

ITP-800-8PH24

IP56, 8xFE M12 with 8x PoE, 120W, 24/48VDC input



- 24/48VDC redundant dual input power
- Regulated PoE output voltage
- M12/M23 connector for UTP and Power
- EN50155, EN50121-4 for railway certified
- IP56 protection for water and dust



The ITP-800-8PH24 is an unmanaged, Fast Ethernet, PoE switch, that provides 8 x 10/100Base-TX PoE⁺ Ethernet ports. The 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-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 factory automation.

Features

- IP56 grade housing for against water, dust, and oil
- 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 (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)
- Provides 8-port IEEE802.3af / 802.3at PoE output (30W per Port), Maximum PoE output power budget 120W
- Supports flow control
- 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 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 |
| 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 | 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><tr><th>Input Voltage</th><th>Total Power Consumption</th><th>Device Power Consumption</th><th>PoE Budget</th><th>Boost Efficiency</th></tr><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></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% | | | | |
| 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% | | | | | | | | | | | | | | | | |
| Operating Temperature | -10°C~-60°C (ITP-800-8PH24) -40°C~-75°C (ITP-800-8PHE24) | | | | | | | | | | | | | | | | | | | |
| Operating Humidity | 5% to 95% (Non-condensing) | | | | | | | | | | | | | | | | | | | |
| Storage Temperature | -40°C~-85°C | | | | | | | | | | | | | | | | | | | |
| Housing | IP56 water-proof grade housing, and fanless | | | | | | | | | | | | | | | | | | | |
| Dimensions | 67 x 71.4 x 219.5 mm (D x W x H) | | | | | | | | | | | | | | | | | | | |
| Weight | 715g | | | | | | | | | | | | | | | | | | | |
| 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 Immunity for Heavy Industrial Environment | EN50155, EN50121-4 |
| Emission for Heavy Industrial Environment | EN61000-6-2 |
| | EN61000-6-4 |

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| 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 |
| Safety | EN61000-4-8 (PFMF, Magnetic Field) Field Strength: 300A/m, Criteria A |
| | EN 61000-4-11 Voltage Dips |
| | UL60950-1 (Pending) |
| Shock | IEC 61373 |
| Freefall | IEC 60068-2-32 |
| Vibration | IEC 61373 |

Application

Figure 1 : EN50155 PoE switch in Smart Bus application

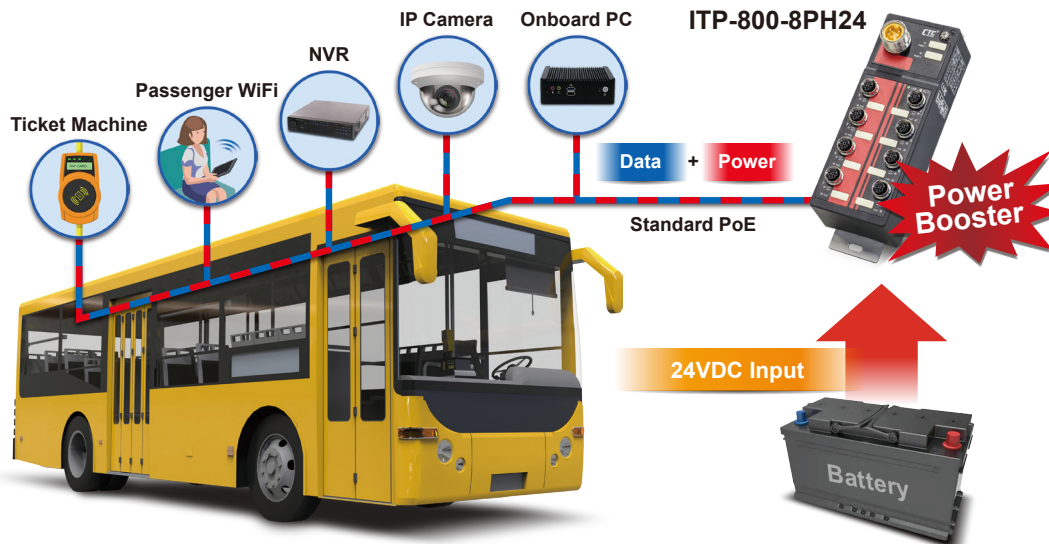
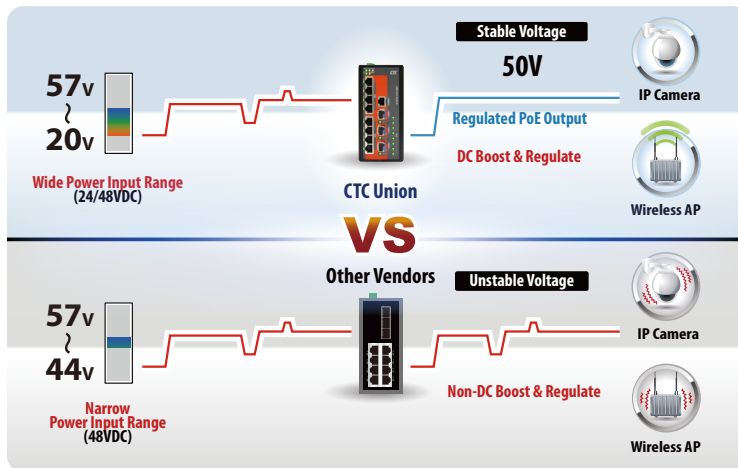


Figure 2 : High efficiency boost technology for PoE



- 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

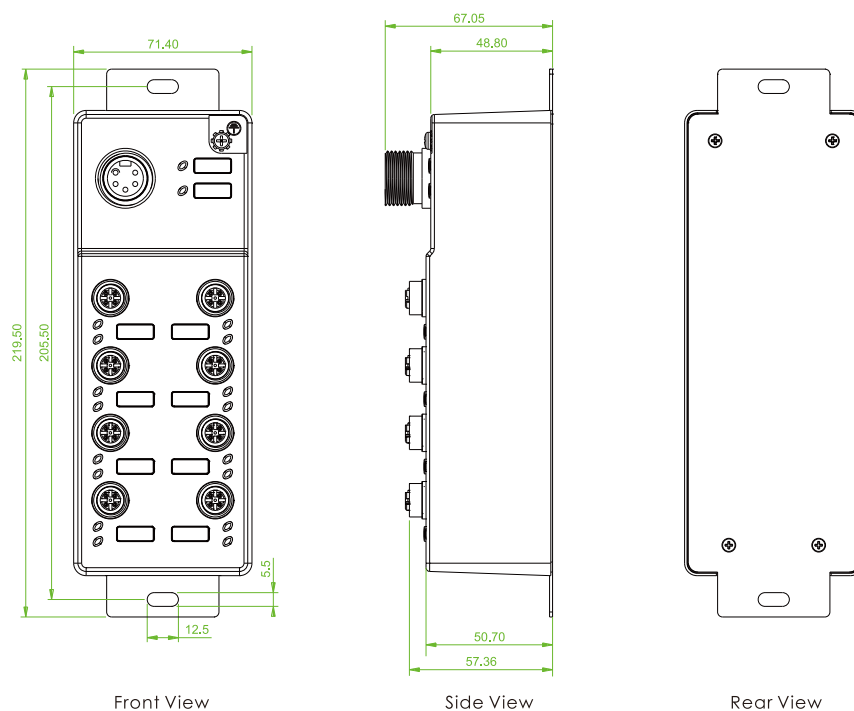
Figure 3 : Wide Range Temperature



Figure 4 : ITP Series for Industrial Automation



Dimensions



Front View

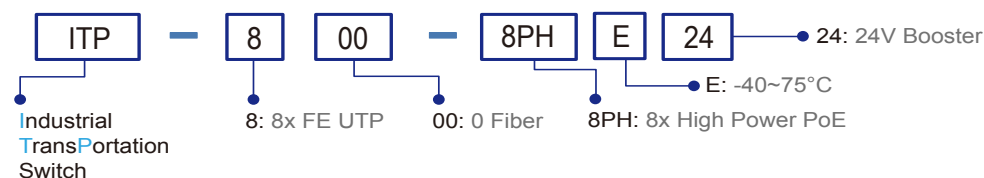
Side View

Rear View

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

Model Naming Rule



Package List

- ITP-800-8PH(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