

## ITP-800A-8PH24

8x 10/100Base M12 with 8x PoE (120W, 24/48VDC)



- 24/48VDC redundant dual input power
- Regulated PoE output voltage
- M12/M23 connector for UTP and Power
- EN50155, EN50121-4 and EN45545-2 for railway certified



The ITP-800A-8PH24 is an unmanaged, Fast Ethernet, PoE switch, that provides 8 x 10/100Base-TX PoE+ Ethernet ports. This Ethernet switch is designed for industrial applications in harsh environments with Ethernet ports that utilize M12 connectors to ensure water-tight, robust connections and guarantee reliable operation against environmental disturbances such as vibration and shock. The ITP-800A-8PH24 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 factory automation.

### Features

- 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 (97~98%) to boost PoE output voltage to 50VDC
- Regulated PoE output voltage (50VDC) to stabilize PoE device, and guarantee delivery PoE power distance to 100 meters (Figure 2)
- Wide operating temperature -40~75°C (ITP-800A-8PHE24)
- CE, FCC, EN51055, EN50121-4 and EN45545-2 for railway certified
- Industrial Grade EMS, EMI, EN61000-6-2, EN61000-6-4 certified

### Specifications

<b>IEEE Standard</b>	IEEE 802.3 10Base-T Ethernet IEEE 802.3u 100Base-TX Fast Ethernet IEEE 802.3x Flow Control and Back Pressure IEEE 802.3af PoE (Power over Ethernet) IEEE 802.3at PoE+ (Power over Ethernet enhancements)
<b>Switch Architecture</b>	Back-plane (Switching Fabric): 1.6Gbps (Full wire-speed)
<b>Data Processing</b>	Store and Forward
<b>Flow Control</b>	IEEE 802.3x flow control, back pressure flow control
<b>MAC Address Table</b>	1 K
<b>Packet Buffer Size</b>	448Kbits
<b>Network Connector</b>	8x M12 D-code Female 10/100Base-TX auto negotiation speed Auto MDI/MDI-X function Full/Half duplex
<b>Network Cable</b>	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)
<b>Protocols</b>	CSMA/CD
<b>LED</b>	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)
<b>Reverse Polarity Protection</b>	Present for power input
<b>Overload Current Protection</b>	Supported
<b>PoE Standard</b>	IEEE 802.3af, IEEE 802.3at
<b>PoE Power Budget</b>	Maximum PoE output power budget 120W (30W/per port) Regulated PoE output voltage at 50VDC (Figure 2)

<b>Power Supply</b>	Provide 1x M23 (5-Pin, male) for redundant dual DC 24/48V (20~57VDC) input power Built-in very high efficiency (97~98%) to boost PoE output voltage to 50VDC Regulate PoE output voltage (50VDC) to stabilize PoE device, and guarantee delivery PoE power distance to 100 meters (Figure 2)															
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<b>Operating Temperature</b>	-10°C~60°C (ITP-800A-8PH24) -40°C~75°C (ITP-800A-8PHE24)															
<b>Operating Humidity</b>	5% to 95% (Non-condensing)															
<b>Storage Temperature</b>	-40°C~85°C															
<b>Housing</b>	Rugged metal, IP40 protection housing, and fanless															
<b>Dimensions</b>	64 x 71.5 x 219 mm (D x W x H)															
<b>Weight</b>	860g															
<b>Installation Mounting</b>	Wall mounting															
<b>MTBF</b>	937,878 Hours (MIL-HDBK-217)															
<b>Warranty</b>	5 years															
<b>Certification</b>																
<b>EMC</b>	CE (EN55024, EN55032)															
<b>EMI</b>	FCC, FCC Part 15 Subpart B Class A CE															
<b>Railway Traffic</b>	EN50155, EN50121-4															
<b>Fire Protection of Railway Vehicles</b>	EN45545-2															
<b>Immunity for Heavy Industrial Environment</b>	EN61000-6-2															
<b>Emission for Heavy Industrial Environment</b>	EN61000-6-4															

<b>EMS (Electromagnetic Susceptibility) Protection Level</b>	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

<b>Safety</b>	UL60950-1 (Pending)
<b>Shock</b>	IEC 61373
<b>Freefall</b>	IEC 60068-2-32
<b>Vibration</b>	IEC 61373

## Application

Figure 1 : EN50155 PoE switch in smart Bus application

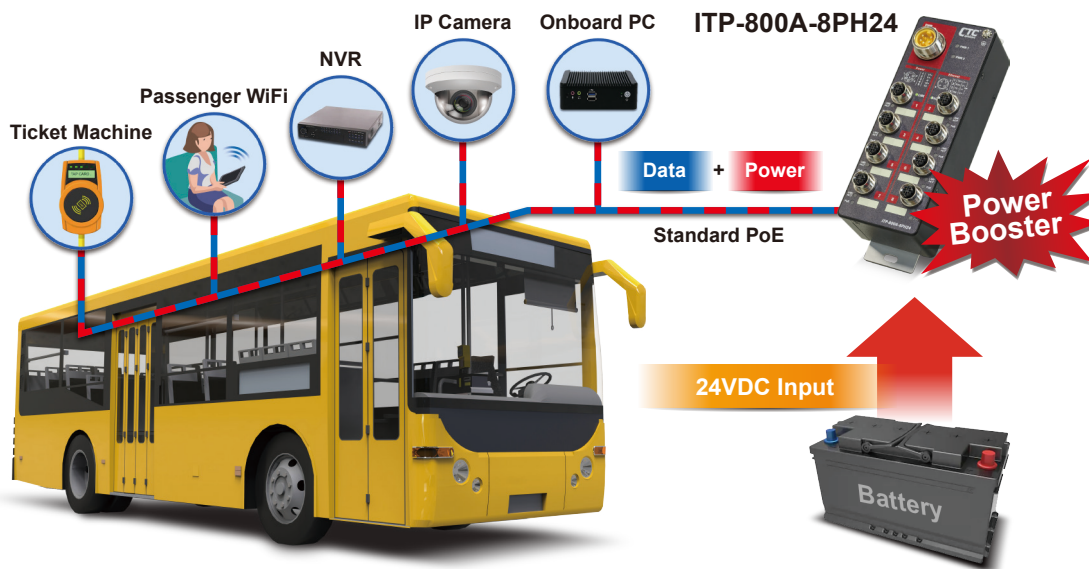
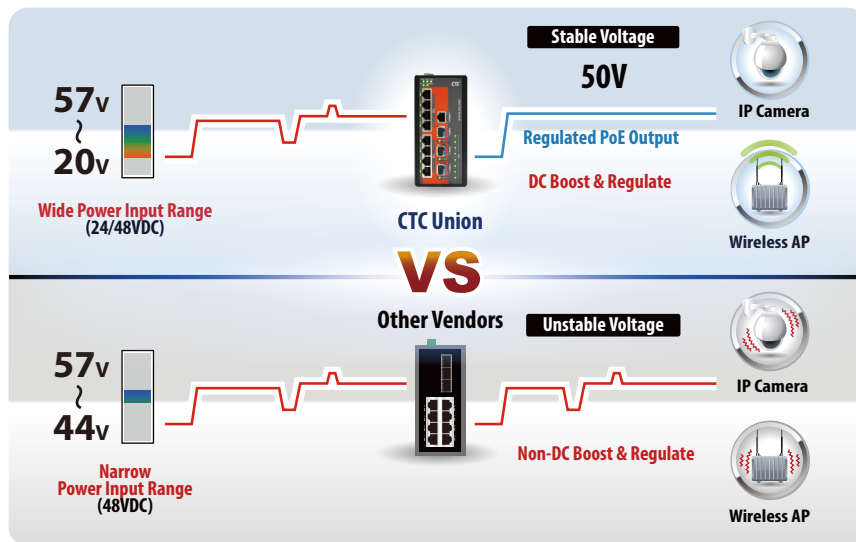
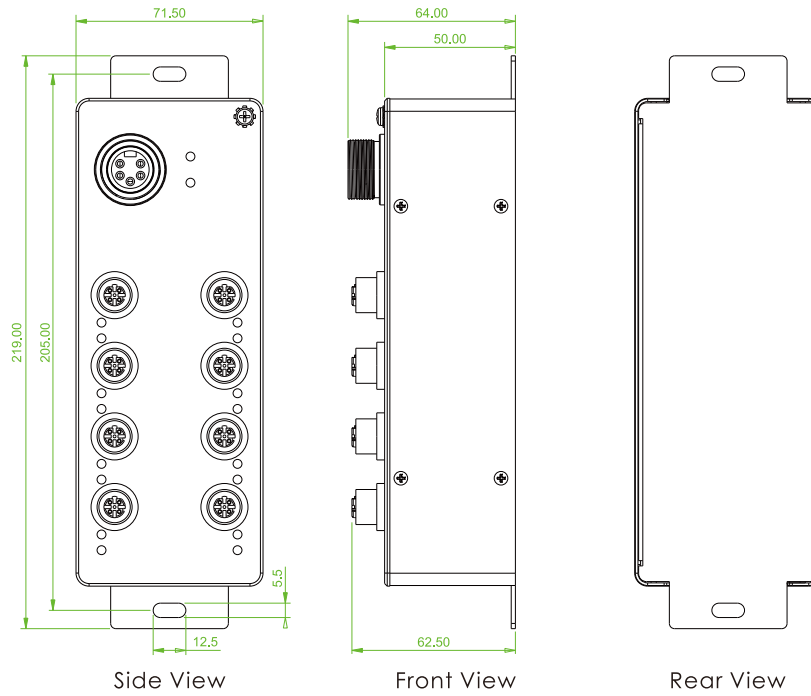


Figure 2 : High efficiency boost technology for PoE



- Regulated PoE output voltage (50VDC) 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 (97~98%) to boost PoE output voltage

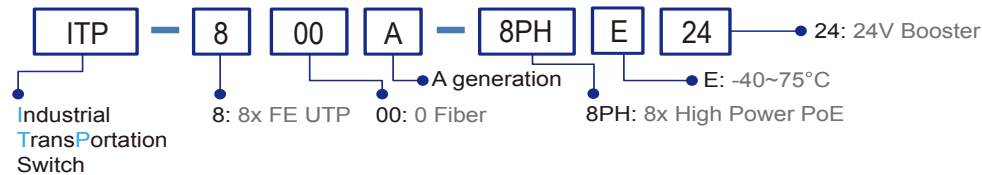
## Dimensions



## Ordering Information

Model Name	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	EN45545-2	EN50155 EN50121-4	EN61000-6-2 EN61000-6-4	CE FCC	IEC61373	
ITP-800A-8PH24	8	8	8	120W	24/48VDC	V	V	V	V	V	-10~60°C
ITP-800A-8PHE24	8	8	8	120W	24/48VDC	V	V	V	V	V	-40~75°C

### Model Naming Rule



### Package List

- ITP-800A-8PH(E)24 device
- Protective caps for UTP port
- Wall mount (bound with switch device)

## 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