Industrial 8-Port 10/100TX M12 802.3at PoE+ Switch (-40~75 degrees C)



Reliable Data and Power over Ethernet

PLANET ISW-808PT-M12A is an industrial-grade robust and vibration-proof PoE+ switch for a wide range of applications in factories or moving trains as it guarantees a reliable performance under vibration and shock. It features **eight 10/100BASE-TX** auto-negotiation **dustproof M12** connectors with **IEEE 802.3at PoE+ injector** function; each PoE+ port provides **36 watts** of PoE output. The M12 connector provides tight and strong connection, and ensures stable Ethernet operating performance withstanding humidity, dirt, dust, shock, vibrations, heat and cold. The compact, IP50-rated metal case of the ISW-808PT-M12A allows either DIN-rail or wall mounting for efficient use of cabinet space.



Environmentally-hardened Design

Being able to operate under the temperature range from **-40** to **75 degrees C**, the ISW-808PT-M12A, equipped with a tough IP50-rated industrial case, provides a high level of immunity against electromagnetic interference and heavy electrical surges which are usually found on plant floors or in curb-side traffic control cabinets. It ensures the highest level of reliability for mission-critical applications in any difficult environment.

Convenient and Reliable Power System

To facilitate the 802.3at PoE usage with commonly-used 12~54V DC power input for transportation and industrial-level applications, the ISW-808PT-M12A adopts the 12~54V DC to 54V power boost technology to solve power source issue but does not require special power supplies. Its wide-ranging voltages design is suitable for worldwide operability with high availability applications requiring dual or backup power inputs.

Physical Port

- 8-port 10/100BASE-TX with dustproof M12 connectors and IEEE 802.3at PoE+ injector function

Power over Ethernet

- Its end-span PSE complies with IEEE 802.3at Power over Ethernet Plus.
- Backward compatible with IEEE 802.3af Power over Ethernet
- Up to 8 ports of IEEE 802.3af/802.3at devices powered
- 180-watt PoE budget
- Supports PoE power up to 36 watts for each PoE port
- Auto detects powered device (PD)
- Circuit protection prevents power interference between ports
- Remote power feeding up to 100 meters

Layer 2 Features

- Supports auto-negotiation and 10/100Mbps half/full duplex mode
- High-performance Store and Forward architecture; runt/CRC filtering eliminates erroneous packets to optimize the network bandwidth
- Prevents packet loss with back pressure (half-duplex) and IEEE 802.3x pause frame flow control (full-duplex)
- Backplane (switching fabric): 1.6Gbps
- Integrated address look-up engine, supporting 2K absolute MAC addresses
- Automatic address learning and address aging
- CSMA/CD Protocol

Industrial Case and Installation

- IP50 metal case
- Dustproof and fanless designs
- DIN-rail and wall-mount installation
- Redundant power design
  - 12 to 54V DC, redundant power with reverse polarity protection
  - Active-active redundant power failure protection
  - Backup of catastrophic power failure on one supply
  - Fault tolerance and resilience
- Supports 6KV DC Ethernet ESD protection
- Supports 6KV surge protection
- -40 to 75 degrees C operating temperature

Intelligent LED Indicator for Real-time PoE Usage

The ISW-808PT-M12A helps users to monitor current status of PoE power usage easily and efficiently by its advanced LED indication. Called “PoE Power Usage”, the front panel of the ISW-808PT-M12A has three orange LEDs indicating 60W,120W and 180W of PoE power usage.

High Performance

The ISW-808PT-M12A has 2K MAC address table and offers wire-speed packets transfer performance without the risk of packet loss. The high data throughput of the device makes it ideal for most Gigabit environments. With a 1.6Gbps internal switching fabric and featuring auto negotiation support in each Fast Ethernet port, the ISW-808PT-M12A can handle large amounts of data in a secure topology linking to a backbone or high capacity servers.

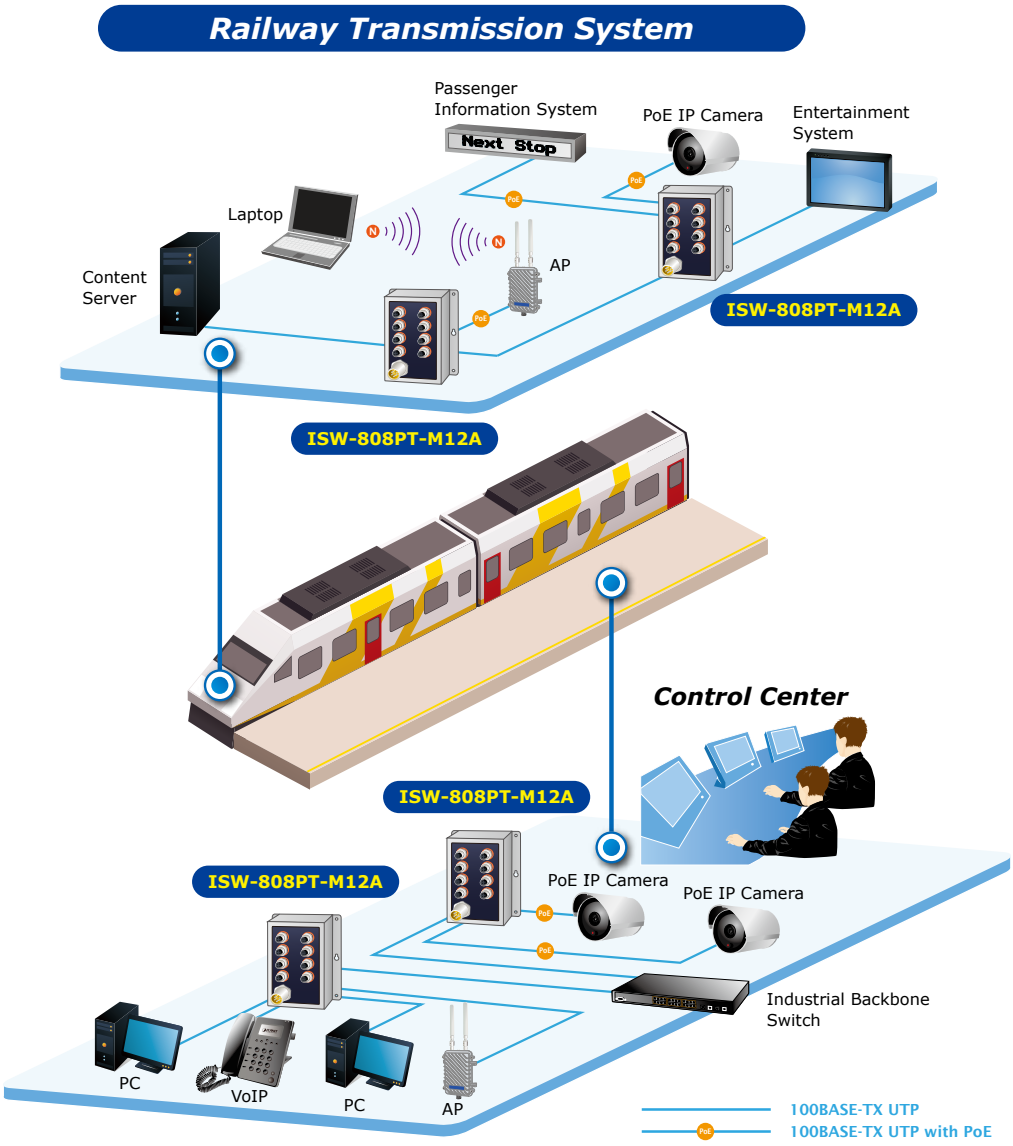
Easy Installation

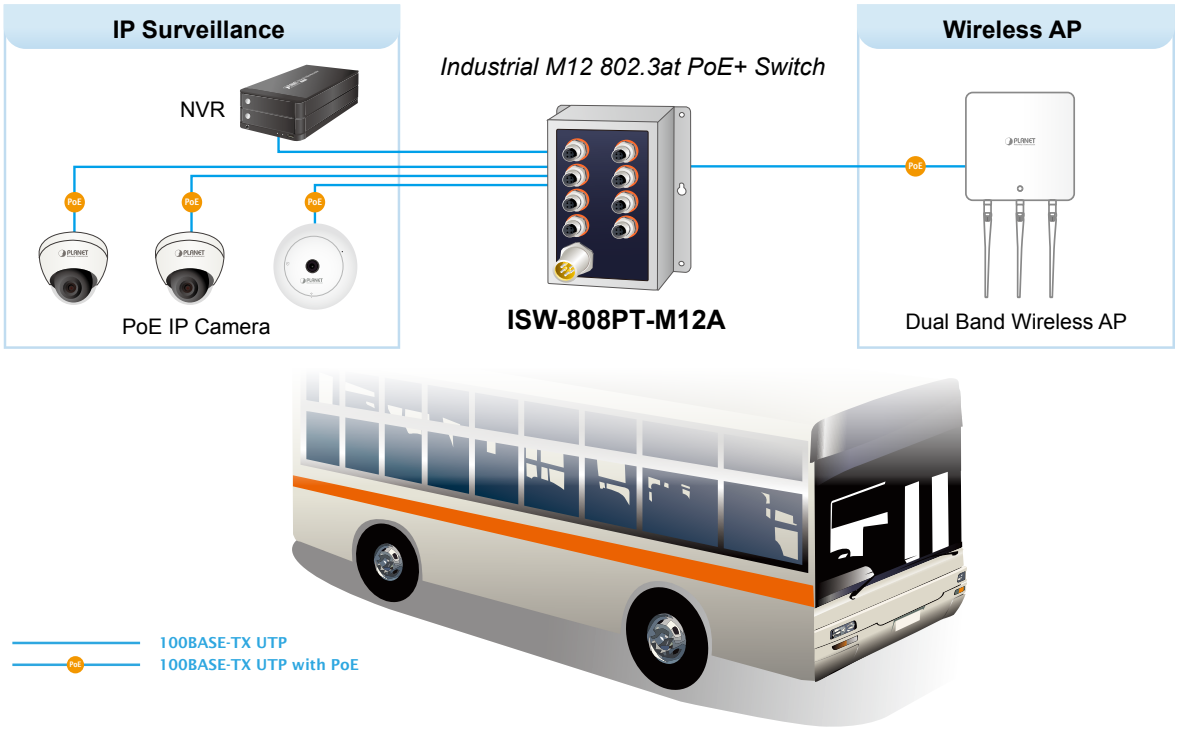
The flow control function enables the ISW-808PT-M12A to provide fast and reliable data transfer. All of the M12 RJ45 copper interfaces in the ISW-808PT-M12A support 10/100Mbps auto-negotiation for optimal speed detection through RJ45 Category 3, 4, 5, 5e, 6 cables. The standard auto-MDI/MDI-X support can detect the type of connection to any Ethernet device without requiring special straight-through or crossover cables.

Applications

ITS Industrial Ethernet PoE Solution

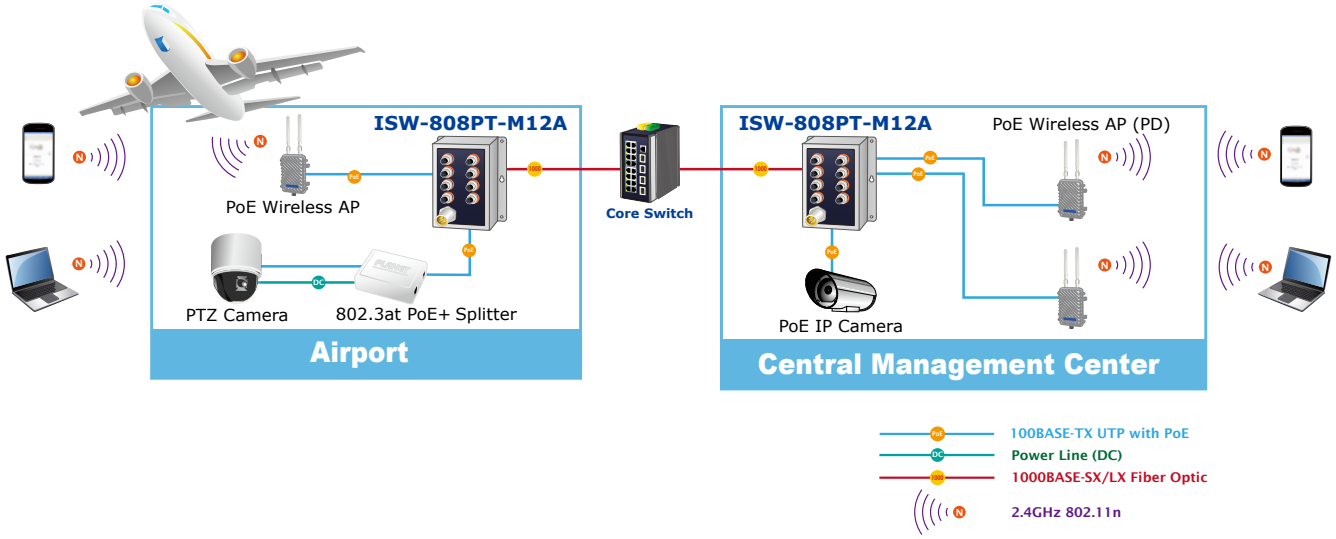
The ISW-808PT-M12A’s vibration-proof and shockproof features guarantee stable operation, even in moving vehicles, trains and other public transportation systems, making it an ideal solution for intelligent transportation systems. To facilitate the 802.3at PoE usage with commonly-used 12~54V DC power input for transportation and industrial-level applications, the ISW-808PT-M12A adopts the 12~54V DC to 54V power boost technology to solve power source issue but does not require special power supplies. It certainly meets the transmission needs of power and data for surveillance system, video transmission and wireless service on the bus, shuttle and other vehicles.



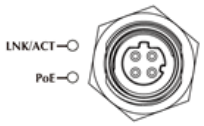
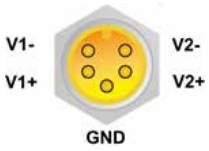


Public Construction for Data Collection and Forwarding

Providing up to 8 PoE+, in-line power interfaces, the ISW-808PT-M12A can easily build a power centrally controlled by IP phone system, IP camera system, or wireless AP group for Industrial network. For instance, 8 PoE IP cameras or wireless access points can be easily installed around the corner in the industrial environment for surveillance demands or for a wireless roaming network. Without the power-socket limitation, the ISW-808PT-M12A makes the installation of IP cameras or wireless AP easier and more efficient.

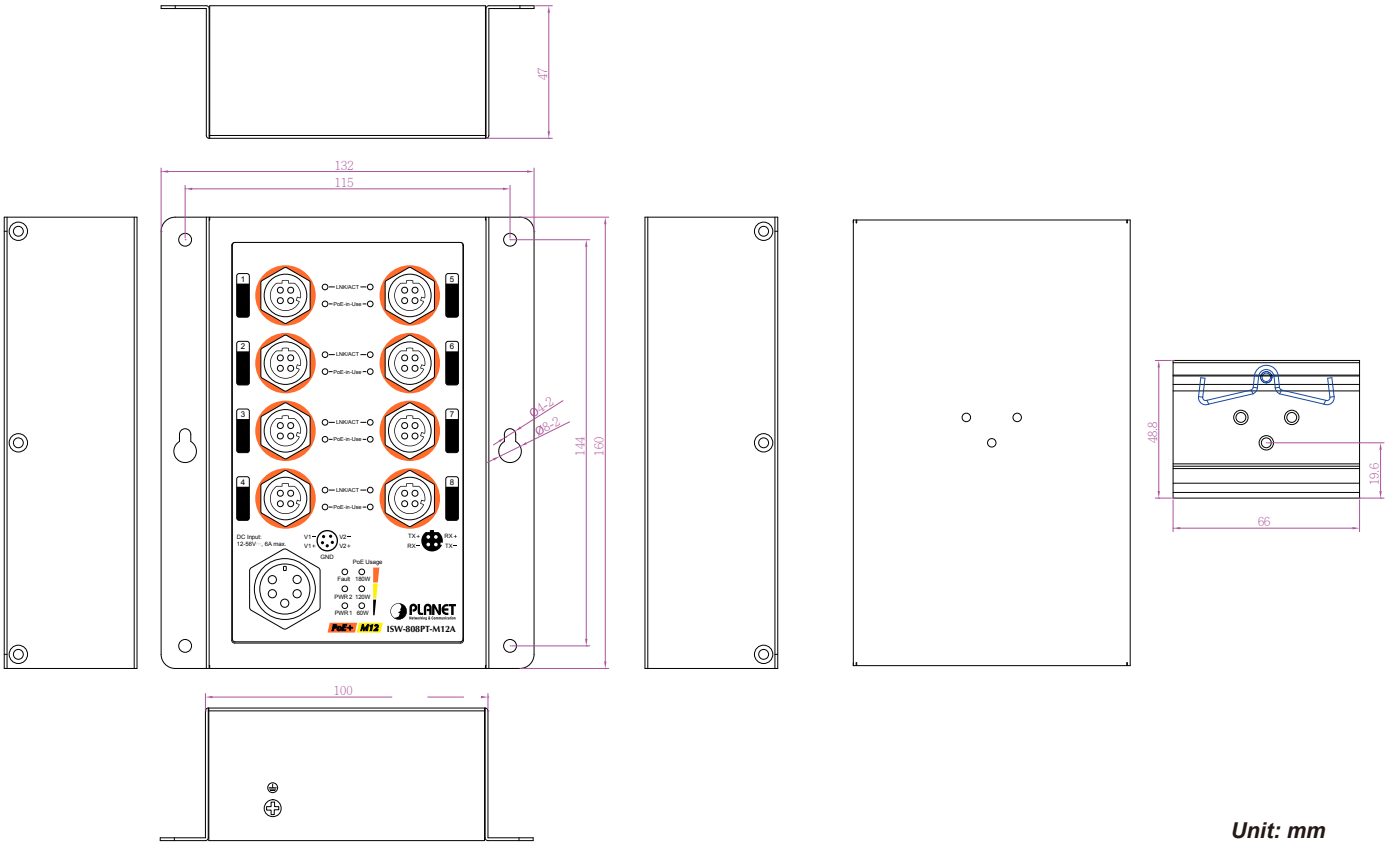


Specifications

Model	ISW-808PT-M12A
Hardware Specifications	
Copper Ports	8 x M12, 4-pin D-coded female connector 10/100BASE-TX auto-MDI/MDI-X 
IEEE 802.3at PoE+ Ports	8, port 1 to port 8
Power Connector	1 x M23, 5-pin A-coded male connector 
Enclosure	IP50 metal case
Dimensions (W x D x H)	132 x 75 x 160mm
Weight	952g
Installation	Wall-mount and DIN-rail kit
Power requirements	Dual 12~54V DC
Power Consumption	DC 12V:75.6 watts/257BTU DC 24V:129.3 watts/441 BTU DC 48V:190.1 watts/648 BTU DC 54V:191.7 watts/654 BTU
ESD Protection	6KV DC
Surge Protection	6KV DC
Switch Specifications	
Switch Processing Scheme	Store-and-Forward
Address Table	2K entries
Flow Control	Back pressure for half duplex IEEE 802.3x pause frame for full duplex
Switch Fabric	1.6Gbps
Throughput (packet per second)	1.19Mpps
Maximum Transmit Unit	1536 bytes
Network Cables	10BASE-T: 2-pair UTP Cat.3,4,5 up to 100m (328ft) 100BASE-TX: 2-pair UTP Cat.5, 5e, 6 up to 100m (328ft) EIA/TIA-568 100-ohm STP (100m, max.)
Power over Ethernet	
PoE Standard	IEEE 802.3at Power over Ethernet Plus / PSE
PoE Power Supply Type	End-span
PoE Power Output	54V DC per port with maximum of 36 watts
Power Pin Assignment	1/2(+), 3/6(-)
PoE Budget	180 watts@48-56V DC input 120 watts@24~48V DC input 60 watts@12~23V DC input
Standards Conformance	
Regulatory Compliance	FCC Part 15 Class A CE
Standards Compliance	IEEE 802.3 10BASE-T Ethernet IEEE 802.3u 100BASE-TX Fast Ethernet IEEE 802.3x Full-Duplex Flow Control IEEE 802.3af Power over Ethernet IEEE 802.3at Power over Ethernet plus
Stability Testing	IEC60068-2-32 (free fall) IEC60068-2-27 (shock) IEC60068-2-6 (vibration)
Railway Traffic	EN50155

Environments	
Operating	Temperature: -40 ~ 75 degrees C Relative Humidity: 5 ~ 95% (non-condensing)
Storage	Temperature: -40 ~ 80 degrees C Relative Humidity: 5 ~ 95% (non-condensing)

Diagram



Unit: mm

Ordering Information

ISW-808PT-M12A	Industrial 8-Port 10/100TX M12 802.3at PoE+ Switch (-40~75 degrees C)

Accessories

CB-M23F5F-120	5-pin M23 Female to Bare End Power Cable (1.2 meters)
CB-M12D4MRJ-120	4-pin D-coded M12 Male to RJ45 Ethernet Cable (1.2 meters)
CB-M12D4MRJ-1000	4-pin D-coded M12 Male to RJ45 Ethernet Cable (10 meters)
CB-M12D4MD4F-1000	4-pin D-coded M12 Male to D-coded M12 Female Ethernet Cable (10 meters)

Related Products

ISW-804PT-M12	Industrial IP67-rated 8-Port 10/100Mbps M12 Ethernet Switch with 4-Port PoE (-40~75 degrees C)
IGS-5227-4MP2MT	Industrial IP67-rated 4-Port 10/100/1000T 802.3at PoE + 2-Port 10/100/1000T Managed Ethernet Switch (-40~75 degrees C)
IGS-5226-4P2T	Industrial EN50155 4-Port 10/100/1000T 802.3at PoE + 2-Port 10/100/1000T Managed Ethernet Switch (-40~75 degrees C)
IGS-604HPT-RJ	Industrial IP67-rated 4-Port 10/100/1000T 802.3at PoE + 2-Port 10/100/1000T Managed Ethernet Switch (-40~75 degrees C)
IGS-604HPT-M12	Industrial IP67-rated 4-Port 10/100/1000T 802.3at PoE + 2-Port 10/100/1000T Managed Ethernet Switch (-40~75 degrees C)

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