 0 to 30 km, 130 nm (9/125 µm); 0 to 30 km, 140 km/ 60 km, 1270/1330 nm (9/125 µm); 0 to 30 km, 130 nm (9/125 µm); 0 to 30 km, 130 nm (9/125 µm); 0 to 30 km, 130 nm (9/125 µm); 0 to 30 km, 140 km/ 60 km, 1270/1330 nm (9/125 µm); 0 to 30 km, 140 km/ 60 km, 1270/1330 nm (9/125 µm); 0 to 30 km, 140 km/ 60 km, 1270/1330 nm (9/125 µm); 0 to 30 km, 140 km/ 60 km, 1270/1330 nm (9/125 µm); 0 to 30 km, 140 km/ 60 km, 1270/1330 nm (9/	Network Cable	•	Stability Testing			
Optical Cable       106ps: 106ps		. ,		IEC60068-2-27 (Shock),		
Optical Cable         1Gbp: Multi-mode: 0 to 55 mm (50/125 µm); 0 to 2 km, 1310 nm (50/125 µm) Single mode: 0 to 10 km/ 30 km/ 40 km, 1310 nm (9/125 µm); 0 to 50 km (60 km/ 80 km/ 100 km, 1310 nm (9/125 µm); 0 to 50 km / 60 km/ 80 km/ 100 km, 1550 nm (9/125 µm); 0 to 40 km/ 40 km/ 100 km, 1550 nm (9/125 µm); 0 to 40 km/ 40 km/ 100 km, 1550 nm (9/125 µm); 0 to 40 km/ 40 km/ 60 km, 1310 nm (9/125 µm); 0 to 80 km, 1400 nm (9/125 µm); 0 to 40 km/ 40 km/ 60 km, 1310 nm (9/125 µm); 0 to 80 km, 1400 nm (9/125 µm); 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 µm); 0 to 80 km, 1400 nm (9/125 µm); 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 µm); 0 to 80 km, 1400 nm (9/125 µm); 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 µm); 0 to 80 km, 1400 nm (9/125 µm); 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 µm); 0 to 80 km, 1400 nm (9/125 µm); 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 µm); 0 to 80 km, 1400 nm (9/125 µm); 0 to 10 km/ 20 km, 140 km/ 60 km, 1310 nm (9/125 µm); 0 to 80 km, 1400 nm (9/125 µm); WDM 1Gbps         ITU G.8032         Support TIU G.8032 for Ring protection in less than 20ms for self-heal recovery (single ring enhanced mode)           UED         Port Intuk-kkl (Sreen); FAULT (Red); RM(Green); FAULT (Red); RM(Green); FAULT (Red); RM(Green); FULT (Green); 105 (Amber) Port: Link/Activity (Green), FAULT (Red); RM(Green); Etherest port: Link/Activity (Green); 105 (Amber) Port: Link/Activity (Green), FAULT (Red); RM(Green); Etherest port: Link/Activity (Green); FAULT (Red); RM(Green); Etherest port: Link/Activity (Green); FAULT (Red); RM(Green); Etherest port: Link/Activity (Green); FAULT (Red); RM(Green); Etherest port: Link/Activity (Green); Fahanced C 21 O Tro VLAN (266 entries) VLAN 10 kontoingy		•		IEC60068-2-6 (Vibration)		
Multi-mode: 0 to 500 m, 500 m (50/125 µm);       58 002.5 Hrs         Single mode: 0 to 10 km/ 30 km/ 40 km, 1310 m       (HC 62380 standards)         mm (9/125 µm); 0 to 50 km/ 60 km/ 80km/ 120 km, 1550 nm       Single mode: 0 to 30 m, 550 nm (50/125 µm);         Single mode: 0 to 10 km/ 30 km/ 40 km, 1310 nm       (HC 62380 standards)         (H12F µm); 0 to 40 km/ 80 km/ 100km, 1550 nm       RC 1213 MIBI         RC 1135 NIMP MIB       RC 1213 MIBI         RC 1135 NIMP MIB       RC 1373 FMIB         RC 1135 NIMP MIB       RC 2380 standards)         MULT-mode: 0 to 10 km/ 20 km/ 40 km, 1300 nm       (H/125 µm);         VDM 16bps:       Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 µm);       0 to 30 m, 200 nm (49125 µm);         WDM 2.5Gbps       Single-mode: 0 to 50 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 µm);       0 to 80 km, 1490 nm         WDM 105bps       Single mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1270/1330 nm (9/125 µm);       0 to 80 km, 1310 nm (9/125 µm);         USD       PoE       PoE       PoE Detection to check if PD hangs then restart the PD         ym);       Single mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1270/1330 nm (9/125 µm);       0 to 80 km, 1490 nm         WDM 105bps       Single mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1270/1330 nm (9/125 µm);       0 km/ 60 km, 120 km/ 40 km/ 60 km, 1270/1330 nm (9/125 µm);         LED       Por Unit Power 1 (Green), Powe	Optical Cable	1Gbps:				
b) 2 km, 1310 nm (60/125 µm)       (EC 62380 standards)         Single mode: 0 to 16 km/ 30 km/ 40 km, 1310 nm (9/125 µm); 0 to 50 km/ 60 km/ 80 km/ 120 km, 1550 nm (9/125 µm); 0 to 50 km/ 60 km/ 500 nm (50/125 µm);       SoftWare Specification         2.56bps       Multi-mode: 0 to 300 m, 850 nm (50/125 µm);       Single-mode: 0 to 20 nm (50/125 µm);       Single-mode: 0 to 10 km/ 40 km, 1310 nm (9/125 µm); 0 to 40 km/ 80 km/ 1490 nm (9/125 µm); 0 to 80 km, 1490 nm (9/125 µm); 0 to 40 km/ 80 km, 150 nm (9/125 µm); 0 to 80 km, 1490 nm (		Multi-mode: 0 to 550 m, 850 nm (50/125 µm); 0				
Single mode: 0 to 10 km/ 30 km/ 40 km, 1310 m (9/125 µm); 0 to 60 km/ 80 km/ 120 km, 1550 nm (9/125 µm);       Single mode: 0 to 10 km/ 20 km/ 40 km, 1310 nm (9/125 µm);       Single mode: 0 to 10 km/ 20 km/ 40 km, 1310 nm (9/125 µm);       Single mode: 0 to 10 km/ 20 km/ 40 km, 1300 nm (9/125 µm);       RFC 1213 MIBI RFC 1153 MIB         WDM 105ps:       Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 µm);       Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 µm);       TU G 8032       Support ITU G 8032 for Ring protection in less than 20ms for self-heal recovery (single ring enhanced mode)         Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 /m (9/125 µm);       TU G 8032       Support ITU G 8032 for Ring protection in less than 20ms for self-heal recovery (single ring enhanced mode)         Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 /m (9/125 µm);       TU G 8032       Support ITU G 8032 for Ring protection in less than 20ms for self-heal recovery (single ring enhanced mode)         Multi-mode: 0 to 300 m, 850 nm (9/125 µm);       Single-mode: 0 to 10 km/ 20 km /40 km/ 60 km, 1270/1330 nm (9/125 µm)       PoE       PoE         PoE       PoI to 10 km/ 20 km/ 40 km/ 60 km, 1270/1330 nm (9/125 µm);       Pois cheduling       Pois cheduling         Pois Internet port: Link/Activity (Green); FAULT (Red); RM(Green); Ethernet port: Link/Activity (Green); Speed (Green); 10 G (Amber)       Pois Cheduling       Acto topology drawing • Topology demo Cicco Discovery Protocol for topology mapping       System status for actual input voitage, current, tating wertiba for actual input voitage, current, tating werti		to 2 km, 1310 nm (50/125 μm)	MIBE			
Imm. (9/125 µm); 0 to 50 km/ 80 km/ 120 km/ 80 km/ 120 km/ 120 km/ 90 km/ 130 nm (9/125 µm);       Software Specification         Software Specification       SNMP v1 v2c, v3/ Web/Telnet/CLI         Null:-mode: 0 to 300 m, 850 nm (50/125 µm);       SNMP v1 v2c, v3/ Web/Telnet/CLI         Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 µm);       SNMP v1 v2c, v3/ Web/Telnet/CLI         WDM 165pe:       Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 µm);       SNMP v132 km/ 40 km/ 60 km, 1310 nm (9/125 µm);         WDM 2.56Dps       Single-mode: 0 to 5 km/ 20 km/ 40 km/ 60 km, 1310 / 1550 nm (9/125 µm);       U to 80 km, 1310 nm (9/125 µm);         WDM 2.56Dps       Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 µm);       U to 80 km, 1310 nm (9/125 µm);         Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 µm);       U to 40 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 µm);         WDM 106bps       Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1270/1330 nm (9/125 µm);         WDM 106bps       Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1200/1425 µm);         VDM 106bps       Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1200/1425 µm);         VDM 106bps       Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1200/1425 µm);         VDM 106bps       On/ Off, voltage, current, wats, temperature         ILDP       Port Trunk with LACP Port Trunk: 8 Trunk groups         Port Trunk with LACP Port Trunk: 8 Trunk groups <td< th=""><th></th><th>Single mode: 0 to 10 km/ 30 km/ 40 km, 1310</th><th>Warranty</th><th></th></td<>		Single mode: 0 to 10 km/ 30 km/ 40 km, 1310	Warranty			
Imagement       SNMP v1 v2c, v3/ Web/Teinet/CLI         2.650ps       Multi-mode: 0 to 300 m, 850 nm (50/125 µm);         Single-mode: 0 to 2 km/ 15 km/ 40 km, 130 nm       (9/125 µm)         WDM 16bps:       Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 µm); 0 to 80 km, 1490 nm       PFC 1433 Bridge MIB*         (9/125 µm); 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 µm); 0 to 80 km, 1490 nm       PFC 2819 RNCN MIB         (9/125 µm); 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 µm); 0 to 80 km, 1490 nm       PIU G.8032       Support ITU G.8032 for Ring protection in less than 20ms for self-heal recovery (single ring enhanced mde)         Single-mode: 0 to 300 m, 850 nm (OM3 50/125 µm);       ITU G.8032       Support ITU G.8032 for Ring protection in less than 20ms for self-heal recovery (single ring enhanced ring         Idotsps       Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 µm);       ITU G.8032       Support ITU G.8032 for Ring protection in less than 20ms for self-heal recovery (single ring enhanced ring         VDM 1060ps       Single-mode: 0 to 10 km/ 20 km, 1310 nm (9/125 µm);       Nulti-mode: 0 to 300 m, 850 nm (9/125 µm);       PoE         VDM 1060ps       Single-mode: 0 to 10 km/ 20 km, 40 km/ 60 km, 1270/1330 nm (9/125 µm);       Topology drawing       Topology drawing         ICCore       Pot Trunk with       LACP Port Trunk: 8 Trunk groups       Auto topology drawing       Topology drawing         Single-mode: 10 to 10 km/ 20 km/ 40 km/ 60 k						
2.50bps         Multi-mode: 0 to 300 m, 850 nm (50/125 µm);         Single mode: 0 to 2 km/ 15 km/ 40 km, 1310 nm (9/125 µm);         (9/125 µm); 0 to 40 km/ 20 km/ 100km, 1550 nm (9/125 µm);         WDM 105ps:         Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 µm);         (9/125 µm); 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 µm);         WDM 2.50ps         Single-mode: 0 to 3 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 µm);         WDM 2.50ps         Single-mode: 0 to 3 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 µm);         VDO 2.50ps         Multi-mode: 0 to 300 m, 850 nm (OM3 50/125 µm);         VOM 105bps         Multi-mode: 0 to 10 km/ 20 km, 1310 nm (9/125 µm);         VDM 105bps         Single-mode: 0 to 10 km/ 20 km, 1310 nm (9/125 µm);         VDM 105bps         mm (9/125 µm);         WDM 105bps         mm (9/125 µm);         Single-mode: 0 to 10 km/ 20 km, 1490/150 nm (9/125 µm);         VDM 106bps         mm (9/125 µm);         Single-mode: 0 to 10 km/ 20 km, 1490/150 nm (9/125 µm);         VDM 105bps         Single-mode: 0 to 10 km/ 20 km, 1490/150 nm (9/125 µm);         Multi-mode: 0 to 10 km/ 20 km, 1490/150 nm (9/125 µm);         Multi-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km,         10/20 bpit		nm (9/125 µm); 0 to 50 km/ 60 km/ 80km/ 120				
Multi-mode: 0 to 300 m, 850 nm (50/125 µm);       RFC 1158 MIB         Single mode: 0 to 2 km/ 80 km/ 100km, 1550 nm (9/125 µm);       RFC 1157 SIMMP MIB         WDM 16bps:       RFC 1157 SIMMP MIB         Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 µm);       to 80 km, 1490 nm         (9/125 µm); 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 µm);       to 80 km, 1490 nm         WDM 2.5Gbps       Single-mode: 0 to 5 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 µm);       to 80 km, 1490 nm         WDM 2.5Gbps       Single-mode: 0 to 300 m, 850 nm (OM3 50/125 µm);       Support basic single ring & enhanced ring         Multi-mode: 0 to 300 m, 850 nm (OM3 50/125 µm);       PoE       PoE       PoE Detection to check if PD hangs then restart         Multi-mode: 0 to 300 m, 850 nm (9/125 µm);       to 80 km, 1490/1550 nm (9/125 µm);       TU G.8032       Support basic single ring & enhanced ring         Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1270/1330 nm (9/125 µm);       to 10 km/ 20 km/ 40 km/ 60 km, 1270/1330 nm (9/125 µm);       To 80 km, 1490/1550 mm (9/125 µm);         LED       Per unt: Power 1 (Green); Power 2 (Green); FAULT (Red); RM(Green)       Ethemet port: Link/Activity (Green); Speed (Green;); 10G (Amber)       Topology demo = Complete CLI for professional setting         DI/DO       2 Digital Input (D);       Enhanced (Core); Poot Trunk: 8 Trunk groups astus for actual input voltage, current, totak and ambient temperature to be shown in GUI and sent alerting if any abnormal sa		km, 1550 nm (9/125 μm)	Software S	Specification		
Image: Big (9/125 µm); 0 to 40 km/ 80 km/ 100 km, 1550 nm       (9/125 µm); 0 to 30 km/ 40 km/ 60 km, 1310 nm (9/125 µm); 0 to 30 km, 1490 nm       (9/125 µm); 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 µm); 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 /1550 nm (9/125 µm); 0 to 80 km, 1490 nm       (9/125 µm); 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 /1550 nm (9/125 µm); 0 to 80 km, 1490 nm         IVU G.8032       Support ITU G.8032 for Ring protection in less than 20ms for self-heal recovery (single ring enhanced mode)         Single-mode: 0 to 5 km/ 20 km/ 40 km/ 60 km, 1310 /1550 nm (9/125 µm);       ITU G.8032         IVU G.8032       Support ITU G.8032 for Ring protection in less than 20ms for self-heal recovery (single ring enhanced mode)         Single-mode: 0 to 5 km/ 20 km, 1310 nm (9/125 µm);       Enhanced G.8032 ring configuration with ease Cover multicast & data packets protection         IVU G.8032       PoE Detection to check if PD hangs then restart the PD         ym);       Itu G.8032 ing configuration with ease Cover multicast & data packets protection         ym);       Itu G.8032         Single-mode: 0 to 10 km/ 20 km, 1310 nm (9/125 µm);       Itu S         ym);       Itu G.8032         Single-mode: 0 to 10 km/ 20 km, 1490/1550 nm (9/125 µm);       Itu S         ym);       Itu G.8032         Single-mode: 0 to 10 km/ 20 km, 1490/1550 nm (9/125 µm);       Itu S         ym);       Itu Green); Mini-GBIC: Link/Activity (Green), Speed (Green); Mini-GBIC: Link/Activity (Green); Speed (Green); Mini-		km, 1550 nm (9/125 μm) <b>2.5Gbps</b>	Software S Management	Specification SNMP v1 v2c, v3/ Web/Telnet/CLI		
(g/125 µm)       WPM 1Gbps:         Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km,       RFC 1373 F MIB         (g/125 µm); 0 to 10 km/ 20 km/ 40 km/ 60 km,       RFC 2813 RMON MIB         (g/125 µm); 0 to 10 km/ 20 km/ 40 km/ 60 km,       RFC 1373 IP MIB         (g/125 µm); 0 to 10 km/ 20 km/ 40 km/ 60 km,       Support ITU G.8032 for Ring protection in less         (g/125 µm);       UO 300 m, 850 nm (9/125 µm);       Support ITU G.8032 for Ring protection in less         (g/125 µm);       UO 300 m, 850 nm (OM3 50/125 µm);       Support basic single ring & enhanced ring         14300/1550 nm (9/125 µm);       Support basic single ring & enhanced ring         10Gbps       Multi-mode: 0 to 300 m, 850 nm (OM3 50/125 µm);       PoE         Milli-mode: 0 to 10 km/ 20 km, 1310 nm (9/125 µm);       PoE       PoE Detection to check if PD hangs then restart the PD         ym);       Single-mode: 0 to 10 km/ 20 km, 1400 km, 1550 nm (9/125 µm);       PoE Scheduling       Por Toruk with         VDM 1Gbps       Single-mode: 0 to 10 km/ 20 km, 1490/1550 nm (9/125 µm);       Or Off, voltage, current, watts, temperature Status         ymm;       Foult Trunk with       LACP Port Truck: 8 Truck groups       Corpolete CL1 for professional setting         PoE:       Per unit: Power 1 (Green), Speed (Green);       Foult (Green); Single Input (D);       Support Truck with       LACP Port Trunk with         LACP		km, 1550 nm (9/125 μm) <b>2.5Gbps</b> Multi-mode: 0 to 300 m, 850 nm (50/125 μm);	Software S Management	Specification SNMP v1 v2c, v3/ Web/Telnet/CLI RFC 1213 MIBII		
(9/125 µm)       WDM 1Gbps:         Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km,         1310 nm (9/125 µm); 0 to 80 km, 1490 nm         (9/125 µm); 0 to 10 km/ 20 km/ 40 km/ 60 km,         (9/125 µm); 0 to 10 km/ 20 km/ 40 km/ 60 km,         (9/125 µm); 0 to 10 km/ 20 km/ 40 km/ 60 km,         (1310 nf (9/125 µm); 0 to 80 km,         (1490/1550 nm (9/125 µm);         (1550 nm (9/125 µm);         (1650 ps)         Multi-mode: 0 to 300 m, 850 nm (OM3 50/125         µm);         Single-mode: 0 to 10 km/ 20 km, 1310 nm (9/125         µm);         Single-mode: 0 to 10 km/ 20 km, 40 km/ 60 km,         1270/1330 nm (9/125 µm)         VDM 105ps         Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km,         1270/1330 nm (9/125 µm)         VDM 105ps         Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km,         1270/1330 nm (9/125 µm)         LED       Per unit: Power 1 (Green), Power 2 (Green),         FAULT (Red); RM(Green)       Ethermet port: Link/Activity (Green), Speed         (Green): 10G (Amber)       Poil         PoE: Link/Act (Green); Mini-GBIC: Link/Activity         (Green): 20 bigita		km, 1550 nm (9/125 μm) <b>2.5Gbps</b> Multi-mode: 0 to 300 m, 850 nm (50/125 μm); Single mode: 0 to 2 km/ 15 km/ 40 km, 1310 nm	Software S Management	Specification SNMP v1 v2c, v3/ Web/Telnet/CLI RFC 1213 MIBII RFC 1158 MIB		
Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 µm); 0 to 80 km, 1490 nm (9/125 µm); 0 to 10 km/ 20 km/ 40 km/ 80 km, 1550 nm (9/125 µm)RFC 28/19 RMON MIB Private MIBITU G.8032Support ITU G.8032 for Ring protection in less than 20ms for self-heal recovery (single ring enhanced mode)WDM 2.5Gbps Single-mode: 0 to 5 km/ 20 km/ 40 km/ 60 km, 1310 /1550 nm (9/125 µm); 0 to 80 km, 1490/1550 nm (9/125 µm)Support basic single ring & enhanced ring Enhanced G.8032 ring configuration with ease Cover multicast & data packets protection Nulti-mode: 0 to 300 m, 850 nm (OM3 50/125 µm); 0 to 40 km/ 80km/ 100 km, 1550 nm (9/125 µm); 0 to 40 km/ 80km/ 100 km, 1550 nm (9/125 µm); 0 to 40 km/ 20 km/ 40 km/ 60 km, 1270/1330 nm (9/125 µm); 0 to 80 km, 1490/1550 nm (9/125 µm); 0 to 80 km, 1490/150 nm (9/125 µm); 0 to 80 km, 1490/150 0 mi (9/125 µm); 0 to 80 km, 1490/150 		km, 1550 nm (9/125 μm) <b>2.5Gbps</b> Multi-mode: 0 to 300 m, 850 nm (50/125 μm); Single mode: 0 to 2 km/ 15 km/ 40 km, 1310 nm (9/125 μm); 0 to 40 km/ 80 km/ 100km, 1550 nm	Software S Management	Specification SNMP v1 v2c, v3/ Web/Telnet/CLI RFC 1213 MIBII RFC 1158 MIB RFC 1157 SNMP MIB		
1310 nm (9/125 µm); 0 to 80 km, 1490 nm (9/125 µm); 0 to 10 km/ 20 km/ 40 km/ 60 km, 1550 nm (9/125 µm);       NPC 2819 RMON MIB         WDM 2.5Gbps       Support ITU G.8032 for Ring protection in less than 20ms for self-heal recovery (single ring enhanced mode)         Single-mode: 0 to 5 km/ 20 km/ 40 km/ 60 km, 1310 / 1550 nm (9/125 µm);       Support ITU G.8032 for Ring protection in less than 20ms for self-heal recovery (single ring enhanced mode)         Multi-mode: 0 to 5 km/ 20 km/ 40 km/ 60 km, 1310 / 1550 nm (9/125 µm);       PoE         Multi-mode: 0 to 10 km/ 20 km, 1310 nm (9/125 µm);       PoE         Single-mode: 0 to 10 km/ 20 km, 1350 nm (9/125 µm);       PoE         Single-mode: 0 to 10 km/ 20 km, 1490/1550 nm (9/125 µm);       PoE to the chaing         VDM 106bps       On/ Off, voltage, current, watts, temperature status         VED       Per unit: Power 1 (Green), Power 2 (Green), FAULT (Red); RM(Green)         Ethernet port: Link/Activity (Green)       PoE: Link/Activity (Green), Speed (Green); 10G (Amber)         PoE: Link/Activity (Green); Mini-GBIC: Link/Activity (Green)       System status for actual input voltage, current, total power load and ambient temperature to be shown in GUI and sent alerting if any abnormal status         DI/DO       2 Digital Input (DI): Level 0: -30-2V / Level 1: 10-30V Max, input current:BmA 2 Digital Output (DO): Open collector to 40 VDC,       VLAN       Port Based VLAN IEEE 802.10 Tag VLAN (256 entries) VLAN ID		km, 1550 nm (9/125 μm) <b>2.5Gbps</b> Multi-mode: 0 to 300 m, 850 nm (50/125 μm); Single mode: 0 to 2 km/ 15 km/ 40 km, 1310 nm (9/125 μm); 0 to 40 km/ 80 km/ 100km, 1550 nm (9/125 μm)	Software S Management	Specification SNMP v1 v2c, v3/ Web/Telnet/CLI RFC 1213 MIBII RFC 1158 MIB RFC 1157 SNMP MIB RFC 1493 Bridge MIB*		
(g/125 µm); 0 to 10 km/ 20 km/ 40 km/ 60 km/ 80 km, 1550 nm (g/125 µm)       Support ITU G.8032 for Ring protection in less than 20ms for self-heal recovery (single ring enhanced mode)         Single-mode: 0 to 5 km/ 20 km/ 40 km/ 60 km, 1310 /1550 nm (g/125 µm)       ITU G.8032       Support ITU G.8032 for Ring protection in less than 20ms for self-heal recovery (single ring enhanced mode)         Nutli-mode: 0 to 300 m, 850 nm (OM3 50/125 µm); 0 to 80 km, 1490/1550 nm (g/125 µm); 0 to 40 km/ 80 km/ 100 km, 1550 nm (g/125 µm); 0 to 40 km/ 80 km/ 100 km, 1550 nm (g/125 µm)       PoE         VDM 106bps       Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1270/1330 nm (g/125 µm); 0 to 80 km, 1490/1550 nm (g/125 µm)       Pot to 10 km/ 20 km/ 40 km/ 60 km, 1270/1330 nm (g/125 µm); 0 to 80 km, 1490/1550 nm (g/125 µm); 0 to 80 km, 1490/1550 nm (g/125 µm)         LED       Per unit: Power 1 (Green), Power 2 (Green), FAULT (Red); RM(Green)       Pot 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         DI/DO       2 Digital Input (DI): Level 0: -30-2V / Level 1: 1030V Max. input current.math. 2 Digital Output (DO): Open collector to 40 VDC,       VLAN       Port Based VLAN       EEE 802 10 Tag VLAN (256 entries)/ VLAN ID (ULA) ID or to acerimed from 1 to 10 (ULA) ID or to acerimed from 1 to 10 (ULA) ID or to acerimed from 1 to 10 (ULA) ID or to acerimed from 1 to 10 (ULA) ID or to acerimed from 1 to 10 (ULA) ID or to acerimed from 1 to 10 (ULA) ID or to acerimed from 1 to 10 (ULA) ID (ULA) ID (ULA) ID (ULA) ID (ULA) ID (U		km, 1550 nm (9/125 μm) <b>2.5Gbps</b> Multi-mode: 0 to 300 m, 850 nm (50/125 μm); Single mode: 0 to 2 km/ 15 km/ 40 km, 1310 nm (9/125 μm); 0 to 40 km/ 80 km/ 100km, 1550 nm (9/125 μm) <b>WDM 1Gbps:</b>	Software S Management	Specification SNMP v1 v2c, v3/ Web/Telnet/CLI RFC 1213 MIBII RFC 1158 MIB RFC 1157 SNMP MIB RFC 1493 Bridge MIB* RFC 1573 IF MIB		
km, 1550 nm (9/125 µm)       Support 1TU G.8032       Support Ring protection in less than 20ms for self-heal recovery (single ring enhanced mode)         Single-mode: 0 to 5 km/ 20 km/ 40 km/ 60 km, 1490/1550 nm (9/125 µm)       Support 1basic single ring & enhanced ring Enhanced G.8032 ring configuration with ease Cover multicast & data packets protection         10Gbps       Multi-mode: 0 to 300 m, 850 nm (OM3 50/125 µm); 0 to 40 km/ 80 km/ 100 km, 1550 nm (9/125 µm); 0 to 40 km/ 80 km/ 100 km, 1550 nm (9/125 µm); 0 to 40 km/ 20 km/ 40 km/ 60 km, 1270/1330 nm (9/125 µm); 0 to 80 km, 1490/1550 nm (9/125 µm); 0 to 80 km, 1490/150 nm (8/125 µm); 0 to 80 km, 149		km, 1550 nm (9/125 μm) <b>2.5Gbps</b> Multi-mode: 0 to 300 m, 850 nm (50/125 μm); Single mode: 0 to 2 km/ 15 km/ 40 km, 1310 nm (9/125 μm); 0 to 40 km/ 80 km/ 100km, 1550 nm (9/125 μm) <b>WDM 1Gbps:</b> Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km,	Software S Management	Specification SNMP v1 v2c, v3/ Web/Telnet/CLI RFC 1213 MIBII RFC 1158 MIB RFC 1157 SNMP MIB RFC 1493 Bridge MIB* RFC 1573 IF MIB RFC 2674 Q-Bridge MIB*		
WDM 2.5Gbps       than 20ms for self-heal recovery (single ring         Single-mode: 0 to 5 km/ 20 km/ 40 km/ 60 km,       1310 /1550nm (9/125 µm); 0 to 80 km,         11490/1550 nm (9/125 µm);       0 to 300 m, 850 nm (OM3 50/125         Multi-mode: 0 to 10 km/ 20 km, 1310 nm (9/125       Enhanced G.8032 ring configuration with ease         Cover multicast & data packets protection       PoE         Single mode: 0 to 10 km/ 20 km, 1310 nm (9/125       PoE         µm);       0 to 40 km/ 80km/ 100 km, 1550 nm (9/125         µm);       VDM 10Gbps         Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km,       1270/1330 nm (9/125 µm); 0 to 80km, 1490/1550         nm (9/125 µm);       0 to 80km, 1490/1550         nm (9/125 µm);       0 to 80 km, 1490/1550         pot:       Enhanced (Green);         FAULT (Red); RM(Green)       Ethernet port: Link/Activity (Green),         Ethernet port: Link/Act (Green); Mini-GBIC: Link/Activity       CDP         (Green);       Dijdial Input (DI);       Level 0: -30-2V / Level 1: 10-30V         Level 0: -30-2		km, 1550 nm (9/125 μm) <b>2.5Gbps</b> Multi-mode: 0 to 300 m, 850 nm (50/125 μm); Single mode: 0 to 2 km/ 15 km/ 40 km, 1310 nm (9/125 μm); 0 to 40 km/ 80 km/ 100km, 1550 nm (9/125 μm) <b>WDM 1Gbps:</b> Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 μm); 0 to 80 km, 1490 nm	Software S Management	Specification SNMP v1 v2c, v3/ Web/Telnet/CLI RFC 1213 MIBII RFC 1158 MIB RFC 1157 SNMP MIB RFC 1493 Bridge MIB* RFC 1573 IF MIB RFC 2674 Q-Bridge MIB* RFC 2819 RMON MIB		
Single-mode: 0 to 5 km/ 20 km/ 40 km/ 60 km, 1310 /1550nm (9/125 µm); 0 to 80 km, 1490/1550 nm (9/125 µm)       enhanced mode)         10Gbps       Support basic single ring & enhanced ring         Multi-mode: 0 to 300 m, 850 nm (OM3 50/125 µm);       Enhanced G. 8032 ring configuration with ease Cover multicast & data packets protection         Multi-mode: 0 to 300 m, 850 nm (OM3 50/125 µm);       PoE         Single mode: 0 to 10 km/ 20 km, 1310 nm (9/125 µm);       PoE         WDM 10Gbps       Single-mode: 0 to 10 km/ 20 km, 40 km/ 60 km, 1270/1330 nm (9/125 µm);       PoE work 1 (Green), FAULT (Red); RM(Green)         LED       Per unit: Power 1 (Green), Power 2 (Green), FAULT (Red); RM(Green)       Poet (Green); 10G (Amber)         PoE: Link/Activity (Green)       Enhanced       CDP         Cisco Discovery Protocol for topology mapping       System status for actual input voltage, current, total power load and ambient temperature to be shown in GUI and sent alerting if any abnormal status         DI/DO       2 Digital Input (DI): Level 0: -30-2V / Level 1: 10-30V Max. input current.8mA 2 Digital Output (DO): Open collector to 40 VDC,       VLAN       Port Based VLAN IEEE 802: 10 Tag VLAN (256 entries)/ VLAN ID IEEE 802: 10 Tag VLAN (256 entries)/ VLAN ID		km, 1550 nm (9/125 μm) <b>2.5Gbps</b> Multi-mode: 0 to 300 m, 850 nm (50/125 μm); Single mode: 0 to 2 km/ 15 km/ 40 km, 1310 nm (9/125 μm); 0 to 40 km/ 80 km/ 100km, 1550 nm (9/125 μm) <b>WDM 1Gbps:</b> Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 μm); 0 to 80 km, 1490 nm (9/125 μm); 0 to 10 km/ 20 km/ 40 km/ 60 km/ 80	Software S Management SNMP MIB	Specification SNMP v1 v2c, v3/ Web/Telnet/CLI RFC 1213 MIBII RFC 1158 MIB RFC 1157 SNMP MIB RFC 1493 Bridge MIB* RFC 1573 IF MIB RFC 2674 Q-Bridge MIB* RFC 2819 RMON MIB Private MIB		
LED       Poel       Support basic single ring & enhanced ring         LED       Per unit: Power 1 (Green); Power 2 (Green),       Politier (Green); Power 2 (Green),         FAULT (Red); RM(Green)       Ethernet port: Link/Activity (Green),         DI/DO       2 Digital Input (D):         LED       Per unit: Power 1 (Green); Mini-GBIC: Link/Activity (Green),         DI/DO       2 Digital Output (D):         LED       Per unit: Power 1 (Green); Mini-GBIC: Link/Activity (Green),         DI/DO       2 Digital Input (D):         LED       VLAN		km, 1550 nm (9/125 μm) <b>2.5Gbps</b> Multi-mode: 0 to 300 m, 850 nm (50/125 μm); Single mode: 0 to 2 km/ 15 km/ 40 km, 1310 nm (9/125 μm); 0 to 40 km/ 80 km/ 100km, 1550 nm (9/125 μm) <b>WDM 1Gbps:</b> Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 μm); 0 to 80 km, 1490 nm (9/125 μm); 0 to 10 km/ 20 km/ 40 km/ 60 km/ 80 km, 1550 nm (9/125 μm)	Software S Management SNMP MIB	Specification SNMP v1 v2c, v3/ Web/Telnet/CLI RFC 1213 MIBII RFC 1158 MIB RFC 1157 SNMP MIB RFC 1493 Bridge MIB* RFC 1573 IF MIB RFC 2674 Q-Bridge MIB* RFC 2819 RMON MIB Private MIB Support ITU G.8032 for Ring protection in less		
1490/1550 nm (9/125 µm)       Enhanced G.8032 ring configuration with ease Cover multicast & data packets protection         Multi-mode: 0 to 300 m, 850 nm (OM3 50/125 µm);       PoE       PoE Detection to check if PD hangs then restart the PD         Single mode: 0 to 10 km/ 20 km, 1310 nm (9/125 µm);       PoE Detection to check if PD hangs then restart       The PD         WDM 10Gbps       Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1270/1330 nm (9/125 µm);       On/ Off, voltage, current, watts, temperature         LED       Per unit: Power 1 (Green), Power 2 (Green), FAULT (Red); RM(Green)       Poet Trunk with LACP       Acto topology drawing         Pot Trunk with LACP       LLDP       Supports LLDP to allow switch to advise its identification and capability on the LAN         CDP       Cisco Discovery Protocol for topology mapping PoE: Link/Act (Green); Mini-GBIC: Link/Activity (Green)       System status for actual input voltage, current, total power load and ambient temperature to be shown in GUI and sent alerting if any abnormal status         DI/DO       2 Digital Nput (DD): Level 0: -30-2V / Level 1: 10~30V Max. input current:8mA 2 Digital Output (DO): Open collector to 40 VDC,       VLAN       Port Based VLAN IEEE 802.10 Tag VLAN (256 entries)/ VLAN ID (Ub to the VLAN UD com be assemed from 1 to		km, 1550 nm (9/125 μm) <b>2.5Gbps</b> Multi-mode: 0 to 300 m, 850 nm (50/125 μm); Single mode: 0 to 2 km/ 15 km/ 40 km, 1310 nm (9/125 μm); 0 to 40 km/ 80 km/ 100km, 1550 nm (9/125 μm) <b>WDM 1Gbps:</b> Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 μm); 0 to 80 km, 1490 nm (9/125 μm); 0 to 10 km/ 20 km/ 40 km/ 60 km/ 80 km, 1550 nm (9/125 μm) <b>WDM 2.5Gbps</b>	Software S Management SNMP MIB	Specification SNMP v1 v2c, v3/ Web/Telnet/CLI RFC 1213 MIBII RFC 1158 MIB RFC 1157 SNMP MIB RFC 1493 Bridge MIB* RFC 1573 IF MIB RFC 2674 Q-Bridge MIB* RFC 2819 RMON MIB Private MIB Support ITU G.8032 for Ring protection in less than 20ms for self-heal recovery (single ring		
10Gbps       Cover multicast & data packets protection         Multi-mode: 0 to 300 m, 850 nm (OM3 50/125 µm);       PoE         Single mode: 0 to 10 km/ 20 km, 1310 nm (9/125 µm);       PoE Detection to check if PD hangs then restart the PD         Single-mode: 0 to 10 km/ 20 km, 1310 nm (9/125 µm);       PoE Port PoE Scheduling         WDM 10Gbps       On/ Off, voltage, current, watts, temperature         Single-mode: 0 to 10 km/ 20 km, 40 km/ 60 km, 1270/1330 nm (9/125 µm);       Ot 80 km, 1490/1550 nm (9/125 µm);         LED       Per unit: Power 1 (Green), Power 2 (Green), FAULT (Red); RM(Green)         Ethernet port: Link/Activity (Green), Speed (Green); 10G (Amber)       PoE: Link/Activity (Green); Mini-GBIC: Link/Activity (Green); 20 cg/2 / Level 0: -30-2V / Level 1: 10~30V         Max. input current:8mA 2 Digital Output (DD): Open collector to 40 VDC,       VLAN		km, 1550 nm (9/125 μm) <b>2.5Gbps</b> Multi-mode: 0 to 300 m, 850 nm (50/125 μm); Single mode: 0 to 2 km/ 15 km/ 40 km, 1310 nm (9/125 μm); 0 to 40 km/ 80 km/ 100km, 1550 nm (9/125 μm); <b>WDM 1Gbps:</b> Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 μm); 0 to 80 km, 1490 nm (9/125 μm); 0 to 10 km/ 20 km/ 40 km/ 60 km/ 80 km, 1550 nm (9/125 μm); <b>WDM 2.5Gbps</b> Single-mode: 0 to 5 km/ 20 km/ 40 km/ 60 km,	Software S Management SNMP MIB	Specification SNMP v1 v2c, v3/ Web/Telnet/CLI RFC 1213 MIBII RFC 1158 MIB RFC 1157 SNMP MIB RFC 1493 Bridge MIB* RFC 1573 IF MIB RFC 2674 Q-Bridge MIB* RFC 2819 RMON MIB Private MIB Support ITU G.8032 for Ring protection in less than 20ms for self-heal recovery (single ring enhanced mode)		
Multi-mode: 0 to 300 m, 850 nm (OM3 50/125 µm);       PoE       PoE Detection to check if PD hangs then restart the PD         Single mode: 0 to 10 km/ 20 km, 1310 nm (9/125 µm);       PoE       PoE Detection to check if PD hangs then restart         WDM 10Gbps       PoE       PoF Pot PoE       On/ Off, voltage, current, watts, temperature         WDM 10Gbps       Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1270/1330 nm (9/125 µm); 0 to 80km, 1490/1550 nm (9/125 µm)       Per Port PoE       On/ Off, voltage, current, watts, temperature         LED       Per unit: Power 1 (Green), Power 2 (Green), FAULT (Red); RM(Green)       Pot 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 System status for actual input voltage, current, total power load and ambient temperature to be shown in GUI and sent alerting if any abnormal status         DI/DO       2 Digital Input (DI): Level 0: -30~2V / Level 1: 10~30V Max. input current:8mA 2 Digital Output (DO): Open collector to 40 VDC,       VLAN       Port Based VLAN (EEE 802.10 Tag VLAN (256 entries) / VLAN ID (Ub to the VLAN UD con be acciment form 1 to to 4 W VLAN UD con be acciment of them 1 to to 4 W VLAN UD con be acciment of them 1 to to 4 W VLAN UD con be acciment of them 1 to to 4 W VLAN UD con be acciment of them 1 to to 4 W VLAN UD con be acciment of tom 1 to to 4 W VLAN US con be acciment of tom 1 to to 4 W VLAN US con be acciment of tom 1 to to 4 W VLAN US con the acciment to tocon to to VDC, <th></th> <th>km, 1550 nm (9/125 μm) <b>2.5Gbps</b> Multi-mode: 0 to 300 m, 850 nm (50/125 μm); Single mode: 0 to 2 km/ 15 km/ 40 km, 1310 nm (9/125 μm); 0 to 40 km/ 80 km/ 100km, 1550 nm (9/125 μm) <b>WDM 1Gbps:</b> Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 μm); 0 to 80 km, 1490 nm (9/125 μm); 0 to 10 km/ 20 km/ 40 km/ 60 km/ 80 km, 1550 nm (9/125 μm) <b>WDM 2.5Gbps</b> Single-mode: 0 to 5 km/ 20 km/ 40 km/ 60 km, 1310 /1550nm (9/125 μm); 0 to 80 km,</th> <th>Software S Management SNMP MIB</th> <th>Specification SNMP v1 v2c, v3/ Web/Telnet/CLI RFC 1213 MIBII RFC 1158 MIB RFC 1157 SNMP MIB RFC 1493 Bridge MIB* RFC 1573 IF MIB RFC 2674 Q-Bridge MIB* RFC 2819 RMON MIB Private MIB Support ITU G.8032 for Ring protection in less than 20ms for self-heal recovery (single ring enhanced mode) Support basic single ring &amp; enhanced ring</th>		km, 1550 nm (9/125 μm) <b>2.5Gbps</b> Multi-mode: 0 to 300 m, 850 nm (50/125 μm); Single mode: 0 to 2 km/ 15 km/ 40 km, 1310 nm (9/125 μm); 0 to 40 km/ 80 km/ 100km, 1550 nm (9/125 μm) <b>WDM 1Gbps:</b> Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 μm); 0 to 80 km, 1490 nm (9/125 μm); 0 to 10 km/ 20 km/ 40 km/ 60 km/ 80 km, 1550 nm (9/125 μm) <b>WDM 2.5Gbps</b> Single-mode: 0 to 5 km/ 20 km/ 40 km/ 60 km, 1310 /1550nm (9/125 μm); 0 to 80 km,	Software S Management SNMP MIB	Specification SNMP v1 v2c, v3/ Web/Telnet/CLI RFC 1213 MIBII RFC 1158 MIB RFC 1157 SNMP MIB RFC 1493 Bridge MIB* RFC 1573 IF MIB RFC 2674 Q-Bridge MIB* RFC 2819 RMON MIB Private MIB Support ITU G.8032 for Ring protection in less than 20ms for self-heal recovery (single ring enhanced mode) Support basic single ring & enhanced ring		
µm);       Single mode: 0 to 10 km/ 20 km, 1310 nm (9/125         µm);       0 to 40 km/ 80km/ 100 km, 1550 nm (9/125         µm);       0 to 40 km/ 80km/ 100 km, 1550 nm (9/125         µm);       WDM 10Gbps         Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1270/1330 nm (9/125 µm);       0 to 80km, 1490/1550         nm (9/125 µm)       0 to 80km, 1490/1550         poet unit: Power 1 (Green), Power 2 (Green), FAULT (Red); RM(Green)       Ethernet port: Link/Activity (Green), Speed (Green); 10G (Amber)         PoE: Link/Act (Green); Mini-GBIC: Link/Activity (Green)       CDP         DI/DO       2 Digital Input (DI):         Level 0: -30~2V / Level 1: 10~30V       Max. input current:8mA         2 Digital Output (DO): Open collector to 40 VDC,       VLAN         VLAN       Port Based VLAN         IEEE 802: 10 Tag VLAN (256 entries) / VLAN ID         ULND       Pont based VLAN		km, 1550 nm (9/125 μm) <b>2.5Gbps</b> Multi-mode: 0 to 300 m, 850 nm (50/125 μm); Single mode: 0 to 2 km/ 15 km/ 40 km, 1310 nm (9/125 μm); 0 to 40 km/ 80 km/ 100km, 1550 nm (9/125 μm) <b>WDM 1Gbps:</b> Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 μm); 0 to 80 km, 1490 nm (9/125 μm); 0 to 10 km/ 20 km/ 40 km/ 60 km/ 80 km, 1550 nm (9/125 μm) <b>WDM 2.5Gbps</b> Single-mode: 0 to 5 km/ 20 km/ 40 km/ 60 km, 1310 /1550nm (9/125 μm); 0 to 80 km, 1490/1550 nm (9/125 μm)	Software S Management SNMP MIB	Specification SNMP v1 v2c, v3/ Web/Telnet/CLI RFC 1213 MIBII RFC 1158 MIB RFC 1157 SNMP MIB RFC 1493 Bridge MIB* RFC 1573 IF MIB RFC 2674 Q-Bridge MIB* RFC 26174 Q-Bridge MIB* RFC 2619 RMON MIB Private MIB Support ITU G.8032 for Ring protection in less than 20ms for self-heal recovery (single ring enhanced mode) Support basic single ring & enhanced ring Enhanced G.8032 ring configuration with ease		
Single mode: 0 to 10 km/ 20 km, 1310 nm (9/125       PoE scheduling         µm); 0 to 40 km/ 80km/ 100 km, 1550 nm (9/125       Por Port PoE         µm);       WDM 10Gbps         Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1270/1330 nm (9/125 µm); 0 to 80km, 1490/1550       Per Port PoE         nm (9/125 µm);       0 to 80km, 1490/1550         per unit: Power 1 (Green), Power 2 (Green), FAULT (Red); RM(Green)       Ethernet port: Link/Activity (Green), Speed (Green); 10G (Amber)         PoE: Link/Act (Green); Mini-GBIC: Link/Activity (Green)       CDP         Z Digital Input (DI):       Level 0: -30~2V / Level 1: 10~30V         Max. input current:8mA       2 Digital Output (DO): Open collector to 40 VDC,         Z Digital Output (DO): Open collector to 40 VDC,       VLAN		km, 1550 nm (9/125 μm) 2.5Gbps Multi-mode: 0 to 300 m, 850 nm (50/125 μm); Single mode: 0 to 2 km/ 15 km/ 40 km, 1310 nm (9/125 μm); 0 to 40 km/ 80 km/ 100km, 1550 nm (9/125 μm) WDM 1Gbps: Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 μm); 0 to 80 km, 1490 nm (9/125 μm); 0 to 10 km/ 20 km/ 40 km/ 60 km/ 80 km, 1550 nm (9/125 μm) WDM 2.5Gbps Single-mode: 0 to 5 km/ 20 km/ 40 km/ 60 km, 1310 /1550nm (9/125 μm); 0 to 80 km, 1490/1550 nm (9/125 μm)	Software S Management SNMP MIB	SNMP v1 v2c, v3/ Web/Telnet/CLI         RFC 1213 MIBII         RFC 1158 MIB         RFC 1157 SNMP MIB         RFC 1493 Bridge MIB*         RFC 1573 IF MIB         RFC 2674 Q-Bridge MIB*         RFC 2674 Q-Bridge MIB*         RFC 2819 RMON MIB         Private MIB         Support ITU G.8032 for Ring protection in less         than 20ms for self-heal recovery (single ring         enhanced mode)         Support basic single ring & enhanced ring         Enhanced G.8032 ring configuration with ease         Cover multicast & data packets protection		
Implementation       Implementation       Status       Implementation         Implementation       Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1270/1330 nm (9/125 µm); 0 to 80km, 1490/1550 nm (9/125 µm); 0 to 80km, 1490/1550 nm (9/125 µm);       Implementation       Implementation </th <th></th> <th>km, 1550 nm (9/125 μm) <b>2.5Gbps</b> Multi-mode: 0 to 300 m, 850 nm (50/125 μm); Single mode: 0 to 2 km/ 15 km/ 40 km, 1310 nm (9/125 μm); 0 to 40 km/ 80 km/ 100km, 1550 nm (9/125 μm) <b>WDM 1Gbps:</b> Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 μm); 0 to 80 km, 1490 nm (9/125 μm); 0 to 10 km/ 20 km/ 40 km/ 60 km/ 80 km, 1550 nm (9/125 μm) <b>WDM 2.5Gbps</b> Single-mode: 0 to 5 km/ 20 km/ 40 km/ 60 km, 1310 /1550nm (9/125 μm); 0 to 80 km, 1490/1550 nm (9/125 μm) <b>10Gbps</b> Multi-mode: 0 to 300 m, 850 nm (OM3 50/125</th> <th>Software S Management SNMP MIB ITU G.8032</th> <th>SNMP v1 v2c, v3/ Web/Telnet/CLI         RFC 1213 MIBII         RFC 1158 MIB         RFC 1157 SNMP MIB         RFC 1493 Bridge MIB*         RFC 1573 IF MIB         RFC 2674 Q-Bridge MIB*         RFC 2819 RMON MIB         Private MIB         Support ITU G.8032 for Ring protection in less         than 20ms for self-heal recovery (single ring         enhanced mode)         Support basic single ring &amp; enhanced ring         Enhanced G.8032 ring configuration with ease         Cover multicast &amp; data packets protection         PoE Detection to check if PD hangs then restart</th>		km, 1550 nm (9/125 μm) <b>2.5Gbps</b> Multi-mode: 0 to 300 m, 850 nm (50/125 μm); Single mode: 0 to 2 km/ 15 km/ 40 km, 1310 nm (9/125 μm); 0 to 40 km/ 80 km/ 100km, 1550 nm (9/125 μm) <b>WDM 1Gbps:</b> Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 μm); 0 to 80 km, 1490 nm (9/125 μm); 0 to 10 km/ 20 km/ 40 km/ 60 km/ 80 km, 1550 nm (9/125 μm) <b>WDM 2.5Gbps</b> Single-mode: 0 to 5 km/ 20 km/ 40 km/ 60 km, 1310 /1550nm (9/125 μm); 0 to 80 km, 1490/1550 nm (9/125 μm) <b>10Gbps</b> Multi-mode: 0 to 300 m, 850 nm (OM3 50/125	Software S Management SNMP MIB ITU G.8032	SNMP v1 v2c, v3/ Web/Telnet/CLI         RFC 1213 MIBII         RFC 1158 MIB         RFC 1157 SNMP MIB         RFC 1493 Bridge MIB*         RFC 1573 IF MIB         RFC 2674 Q-Bridge MIB*         RFC 2819 RMON MIB         Private MIB         Support ITU G.8032 for Ring protection in less         than 20ms for self-heal recovery (single ring         enhanced mode)         Support basic single ring & enhanced ring         Enhanced G.8032 ring configuration with ease         Cover multicast & data packets protection         PoE Detection to check if PD hangs then restart		
WDM 10Gbps         Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1270/1330 nm (9/125 µm); 0 to 80km, 1490/1550 nm (9/125 µm)       User friendly UI       Auto topology drawing         LED       Per unit: Power 1 (Green), Power 2 (Green), FAULT (Red); RM(Green) Ethernet port: Link/Activity (Green), Speed (Green); 10G (Amber) PoE: Link/Act (Green); Mini-GBIC: Link/Activity (Green)       Port Trunk with LACP       LACP Port Trunk: 8 Trunk groups         DI/DO       2 Digital Input (DI): Level 0: -30~2V / Level 1: 10~30V Max. input current:8mA 2 Digital Output (DO): Open collector to 40 VDC,       CDP       Cisco Discovery Protocol for topology mapping System status for actual input voltage, current, total power load and ambient temperature to be shown in GUI and sent alerting if any abnormal status         VLAN       Port Based VLAN (EE 802.1Q Tag VLAN (256 entries)/ VLAN ID (Ub to 4K // M NID con be accimed from 1 to to 4K // M NID con be accimed from 1 to		km, 1550 nm (9/125 μm) <b>2.5Gbps</b> Multi-mode: 0 to 300 m, 850 nm (50/125 μm); Single mode: 0 to 2 km/ 15 km/ 40 km, 1310 nm (9/125 μm); 0 to 40 km/ 80 km/ 100km, 1550 nm (9/125 μm) <b>WDM 16bps:</b> Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 μm); 0 to 80 km, 1490 nm (9/125 μm); 0 to 10 km/ 20 km/ 40 km/ 60 km/ 80 km, 1550 nm (9/125 μm) <b>WDM 2.5Gbps</b> Single-mode: 0 to 5 km/ 20 km/ 40 km/ 60 km, 1310 /1550nm (9/125 μm); 0 to 80 km, 1490/1550 nm (9/125 μm); <b>106bps</b> Multi-mode: 0 to 300 m, 850 nm (OM3 50/125 μm);	Software S Management SNMP MIB ITU G.8032	SNMP v1 v2c, v3/ Web/Telnet/CLI         RFC 1213 MIBII         RFC 1158 MIB         RFC 1157 SNMP MIB         RFC 1493 Bridge MIB*         RFC 1573 IF MIB         RFC 2674 Q-Bridge MIB*         RFC 2819 RMON MIB         Private MIB         Support ITU G.8032 for Ring protection in less         than 20ms for self-heal recovery (single ring         enhanced mode)         Support basic single ring & enhanced ring         Enhanced G.8032 ring configuration with ease         Cover multicast & data packets protection         PoE Detection to check if PD hangs then restart         the PD		
Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1270/1330 nm (9/125 µm); 0 to 80 km, 1490/1550 nm (9/125 µm)       Topology demo         LED       Per unit: Power 1 (Green), Power 2 (Green), FAULT (Red); RM(Green)       Port Trunk with LACP       LACP Port Trunk: 8 Trunk groups         DI/DO       2 Digital Input (DI): Level 0: -30~2V / Level 1: 10~30V Max. input current:8mA 2 Digital Output (DO): Open collector to 40 VDC,       CDP       Cisco Discovery Protocol for topology mapping System status for actual input voltage, current, total power load and ambient temperature to be shown in GUI and sent alerting if any abnormal status		km, 1550 nm (9/125 μm) <b>2.5Gbps</b> Multi-mode: 0 to 300 m, 850 nm (50/125 μm); Single mode: 0 to 2 km/ 15 km/ 40 km, 1310 nm (9/125 μm); 0 to 40 km/ 80 km/ 100km, 1550 nm (9/125 μm) <b>WDM 1Gbps:</b> Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 μm); 0 to 80 km, 1490 nm (9/125 μm); 0 to 10 km/ 20 km/ 40 km/ 60 km/ 80 km, 1550 nm (9/125 μm); <b>WDM 2.5Gbps</b> Single-mode: 0 to 5 km/ 20 km/ 40 km/ 60 km, 1310 /1550nm (9/125 μm); 0 to 80 km, 1490/1550 nm (9/125 μm); <b>10Gbps</b> Multi-mode: 0 to 300 m, 850 nm (OM3 50/125 μm); Single mode: 0 to 10 km/ 20 km, 1310 nm (9/125	Software S Management SNMP MIB ITU G.8032 PoE Management	SNMP v1 v2c, v3/ Web/Telnet/CLI RFC 1213 MIBII RFC 1158 MIB RFC 1157 SNMP MIB RFC 1493 Bridge MIB* RFC 1493 Bridge MIB* RFC 1573 IF MIB RFC 2674 Q-Bridge MIB* RFC 2819 RMON MIB Private MIB Support ITU G.8032 for Ring protection in less than 20ms for self-heal recovery (single ring enhanced mode) Support basic single ring & enhanced ring Enhanced G.8032 ring configuration with ease Cover multicast & data packets protection PoE Detection to check if PD hangs then restart the PD PoE scheduling		
Single-Indee: 0 to 10 km/ 20 km/ 40 km/ 00 km, 1270/1330 nm (9/125 µm); 0 to 80km, 1490/1550 nm (9/125 µm); 0 to 80km, 1490/1550       Complete CLI for professional setting         LED       Per unit: Power 1 (Green), Power 2 (Green), FAULT (Red); RM(Green)       Port Trunk with LACP       LACP Port Trunk: 8 Trunk groups         Ethernet port: Link/Activity (Green); 10G (Amber) PoE: Link/Act (Green); Mini-GBIC: Link/Activity (Green)       Supports LLDP to allow switch to advise its identification and capability on the LAN         DI/DO       2 Digital Input (DI): Level 0: -30~2V / Level 1: 10~30V Max. input current:8mA 2 Digital Output (DO): Open collector to 40 VDC,       VLAN       Port Based VLAN (LNN UD con be procise)/ VLAN ID (Ub to 4/K // NUD con be procise)/ VLAN ID		km, 1550 nm (9/125 μm) <b>2.5Gbps</b> Multi-mode: 0 to 300 m, 850 nm (50/125 μm); Single mode: 0 to 2 km/ 15 km/ 40 km, 1310 nm (9/125 μm); 0 to 40 km/ 80 km/ 100km, 1550 nm (9/125 μm) <b>WDM 16bps:</b> Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 μm); 0 to 80 km, 1490 nm (9/125 μm); 0 to 10 km/ 20 km/ 40 km/ 60 km/ 80 km, 1550 nm (9/125 μm); <b>WDM 2.5Gbps</b> Single-mode: 0 to 5 km/ 20 km/ 40 km/ 60 km, 1310 /1550 nm (9/125 μm); 0 to 80 km, 1490/1550 nm (9/125 μm); 0 to 80 km, 1490/1550 nm (9/125 μm); <b>10Gbps</b> Multi-mode: 0 to 300 m, 850 nm (OM3 50/125 μm); Single mode: 0 to 10 km/ 20 km, 1310 nm (9/125 μm); 0 to 40 km/ 80km/ 100 km, 1550 nm (9/125	Software S         Management         SNMP MIB         ITU G.8032         PoE         Management         Per Port PoE	SNMP v1 v2c, v3/ Web/Telnet/CLI RFC 1213 MIBII RFC 1158 MIB RFC 1157 SNMP MIB RFC 1493 Bridge MIB* RFC 1493 Bridge MIB* RFC 1573 IF MIB RFC 2674 Q-Bridge MIB* RFC 2819 RMON MIB Private MIB Support ITU G.8032 for Ring protection in less than 20ms for self-heal recovery (single ring enhanced mode) Support basic single ring & enhanced ring Enhanced G.8032 ring configuration with ease Cover multicast & data packets protection PoE Detection to check if PD hangs then restart the PD PoE scheduling		
127/0/330 hm (9/125 µm); 0 to 80km, 1490/1550 nm (9/125 µm);       Port Trunk with LACP Port Trunk: 8 Trunk groups         LED       Per unit: Power 1 (Green), Power 2 (Green), FAULT (Red); RM(Green)       Ethernet port: Link/Activity (Green), Speed (Green); 10G (Amber)         DI/DO       2 Digital Input (DI): Level 0: -30~2V / Level 1: 10~30V Max. input current: 8mA 2 Digital Output (DO): Open collector to 40 VDC,       Port Trunk with LACP       LACP Port Trunk: 8 Trunk groups         VLAN       Port Trunk with LACP       LACP Port Trunk: 8 Trunk groups		km, 1550 nm (9/125 μm) <b>2.5Gbps</b> Multi-mode: 0 to 300 m, 850 nm (50/125 μm); Single mode: 0 to 2 km/ 15 km/ 40 km, 1310 nm (9/125 μm); 0 to 40 km/ 80 km/ 100km, 1550 nm (9/125 μm); <b>WDM 1Gbps:</b> Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 μm); 0 to 80 km, 1490 nm (9/125 μm); 0 to 10 km/ 20 km/ 40 km/ 60 km/ 80 km, 1550 nm (9/125 μm); <b>WDM 2.5Gbps</b> Single-mode: 0 to 5 km/ 20 km/ 40 km/ 60 km, 1310 /1550 nm (9/125 μm); <b>UDM 2.5Gbps</b> Multi-mode: 0 to 300 m, 850 nm (OM3 50/125 μm); Single mode: 0 to 10 km/ 20 km, 1310 nm (9/125 μm); 0 to 40 km/ 80 km/ 100 km, 1550 nm (9/125 μm);	Software S Management SNMP MIB ITU G.8032 PoE Management Per Port PoE Status	Specification         SNMP v1 v2c, v3/ Web/Telnet/CLI         RFC 1213 MIBII         RFC 1157 SNMP MIB         RFC 1493 Bridge MIB*         RFC 1573 IF MIB         RFC 2674 Q-Bridge MIB*         Private MIB         Support ITU G.8032 for Ring protection in less         than 20ms for self-heal recovery (single ring         enhanced mode)         Support basic single ring & enhanced ring         Enhanced G.8032 ring configuration with ease         Cover multicast & data packets protection         PoE Detection to check if PD hangs then restart         the PD         PoE scheduling         On/ Off, voltage, current, watts, temperature		
LED       Per unit: Power 1 (Green), Power 2 (Green),         FAULT (Red); RM(Green)       Ethernet port: Link/Activity (Green), Speed         (Green); 10G (Amber)       PoE: Link/Act (Green); Mini-GBIC: Link/Activity (Green)         PV/DO       2 Digital Input (DI):         Level 0: -30~2V / Level 1: 10~30V         Max. input current:8mA         2 Digital Output (DO): Open collector to 40 VDC,		km, 1550 nm (9/125 μm) 2.5Gbps Multi-mode: 0 to 300 m, 850 nm (50/125 μm); Single mode: 0 to 2 km/ 15 km/ 40 km, 1310 nm (9/125 μm); 0 to 40 km/ 80 km/ 100km, 1550 nm (9/125 μm); WDM 1Gbps: Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 μm); 0 to 80 km, 1490 nm (9/125 μm); 0 to 10 km/ 20 km/ 40 km/ 60 km, 80 km, 1550 nm (9/125 μm); WDM 2.5Gbps Single-mode: 0 to 5 km/ 20 km/ 40 km/ 60 km, 1310 /1550 nm (9/125 μm); 10Gbps Multi-mode: 0 to 300 m, 850 nm (OM3 50/125 μm); Single mode: 0 to 10 km/ 20 km, 1310 nm (9/125 μm); WDM 10Gbps	Software S Management SNMP MIB ITU G.8032 PoE Management Per Port PoE Status	Specification         SNMP v1 v2c, v3/ Web/Telnet/CLI         RFC 1213 MIBII         RFC 1157 SNMP MIB         RFC 1157 SNMP MIB         RFC 1493 Bridge MIB*         RFC 1573 IF MIB         RFC 2674 Q-Bridge MIB*         RFC 2819 RMON MIB         Private MIB         Support ITU G.8032 for Ring protection in less         than 20ms for self-heal recovery (single ring         enhanced mode)         Support basic single ring & enhanced ring         Enhanced G.8032 ring configuration with ease         Cover multicast & data packets protection         PoE Detection to check if PD hangs then restart         the PD         PoE scheduling         On/ Off, voltage, current, watts, temperature         Auto topology drawing         Topology demo		
LED       Per unit: Power 1 (Green), Power 2 (Green),         FAULT (Red); RM(Green)       Ethernet port: Link/Activity (Green), Speed         (Green); 10G (Amber)       CDP         PoE: Link/Activity (Green); Mini-GBIC: Link/Activity (Green)       Enhanced         DI/DO       2 Digital Input (DI):         Level 0: -30-2V / Level 1: 10~30V       Max. input current:8mA         2 Digital Output (DO): Open collector to 40 VDC,       VLAN		km, 1550 nm (9/125 μm) 2.5Gbps Multi-mode: 0 to 300 m, 850 nm (50/125 μm); Single mode: 0 to 2 km/ 15 km/ 40 km, 1310 nm (9/125 μm); 0 to 40 km/ 80 km/ 100km, 1550 nm (9/125 μm) WDM 1Gbps: Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 μm); 0 to 80 km, 1490 nm (9/125 μm); 0 to 10 km/ 20 km/ 40 km/ 60 km/ 80 km, 1550 nm (9/125 μm) WDM 2.5Gbps Single-mode: 0 to 5 km/ 20 km/ 40 km/ 60 km, 1310 /1550nm (9/125 μm); 0 to 80 km, 1490/1550 nm (9/125 μm); Multi-mode: 0 to 300 m, 850 nm (OM3 50/125 μm); Single mode: 0 to 10 km/ 20 km, 1310 nm (9/125 μm); WDM 10Gbps Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km,	Software S         Management         SNMP MIB         ITU G.8032         PoE         Management         Per Port PoE         Status         User friendly UI	SNMP v1 v2c, v3/ Web/Telnet/CLI         RFC 1213 MIBII         RFC 1158 MIB         RFC 1157 SNMP MIB         RFC 1493 Bridge MIB*         RFC 1573 IF MIB         RFC 2674 Q-Bridge MIB*         RFC 2819 RMON MIB         Private MIB         Support ITU G.8032 for Ring protection in less         than 20ms for self-heal recovery (single ring         enhanced mode)         Support basic single ring & enhanced ring         Enhanced G.8032 ring configuration with ease         Cover multicast & data packets protection         PoE Detection to check if PD hangs then restart         the PD         PoE scheduling         On/ Off, voltage, current, watts, temperature         Auto topology drawing         Topology demo         Complete CLI for professional setting		
FAULT (Red); RM(Green)       Experimental induction of the LAN         Ethernet port: Link/Activity (Green), Speed (Green); 10G (Amber)       CDP       Cisco Discovery Protocol for topology mapping         DV/DO       2 Digital Input (DI): Level 0: -30~2V / Level 1: 10~30V       Enhanced       System status for actual input voltage, current, Monitoring         VLAN       Pot Based VLAN       Status         VLAN       Pot Based VLAN       IEE 802.1Q Tag VLAN (256 entries)/ VLAN ID (UD): 000 per collector to 40 VDC,		km, 1550 nm (9/125 μm) 2.5Gbps Multi-mode: 0 to 300 m, 850 nm (50/125 μm); Single mode: 0 to 2 km/ 15 km/ 40 km, 1310 nm (9/125 μm); 0 to 40 km/ 80 km/ 100km, 1550 nm (9/125 μm) WDM 1Gbps: Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 μm); 0 to 80 km, 1490 nm (9/125 μm); 0 to 10 km/ 20 km/ 40 km/ 60 km/ 80 km, 1550 nm (9/125 μm) WDM 2.5Gbps Single-mode: 0 to 5 km/ 20 km/ 40 km/ 60 km, 1310 /1550nm (9/125 μm); 0 to 80 km, 1490/1550 nm (9/125 μm) 10Gbps Multi-mode: 0 to 300 m, 850 nm (OM3 50/125 μm); Single mode: 0 to 10 km/ 20 km, 1310 nm (9/125 μm); 0 to 40 km/ 80km/ 100 km, 1550 nm (9/125 μm) WDM 10Gbps Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1270/1330 nm (9/125 μm); 0 to 80km, 1490/1550	Software S         Management         SNMP MIB         ITU G.8032         PoE         Management         Per Port PoE         Status         User friendly UI         Port Trunk with	SNMP v1 v2c, v3/ Web/Telnet/CLI         RFC 1213 MIBII         RFC 1158 MIB         RFC 1157 SNMP MIB         RFC 1493 Bridge MIB*         RFC 1573 IF MIB         RFC 2674 Q-Bridge MIB*         RFC 2819 RMON MIB         Private MIB         Support ITU G.8032 for Ring protection in less         than 20ms for self-heal recovery (single ring         enhanced mode)         Support basic single ring & enhanced ring         Enhanced G.8032 ring configuration with ease         Cover multicast & data packets protection         PoE Detection to check if PD hangs then restart         the PD         PoE scheduling         On/ Off, voltage, current, watts, temperature         Auto topology drawing         Topology demo         Complete CLI for professional setting		
DI/DO     2 Digital Input current:8mA       2 Digital Output (DD):     2 Digital Output (DD): Open collector to 40 VDC,	LED	km, 1550 nm (9/125 μm) 2.5Gbps Multi-mode: 0 to 300 m, 850 nm (50/125 μm); Single mode: 0 to 2 km/ 15 km/ 40 km, 1310 nm (9/125 μm); 0 to 40 km/ 80 km/ 100km, 1550 nm (9/125 μm) WDM 1Gbps: Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 μm); 0 to 80 km, 1490 nm (9/125 μm); 0 to 10 km/ 20 km/ 40 km/ 60 km/ 80 km, 1550 nm (9/125 μm) WDM 2.5Gbps Single-mode: 0 to 5 km/ 20 km/ 40 km/ 60 km, 1310 /1550 nm (9/125 μm); 0 to 80 km, 1310 /1550 nm (9/125 μm); 0 to 80 km, 1310 /1550 nm (9/125 μm); 10Gbps Multi-mode: 0 to 300 m, 850 nm (OM3 50/125 μm); Single mode: 0 to 10 km/ 20 km, 1310 nm (9/125 μm); 0 to 40 km/ 80km/ 100 km, 1550 nm (9/125 μm) WDM 10Gbps Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1270/1330 nm (9/125 μm); 0 to 80km, 1490/1550 nm (9/125 μm) Per unit: Power 1 (Green), Power 2 (Green),	Software S         Management         SNMP MIB         ITU G.8032         ITU G.8032         PoE         Management         Per Port PoE         Status         User friendly UI         Port Trunk with         LACP	SNMP v1 v2c, v3/ Web/Telnet/CLI         RFC 1213 MIBII         RFC 1157 SNMP MIB         RFC 1157 SNMP MIB         RFC 1493 Bridge MIB*         RFC 1573 IF MIB         RFC 2819 RMON MIB         Private MIB         Support ITU G.8032 for Ring protection in less         than 20ms for self-heal recovery (single ring         enhanced mode)         Support basic single ring & enhanced ring         Enhanced G.8032 ring configuration with ease         Cover multicast & data packets protection         PoE betection to check if PD hangs then restart         the PD         PoE scheduling         On/ Off, voltage, current, watts, temperature         Auto topology drawing         Topology demo         Complete CLI for professional setting         LACP Port Trunk: 8 Trunk groups		
DI/DO       2 Digital Input (DI): Level 0: -30~2V / Level 1: 10~30V Max. input current:8mA 2 Digital Output (DO): Open collector to 40 VDC,       Enhanced Environmental Monitoring       System status for actual input voltage, current, total power load and ambient temperature to be shown in GUI and sent alerting if any abnormal status         VLAN       Port Based VLAN (III to 4K // 4 N IID can be assigned from 1 to 2 M // 4 N IID can be assigned from 1 to	LED	km, 1550 nm (9/125 μm) 2.5Gbps Multi-mode: 0 to 300 m, 850 nm (50/125 μm); Single mode: 0 to 2 km/ 15 km/ 40 km, 1310 nm (9/125 μm); 0 to 40 km/ 80 km/ 100km, 1550 nm (9/125 μm) WDM 1Gbps: Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 μm); 0 to 80 km, 1490 nm (9/125 μm); 0 to 10 km/ 20 km/ 40 km/ 60 km/ 80 km, 1550 nm (9/125 μm) WDM 2.5Gbps Single-mode: 0 to 5 km/ 20 km/ 40 km/ 60 km, 1310 /1550 nm (9/125 μm); 0 to 80 km, 1310 /1550 nm (9/125 μm); 0 to 80 km, 1310 /1550 nm (9/125 μm); 10Gbps Multi-mode: 0 to 300 m, 850 nm (OM3 50/125 μm); Single mode: 0 to 10 km/ 20 km, 1310 nm (9/125 μm); 0 to 40 km/ 80km/ 100 km, 1550 nm (9/125 μm) WDM 10Gbps Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1270/1330 nm (9/125 μm); 0 to 80km, 1490/1550 nm (9/125 μm) Per unit: Power 1 (Green), Power 2 (Green),	Software S         Management         SNMP MIB         ITU G.8032         ITU G.8032         PoE         Management         Per Port PoE         Status         User friendly UI         Port Trunk with         LACP	Specification         SNMP v1 v2c, v3/ Web/Telnet/CLI         RFC 1213 MIBII         RFC 1158 MIB         RFC 1157 SNMP MIB         RFC 1493 Bridge MIB*         RFC 1573 IF MIB         RFC 2819 RMON MIB         Private MIB         Support ITU G.8032 for Ring protection in less         than 20ms for self-heal recovery (single ring         enhanced mode)         Support basic single ring & enhanced ring         Enhanced G.8032 ring configuration with ease         Cover multicast & data packets protection         PoE betection to check if PD hangs then restart         the PD         PoE scheduling         On/ Off, voltage, current, watts, temperature         Auto topology drawing         Topology demo         Complete CLI for professional setting         LACP Port Trunk: 8 Trunk groups         Supports LLDP to allow switch to advise its		
DI/DO     2 Digital Input (DI): Level 0: -30~2V / Level 1: 10~30V Max. input current:8mA     Environmental Monitoring     total power load and ambient temperature to be shown in GUI and sent alerting if any abnormal status       VLAN     Port Based VLAN       2 Digital Output (DO): Open collector to 40 VDC,     VLAN	LED	km, 1550 nm (9/125 μm) <b>2.5Gbps</b> Multi-mode: 0 to 300 m, 850 nm (50/125 μm); Single mode: 0 to 2 km/ 15 km/ 40 km, 1310 nm (9/125 μm); 0 to 40 km/ 80 km/ 100km, 1550 nm (9/125 μm) <b>WDM 1Gbps:</b> Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 μm); 0 to 80 km, 1490 nm (9/125 μm); 0 to 10 km/ 20 km/ 40 km/ 60 km/ 80 km, 1550 nm (9/125 μm) <b>WDM 2.5Gbps</b> Single-mode: 0 to 5 km/ 20 km/ 40 km/ 60 km, 1310 /1550nm (9/125 μm); 0 to 80 km, 1490/1550 nm (9/125 μm); <b>WDM 10Gbps</b> Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1270/1330 nm (9/125 μm); 0 to 80 km, 1490/1550 nm (9/125 μm) Per unit: Power 1 (Green), Power 2 (Green), FAULT (Red); RM(Green)	Software S         Management         SNMP MIB         ITU G.8032         ITU G.8032         PoE         Management         Per Port PoE         Status         User friendly UI         Port Trunk with         LACP         LLDP	Specification         SNMP v1 v2c, v3/ Web/Telnet/CLI         RFC 1213 MIBII         RFC 1158 MIB         RFC 1157 SNMP MIB         RFC 1493 Bridge MIB*         RFC 1573 IF MIB         RFC 2674 Q-Bridge MIB*         RFC 2819 RMON MIB         Private MIB         Support ITU G.8032 for Ring protection in less         than 20ms for self-heal recovery (single ring         enhanced mode)         Support basic single ring & enhanced ring         Enhanced G.8032 ring configuration with ease         Cover multicast & data packets protection         PoE Detection to check if PD hangs then restart         the PD         PoE scheduling         On/ Off, voltage, current, watts, temperature         Auto topology drawing         Topology demo         Complete CLI for professional setting         LACP Port Trunk: 8 Trunk groups         Supports LLDP to allow switch to advise its         identification and capability on the LAN		
DV/DO     2 Digital Input (DI): Level 0: -30~2V / Level 1: 10~30V Max. input current:8mA 2 Digital Output (DO): Open collector to 40 VDC,     Monitoring     shown in GUI and sent alerting if any abnormal status       VLAN     Port Based VLAN IEEE 802.1Q Tag VLAN (256 entries)/ VLAN ID (I) to 4K (VLAN) ID can be assigned from 1 to 1000 (VLAN)	LED	km, 1550 nm (9/125 μm) <b>2.5Gbps</b> Multi-mode: 0 to 300 m, 850 nm (50/125 μm); Single mode: 0 to 2 km/ 15 km/ 40 km, 1310 nm (9/125 μm); 0 to 40 km/ 80 km/ 100km, 1550 nm (9/125 μm); 0 to 40 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 μm); 0 to 80 km, 1490 nm (9/125 μm); 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 μm); 0 to 80 km, 1490 nm (9/125 μm); 0 to 10 km/ 20 km/ 40 km/ 60 km, 80 km, 1550 nm (9/125 μm); <b>WDM 2.5Gbps</b> Single-mode: 0 to 5 km/ 20 km/ 40 km/ 60 km, 1310 /1550 nm (9/125 μm); <b>WDM 2.5Gbps</b> Multi-mode: 0 to 5 km/ 20 km, 40 km/ 60 km, 1310 /1550 nm (9/125 μm); <b>10Gbps</b> Multi-mode: 0 to 300 m, 850 nm (OM3 50/125 μm); Single mode: 0 to 10 km/ 20 km, 1310 nm (9/125 μm); 0 to 40 km/ 80km/ 100 km, 1550 nm (9/125 μm); WDM 10Gbps Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1270/1330 nm (9/125 μm); 0 to 80km, 1490/1550 nm (9/125 μm) Per unit: Power 1 (Green), Power 2 (Green), FAULT (Red); RM(Green) Ethernet port: Link/Activity (Green), Speed (Green); 10G (Amber)	Software S         Management         SNMP MIB         ITU G.8032         PoE         Management         Per Port PoE         Status         User friendly UI         Port Trunk with         LLDP         CDP	Specification         SNMP v1 v2c, v3/ Web/Telnet/CLI         RFC 1213 MIBII         RFC 1157 SNMP MIB         RFC 1493 Bridge MIB*         RFC 1573 IF MIB         RFC 2674 Q-Bridge MIB*         RFC 2819 RMON MIB         Private MIB         Support ITU G.8032 for Ring protection in less         than 20ms for self-heal recovery (single ring         enhanced mode)         Support basic single ring & enhanced ring         Enhanced G.8032 ring configuration with ease         Cover multicast & data packets protection         PoE Detection to check if PD hangs then restart         the PD         PoE scheduling         On/ Off, voltage, current, watts, temperature         Auto topology drawing         Topology demo         Complete CLI for professional setting         LACP Port Trunk: 8 Trunk groups         Supports LLDP to allow switch to advise its         identification and capability on the LAN         Cisco Discovery Protocol for topology mapping		
Dirbo     2 Digital Input (D).     status       Level 0: -30~2V / Level 1: 10~30V     VLAN     Port Based VLAN       Max. input current:8mA     2 Digital Output (DO): Open collector to 40 VDC,     IEEE 802.1Q Tag VLAN (256 entries)/ VLAN ID       2 Digital Output (DO): Open collector to 40 VDC,     (I) to 4/K //I AN ID can be assigned from 1 to	LED	km, 1550 nm (9/125 μm)         2.5Gbps         Multi-mode: 0 to 300 m, 850 nm (50/125 μm);         Single mode: 0 to 2 km/ 15 km/ 40 km, 1310 nm         (9/125 μm); 0 to 40 km/ 80 km/ 100km, 1550 nm         (9/125 µm)         WDM 1Gbps:         Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 µm); 0 to 80 km, 1490 nm         (9/125 µm); 0 to 10 km/ 20 km/ 40 km/ 60 km, 80 km, 1550 nm (9/125 µm); 0 to 80 km, 1490 nm         (9/125 µm); 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 µm);         WDM 2.5Gbps         Single-mode: 0 to 5 km/ 20 km/ 40 km/ 60 km, 1310 /1550 nm (9/125 µm);         MUB         MULti-mode: 0 to 300 m, 850 nm (OM3 50/125 µm);         Nulti-mode: 0 to 10 km/ 20 km, 1310 nm (9/125 µm);         Ningle mode: 0 to 10 km/ 20 km, 1310 nm (9/125 µm);         WDM 10Gbps         Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1270/1330 nm (9/125 µm); 0 to 80km, 1490/1550 nm (9/125 µm);         WDM 10Gbps         Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1270/1330 nm (9/125 µm);         Per unit: Power 1 (Green), Power 2 (Green), FAULT (Red); RM(Green)         Ethermet port: Link/Activity (Green), Speed         (Green); 10G (Amber)         PoE: Link/Act (Green); Mini-GBIC: Link/Activity	Software S         Management         SNMP MIB         ITU G.8032         PoE         Management         Per Port PoE         Status         User friendly UI         Port Trunk with         LACP         CDP         Enhanced	Specification         SNMP v1 v2c, v3/ Web/Telnet/CLI         RFC 1213 MIBII         RFC 1157 SNMP MIB         RFC 1157 SNMP MIB         RFC 1493 Bridge MIB*         RFC 1573 IF MIB         RFC 2674 Q-Bridge MIB*         RFC 2819 RMON MIB         Private MIB         Support ITU G.8032 for Ring protection in less         than 20ms for self-heal recovery (single ring         enhanced mode)         Support basic single ring & enhanced ring         Enhanced G.8032 ring configuration with ease         Cover multicast & data packets protection         PoE Detection to check if PD hangs then restart         the PD         PoE scheduling         On/ Off, voltage, current, watts, temperature         Auto topology drawing         Topology demo         Complete CLI for professional setting         LACP Port Trunk: 8 Trunk groups         Supports LLDP to allow switch to advise its         identification and capability on the LAN         Cisco Discovery Protocol for topology mapping         System status for actual input voltage, current,		
Max. input current:8mA 2 Digital Output (DO): Open collector to 40 VDC, (I) to 4K (VI AN ID can be assigned from 1 to		km, 1550 nm (9/125 μm) <b>2.5Gbps</b> Multi-mode: 0 to 300 m, 850 nm (50/125 μm); Single mode: 0 to 2 km/ 15 km/ 40 km, 1310 nm (9/125 μm); 0 to 40 km/ 80 km/ 100km, 1550 nm (9/125 μm) <b>WDM 1Gbps:</b> Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km, 1310 nm (9/125 μm); 0 to 80 km, 1490 nm (9/125 μm); 0 to 10 km/ 20 km/ 40 km/ 60 km/ 80 km, 1550 nm (9/125 μm) <b>WDM 2.5Gbps</b> Single-mode: 0 to 5 km/ 20 km/ 40 km/ 60 km, 1310 /1550 nm (9/125 μm); 0 to 80 km, 1310 /1550 nm (9/125 μm) <b>10Gbps</b> Multi-mode: 0 to 300 m, 850 nm (OM3 50/125 μm); Single mode: 0 to 10 km/ 20 km, 1310 nm (9/125 μm); Single mode: 0 to 10 km/ 20 km, 1310 nm (9/125 μm); Single-mode: 0 to 10 km/ 20 km, 40 km/ 60 km, 1270/1330 nm (9/125 μm); 0 to 80km, 1490/1550 nm (9/125 μm) Per unit: Power 1 (Green), Power 2 (Green), FAULT (Red); RM(Green) Ethernet port: Link/Activity (Green), Speed (Green); 10G (Amber) PoE: Link/Act (Green); Mini-GBIC: Link/Activity (Green)	Software S         Management         SNMP MIB         ITU G.8032         ITU G.8032         PoE         Management         Per Port PoE         Status         User friendly UI         Port Trunk with         LACP         LLDP         CDP         Enhanced         Environmental	Specification         SNMP v1 v2c, v3/ Web/Telnet/CLI         RFC 1213 MIBII         RFC 1157 SNMP MIB         RFC 1157 SNMP MIB         RFC 1493 Bridge MIB*         RFC 1573 IF MIB         RFC 2819 RMON MIB         Private MIB         Support ITU G.8032 for Ring protection in less         than 20ms for self-heal recovery (single ring         enhanced mode)         Support basic single ring & enhanced ring         Enhanced G.8032 ring configuration with ease         Cover multicast & data packets protection         PoE betection to check if PD hangs then restart         the PD         PoE scheduling         On/ Off, voltage, current, watts, temperature         Auto topology drawing         Topology demo         Complete CLI for professional setting         LACP Port Trunk: 8 Trunk groups         Supports LLDP to allow switch to advise its         identification and capability on the LAN         Cisco Discovery Protocol for topology mapping         System status for actual input voltage, current, total power load and ambient temperature to be		
2 Digital Output (DO): Open collector to 40 VDC, (I) to 4K (J/ AN LD can be assigned from 1 to		km, 1550 nm (9/125 μm)         2.5Gbps         Multi-mode: 0 to 300 m, 850 nm (50/125 μm);         Single mode: 0 to 2 km/ 15 km/ 40 km, 1310 nm         (9/125 µm); 0 to 40 km/ 80 km/ 100km, 1550 nm         (9/125 µm);         WDM 1Gbps:         Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km,         1310 nm (9/125 µm); 0 to 80 km, 1490 nm         (9/125 µm); 0 to 10 km/ 20 km/ 40 km/ 60 km,         1310 nm (9/125 µm); 0 to 80 km, 1490 nm         (9/125 µm); 0 to 10 km/ 20 km/ 40 km/ 60 km,         1310 nm (9/125 µm);         WDM 2.5Gbps         Single-mode: 0 to 5 km/ 20 km/ 40 km/ 60 km,         1310 /1550nm (9/125 µm);         MDGbps         Multi-mode: 0 to 300 m, 850 nm (OM3 50/125 µm);         10Gbps         Multi-mode: 0 to 10 km/ 20 km, 1310 nm (9/125 µm);         Single-mode: 0 to 10 km/ 20 km, 1310 nm (9/125 µm);         0 to 40 km/ 80km/ 100 km, 1550 nm (9/125 µm);         WDM 10Gbps         Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km,         1270/1330 nm (9/125 µm);       0 to 80 km, 1490/1550 nm (9/125 µm);         Per unit: Power 1 (Green), Power 2 (Green),         FAULT (Red); RM(Green)         Ethernet port: Link/Activity (Green), Speed (Green); 10G (Amber)         PoE: Link/Act (Green); Mini-GBIC: Link/Activity	Software S         Management         SNMP MIB         ITU G.8032         ITU G.8032         PoE         Management         Per Port PoE         Status         User friendly UI         Port Trunk with         LACP         LLDP         CDP         Enhanced         Environmental         Monitoring	Specification         SNMP v1 v2c, v3/ Web/Telnet/CLI         RFC 1213 MIBII         RFC 1157 SNMP MIB         RFC 1157 SNMP MIB         RFC 1493 Bridge MIB*         RFC 1573 IF MIB         RFC 2819 RMON MIB         Private MIB         Support ITU G.8032 for Ring protection in less         than 20ms for self-heal recovery (single ring         enhanced mode)         Support basic single ring & enhanced ring         Enhanced G.8032 ring configuration with ease         Cover multicast & data packets protection         PoE betection to check if PD hangs then restart         the PD         PoE scheduling         On/ Off, voltage, current, watts, temperature         Auto topology drawing         Topology demo         Complete CLI for professional setting         LACP Port Trunk: 8 Trunk groups         Supports LLDP to allow switch to advise its         identification and capability on the LAN         Cisco Discovery Protocol for topology mapping         System status for actual input voltage, current, total power load and ambient temperature to be shown in GUI and sent alerting if any abnormal		
200mA (Up to 4K, VLAN ID can be assigned from 1 to		km, 1550 nm (9/125 μm)         2.5Gbps         Multi-mode: 0 to 300 m, 850 nm (50/125 μm);         Single mode: 0 to 2 km/ 15 km/ 40 km, 1310 nm         (9/125 µm); 0 to 40 km/ 80 km/ 100km, 1550 nm         (9/125 µm); 0 to 40 km/ 20 km/ 40 km/ 60 km,         1310 nm (9/125 µm); 0 to 80 km, 1490 nm         (9/125 µm); 0 to 10 km/ 20 km/ 40 km/ 60 km,         1310 nm (9/125 µm); 0 to 80 km, 1490 nm         (9/125 µm); 0 to 10 km/ 20 km/ 40 km/ 60 km,         1310 nm (9/125 µm); 0 to 80 km, 1490 nm         (9/125 µm); 0 to 10 km/ 20 km/ 40 km/ 60 km,         1310 /1550 nm (9/125 µm); 0 to 80 km,         VDM 2.5Gbps         Single-mode: 0 to 5 km/ 20 km/ 40 km/ 60 km,         1310 /1550 nm (9/125 µm); 0 to 80 km,         1490/1550 nm (9/125 µm);         Multi-mode: 0 to 300 m, 850 nm (OM3 50/125 µm);         Single mode: 0 to 10 km/ 20 km, 1310 nm (9/125 µm);         Single mode: 0 to 10 km/ 20 km, 1310 nm (9/125 µm);         VDM 10Gbps         Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km,         1270/1330 nm (9/125 µm);         VDM 10Gbps         Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km,         1270/1330 nm (9/125 µm);         Per unit: Power 1 (Green), Power 2 (Green),         FAULT (Red); RM(Green)         Ethernet port: Link/Activity (Green), Speed     <	Software S         Management         SNMP MIB         ITU G.8032         ITU G.8032         PoE         Management         Per Port PoE         Status         User friendly UI         Port Trunk with         LACP         LLDP         CDP         Enhanced         Environmental         Monitoring	Specification         SNMP v1 v2c, v3/ Web/Telnet/CLI         RFC 1213 MIBII         RFC 1157 SNMP MIB         RFC 1493 Bridge MIB*         RFC 1573 IF MIB         RFC 2674 Q-Bridge MIB*         RFC 2819 RMON MIB         Private MIB         Support ITU G.8032 for Ring protection in less         than 20ms for self-heal recovery (single ring         enhanced mode)         Support basic single ring & enhanced ring         Enhanced G.8032 ring configuration with ease         Cover multicast & data packets protection         PoE Detection to check if PD hangs then restart         the PD         PoE scheduling         On/ Off, voltage, current, watts, temperature         Auto topology drawing         Topology demo         Complete CLI for professional setting         LACP Port Trunk: 8 Trunk groups         Supports LLDP to allow switch to advise its         identification and capability on the LAN         Cisco Discovery Protocol for topology mapping         System status for actual input voltage, current, total power load and ambient temperature to be shown in GUI and sent alerting if any abnormal status         Port Based VLAN		
		km, 1550 nm (9/125 μm)         2.5Gbps         Multi-mode: 0 to 300 m, 850 nm (50/125 μm);         Single mode: 0 to 2 km/ 15 km/ 40 km, 1310 nm         (9/125 µm); 0 to 40 km/ 80 km/ 100km, 1550 nm         (9/125 µm);         WDM 1Gbps:         Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km,         1310 nm (9/125 µm); 0 to 80 km, 1490 nm         (9/125 µm); 0 to 10 km/ 20 km/ 40 km/ 60 km,         1310 nm (9/125 µm); 0 to 80 km, 1490 nm         (9/125 µm); 0 to 10 km/ 20 km/ 40 km/ 60 km,         1310 nm (9/125 µm)         WDM 2.5Gbps         Single-mode: 0 to 5 km/ 20 km/ 40 km/ 60 km,         1310 /1550 nm (9/125 µm);         MUlti-mode: 0 to 300 m, 850 nm (OM3 50/125 µm);         Nigle mode: 0 to 10 km/ 20 km, 1310 nm (9/125 µm);         Single mode: 0 to 10 km/ 20 km, 1310 nm (9/125 µm);         WDM 10Gbps         Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km,         1270/1330 nm (9/125 µm);         WDM 10Gbps         Single-mode: 0 to 10 km/ 20 km/ 40 km/ 60 km,         1270/1330 nm (9/125 µm);         Per unit: Power 1 (Green), Power 2 (Green),         FAULT (Red); RM(Green)         Ethernet port: Link/Activity (Green), Speed         (Green); 10G (Amber)         PoE: Link/Act (Green); Mini-GBIC: Link/Activity (Green);	Software S         Management         SNMP MIB         ITU G.8032         ITU G.8032         PoE         Management         Per Port PoE         Status         User friendly UI         Port Trunk with         LACP         LLDP         CDP         Enhanced         Environmental         Monitoring	Specification         SNMP v1 v2c, v3/ Web/Telnet/CLI         RFC 1213 MIBII         RFC 1157 SNMP MIB         RFC 1493 Bridge MIB*         RFC 1573 IF MIB         RFC 2674 Q-Bridge MIB*         RFC 2819 RMON MIB         Private MIB         Support ITU G.8032 for Ring protection in less         than 20ms for self-heal recovery (single ring         enhanced mode)         Support basic single ring & enhanced ring         Enhanced G.8032 ring configuration with ease         Cover multicast & data packets protection         PoE betection to check if PD hangs then restart         the PD         PoE scheduling         On/ Off, voltage, current, watts, temperature         Auto topology drawing         Topology demo         Complete CLI for professional setting         LACP Port Trunk: 8 Trunk groups         Supports LLDP to allow switch to advise its         identification and capability on the LAN         Cisco Discovery Protocol for topology mapping         System status for actual input voltage, current,         total power load and ambient temperature to be         shown in GUI and sent alerting if any abnormal status         Port Based VLAN         IEEE 802.1Q Tag VLAN (256 entries)/ VLAN ID </th		

Datasheet Version 2.2

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### Industrial 10G Uplink PoE Managed Ethernet Switches



4096.)	
GVRP	
Protocol based VLAN, Subnet based VLAN	
Spanning Tree Supports IEEE802.1d Spanning Tree and	
IEEE802.1w Rapid Spanning Tree, IEEE802.1	s
Multiple Spanning Tree 8 MSTI	
Quality of The quality of service determined by port, Tag	
Service 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	
Remote Admin Supports 10 IP addresses that have permission	n
to access the switch management and to preve	ent
unauthorized intruder.	
Login Security Supports IEEE802.1X Authentication/RADIUS	
Port Mirror Support 3 mirroring types: "RX, TX and Both packet"	
Network Support 10 IP addresses that have permission	to
Security access the switch management and to prevent	
unauthorized intruder.	
802.1X access control for port based and MAC	;
based authentication/static MAC-Port binding	
Ingress ACL L2/L3	
SSL/ SSH v2 for Management	
HTTPS for secure access to the web interface	
TACACS+ for Authentication	
IGMP Support IGMP snooping v1, v2, v3; 256 multica	ast
groups; IGMP router port; IGMP query; GMRP	
MLD Snooping Support IPv6 Multicast stream	
Static multicast Static multicast forwarding forward reversed	
forwarding IGMP flow with multicast packets binding with	
ports for IP surveillance application	
Bandwidth Support ingress packet filter and egress packet	t
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 ingre	ss
packet filter and the egress packet limit.	
Flow Control Supports Flow Control for Full-duplex and Bac Pressure for Half-duplex	k
System Log Supports System log record and remote system	

	log server
SMTP Trap	Supports SMTP Server and 8 e-mail accounts
	for receiving event alert
Relay Alarm	Provides one relay output for port breakdown,
	power fail and alarm.
	Alarm Relay current carry ability: 1A @ DC24V
Protection	<ul> <li>Miss-wiring avoidance</li> </ul>
	<ul> <li>Node failure protection</li> </ul>
	Loop protection
SNMP Trap	Up to 5 trap stations; trap types including:
	Device cold start
	Authorization failure
	<ul> <li>Port link up/link down</li> </ul>
	DI/DO open/close
	<ul> <li>Typology change (ITU ring)</li> </ul>
	Power failure
	<ul> <li>Environmental abnormal</li> </ul>
PXE	PXE to verify switch firmware with the latest or
	certain version
DHCP	Provide DHCP Client/ DHCP Server/DHCP
	Option 82 (Client & Server)/Port based DHCP;
	DHCP Option 66; Basic IPv6 DHCP server
Mac based	Assign IP address by Mac that can include dumb
DHCP Server	switch in DHCP network
Optional	Lantech OS3 is optional upgradable to L3
L3Lite/L3*	Lite/L3* for future expansion. The optional L3Lite
	includes editable routing table, VRRP, Router-
	on-a-stick, Inter- VLAN routing.
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
Update	and restore; HTTP firmware upgrade
Configuration	Supports text configuration file for system quick
upload and	installation; Support factory reset button to
download	restore all settings back to factory default; USB for auto restore/backup
Diognostio	Support Ping, ARP table and DDM information
Diagnostic Dual Image	11 0.
Duai image Firmware	Support dual image firmware function
Timware	*Eutura ralagga

\*Future release \*\*Optional \*\*\*Optional DDM SFP required

### **ORDERING INFORMATION**

- IPGS-6416XSFP-16-48V......P/N: 8350-864
   16 10/100/1000T PoE at/af up to 30W + 4 1G/2.5G/10G SFP\* L2+ Industrial PoE Managed Ethernet Switch; -20°C to 60°C; Enhanced Environmental Monitoring; dual 44V~56V input PoE budget 240W
- IPGS-6416XSFP-16-48V-E......P/N: 8350-865
   16 10/100/1000T PoE at/af up to 30W + 4 1G/2.5G/10G SFP\* L2+ Industrial PoE Managed Ethernet Switch; -40°C to 75°C; Enhanced Environmental Monitoring; dual 44V~56V input PoE budget 240W
- IPGS-6416XSFP-16-24V.....P/N: 8350-8661
   16 10/100/1000T PoE at/af up to 30W + 4 1G/2.5G/10G SFP\* L2+ Industrial PoE Managed Ethernet Switch; -20°C to 60°C; Enhanced Environmental Monitoring; dual 12V~57V input, PoE budget 80W at 12V, 120W at 24V
- IPGS-6416XSFP-16-24V-E......P/N: 8350-8671
   16 10/100/1000T PoE at/af up to 30W + 4 1G/2.5G/10G SFP\* L2+ Industrial PoE Managed Ethernet Switch; -40°C to 75°C; Enhanced Environmental Monitoring; dual 12V~57V input, PoE budget 80W at 12V, 120W at 24V

### **OPTIONAL ACCESSORIES**

### Software package

 OS3 – L3L...... P/N: 9000-114 OS3 software platform with Layer 3 Lite functions (please check Lantech software data sheet for details)
 OS3 – L3\*...... P/N: 9000-116

OS3 software platform with Layer 3 functions (please check Lantech software data sheet for details)



### **DIN Rail Power for 802.3at Applications**

NDR-240 series

240W Single Output Industrial Din Rail Power; 90-264VAC / 127-370VDC Input Range; Cooling by free air convection; RoHS2 ; Operating Temp. -20°C~70°C (ambient, derating each output at 2.5% per degree from 50°C ~ 70°C)

input, maximum two ports)

### Mini GBIC (SFP)

8330-162X	MINI GBIC 1000SX (LC/0.5km) Transceiver
📕 8330-163X	MINI GBIC 1000SX2 (LC/2km) Transceiver
8330-165X	MINI GBIC 1000LX (LC/10km) Transceiver
8340-0591	MINI GBIC 1000LHX (LC/40km) Transceiver
8330-166	MINI GBIC 1000XD (LC/50km) Transceiver
8330-169	MINI GBIC 1000XD (LC/60km) Transceiver
8330-167	MINI GBIC 1000ZX (LC/80km) Transceiver
8330-170	MINI GBIC 1000EZX (120km) Transceiver
8330-168	MINI GBIC 1000T (100m) Transceiver
8330-188	LTSFP-1000BX-10KM Transceiver (WDM 1310)
8330-189	LTSFP-1000BX-10KM Transceiver (WDM 1550)
8330-186	LTSFP-1000BX-20KM Transceiver (WDM 1310)
8330-187	LTSFP-1000BX-20KM Transceiver (WDM 1550)
8330-180	LTSFP-1000BX-40KM Transceiver (WDM 1310)
8330-182	LTSFP-1000BX-40KM Transceiver (WDM 1550)
8330-181	LTSFP-1000BX-60KM Transceiver (WDM 1310)
8330-183	LTSFP-1000BX-60KM Transceiver (WDM 1550)
8330-184	LTSFP-1000BX-80KM Transceiver (WDM 1490)
8330-185	LTSFP-1000BX-80KM Transceiver (WDM 1550)
<b>8330-262D</b>	MINI GBIC 2.5G 850nm VCSEL (LC/0.3km)
Transceiver	

8330-263D	
8330-265D	MINI GBIC 2.5G 1310nm FP (LC/2km) Transceiver MINI GBIC 2.5G 1310nm DFB (LC/15km) Transceiver
8330-193D	10G Base SFP* SR, Multi-mode (LC/300m) Transceiver
8330-194D	10G Base SFP* LR, Single-mode (LC/10km)
Transceiver	
8330-209D	10G Base SFP+ , Single-mode(10km) Transceiver
(WDM 1270)	
8330-210D	10G Base SFP+ , Single-mode(10km) Transceiver
(WDM 1330)	
<b>8330-200D</b>	10G Base SFP <sup>+</sup> , Single-mode(20km) Transceiver
(WDM 1270)	
8330-201D	10G Base SFP <sup>+</sup> , Single-mode(20km) Transceiver
(WDM 1330)	
8330-202D	10G Base SFP <sup>+</sup> , Single-mode(40km) Transceiver
(WDM 1270)	
8330-203D	10G Base SFP <sup>+</sup> , Single-mode(40km) Transceiver
(WDM 1330)	
	10G/5G/2.5G/1000Base-T SFP, 3.3V,30m (10G) 50m
(2.5G/5G) 100	m (1G); -10~70°C (only used from 18V~57VDC power

All SFP ended with D are with Diagnostic function

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