

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, EN62368-1, EN51055, EN50121-4 and EN45545-2 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 IEEE 802.3x 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
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	IEEE 802.3af, IEEE 802.3at
PoE Power Budget	Maximum PoE output power budget 120W (30W/per port) Regulated PoE output voltage at 50VDC (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 (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)															
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>125W</td> <td>3.6W</td> <td>120W</td> <td>98%</td> </tr> <tr> <td>48 VDC</td> <td>127W</td> <td>4.3W</td> <td>120W</td> <td>97%</td> </tr> </tbody> </table>	Input Voltage	Total Power Consumption	Device Power Consumption	PoE Budget	Boost Efficiency	24 VDC	125W	3.6W	120W	98%	48 VDC	127W	4.3W	120W	97%
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24 VDC	125W	3.6W	120W	98%												
48 VDC	127W	4.3W	120W	97%												
Operating Temperature	-10°C~60°C (ITP-800A-8PH24) -40°C~75°C (ITP-800A-8PHE24)															
Operating Humidity	5% to 95% (Non-condensing)															
Storage Temperature	-40°C~85°C															
Housing	Rugged metal, IP40 protection housing, and fanless															
Dimensions	64 x 71.5 x 219 mm (D x W x H)															
Weight	860g															
Installation Mounting	Wall mounting															
MTBF	937,878 Hours (MIL-HDBK-217)															
Warranty	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															

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
	EN61000-4-11 Voltage Dips

Safety	EN62368-1
Shock	IEC 61373
Freefall	IEC 60068-2-32
Vibration	IEC 61373

Application

Figure 1 : EN50155 PoE switch in smart Bus application

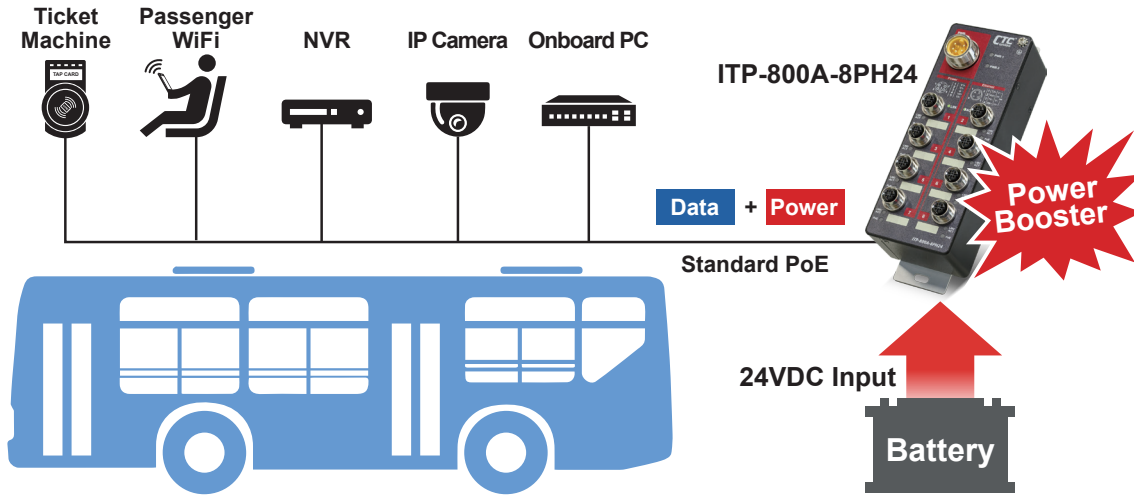
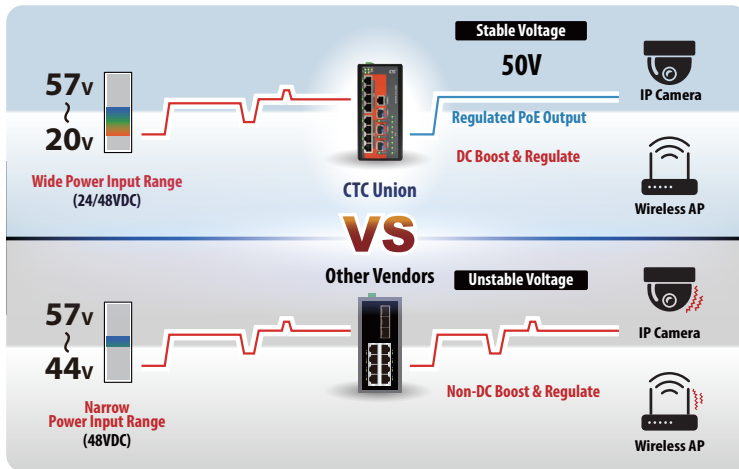
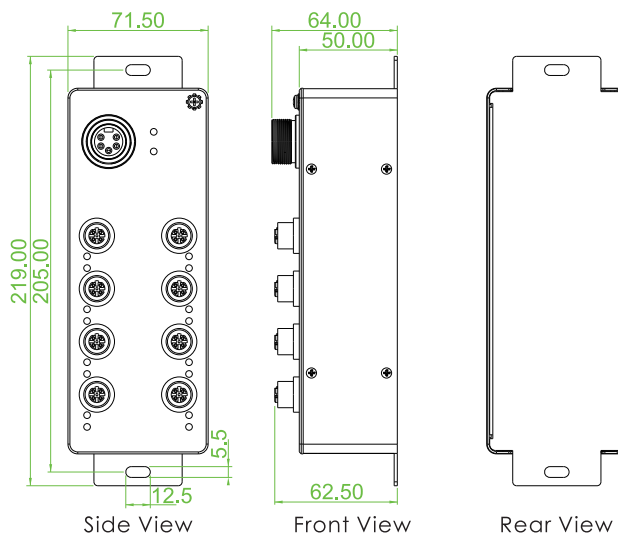


Figure 2 : High efficiency boost technology for PoE



- 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	EN62368-1	EN61000-6-2 EN61000-6-4	CE FCC	IEC61373		
ITP-800A-8PH24	8	8	8	120W	24/48VDC	V	V	V	V	V	V	V	-10~60°C
ITP-800A-8PHE24	8	8	8	120W	24/48VDC	V	V	V	V	V	V	V	-40~75°C

Package List

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

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

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EN50155 PoE Switch ITP-800A-8PH24