

ITP-800A

EN50155 M12, 8x 10/100Base-TX, Redundant input power



- M12 connector for Ethernet and Power
- EN50155, EN50121-4, EN45545-2 for railway certified
- Rugged metal housing and fanless design
- Build-in 2 bypass port
- 12/24/48VDC redundant dual input power



This model is an unmanaged, industrial grade, Fast Ethernet switch, with 8 x 10/100Base-TX Ethernet ports and is designed for industrial applications in harsh environments. The Ethernet ports utilize M12 connectors to ensure water-tight, robust connections and guarantee reliable operation against environmental disturbances such as vibration and shock. This switch is compliant with EN50155, covering operating temperature, power input voltage, surge, ESD, vibration, and shock, thus making it suitable for industrial applications in vehicle, rolling stock and factory automation.

Features

- 8-Port 10/100Base-TX Ethernet Switch
- Use M12 connector anti vibration and shock for vehicle, rolling stock, and railway applications
- Supports flow control
- Wall mounting installation
- Supports auto-negotiation and auto-MDI/MDI-X
- Build-in 2 bypass port to avoid one or more nodes power fail in a bus structure to collapse the network
- Redundant dual DC input power 12/24/48VDC (8.4~60VDC)
- Very low power consumption
- Rugged metal, IP40 protection and fanless design
- Wide operating temperature -40~75°C
- CE, FCC, EN50155, 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
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 8x M12 D-code Female 10/100Base-TX auto negotiation speed Auto MDI/MDI-X function Full/Half duplex Built in 2 bypass port
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)
Reverse Polarity Protection	Present for power input
Overload Current Protection	Supported
Power Supply	Redundant Dual DC 12/24/48V (8.4~60VDC) Input power
Power Connector	5 Pin Male A-Code M12

Power Consumption	<table border="1"> <thead> <tr> <th>Input Voltage</th><th>ITP-800A</th></tr> </thead> <tbody> <tr> <td>12VDC</td><td>1.8W</td></tr> <tr> <td>24VDC</td><td>2.2W</td></tr> <tr> <td>48VDC</td><td>3.4W</td></tr> </tbody> </table>	Input Voltage	ITP-800A	12VDC	1.8W	24VDC	2.2W	48VDC	3.4W
Input Voltage	ITP-800A								
12VDC	1.8W								
24VDC	2.2W								
48VDC	3.4W								
Operating Temperature	-40°C~75°C								
Operating Humidity	5% to 95% (Non-condensing)								
Storage Temperature	-40°C~85°C								
Housing	Rugged metal housing, IP40 protection and fanless								
Dimensions	45x 71.5x 219 mm (D x W x H)								
Weight	420g								
Installation Mounting	Wall mounting								
MTBF	1,492,660 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
 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

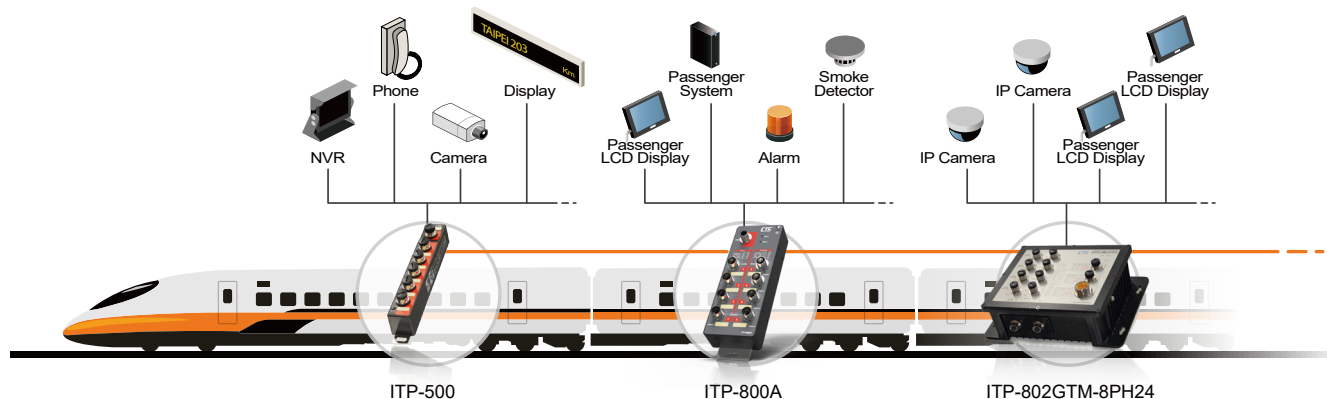


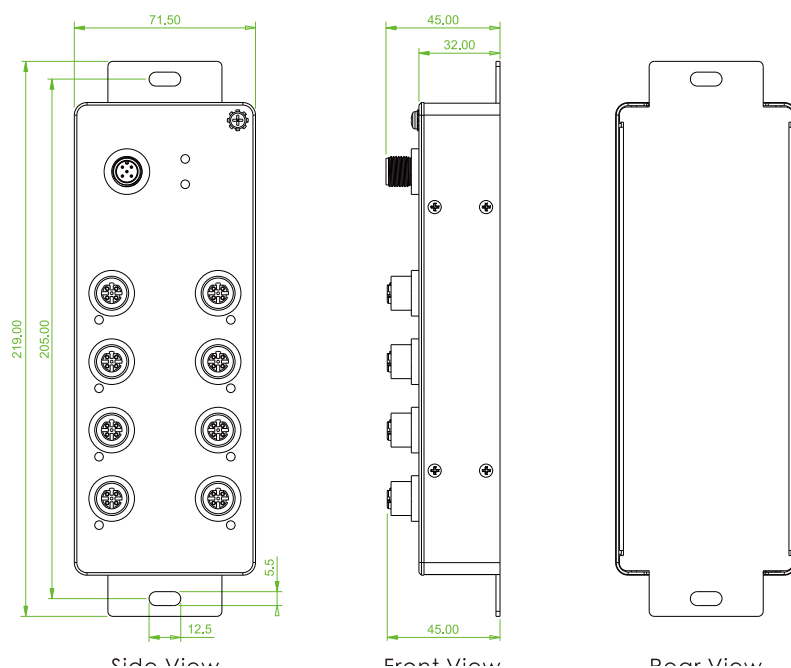
Figure 2 : Wide Range Temperature



Figure 3 : ITP Series for Industrial Automation



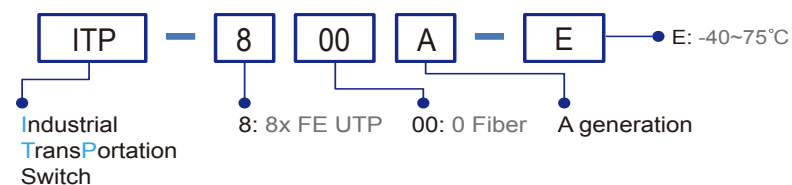
Dimensions



Ordering Information

Model Name	Total Port	UTP Port M12	Redundant Power	Certification				Shock Vibration	Operating Temperature
		10/100 Base-TX	12/24/48VDC (8.4~60VDC)	EN45545-2	EN50155 EN50121-4	EN61000-6-2 EN61000-6-4	CE FCC	IEC61373	
ITP-800A-E	8	8	V	V	V	V	V	V	-40~75°C

Model Naming Rule



Package List

- ITP-800A-E device
- Protective caps for UTP port and power
- 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-M12AF5-OPEN

M12 A-code Female (5-Pin) to open wire, AWG 22, IP67, 1 meter



For Power

P/N: M12D-M4

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



For FE UTP

P/N: M12A-F5

M12 A-code Female (5-Pin) connector, IP67



For Power