

## ITP-800A-8PH24

M12, 8x 10/100Base-TX, 8x PoE, 24/48VDC input

150W  
24V Booster



- 24/48VDC redundant dual input power
- Regulated PoE output voltage (55VDC)
- 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 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-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 railways.

### Features

- Rugged metal, IP30 protection 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 150W
- Supports flow control
- Wall mounting installation
- Supports auto-negotiation and auto-MDI/MDI-X
- 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 150W (30W/per port) Regulated PoE output voltage at 55VDC (Figure 2)															
<b>Power Supply</b>	Provide 1x M23 (5-Pin, male) for redundant dual DC 24/48V (24~57VDC) 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)															
<b>Power Consumption</b>	<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>163.5W</td> <td>3.6W</td> <td>150W</td> <td>94%</td> </tr> <tr> <td>48 VDC</td> <td>164.7W</td> <td>4.3W</td> <td>150W</td> <td>93.5%</td> </tr> </tbody> </table>	Input Voltage	Total Power Consumption	Device Power Consumption	PoE Budget	Boost Efficiency	24 VDC	163.5W	3.6W	150W	94%	48 VDC	164.7W	4.3W	150W	93.5%
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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, IP30 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															

Certification	
EMC	CE (EN55024, EN55032)
EMI	FCC, FCC Part 15 Subpart B Class A CE
Railway Traffic	EN50155, EN50121-4
Fire Protection of Railway Vehicles	EN45545-2
Immunity for Heavy Industrial Environment	EN61000-6-2
Emission for Heavy Industrial Environment	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 : ITP Series in Onboard Train Application

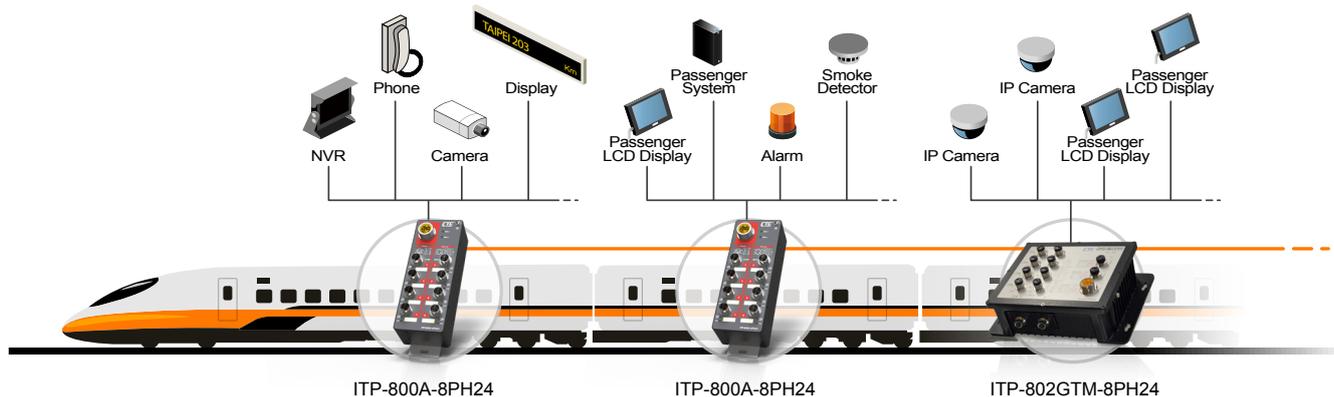
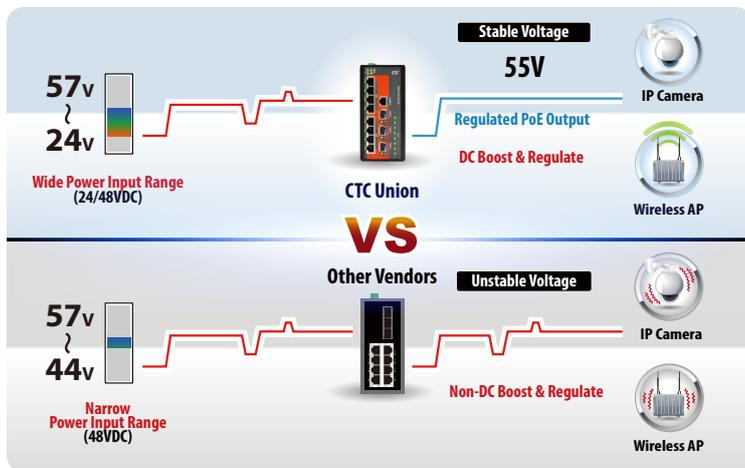


Figure 2 : High efficiency boost technology for PoE



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

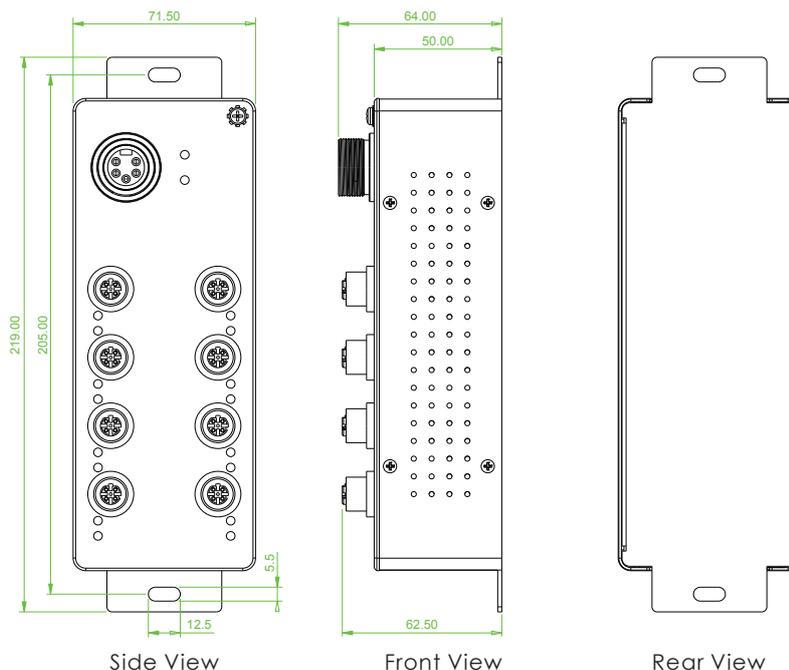
Figure 3 : Wide Range Temperature



Figure 4 : ITP Series for Industrial Automation



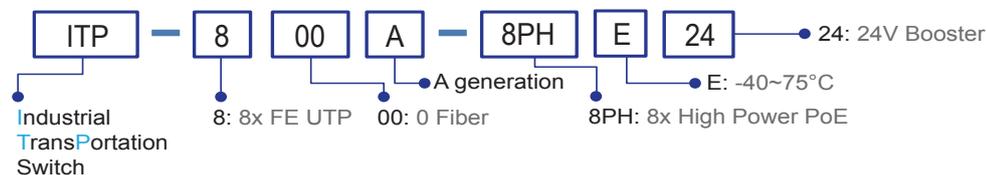
## Dimensions



## 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	150W	24/48VDC	V	V	V	V	V	-10~60°C
ITP-800A-8PHE24	8	8	8	150W	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)
- Quick 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

EN50155 PoE Switch ITP-800A-8PH24