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

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%

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

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

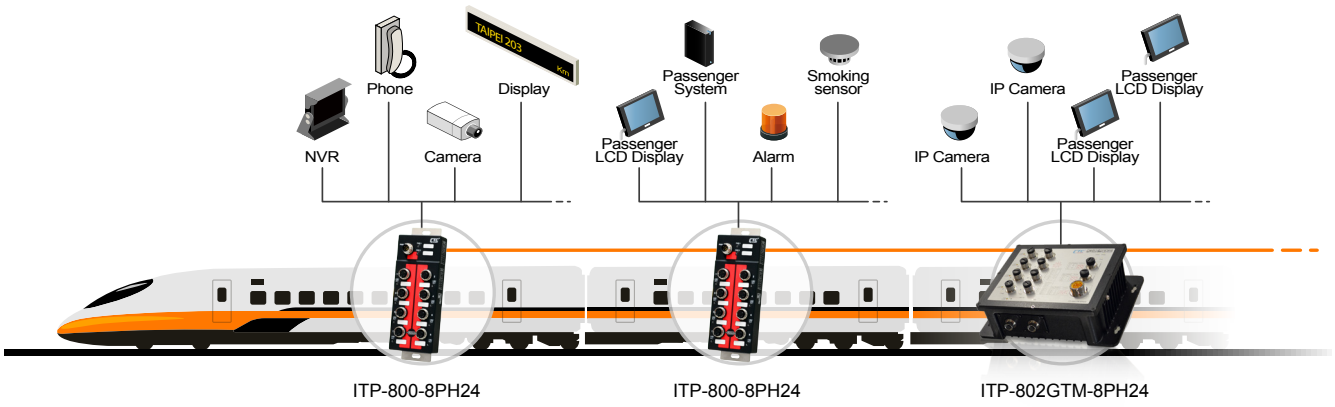


Figure 2 : High efficiency boost technology for PoE

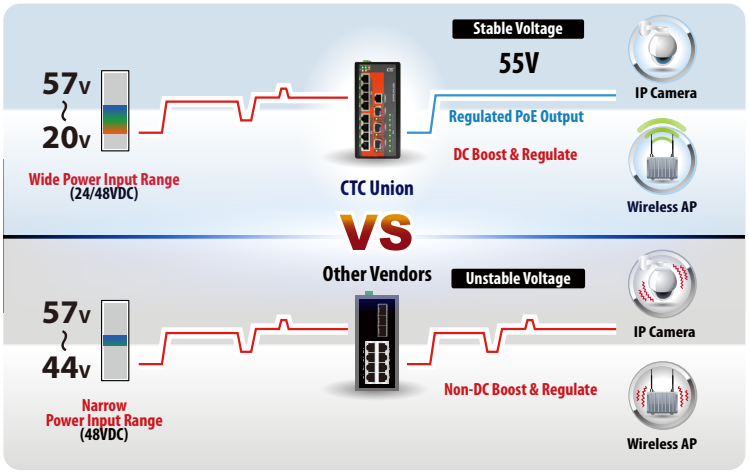


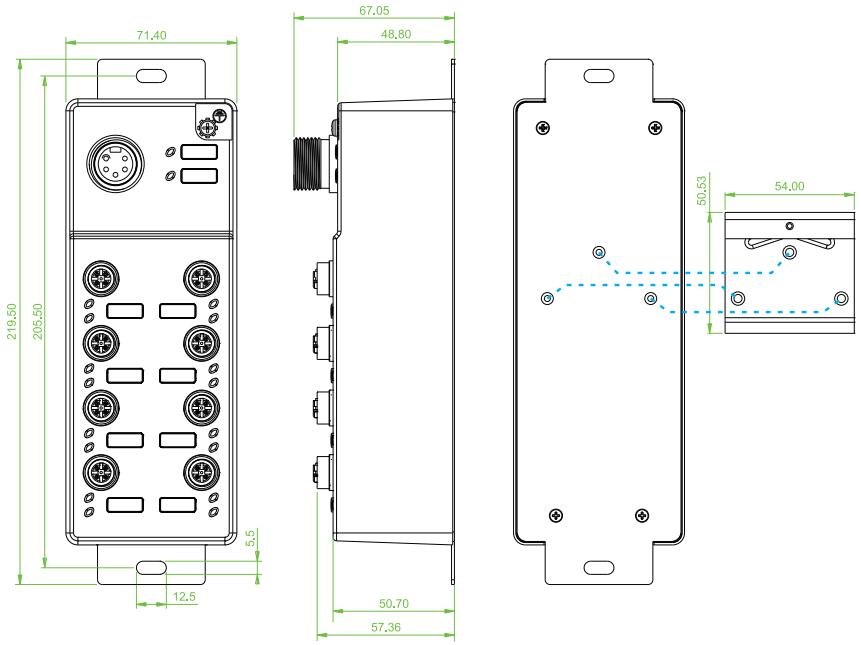
Figure 3 : IP67 water proof Protection

- 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 4 : Wide Range Temperature

Figure 5 : ITP Series for Industrial Automation

Dimensions

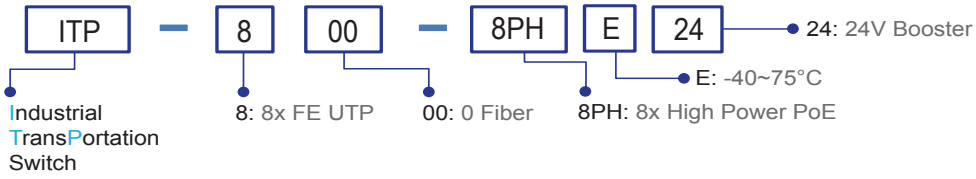


Front View | Side View | Rear View | DIN-Rail Kit View **(Optional)**

Ordering Information

Model Name	IP67	Total Port	UTP Port M12	PoE Port	PoE Total Power Budget	Power Input	—	Certification			Shock Vibration	Operating Temperature
			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