

# T(P)GS-H7524XTR

24 GT + 5 10G Copper M12 Push-Pull X-coded (PoE) EN50155 Managed Ethernet Switch w/optional L3L/L3 & Cybersecurity, WVI input



### **OVERVIEW**

Lantech T(P)GS-H7524XTR is a high-performance OS5 managed ethernet switch with 24 10/100/1000T + 5 100M/1G/2.5G/5G/10G Copper PoE switch (total 29 ports) w/ M12 X-coded Push-Pull connectors. The OS5 platform supports L3/L2, IPv6/v4, NAT\*\*, standardized ITU G.803 ring, IEC62443-4-2 certified cybersecurity, Macsec\*\*, PTP v2\*\* as well as ETBN TTDP\*\* protocol suitable for the future-proof modern network.

# Lantech OS5 platform is equipped with complete L2 management and L3 communication protocols incl. dynamic routing, multicast routing, hardware NAT and ETBN TTDP; optional PTP, MacSec to be upgradable

The switch runs on the Lantech OS5 platform which is powerful with complete Layer 2 management features and major L3 protocols inclusive of RIP, OSPF, PIM, DVMRP, IEC61375-2-5 (ETBN), and hardware-based NAT. It also supports optional Macsec for authentication and encryption between two Macsec devices. The optional PTP V2 and gPTP support transparent clock, boundary clock and ordinary clocks with 2-step processing that synchronizes network time accuracy to sub-microseconds. To learn more about the Lantech OS5 Platform, please refer to Lantech OS5 Software Datasheet

# Certified cybersecurity development process with IEC 62443-4-1, and IEC 62443-4-2\* certificate with physical tamper resistance and detection for integrity and authenticity of the boot process

Lantech OS5 platform is designed with a high standard of cybersecurity to prevent threats from network attacks. To ensure the safety and reliability of communication networks, Lantech software development is certified with IEC 62443-4-1 security process standards and the switch is also certified with IEC 62443-4-2\*. The switch uses roots of trust to verify the integrity and authenticity of the firmware, software, and configuration data needed for the switch's boot process.

To learn more about Lantech cybersecurity software solutions, please refer to Lantech OS5 Software Datasheet



# Support Restful API for better switch performance; Auto-provisioning\* for firmware/configuration update

The switch supports Restful API that uses JSON format to access and use data for GET, PUT, POST and DELETE types to avoid traditional SNMP management occupying CPU utilization. The OPEN API document format for Restful API can greatly improve central management efficiency for various applications including fleet management and AIOT.

It also supports auto-provisioning for switch to auto-check the latest software image and configuration through TFTP server.

# Optional IEC 61375-2-5/3-4 ETBN/ECN TTDP protocol, RNAT and proprietary DHCP and VLAN over TTDP

Lantech optional L3L/L3 license includes IEC 61375-2-5 and 3-4 ETBN standardized TTDP protocol that automatically assigns the switch IP address reflecting its location to adapt with various train-car arrangements of the operator's plan. With RNAT (railway NAT), each car device's IP address can be routed to the specific server and proprietary DHCP and VLAN over TTDP to help manage fixed IP address per device as well as the segmentation of VLAN in ECN.

#### Redundant dual WVI power input w/ power transient, inrush current, polarity reverse and overheat protection

The T(P)GS-H7524XTR WVI model accepts 16.8~137.5VDC dual inputs with galvanic isolation to PoE and all Ethernet ports. The switch incorporates a power protection circuit to safeguard against potential adverse effects and hazards from power transients (surges, spikes, power fluctuations). It is also designed to clamp inrush current and protect from polarity reversal damage. The switch will automatically disable power output when the switch ambient temperature is over 85°C and re-boot when the temperature is back to normal.

## Up to 24 PoE at/af (-24) or 24 PoE at/af and 2 T4 PoE bt/at/af ports (-26) w/advanced PoE

*management and PoE galvanic isolation with max PoE budget, support Perpetual/Fast PoE* Compliant with 802.3 bt/at/af standard, the PoE model can feed 24 PoE ports up to 30 Watt@ or 24 PoE 30 Watt@ and 2 T4 PoE IEEE 802.3bt to feed PoE up to 90 Watt@ for various PD devices. The switch supports 120W PoE budget. It 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 a pre-set power feeding schedule upon a routine timetable. Each PoE port can be enabled/disabled, get the voltage, current, Watt, and temperature info displayed on WebUI.

Perpetual and Fast PoE provides immediate and continuous power to devices during PSE switch reboots.

The PoE galvanic isolation provides insulation between the power input to PoE Ethernet ports, preventing cabling and grounding incidents from damaging the Ethernet switch. The efficiency of the galvanically decoupled voltage converters can reach above 90%.

#### Support RTC (Real Time Clock) with longevity golden capacitor

Our switch supports RTC which is powered by a golden capacitor, ensuring accurate real-time event logs for all times. Unlike traditional batteries, golden capacitors offer superior reliability, and longevity, without a need to change battery.

#### User-friendly GUI, Auto topology drawing, Enhanced Environmental Monitoring

The user-friendly UI, innovative auto topology drawing, and topology demo make the switch much easier to get hands-on. The complete CLI enables professional engineers to configure settings by command line. It supports enhanced environmental monitoring for actual input voltage, current, switch ambient temperature and total power load.

#### Event log & message; 2DI + 2DO; Factory default pin

OS5 Platform OS5 EN50155 Managed Ethernet Switches



3

The T(P)GS-H7524XTR 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 outside alarm and switch will send alert information to IP network with email and traps. The factory reset pin can restore the setting back to factory default.

#### Editable configuration file; USB port for import/export configuration

The configuration file of the switch can be imported and edited with a word processor for the following switches to configure with ease. The USB data port can import/export the configuration from/to the USB dongle and also to upgrade firmware. It supports USB console port that allows CLI access.

#### Optional smart bypass protection on dual/quad 10G copper ports

The bypass relay is set to bypass the switch to the next one when power is off to prevent network disruption. Lantech bypass caters to remain in bypass mode until the switch is completely booting up when power is back to avoid another network loss. An optional smart bypass (Up to two pairs) can be activated when switch encounters power failure. (-BT/-BBT model)

#### EN50155, EN45545-2; EN61373 compliance; IP41 rack mount design

The IP41 aluminum alloy enclosure with M12 connectors for waterproofing. With EN50155 verification along with EN45545-2 Fire & Smoke compliance, this switch is ideally suited for railway on-board/trackside, vehicle, and other rugged applications. The switch operates under wide-ranging temperatures from -40°C to 70°C (-40°F to 158°F) (EN50155 T4).



Datasheet Version 1.8 www.lantechcom.tw | info@lantechcom.tw RP-001-26 A0



### **SPECIFICATIONS**

Standards         LEEB02.31 03Base-T Ethernet IEEEB02.31 000Base-T IEEEB02.31 000Base-T IEEEB02.34 100Base-T IEEEB02.34 100Base-T IEEEB02.34 100Base-T IEEEB02.34 100Base-T IEEEB02.34 Pow Contol and Back Presure IEEEB02.34 Unik Aggregation Control Protocol (LACP)         Operating Temperature         Operating temperat				
Standards         IEEE802.3 1038as-T           IEEE802.3 ab 10068as-T           IEEE802.3 ab 10068as-T           IEEE802.3 ab 10068as-T           IEEE802.3 AP low Control and Back Pressure           IEEE802.3 AP low Control and Back Pressure           IEEE802.3 A Point Control and Back Pressure           IEEE802.3 A Point Control and Back Pressure           IEEE802.3 ab Inix Aggingation Control Protocol (LACP)           IEEE802.1 ab Link Layer Discovery Protocol (LACP)           IEEE802.1 y Class of Service           IEEE802.2 to Class of Service           IEEE802.2 to Class of Service           IEEE802.3 aluer Automatication (Radius)           Automatication (Satication T ± M12 S-coded with Pain-Paint Accoded with Pain-Paint Connector           JUINDO Trace         32MAC address atale           JUINDO Trace         32MAC address 100-000000000000000000000000000000000	Hardware Specification			VDC, 200mA
Humidity       40C-70C/-40F-156F (85°C operation for 10min,)         IEEE802.3ah 1000Base-T       40C-70C/-40F-156F (85°C operation for 10min,)         IEEE802.3ah 1000Base-T       100min,)         IEEE802.3ah 1000Base-T       40C-70C/-40F-156F (85°C operation for 10min,)         IEEE802.3ah Pow Contol and Back Pressure IEEE802.1ah Wapid Spanning Tree IEEE802.1ah Unik Aggregation Control Protocol (LACP)       Dual DC Input 168-137.5D/DC         IEEE802.3ah Unik Aggregation Control Protocol (LACP)       Dual DC Input 168-137.5D/DC       Internal 120W         IEEE802.1ah Link Layer Discovery Protocol (LACP)       POE Budget (PoE model: M12 pot #27-248 (AT 30W)       24 model: M12 pot #27-248 (AT 30W)         Switch       Aschplane (Switching Fabric): 148Gbps       24 model: M12 pot #27-248 (AT 30W)       24 model: M12 pot #27-248 (AT 30W)         Switch       Back-plane (Switching Fabric): 148Gbps       Poe Budget (PoE model)       M2 pot #27-248 (AT 30W)         Switch       Back-plane (Switching Fabric): 148Gbps       Consumgtion       M2 pot #27-248 (AT 30W)         Make Address       33MAC address table       Jumb fame       Poe model: M2 point M12 Accoded with Post-Put Iconnectors         DuDC1 : At W12 S-pole Famala Acooded with Post-Put Iconnectors       Power M1000-01 (At ports M12 Accoded with Post-Put Iconnectors         DuDC1 : At W12 S-pole Famala Acooded with Post-Put Iconnectors       Post Bit M2 post #27-268 (BT B) (At power I) (Boe M14 (Bit M140 (Bit M2 M14	Standards	IEEE802.3 10Base-T Ethernet	Operating	5% ~ 95% (Non-condensing)
IEEEB02.3ab 1000Base-T     Operating     40C-780C / 40PT-185'F       IEEEB02.3a Flow Control and Back Pressure IEEEB02.4b Chronol Whit ACP IEEEB02.4b Chronol Ward Back Protocol (LACP)     Storaga 180-137.5vDL     40C-85'C / 40PT-185'F       IEEEB02.1b Multiple Spanning Tree IEEEB02.1b Multiple Spanning Tree IEEEB02.1c User Authentication (Radius) IEEEB02.1c User Authentication (Radius) IEEEB02.1c VLAN Tag IEEEB02.31 AV Low rower Ethernet Type 4 IEEEB02.31 AV Durow Tethernet Type 4 IEEEB02.31 Prover over Ethernet Type 4 IEEB02.31 Prover over Ethernet Prover Autom Average (Stronol)     Prover Consumption       Mac.Address 10000.1 x M12 5-pole Female A-coded with Push-Pul connector DIDO: 1 x M12 5		IEEE802.3u 100Base-TX	Humidity	
IEEEB02.38 n 10Cbase-T     10min.)       IEEEB02.38 r Fow Control and Back Pressure IEEEB02.19 Class of Spanning Tree IEEEB02.19 Multiple Spanning Tree IEEEB02.19 Multiple Spanning Tree IEEEB02.19 Multiple Spanning Tree IEEEB02.19 Class of Service IEEEB02.19 Class of Service IEEEB02.19 Class of Service IEEEB02.21 D VLAN Tag IEEEB02.21 D VLAN Tag IEEEB02.21 D VLAN Tag IEEEB02.21 J VLAN Tag IEEEB02.23 Jail Power over Ethernet Type 4 IEEEB02.23 Jail Power over Ethernet IEEEB02.23 Jail Power over Ethernet Type 4 IEEEB02.23 Jail Power		IEEE802.3ab 1000Base-T	Operating	-40C~70C / -40F~158F (85°C operation for
IEEE802.3% Flow Control and Back Pressure IEEE802 Id Spanning Tree IEEE802 VM Rapid Spanning Tree IEEE802 SM Link Layer Discovery Protocol (LACP)         Storage         -40°C-65°C / 40°F-185°F           IEEE802 VM Rapid Spanning Tree IEEE802 SM Link Layer Discovery Protocol (LACP)         Dual DC Input 13.8-137.5VDC         Internal 120W           IEEE802 JM Discovery Protocol (LDP)         IEEE802.10 VLAN Tag IEEE802.2016 Power over Ethernet Type 3 (IEEE802.301 Power over Ethernet Type 3 (IEE802.301 Power aver Ethernet Type 3 (IEE802.301 Power aver 2 (IEE802.301 Power 3		IEEE802.3an 10Gbase-T	Temperature	10min.)
IEEEB02.3 ad Port trunk with LACP         Tenperature           IEEEB02.4 W Rapid Spanning Tree         IEEEB02.4 W Rapid Spanning Tree           IEEEB02.4 W Rapid Spanning Tree         IEEEB02.4 Maging Spanning Tree           IEEEB02.4 Maging Spanning Tree         IEEEB02.4 Maging Spanning Tree           IEEEB02.4 Maging Spanning Tree         IEEEB02.4 Maging Spanning Tree           IEEEB02.4 D Link Layer Discovery Protocol (LLOP)         Internal 120W           IEEEB02.4 Julie Power over Ethernet Type 3 IEEEB02.3 dit Power over Ethernet         Power Internet           Type 4 IEEEB02.3 dit Power over Ethernet         Power Internet           Type 4 IEEEB02.3 dit Power over Ethernet         Power Internet           Jumbo frame         10/KB           Oconamption         Internality A mode           Jumbo frame         10/KB           Very Houst-Puil connectors         Power Internet           Jumbo frame         10/KB           Internality A mode         FGC Part 15 Class A           Reset/Console/JUSE 1 x M12 S-pole Male K-coded         FGC Part 15 Class A           Ce ENSISS2 Class A         Ce ENSISS2 Class A           Ce ENSISS2 Class A         Ce ENSISS2 Class A           Power Input connector         FDDD: 1 x M12 S-pole Female A-coded with           Push-Puil connectors         FDI004-4 (ET) Level 3      <		IEEE802.3x Flow Control and Back Pressure	Storage	-40°C~85°C / -40°F~185°F
IEEEB02.14 Spanning Tree     IEEEB02.15 Multiple Spanning Tree       IEEEB02.15 Multiple Spanning Tree     IEEEB02.16 Multiple Spanning Tree       IEEEB02.18 Link Layer Discovery Protocol     Internal 120W       ILDP)     IEEEB02.17 LOass of Service       IEEEB02.18 Link Layer Discovery Protocol     M12 port #1+#24 (AT 30W)       IEEEB02.19 Class of Service     M12 port #1+#24 (AT 30W)       IEEEB02.19 Class of Service     M12 port #1+#24 (AT 30W)       IEEEB02.19 Class of Service     M12 port #1+#24 (AT 30W)       IEEEB02.20 Class and Febricies     M12 port #1+#24 (AT 30W)       Mate Address     32MAC address table       Jumb frame     10KB       Mate Address     32MAC address table       Jumb forame     10KB       Obiol/10/100T 22 ports M12 X-coded with Posh-Pull connectors     Power mult connector: 1 x M12 S-pole Female A-coded with Posh-Pull connector       Power mult connector:     100Base-TX: 2-pair STP Cat. 5/5E/6 cable       ELVTIA-568 100-0hm (100m)     100Base-TX: 2-pair STP Cat. 5/5E/6 cable       ELVTIA-568 100-0hm (100m)     1000Base-TX: 2-pair STP Cat. 5/5E/6 cable       ELVTIA-568 100-0hm (100m)     1000FSCEND121-32/END0121-42       ILED     Per unit: Power 1 (Green); Power 1001/G22.5G/5G/100 Copper port: Speed (1001/G22.5G/5G/100 C		IEEE802.3ad Port trunk with LACP	Temperature	
I       IEEE802.1 Nutley Spanning Tree IEEE802.3 ad Link Aggregation Control Protocol (LCP) IEEE802.1 AU Link Aggregation Control Protocol (LLDP) IEEE802.1 VUser Authentication (Radius) IEEE802.1 OV.LAN Tag IEEE802.2 I/ OV.LAN Tag IEEE802.2 Sho Power over Ethernet Type 4 IEEE802.2 Sho Power over Ethernet Type 4 IEEE802.2 Sho Power over Ethernet Type 3 IEEE802.2 Sho Power over Ethernet Type 4 IEE802.2 Sho Power over Ethernet IIII Collog 2 Sho Power Sho Power over Ethernet IIIII Type 4 IEE802.2 Sho Power over Ethernet IIIIIIIIIIIIIIIIIIIIIIIIIII		IEEE802.1d Spanning Tree	Power Supply	Dual DC input
Installation     FA       Installation     FA       Installation     FA       Installation     FA       Installation     FA       Installation     FA       Machanes     Satisfies       Switch     Back-plane (Switching Fabric): 148Gbps       Architecture     Back-plane (Switching Fabr		IEEE802.1w Rapid Spanning Tree		16.8~137.5VDC
IEEE 802.33d Link Aggregation Control Protocol (LLCP)       Internal 120W         IEEE 802.12 VLB transmitter (Radius)       IEEE 802.12 VLAN Tag         IEEE 802.12 VLAN Tag       PoE Bind assignment (PoE model)         IEEE 802.12 VLAN Tag       PoE Bind assignment (PoE model)         IEEE 802.12 VLAN Tag       PoE Bind assignment (PoE model)         IEEE 802.12 VLAN Tag       PoE Bind assignment (PoE model)         Witch       Back-plates         Architecture       32MAC address table         Jumbo frame       10KB         Connectors       10100/10007: 24 ports M12 X-coded with Push-Pull connectors         Power Input connectors       10100/110007: 24 ports M12 X-coded with Push-Pull connectors         Power Input connectors       Power Input connectors         Power Input connectors       Power Input connector         Power Input connector       Yels Power Address table         DIDIC: 1X M12 S-pole Female A-coded with Push-Pull connector       Weight       5 kgs         Power Input connector       Yels Power 1000/ 20 Elant 100m       Stable 100-44 (EFT) Level 3         CE ENSTOOL-42 (ESD) Level 3       CE ENSTOOL-42 (ESD) Level 3         CE ENSTOOL-42 (ESD) Level 3       CE ENSTOOL-42 (ESD) Level 3         CE ENSTOOL-42 (ESD) Level 3       CE ENSTOOL-42 (ESD) Level 3         CE ENSTOOL-42 (ESD) Level 3		IEEE802.1s Multiple Spanning Tree	Inrush Current	6A
ILACP)       IEEE802.1AB Link Layer Discovery Protocol (LLDP)       PoE pin       -24 model:         M12 port #1-#24 (AT 30W)       IEEE802.1Y User Authentication (Radius)       IEEE802.1Y User Authentication (Radius)       IEEE802.1Y User Authentication (Radius)         IEEE802.1S ULAN Tag       IEEE802.3D Power over Ethernet       M12 port #1-#24 (AT 30W)         Type 3 IEEE802.3D Power over Ethernet       M12 port #1-#24 (AT 30W)         Switch       Back-plane (Switching Fabric): 148Gbps         Architecture       Architecture         Mac Address       32MAC address table         Jurnbo frame       10KB         Connectors       10/100/1001: 24 ports M12 X-coded with Push-Pull connectors         Power Input connectors       Wall Mount Design         Power Input connector:       10001/001: 1 x M12 5-pole Male K-coded         Coded       Power Input connector         DIDO: 1 x M12 5-pole Female A-coded with Push-Pull connector       Wall Mount Design         Network Cable       1008as-TX: 2-pair STP Cat. 5/ 5E/ 6 cable         EIA/TIA-568 100-ohm (100m)       CE ENN1000-43 (RS) Level 3         1000 Goeper: 4-pair STP Cat.5/ 5E/ 6 cable         EIA/TIA-568 100-ohm (100m)       CE ENN1000-44 (CS) Level 3         100 Goeper: A-pair STP Cat.5/ 5E/ 6 cable         EIA/TIA-568 100-ohm (100m)       CE ENN1000-44 (CSD) Level 3		IEEE802.3ad Link Aggregation Control Protocol	PoE Budget (PoE	Internal 120W
IEEE802.14B Link Layer Discovery Protocol (LLDP)     24 model:       IEEE802.15 User Authentication (Radius)     25 model:       IEEE802.16 UVLAN Tag IEEE802.30 VLAN Tag     38 model       IEEE802.30 Lip Class of Service     M12 port #1+#24 (AT 30W)       Type 3 IEEE802.310 Power over Ethernet Type 3 IEEE802.310 Power over Ethernet     M12 port #1+#24 (AT 30W)       Mac Address     32MAC address table       Jumbo fame     10KB       Connectors     10/100/10001: 24 ports M12 X-coded with Push-Pull connectors       Divide (Switching Fabric): 148Cbps     FCC Part 15 Class A       Weil ball to connectors     Veilfalation       Divide (With Push-Pull connector     Veilfalation       DID0: 1 x M12 5-pole Female A-coded with Push-Pull connector     Veilfalation       DID0: 1 x M12 5-pole Female A-coded with Push-Pull connector     CE ENS1000-4.3 (RS) Level 3       DID0: 1 x M12 5-pole Female A-coded with Push-Pull connector     CE ENS1000-4.3 (RS) Level 3       DID0: 1 x M12 5-pole Female A-coded with Push-Pull connector     CE ENS1000-4.4 (CS) Level 3       DID0: 1 x M12 5-pole Female A-coded with Push-Full connector     CE ENS1000-4.4 (CS) Level 3       DID0: 1 x M12 5-pole Female A-coded with Push-Full connector     CE ENS1000-4.4 (CS) Level 3       DID0: 1 x M12 5-pole Female A-coded with Push-Full connector     CE ENS1000-4.4 (CS) Level 3       DID0: 1 x M12 5-pole Female A-coded with Push-Full connector     CE ENS1000-4.4 (CS) Level 3		(LACP)	model)	
ILLDP)       IEEE802.1X User Authentication (Radius)         IEEE802.12 D ULAN Tag       assignment (PoE         IEEE802.310 VLAN Tag       model)         IEEE802.310 VLAN Tag       model)         IEEE802.310 VLAN Tag       model)         M12 port #1-#24 (AT 30W)       M12 port #1-#24 (AT 30W)         M12 port #1-#24 (AT 30W)       M12 port #1-#24 (AT 30W)         M12 port #1-#24 (AT 30W)       M12 port #1-#24 (AT 30W)         M12 port #1-#24 (AT 30W)       M12 port #1-#24 (AT 30W)         M12 port #1-#24 (AT 30W)       M12 port #1-#24 (AT 30W)         M12 port #1-#24 (AT 30W)       M12 port #1-#24 (AT 30W)         M12 port #1-#24 (AT 30W)       M12 port #1-#24 (AT 30W)         M12 port #1-#24 (AT 30W)       M12 port #1-#24 (AT 30W)         M12 port #1-#24 (AT 30W)       M12 port #1-#24 (AT 30W)         M12 port #1-#24 (AT 30W)       M12 port #1-#24 (AT 30W)         M12 port #1-#24 (AT 30W)       M12 port #1-#24 (AT 30W)         M12 port #1-#24 (AT 30W)       M12 port #1-#24 (AT 30W)         M12 port #1-#24 (AT 30W)       M12 port #1-#24 (AT 30W)         M12 port #1-#24 (AT 30W)       M12 port #1-#24 (AT 30W)         M12 port #1-#24 (AT 30W)       M12 port #1-#24 (AT 30W)         M12 port #1-#24 (AT 30W)       M12 port #1-#24 (AT 30W)         M12 port #1-#24 (		IEEE802.1AB Link Layer Discovery Protocol	Definite	-24 model:
IEEEB02 1X User Authentication (Radius)         IEEEB02 10 VLAN Tag         IEEEB02 10 VLAN Tag         IEEEB02 10 VLAN Tag         IEEEB02 13 VLAN Tag         IEEEB02 14 VLAN Tag         IEEEB02 14 VLAN Tag         IEEEB02 15 VLAN Tag         Mac Address         32MAC address table         Jumbo frame         10/100/10007: 24 ports M12 X-coded with         Push-Pull connectors         1000/1012: 25(5G/1007: 5 ports M12 X-coded with         Push-Pull connectors         1000/102: 24 ports M12 X-coded with         Push-Pull connectors         Power Input connectors         Power Input connector:         Power Input connector         DID0: 1 x M12 5-pole Female A-coded with         Push-Pull connector         1000 Gosper: 4-pair STP Catt 5/ 5E/ 6 cable         EIATIA-568 100-ohm (100m)         100G Coper: 4-pair STP Catt 5/ 5E/ 6 cable         EIATIA-568 100-ohm (100m)         100G Coper: 4-pair STP Catt 5/ 5E/ 6 cable         EIATIA-568 100-ohm (100m)         100G Coper: 4-pair STP Catt 5/ 5E/ 6 cable         EIATIA-568 100		(LLDP)	POE pin	M12 port #1~#24 (AT 30W)
IEEEB02 10 (Lass of Service IEEEB02 10 (LAN Tag IEEEB02 3/ut / Power over Ethernet Type 3 IEEEB02 3/ut / Power over Ethernet Type 3 IEEEB02 3/ut / Power over Ethernet Type 3 IEEEB02 3/ut / Power over Ethernet     M12 port #1-#24 (AT 30W) M12 port #2-#26 (BT 90W) support IEEE 802 3/ut / a EEEB02 3/ut / a Max. 65W excludes PoE load       Switch Architecture     Back-plane (Switching Fabric): 148Gbps     Max. 65W excludes PoE load       Architecture     Max. 65W excludes PoE load       Mac Address     32MAC address table       Jumbo frame     10/KB       100/ID0017: 24 ports M12 X-coded with Push-Pull connectors     Power (Switching Fabric): 148/12 5-pole Male K- coded       Power Input connector     Wail Mount Design       Power Input connector     Weight     5 kgs       Power Input connector     CE EN61000-43 (EST) Level 3       Di0DoBase-TX: 2-pair STP Cat. 5/ 5E/ 6 cable     EIATTI-A581 100-bm (100m)       EIATTI-A581 100-bm (100m)     CE EN61000-44 (CST) Level 3       1000Base-TX: 2-pair STP Cat. 5/ 5E/ 6		IEEE802.1X User Authentication (Radius)	assignment (PoE	-26 model:
IEEE802.10 VLAN Tag       MT2 port #25-#26 (BT 90W)         IEEE802.3bt Power over Ethernet       Type 3 IEEE802.3bt Power over Ethernet         Type 4 IEE802.3bt Power over Ethernet       Attemative A mode         Switch       Back-plane (Switching Fabric): 148Gbps         Architecture       Max. 63W excludes PoE load         Mac Address       22MAC address table         Jumbo frame       10KB         Connectors       10/100/10001: 24 ports M12 X-coded with         Push-Pull connectors       10/00/10001: 24 ports M12 X-coded with         Power       CCansulption         100M/riG2 56/56/10G: 5 ports M12 X-coded with       Power         Power       CCansulption         100M/riG2 56/56/10G: 5 ports M12 X-coded with       Power         Power Input connectors       IN12 port #25-#26 (BT 90W)         DID0: 1 x M12 5-pole Female A-coded with       Push-Pull connector         DID0: 1 x M12 5-pole Female A-coded with       CE EN61000-4-4 (EFT) Level 3         CE EN61000-4-4 (EFT) Level 3       CE EN61000-4-4 (EFT) Level 3         CE EN61000-4-4 (EFT) Level 3       CE EN61000-4-4 (EFT) Level 3         CE EN61000-4-4 (EFT) Level 3       CE EN61000-4-4 (EFT) Level 3         CE EN61000-4-4 (EFT) Level 3       CE EN61000-4-5 (ES) Level 3         CE EN61000-4-5 (ES) Level 3       CE EN61000-4-4 (ES)		IEEE802.1p Class of Service	model)	M12 port #1~#24 (AT 30W)
IEEE802.3di/ Power over Ethernet       Immunited functions function         Type 4 IEEE802.3bt Power over Ethernet       support IEEE 802.3bt/al/al End-point,         Switch       Back-plane (Switching Fabric): 148Gbps         Architecture       Max. 65W excludes PoE load         Architecture       Max. 65W excludes PoE load         Jumbo frame       10KB         Connectors       10/100/10001: 24 ports M12 X-coded with         Push-Pull connectors       Power Input connectors         Power Input connector:       1x M12 8-pole Female A-coded with         Push-Pull connector       DIDD: 1x M12 8-pole Female A-coded with         Push-Pull connector       DIDD: 1x M12 8-pole Female A-coded with         Push-Pull connector       DIDD: 1x M12 8-pole Female A-coded with         Push-Pull connector       DIDD: 1x M12 8-pole Female A-coded with         Push-Pull connector       CE EN\51032 Class A         DIDD: 1x M12 8-pole Female A-coded with       CE EN\51032 Class A         CE EN\51000-4-4 (ET) Level 3       CE EN\51000-4-4 (ET) Level 3         CE EN\51000-4-4 (ET) Level 3       CE EN\51000-4-4 (ET) Level 3         CE EN\51000-4-4 (ET) Level 3       CE EN\51000-4-4 (ET) Level 3         CE EN\51000-4-4 (ET) Level 3       CE EN\51032 Class A         CE EN\51000-4-4 (ET) Level 3       CE EN\51000-4-4 (ET) Level 3		IEEE802.1Q VLAN Tag		M12 port #25~#26 (BT 90W)
Type 3 IEEE802.3bt Power over Ethernet       Sutch         Architecture       Alternative A mode         Architecture       Max. dsW excludes PoE load         Jumbo frame       10KB         Connectors       10/10/1000T: 24 ports M12 X-coded with         Push-Pull connectors       10/10/1000T: 24 ports M12 X-coded with         Push-Pull connectors       100/11/G2/50/G0C: 5 ports M12 X-coded with         Push-Pull connectors       FCC Part 15 Class A         Power Input connector: 1 x M12 8-pole Female A-coded with       FCC Part 15 Class A         Push-Pull connector       FCC Part 15 Class A         DIDC: 1 x M12 5-pole Female A-coded with       FCC Part 15 Class A         Push-Pull connector       CE EN51000-4-2 (ESD) Level 3         DIDC: 1 x M12 5-pole Female A-coded with       CE EN51000-4-4 (ETT) Level 3         CE EN51000-4-4 (ETT) Level 3       CE EN51000-4-4 (ETT) Level 3         CE EN51000-4-4 (ETT) Level 3       CE EN51000-4-4 (ETT) Level 3         CE EN51000-4-4 (CSD) Level 3       CE EN51000-4-4 (ETT) Level 3         CE EN51000-4-4 (CSD) Level 3       CE EN51000-4-4 (ETT) Level 3         CE EN51000-4-4 (CSD) Level 3       CE EN51000-4-4 (ETT) Level 3         CE EN51000-4-4 (CSD) Level 3       CE EN51000-4-4 (Magnetic field) Level 3         CE EN51000-4-5 (Magnetic field) Level 3       CE EN51000-4-6 (CS) Lev		IEEE802.3at/af Power over Ethernet		aupport IEEE 902 2ht/ot/of End point
Iype 4 (EEE802.30)       Power over Ethernet       Alternative A mode         Architecture       Alternative A mode         Mac Address       32MAC address table       Mac 65W excludes PoE load         Jumbo frame       10KB       Dimensions       IP41 Aluminum alloy case (rack mount):         Connectors       10/100/1000T: 24 ports M12 X-coded with Push-Pull connectors       IP41 Aluminum alloy case (rack mount):         100MI/G22.56/56/10G: 5 ports M12 X-coded with Push-Pull connectors       FCC Part 15 Class A         Power Input connector: 1 x M12 5-pole Male K-coded with Push-Pull connector       FCC Part 15 Class A         DIDO: 1 x M12 5-pole Female A-coded with Push-Pull connector       FCC Part 15 Class A         DIDO: 1 x M12 5-pole Female A-coded with Push-Pull connector       CE EN61000-44 (EFT) Level 3         CE EN61000-44 (EFT) Level 3       CE EN61000-44 (EFT) Level 3         CE EN61000-45 (RS) Level 3       CE EN61000-45 (RS) Level 3         CE EN61000-44 (EFT) Level 3       CE EN61000-45 (RS) Level 3         CE EN61000-45 (RS) Level 3       CE EN61000-45 (RS) Level 3         CE EN61000-45 (RS) Level 3       CE EN61000-46 (CS) Level 3         CE EN61000-45 (RS) Level 3       CE EN61000-45 (RS) Level 3         LED       Perture reference       Yeinfeations         Poisser TX: 2-pair STP Cat. 5/ 5E/ 6 cable       EN 45545-1, EN 45545-2 Fire & Smoke		Type 3 IEEE802.3bt Power over Ethernet		
Switch         Back-plane (Switching Fabric): 148Gbps           Mac. Address         32MAC address table           Jumbo frame         10KB           Jumbo frame         10KB           10/100/1000T: 24 ports M12 X-coded with         Power (nput connectors           100M/1G/2.5G//5G/10G: 5 ports M12 X-coded with Push-Pull connectors         Installation           Power Input connectors         Wall Solution           Power Input connector:         1 x M12 5-pole Female A-coded with           Power Power Input connector         Network Cable           Network Cable         100Base-TX: 2-pair STP Cat. 5/ 5E/ 6 cable           EIA/TIA-568 100-ohm (100m)         CE EN61000-4.5 ED3 (Surge) Level 3           100 Copper: 4-pair STP Cat. 5/ 5E/ 6 cable           EIA/TIA-568 100-ohm (100m)           100 Copper: 4-pair STP Cat. 5/ 5E/ 6 cable           EIA/TIA-568 100-ohm (100m)           100 Copper: 4-pair STP Cat. 5/ 5E/ 6 cable           EIA/TIA-568 100-ohm (100m)           1000 Base-TX: 2-pair STP Cat. 5/ 5E/ 6 cable           EIA/TIA-568 100-ohm (100m)           1000 Copper: 4-pair STP Cat. 5/ 5E/ 6 cable           FAULT (Red)           100/1000T Ethemet port: Link/Activity (Green),           FAULT (Red)           100/1000T Ethemet port: Link/Activity (Green),           FAULT (Red) <th>0.11</th> <th>Type 4 IEEE802.3bt Power over Ethernet</th> <th></th> <th>Alternative A mode</th>	0.11	Type 4 IEEE802.3bt Power over Ethernet		Alternative A mode
Architecture       Consumption         Jumbo frame       10KB         Jumbo frame       10KB         Ornnectors       10/100/100017: 24 ports M12 X-coded with Push-Pull connectors         Power Input connectors       100M/1G/2.5G/5G/10G: 5 ports M12 X-coded with Push-Pull connectors       Wall Mount Design         Power Input connectors       Power Input connectors       Wall Mount Design         Power Input connector       1X M12 5-pole Male K-coded with Push-Pull connector       FCC Part 15 Class A         DIDC:       1 x M12 5-pole Female A-coded with Push-Pull connector       FCC Part 15 Class A         DIDD:       1 x M12 5-pole Female A-coded with Push-Pull connector       FCC Part 15 Class A         Network Cable       100Base-TX: 2-pair STP Cat. 5/ 5E/ 6 cable       EIATTIA-568 100-ohm (100m)         100Base-TX: 2-pair STP Cat. 5/ 5E/ 6 cable       EIATTIA-568 100-ohm (100m)       CE EN61000-4-6 (CS) Level 3         100D       Per unit: Power 1 (Green), FAULT (Red)       FCC Part 15 Class A       Verifications         FE       175,468 hrs. (standards: IEC 62380)       Verification         MTEF       175,468 hrs. (standards: IEC 62380)       Verification         MIDO       2 Digital Input (DI): Level 0: -30-2V / Level 1: 10-30V Max. input current.8mA       2 Digital Input (DO): Level 0: -30-2V / Level 1: 10-30V Max. input current.8mA       Download Software Datasheet "C	Switch	Back-plane (Switching Fabric): 148Gbps	Power	Max. 65W excludes PoE load
Mack address       32MAC addres       32MaC address <th>Architecture</th> <th></th> <th>Consumption</th> <th></th>	Architecture		Consumption	
Jumob traine       10XB       10XB       440mm(W)(XBBmm(H)(x354mm(D))         Connectors       100M1/G2.5G/5G100: 5 ports M12 X-coded with Push-Pull connectors       5 kgs       FCC Part 15 Class A         Network Cable       Power Input connector       1 x M12 5-pole Female A-coded with Push-Pull connector       FCC Part 15 Class A         DIDO: 1 x M12 5-pole Female A-coded with Push-Pull connector       EMI & EMS       FCC Part 15 Class A         DIDO: 1 x M12 5-pole Female A-coded with Push-Pull connector       CE EN61000-4-2 (ESD) Level 3       CE EN61000-4-3 (RS) Level 3         DIDO: 1 x M12 5-pole Female A-coded with Push-Pull connector       CE EN61000-4-4 (EFT) Level 3       CE EN61000-4-4 (EFT) Level 3         00Base-TX: 2-pair STP Cat. 5/ 5E/ 6 cable       EIA/TIA-568 100-ohm (100m)       CE EN61000-4-6 (CS) Level 3       CE EN61000-4-6 (CS) Level 3         LED       Per unit: Power 1 (Green), Power 2 (Green), FAULT (Red)       EN50155/EN50121-3-2/EN50121-4; EN 45545-2 Fire & Smoke verification         LED       Per unit: Power 1 (Green), Power 2 (Green), FAULT (Ked)       Stability Testing       EN61373 (Shock and Vibration)         100/100/TEX-Es/5G: Yellow; 100: Organge)       2 bigital linput (DI):       Level 0: -30-2V / Level 1; 10-30V       Max. input current:8MA       2 bigital linput (DI):         Level 0: -30-2V / Level 1; 10-30V       Max. input current:8mA       2 bigital Output (DO): Open collector to 40       "Future release "Optimal </th <th>Mac Address</th> <th>32MAC address table</th> <th>Dimensions</th> <th>IP41 Aluminum alloy case (rack mount):</th>	Mac Address	32MAC address table	Dimensions	IP41 Aluminum alloy case (rack mount):
Connectors       10/100/10001: 24 poins M12 X-coded with Push-Puil connectors       Verification       5 kgs         100M/1G/2.5G/5G/10G: 5 ports M12 X-coded with Push-Puil connectors       Installation       Wall Mount Design         Power Input connectors       Power Input connector: 1 x M12 5-pole Male K- coded       ENI 8 EMS       EN61000-6-2         Reset/Console/USB: 1 x M12 8-pole Female A- coded with Push-Puil connector       CE EN5032       Class A         DIDO: 1 x M12 5-pole Female A- coded with Push-Puil connector       CE EN61000-4-2 (ESD) Level 3       CE EN61000-4-2 (ESD) Level 3         Network Cable       100Base-TX: 2-pair STP Cat. 5/ 5E/ 6 cable EIA/TIA-568 100-ohm (100m)       CE EN61000-4-8 (Magnetic field) Level 3         LED       Per unit: Power 1 (Green), FAULT (Red)       Power 1 (Green), PoE: Link/Activity (Green), Speed (Green);       Verifications         R.M. indicator (Green) PoE: Link/Act (Green)       T5,468 hrs. (standards: IEC 62380)         Murranty       5 years         Bypass**       Up to two pairs bypass modules on 10GT ports to pass to the next switch in case of power failure and CPU fail         DI/DO       2 Digital Input (D): Level 0: -30-2V / Level 1: 10-30V Max. input current&mA       2 Digital Output (DO): Open collector to 40	Jumbo frame			440mm(W)x88mm(H)x354mm(D)
Installation       Wall Mount Design         100W10/2/2.56/56/10G: 5 ports M12 X-coded       Wall Mount Design         with Push-Pull connectors       Power Input connector: 1 x M12 5-pole Male K-coded         coded       Reset/Console/USB: 1 x M12 8-pole Female A-coded with         push-Pull connector       DIDO: 1 x M12 5-pole Female A-coded with         Push-Pull connector       DIDO: 1 x M12 5-pole Female A-coded with         Push-Pull connector       CE EN5032 Class A         DIDO: 1 x M12 5-pole Female A-coded with       CE EN51004-42 (ESD) Level 3         DIDO: 1 x M12 5-pole Female A-coded with       CE EN61000-43 (RS) Level 3         DIDO: 1 x M12 5-pole Female A-coded with       CE EN61000-44 (EFT) Level 3         DIDO: 1 x M12 5-pole Female A-coded with       CE EN61000-44 (EFT) Level 3         DIDO: 1 x M12 5-pole Female A-coded with       CE EN61000-44 (EFT) Level 3         DIDO: 1 x M12 5-pole Cat. 5/ 5E/ 6 cable       CE EN61000-44 (EST) Level 3         ELATIA-568 100-ohm (100m)       CE EN61000-45 (CS) (Level 3         1000Base-TX: 2-pair STP Cat. 5/ 5E/ 6 cable       EN61373 (Shock and Vibration)         FAUL T (Red)       Stability Testing       EN61373 (Shock and Vibration)         100/1007 Ethemet port: Link/Activity (Green),       Speed (Green);       Warranty       5 years         DV/DO       2 Digital Input (D):       Lavite o CSP	Connectors	10/100/10001: 24 ports M12 X-coded with	Weight	5 kgs
Individual Connectors       Power Input connectors         Power Input connectors       Power Input connectors         Power Input connector:       1 x M12 5-pole Female A-coded with         Coded with Push-Pull connector       DIDO:       1 x M12 5-pole Female A-coded with         Push-Pull connector       DIDO:       1 x M12 5-pole Female A-coded with         Push-Pull connector       DIDO:       1 x M12 5-pole Female A-coded with         Push-Pull connector       100Base-TX: 2-pair STP Cat. 5/ 5E/ 6 cable         EIA/TIA-568 100-ohm (100m)       CE EN61000-4-4 (EFT) Level 3         100 Copper: 4-pair STP Cat6a/7 cable       CE EN61000-4-4 (EFT) Level 3         ELED       Per unit: Power 1 (Green), Power 2 (Green),         FAULT (Red)       100/1000T Ethernet port: Link/Activity (Green),         Speed (Green);       R.M. indicator (Green)         Notifol (22.5G/5G/10G Copper port: Speed (100/1G/2.5G/5G/10G Copper port: Speed (10		Push-Pull connectors	Installation	Wall Mount Design
With Fush-Pull connector: 1 x M12 5-pole Male K- codedEN61000-6-2Reset/Console/USB: 1 x M12 8-pole Female A- coded with Push-Pull connectorCE EN55032 Class ADID0: 1 x M12 5-pole Female A-coded with Push-Pull connectorCE EN55032 Class ADID0: 1 x M12 5-pole Female A-coded with Push-Pull connectorCE EN61000-4-2 (ESD) Level 3DID0: 1 x M12 5-pole Female A-coded with Push-Pull connectorCE EN61000-4-3 (RS) Level 3DID0: 1 x M12 5-pole Female A-coded with Push-Pull connectorCE EN61000-4-3 (RS) Level 3DID0: 1 x M12 5-pole Female A-coded with Push-Pull connectorCE EN61000-4-4 (ETT) Level 3DID0: 1 x M12 5-pole Female A-coded with Push-Pull connectorCE EN61000-4-5 ED3 (Surge) Level 3DID0: 1 x M12 5-pole Female A-coded with Push-Pull connectorCE EN61000-4-5 (ES) Level 3DID0: 1 x M12 5-pole Female A-coded with Push-Pull connectorCE EN61000-4-3 (RS) Level 3DID0: 1 x M12 5-pole Female A-coded with Push-Pull connectorCE EN61000-4-3 (RS) Level 3DID0: 1 x M12 5-pole Female A-coded with Push-Pull connectorCE EN61000-4-4 (ETT) Level 3DID0: 2 Digital 100-ohm (100m) 100 Copper: 4-pair STP Cata/7 cableVerificationsVerificationEN61307 (Shock and Vibration)MTBF175,488 hrs. (standards: IEC 62380)Speed (Green); R.M. indicator (Green) PoE: Link/Act (Green) 100/16/2.256/5G: Yellow; 106: Orange)Software SpecificationDI/D02 Digital Input (D): Level 0: :30-2V / Level 1: 10-30VLantech OSS PlatformDownload Software Datasheet *Future release *Optional		with Bush Bull connectors	EMI & EMS	FCC Part 15 Class A
Power Input connector. 1 x W12 S-pole Nale X- coded       EN61000-6-4         Reset/Console/USB: 1 x M12 8-pole Female A- coded with Push-Pull connector       CE EN55032 Class A         DID0: 1 x M12 5-pole Female A-coded with Push-Pull connector       CE EN61000-4.2 (ESD) Level 3         Network Cable       100Base-TX: 2-pair STP Cat. 5/ 5E/ 6 cable EIA/TIA-568 100-ohm (100m) 100Base-TX: 2-pair STP Cat. 5/ 5E/ 6 cable         EIA/TIA-568 100-ohm (100m) 100G Copper: 4-pair STP Cat. 5/ 5E/ 6 cable       CE EN61000-4.8 (Magnetic field) Level 3         LED       Per unit: Power 1 (Green), Power 2 (Green), FAULT (Red)       EN61373 (Shock and Vibration)         100/1G/2.5G/5G/10G Copper port: Speed (100/1G/2.5G/5G/10G Copper port: Speed (100/1G/2.5G/5G/10G Copper port: Speed (100/1G/2.5G/5G Yellow; 10G: Orange)       Stability Testing         DI/DO       2 Digital Input (D): Level 0: -30-2V / Level 1: 10-30V Max. input current:8mA 2 Digital Output (DO): Open collector to 40       Stability Testing       Download Software Datasheet Platform		Dever lanut connectors 1 v M12 5 nels Mals K		EN61000-6-2
CodedCodedCE EN55032 Class AReset/Console/USB: 1 x M12 8-pole Female A- coded with Push-Pull connectorCE EN55024DID0: 1 x M12 5-pole Female A-coded with Push-Pull connectorCE EN61000-4-2 (ESD) Level 3Network Cable100Base-TX: 2-pair STP Cat. 5/ 5E/ 6 cable EIA/TIA-568 100-ohm (100m) 1000Base-TX: 2-pair STP Cat. 5/ 5E/ 6 cable EIA/TIA-568 100-ohm (100m) 100C Copper: 4-pair STP Cat6a/7 cableCE EN61000-4-4 (EFT) Level 3LEDPer unit: Power 1 (Green), Power 2 (Green), FAULT (Red) 100/100/T Ethernet port: Link/Activity (Green), Speed (Green); R.M. indicator (Green) POE: Link/Act (Green) 100/16/2.5G/5G: Yellow; 10G: Orange)VerificationDI/DO2 Digital Input (DI): Level 0: -30-2V / Level 1: 10~30V Max. input current:8mA 2 Digital Output (DO): Open collector to 40Verification		Power input connector: 1 x M 12 5-pole Male K-		EN61000-6-4
Resel/Console/USE: 1 x M12 8-pole Female A- coded with Push-Pull connectorCE EN55024DIDO: 1 x M12 5-pole Female A-coded with Push-Pull connectorCE EN61000-4-2 (ESD) Level 3Network Cable100Base-TX: 2-pair STP Cat. 5/ 5E/ 6 cable EIA/TIA-568 100-ohm (100m) 1000Base-TX: 2-pair STP Cat. 5/ 5E/ 6 cable EIA/TIA-568 100-ohm (100m)CE EN61000-4-4 (EFT) Level 3LEDPer unit: Power 1 (Green), Power 2 (Green), FAULT (Red) 100/100/T Ethernet port: Link/Activity (Green), Speed (Green); R.M. indicator (Green) PoE: Link/Act (Green) 100/16/2.5G/5G/10G Copper port: Speed (100/1G/2.5G/5G/10G Copper port: Speed (2.30-2V/1Level 1: 10-30V Max.		coded		CE EN55032 Class A
coded with Push-Pull connectorDIDO: 1 x M12 5-pole Female A-coded withPush-Pull connectorNetwork Cable100Base-TX: 2-pair STP Cat. 5/ 5E/ 6 cableEIA/TIA-568 100-ohm (100m)1000Base-TX: 2-pair STP Cat. 5/ 5E/ 6 cableEIA/TIA-568 100-ohm (100m)1000Base-TX: 2-pair STP Cat. 5/ 5E/ 6 cableEIA/TIA-568 100-ohm (100m)100G Copper: 4-pair STP Cat. 5/ 5E/ 6 cableEIA/TIA-568 100-ohm (100m)10G Copper: 4-pair STP Cat. 5/ 5E/ 6 cableEIA/TIA-568 100-ohm (100m)10G Copper: 4-pair STP Cat. 5/ 5E/ 6 cableEIA/TIA-568 100-ohm (100m)10G Copper: 4-pair STP Cat. 5/ 5E/ 6 cableEIA/TIA-568 100-ohm (100m)10G Copper: 4-pair STP Cat. 5/ 5E/ 6 cableEIA/TIA-568 100-ohm (100m)10G Copper: 4-pair STP Cat. 5/ 5E/ 6 cableEIA/TIA-568 100-ohm (100m)10G Copper: 4-pair STP Cat. 5/ 5E/ 6 cableEIA/TIA-568 100-ohm (100m)100/100T Ethemet port: Link/Activity (Green),Speed (Green);R.M. indicator (Green)PoE: Link/Act (Green)100/16/2.5G/5G/10G Copper port: Speed(100/16/2.5G/5G: Yellow; 10G: Orange)DI/DO2 Digital Input (DI):Level 0: -30-2V / Level 1: 10-30VMax. input current:8mA2 Digital Output (DO): Open collector to 40*Future release*Cotional		Reset/Console/USB: 1 x M12 8-pole Female A-		CE EN55024
DIDO: 1 x M12 5-pole Female A-coded with Push-Pull connectorCE EN61000-4-3 (RS) Level 3 CE EN61000-4-4 (EFT) Level 3 CE EN61000-4-6 (CS) Level 3 CE EN61000-4-6 (CS) Level 3 CE EN61000-4-8 (Magnetic field) Level 3 Second (Green); R.M. indicator (Green) PoE: Link/Act (Green) 100/1G/2.5G/5G/1GC Copper port: Speed (100/1G/2.5G/5G/1GC Copper port: Speed (100/1G/2.5G/5G/1GC Copper port: Speed (100/1G/2.		coded with Push-Pull connector		CE EN61000-4-2 (ESD) Level 3
Push-Pull connector       CE EN61000-44 (EFT) Level 3         Network Cable       100Base-TX: 2-pair STP Cat. 5/ 5E/ 6 cable         EIA/TIA-568 100-ohm (100m)       CE EN61000-44 (EFT) Level 3         100DBase-TX: 2-pair STP Cat. 5/ 5E/ 6 cable       CE EN61000-4-8 (Magnetic field) Level 3         EIA/TIA-568 100-ohm (100m)       CE EN61000-4-8 (Magnetic field) Level 3         100 Copper: 4-pair STP Cat6a/7 cable       EN50155/EN50121-3-2/EN50121-4;         LED       Per unit: Power 1 (Green), Power 2 (Green),         FAULT (Red)       100/1000T Ethernet port: Link/Activity (Green),         Speed (Green);       R.M. indicator (Green)         PoE: Link/Act (Green)       5 years         100/IO/2.5G/5G/10G Copper port: Speed       Up to two pairs bypass modules on 10GT ports         100/IOO       2 Digital Input (DI):         Level 0: -30-2V / Level 1: 10-30V       Max. input current:8mA         2 Digital Output (DO): Open collector to 40       Software Datasheet		DIDO: 1 x M12 5-pole Female A-coded with		CE EN61000-4-3 (RS) Level 3
Network Cable       100Base-TX: 2-pair STP Cat. 5/ 5E/ 6 cable         EIA/TIA-568 100-ohm (100m)       CE EN61000-4-5 ED3 (Surge) Level 3         1000Base-TX: 2-pair STP Cat. 5/ 5E/ 6 cable       CE EN61000-4-6 (CS) Level 3         EIA/TIA-568 100-ohm (100m)       CE EN61000-4-8 (Magnetic field) Level 3         100 Gopper: 4-pair STP Cat6a/7 cable       EN50155/EN50121-3-2/EN50121-4;         Per unit: Power 1 (Green), Power 2 (Green),       EN4LT (Red)         100/1000T Ethernet port: Link/Activity (Green),       Speed (Green);         R.M. indicator (Green)       PoE: Link/Act (Green)         PoE: Link/Act (Green)       MTBF         100/10/15/2.5G/5G/10G Copper port: Speed       Up to two pairs bypass modules on 10GT ports         100/100       Stability Testing       Software Specification         Bypass**       Up to two pairs bypass modules on 10GT ports         100/100       Software Specification         Level 0: -30-2V / Level 1: 10-30V       Max. input (DI):         Level 0: -30-2V / Level 1: 10-30V       Download Software Datasheet         "Future release       *'Outional		Push-Pull connector		CE EN61000-4-4 (EET) Level 3
EIA/TIA-568 100-ohm (100m)       CE EN61000-4-6 (CS) Level 3         1000Base-TX: 2-pair STP Cat. 5/ 5E/ 6 cable       CE EN61000-4-6 (CS) Level 3         EIA/TIA-568 100-ohm (100m)       CE EN61000-4-6 (CS) Level 3         100 Copper: 4-pair STP Cat6a/7 cable       CE EN61000-4-8 (Magnetic field) Level 3         LED       Per unit: Power 1 (Green), Power 2 (Green), FAULT (Red)       EN61157/EN50121-3-2/EN50121-4; EN 45545-2 Fire & Smoke verification         100/1000T Ethernet port: Link/Activity (Green), Speed (Green);       Stability Testing       EN61373 (Shock and Vibration)         MTBF       175,468 hrs. (standards: IEC 62380)       Warranty       5 years         PoE: Link/Act (Green)       MTBF       175,468 hrs. (standards: IEC 62380)       Warranty         D/DO       2 Digital Input (DI): Level 0: -30-2V / Level 1: 10-30V       Bypass**       Up to two pairs bypass modules on 10GT ports to pass to the next switch in case of power failure and CPU fail         D/DO       2 Digital Uutput (DO): Copen collector to 40       Ce EN61000-4-8 (Magnetic field) Level 3         *Evel 0: -30-2V / Level 1: 10-30V       Max. input current:8mA 2 Digital Output (DO): Open collector to 40       Download Software Datasheet *Cotional	Network Cable	100Base-TX: 2-pair STP Cat. 5/ 5E/ 6 cable		CE EN61000 4 5 ED3 (Surge) Level 3
1000Base-TX: 2-pair STP Cat. 5/ 5E/ 6 cable         EIA/TIA-568 100-ohm (100m)         10G Copper: 4-pair STP Cat6a/7 cable         LED         Per unit: Power 1 (Green), Power 2 (Green),         FAULT (Red)         100/1000T Ethemet port: Link/Activity (Green),         Speed (Green);         R.M. indicator (Green)         PoE: Link/Act (Green)         100/16/2.5G/5G/10G Copper port: Speed         (100/16/2.5G/5G: Yellow; 10G: Orange)         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		EIA/TIA-568 100-ohm (100m)		CE EN61000-4-5 ED5 (Suige) Level 5
EIA/TIA-568 100-ohm (100m) 10G Copper: 4-pair STP Cat6a/7 cable       CE EN61000-4-8 (Magnetic field) Level 3         LED       Per unit: Power 1 (Green), Power 2 (Green), FAULT (Red) 100/1000T Ethernet port: Link/Activity (Green), Speed (Green); R.M. indicator (Green) PoE: Link/Act (Green) 100/1G/2.5G/5G/10G Copper port: Speed (100/1G/2.5G/5G/10G Copper port: Speed (100/1G/2.5G/5G Yellow; 10G: Orange)       Stability Testing EN61373 (Shock and Vibration)         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       Stability Testing EN61373 (Shock and Vibration)		1000Base-TX: 2-pair STP Cat. 5/ 5E/ 6 cable		CE EN01000-4-0 (CS) Level 5
10G Copper: 4-pair STP Cat6a/7 cable       Verifications       ENS0155/ENS0121-3-2/ENS0121-4; EN 45545-1, EN 45545-2 Fire & Smoke verification         LED       Per unit: Power 1 (Green), Power 2 (Green), FAULT (Red)       I00/1000T Ethemet port: Link/Activity (Green), Speed (Green);       Stability Testing       ENS0153/ENS0121-3-2/ENS0121-4; EN 45545-2 Fire & Smoke verification         November 2 (Green), FAULT (Red)       100/1000T Ethemet port: Link/Activity (Green), Speed (Green);       Stability Testing       ENS01373 (Shock and Vibration)         NTBF       175,468 hrs. (standards: IEC 62380)       Warranty       5 years         PoE: Link/Act (Green)       Warranty       5 years       Bypass**       Up to two pairs bypass modules on 10GT ports to pass to the next switch in case of power failure and CPU fail         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       Software Specification		EIA/TIA-568 100-ohm (100m)		CE EN61000-4-8 (Magnetic field) Level 3
LED       Per unit: Power 1 (Green), Power 2 (Green),         FAULT (Red)       100/1000T Ethernet port: Link/Activity (Green),         Speed (Green);       R.M. indicator (Green)         PoE: Link/Act (Green)       75,468 hrs. (standards: IEC 62380)         Varranty       5 years         Up to two pairs bypass modules on 10GT ports         to pass to the next switch in case of power         (100/16/2.5G/5G/10G Copper port: Speed         (100/1G/2.5G/5G/10G Copper port: Speed         (100/1G/2.5G/5G/10G Copper port: Speed         (100/1G/2.5G/5G: Yellow; 10G: Orange)         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		10G Copper: 4-pair STP Cat6a/7 cable	Verifications	EN50155/EN50121-3-2/EN50121-4;
D/DO       Pointine Total T (Brooth), Fortion 2 (chooth),         FAULT (Red)       100/1000T Ethermet port: Link/Activity (Green),         Speed (Green);       R.M. indicator (Green)         PoE: Link/Act (Green)       100/100/2 (2.56/56/10G Copper port: Speed         (100/11G/2.56/56/10G Copper port: Speed       Up to two pairs bypass modules on 10GT ports         to pass to the next switch in case of power       failure and CPU fail         D/DO       2 bigital Input (DI):         Level 0: -30-2V / Level 1: 10-30V       Lantech OS5         Platform       Download Software Datasheet         "Future release       "Future release         2 bigital Output (DO): Open collector to 40       "Future release	LED	Per unit: Power 1 (Green) Power 2 (Green)		EN 45545-1, EN 45545-2 Fire & Smoke
DI/DO       2 bigital loutput (DD):         Level 0: -30-2V / Level 1: 10-30V         Max. input current:8mA         2 bigital Output (DD): Open collector to 40		FALLET (Red)		verification
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		100/1000T Ethernet pert: Link/Activity (Creen)	Stability Testing	EN61373 (Shock and Vibration)
DI/DO       2 Digital Input (DI): Level 0: -30-2V / Level 1: 10-30V Max. input current:8mA       Warranty       5 years         Varianty       5 years         Up to two pairs bypass modules on 10GT ports to pass to the next switch in case of power failure and CPU fail         DI/DO       2 Digital Input (DI): Level 0: -30-2V / Level 1: 10-30V Max. input current:8mA       Software Specification         Lantech OS5 Platform       Download Software Datasheet *Future release		Speed (Green):	MTBF	175,468 hrs. (standards: IEC 62380)
PoE: Link/Act (Green)     Bypass**     Up to two pairs bypass modules on 10GT ports to pass to the next switch in case of power failure and CPU fail       DI/DO     2 Digital Input (DI):     Software Specification       Level 0: -30-2V / Level 1: 10~30V     Lantech OS5       Platform     Dividition       2 Digital Output (DO): Open collector to 40     *Future release		Speed (Green);	Warranty	5 years
PoE:: Link/Act (Green)       to pass to the next switch in case of power failure and CPU fail         100/1G/2.5G/5G/10G Copper port: Speed       to pass to the next switch in case of power failure and CPU fail         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		R.M. Indicator (Green)	Bypass**	Up to two pairs bypass modules on 10GT ports
100/1G/2.5G/5G/10G Copper port: Speed (100/1G/2.5G/5G: Yellow; 10G: Orange)     failure and CPU fail       DI/DO     2 Digital Input (DI): Level 0: -30-2V / Level 1: 10-30V Max. input current:8mA     Software Specification       2 Digital Output (DO): Open collector to 40     Download Software Datasheet Platform		PoE: Link/Act (Green)		to pass to the next switch in case of power
Software Specification         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    Software Specification          Download Software Datasheet         *Future release		100/1G/2.5G/5G/10G Copper port: Speed		failure and CPU fail
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 Lantech OS5 Platform Platform *Future release **Optional		(100/1G/2.5G/5G: Yellow; 10G: Orange)	Software S	pecification
Level 0: -30~2V / Level 1: 10~30V Max. input current:8mA 2 Digital Output (DO): Open collector to 40 Platform Platform Platform Platform	DI/DO	2 Digital Input (DI):	Lantech OS5	
Max. input current:8mA *Future release 2 Digital Output (DO): Open collector to 40 **Optional		Level 0: -30~2V / Level 1: 10~30V	Platform	Download Software Datasheet
2 Digital Output (DO): Open collector to 40 **Optional		Max. input current:8mA		*Future release
obtional in the second s		2 Digital Output (DO): Open collector to 40		**Optional

### **ORDERING INFORMATION**

All model packages include M12 caps. For conformal coating add –C to Model Name. For optional bypass add –BT (one pair); -BBT (two pairs). For optional PTP add -PTP; For optional MacSec add -MacSec

- TPGS-H7524XTR-24-41-WVI......P/N: 8361-0190 24 100/1000T PoE at/af + 5 100M/1G/2.5G/5G/10G M12 X-coded EN50155 OS5 Managed Ethernet Switch; 16.8V~137.5V dual input; IP41 rack mount design; -40°C to 70°C; w/PoE & ethernet galvanic isolation
- TGS-H7524XTR-41-WVI.......P/N: 8361-0192
   24 100/1000T + 5 100M/1G/2.5G/5G/10G M12 X-coded EN50155 OS5 Managed Ethernet Switch; 16.8V~137.5V dual input; IP41 rack mount design; -40°C to 70°C; w/ethernet galvanic isolation



### **OPTIONAL ACCESSORIES**

#### Software package

Please refer to the software datasheet

#### M12 Connector & Cable

Connector	
ECONM12-08A(M)-180	8 pin M12 (Male) A-coded 180 degrees crimp type connector for reset/console/USB
ECONM12-05A(M)-C-180	5 pin M12 (Male) A-coded 180 degree crimp type connector for DI/DO
ECONM12-08X(M)-SPEEDCON	8 pin M12 (Male) X-coded 180 degrees crimp type connector for data, Ethernet CAT6A (10G), shielded, SPEEDCON
4106-0000097-001	5 pin M12 (Female) K-coded 180 degrees screw type connector for power supply
ECONM12-05K(F)-S-180	
Cable	
ECABM12X83MSTP	8 pin M12 (Male) X-coded 180 degrees RJ45 STP cable for data, shielded, 300cm
ECONM12-08M2-CONSOLE	8 pin M12 (Male) A-coded 180 degree to RS232 cable for console, 150cm
4106-0000096-001	5 pin M12 (Female) K-coded 90 degrees 1.5M cable for power supply
ECABM12-05K(F)-90-1.5M	
Others	
4106-00000093-001	8 pin M12 (Male) A-coded 180 degrees to USB Female/male plug, 150cm
	Lantech Communications Global Inc.

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