

180W, 24V Booster



ITP-800-8PH24

8x 10/100Base-TX with 8x PoE+ Ethernet Switch



The ITP-800-8PH24 is a unmanaged Fast Ethernet PoE switch that provides 8 10/100Base-TX PoE+ Fast Ethernet ports. The Ethernet switch is designed for industrial applications in harsh environments. The switch's Ethernet ports utilize M12 connectors to ensure tight, robust connections and guarantee reliable operation against environmental disturbances such as vibration and shock. The ITP-800-8PHE24 series Ethernet switches are compliant with EN50155, covering operating temperature, power input voltage, surge, ESD, vibration, and shock, thus making these switches suitable for industrial applications in vehicle, rolling stock and railways.

Features

- IP67 grade housing for against water, dust, and oil (Figure 3)
- Rugged and fanless design
- 8-Port 10/100Base-TX UTP with 8x IEEE802.3at/af PoE Ethernet Switch
- Use M12/M23 connector anti vibration and shock for vehicle, rolling stock, and railway applications
- 24/48VDC (20~57VDC) redundant dual input power with built-in very high efficiency (94~97%) to boost PoE output voltage to 55VDC
- Regulated PoE output voltage (55VDC) to stabilize PoE device, and guarantee delivery PoE power distance to 100 meters (Figure 2)
- Provides 8-port IEEE802.3af / 802.3at PoE output (30W per Port), Maximum PoE output power budget 180W
- Supports flow control
- DIN rail or wall mounting installation
- Supports broadcast storm protection
- Supports auto-negotiation and auto-MDI/MDI-X
- Wide operating temperature -40~75°C (ITP-800-8PHE24)
- CE, FCC, EN50155 and EN50121-4 for railway certified
- Industrial Grade EMS, EMI, EN61000-6-2, EN61000-6-4 certified

Specifications

IEEE Standard	IEEE 802.3 10Base-T Ethernet IEEE 802.3u 100Base-TX Fast Ethernet IEEE802.3x Flow Control and Back Pressure IEEE 802.3af PoE (Power over Ethernet) IEEE 802.3at PoE+ (Power over Ethernet enhancements)
Switch Architecture	Back-plane (Switching Fabric): 1.6Gbps (Full wire-speed)
Data Processing	Store and Forward
Flow Control	IEEE 802.3x flow control, back pressure flow control
Provides Broadcast Storm Protection	Present
MAC Address Table	1 K
Packet Buffer Size	448Kbits
Network Connector	8x M12 D-code Female 10/100Base-TX auto negotiation speed Auto MDI/MDI-X function Full/Half duplex
Network Cable	10Base-T: 2-pair UTP/STP Cat. 5e cable EIA/TIA-568 100-ohm (100m) 100Base-TX: 2-pair UTP/STP Cat. 5e cable EIA/TIA-568 100-ohm (100m)
Protocols	CSMA/CD
LED	Per unit: Power 1 (Green), Power 2 (Green) Per port: Link/Active (Green) PoE Port LED 1x LED /per Port : • PoE Output Power On : ON (Green)
Reverse Polarity Protection	Present for power input
Overload Current Protection	Supported
PoE Standard	IEEE802.3af, IEEE802.3at
PoE Power Budget	Maximum PoE output power budget 180W (30W/per port) Regulated PoE output voltage at 55VDC (Figure 2)

Power Supply	Provide 1x M23 (5-Pin, male) for redundant dual DC 24/48V (20~57VDC) input power Built-in very high efficiency (94~97%) to boost PoE output voltage to 55VDC Regulate PoE output voltage (55VDC) to stabilize PoE device, and guarantee delivery PoE power distance to 100 meters (Figure 2)																				
Power Consumption	<table border="1"> <thead> <tr> <th>Input Voltage</th> <th>Total Power Consumption</th> <th>Device Power Consumption</th> <th>PoE Budget</th> <th>Boost Efficiency</th> </tr> </thead> <tbody> <tr> <td>24 VDC</td> <td>188.9W</td> <td>3.6W</td> <td>180W</td> <td>95.7%</td> </tr> <tr> <td>48 VDC</td> <td>191W</td> <td>4.3W</td> <td>180W</td> <td>96.0%</td> </tr> </tbody> </table>	Input Voltage	Total Power Consumption	Device Power Consumption	PoE Budget	Boost Efficiency	24 VDC	188.9W	3.6W	180W	95.7%	48 VDC	191W	4.3W	180W	96.0%					
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Operating Temperature	-40°C~75°C																				
Operating Humidity	5% to 95% (Non-condensing)																				
Storage Temperature	-40°C~85°C																				
Housing	IP67 water-proof grade housing, and fanless (Figure 3)																				
Dimensions	67 x 71.4 x 214.5 mm (D x W x H)																				
Weight	470g																				
Installation Mounting	Wall mounting, or DIN rail (optional)																				
MTBF	937,878 Hours (MIL-HDBK-217)																				
Warranty	5 years																				
Certification																					
EMC	CE																				
EMI	FCC, FCC Part 15 Subpart B Class A CE																				
Railway Traffic	EN50155, EN50121-4																				
Immunity for Heavy Industrial Environment	EN61000-6-2																				
Emission for Heavy Industrial Environment	EN61000-6-4																				

5

EN50155 Managed PoE Switch

EMS (Electromagnetic Susceptibility) Protection Level	EN61000-4-2 (ESD) Level 3, Criteria B
	EN61000-4-3 (RS) Level 3, Criteria A
	EN61000-4-4 (Burst) Level 3, Criteria A
	EN61000-4-5 (Surge) Level 3, Criteria B
	EN61000-4-6 (CS) Level 3, Criteria A
	EN61000-4-8 (PFMF, Magnetic Field) Field Strength: 300A/m, Criteria A
	EN 61000-4-11 Voltage Dips

Safety	UL60950-1 (Pending)
Shock	IEC 61373
Freefall	IEC 60068-2-32
Vibration	IEC 61373

Application

Figure 1 : ITP Series in Onboard Train Application

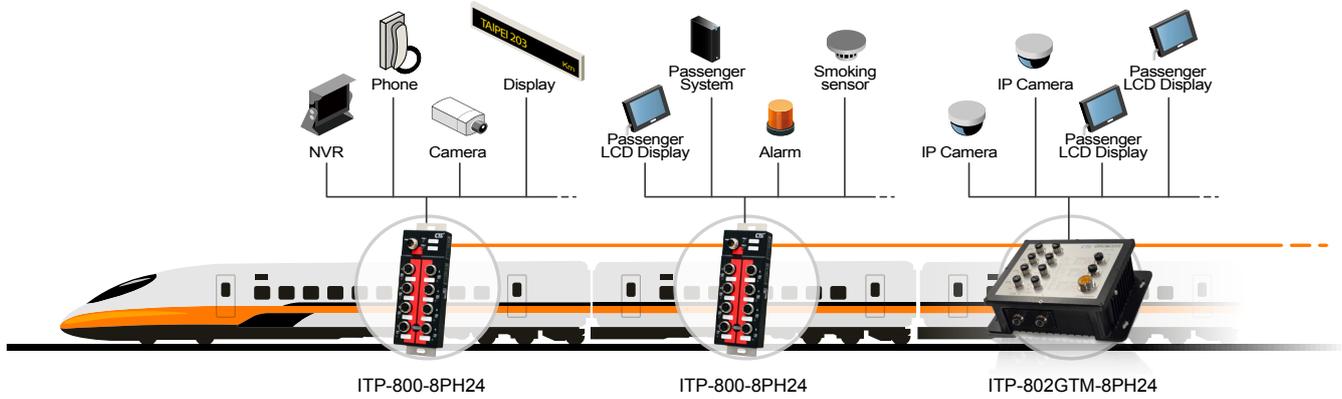
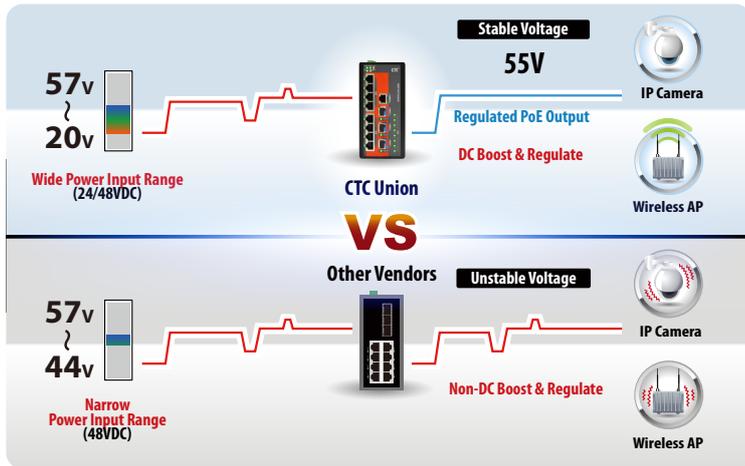


Figure 2 : High efficiency boost technology for PoE



- Regulated PoE output voltage (55VDC) to stabilize PoE device
- Guarantee delivery PoE power distance to 100 meters
- Wide range input power 24/48VDC (20~57VDC)
- Built-in very high efficiency (94~97%) to boost PoE output voltage

Figure 3 : IP67 water proof Protection



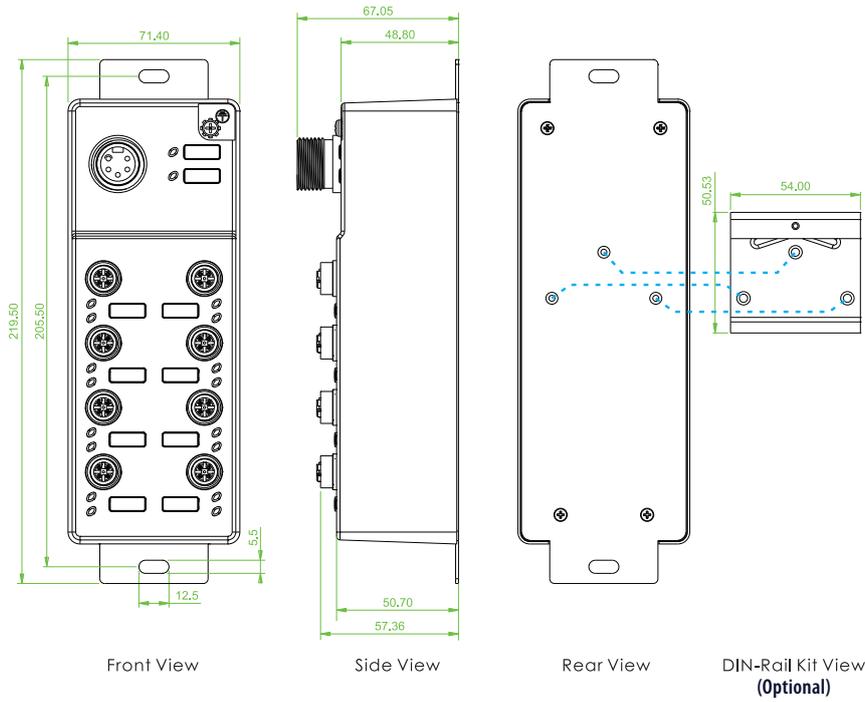
Figure 4 : Wide Range Temperature



Figure 5 : ITP Series for Industrial Automation



Dimensions



Ordering Information

Model Name	IP67	Total Port	UTP Port	PoE Port	PoE Total Power Budget	Power Input	Certification				Shock Vibration	Operating Temperature
			M12 10/100 Base-TX	IEEE802.3at		Redundant	EN50155	EN50121-4	EN61000-6-2 EN61000-6-4	CE FCC	IEC61373	
ITP-800-8PHE24	V	8	8	8	180W	24/48VDC	V	V	V	V	V	-40~75°C

Model Naming Rule



Package List

- ITP-800-8PHE24 device
- Protective caps for UTP port
- Wall mount (bound with switch device)
- Quickly installation guide

Optional Accessories

Optional Cable/Connector

P/N: CAB-M12DM4-RJ45

M12 D-code Male (4-Pin) to RJ-45, AWG 24 ,IP67, 1 meter



For FE UTP

P/N: CAB-M23F5-OPEN

M23 Female (5-Pin) to open wire, (AWG 16) ,IP67, 1 meter



For Power

P/N: M12D-M4

M12 D-code Male (4-Pin) connector, IP67



For FE UTP