5-Port 10/100Mbps Industrial Fast Ethernet Switch with Wide Operating Temperature

Slim type with more practicability and convenience

After PLANET ISW/IFT Fast Ethernet Switch/Converter series become popular, PLANET has released the advanced industrial hardened Fast Ethernet Switch series with slim type, IP30 metal case. The compact, IP30 standard metal case allows either DIN rail or wall mounting to have the efficient use of cabinet space. The ISW-501T, one of the new models, is equipped with five 10/100Mbps auto negotiation ports and operates reliably in heavy industrial demanding environments.

Stable operating performance under difficult environments

The ISW-501T 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. Being able to operate under the temperature range from -40 to 75 degrees C coupled with hazardous location certification (Class 1 Division 2), the ISW-501T can be placed in almost any difficult environment. The ISW-501T also possesses an integrated power supply source with wide range of voltages (12 to 48V DC) for worldwide high availability applications requiring dual or backup power inputs.

Robust switch performance

The ISW-501T offers high performance switch architecture. With the five 10/100Mbps Fast Ethernet ports providing non-blocking switch fabric and wire-speed throughput as high as 1Gbps and the 2K MAC Address table, the ISW-501T can perform wire-speed packets transfer without risk of packet loss. The flow control function enables the ISW-501T to provide fast and reliable data transfer.

All of the RJ-45 copper interfaces in the ISW-501T support 10/100Mbps auto negotiation for optimal speed detection through RJ-45 Category 3, 4 or 5 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.

Physical Port

- 5-Port 10/100Mbps RJ-45 with auto MDI / MDI-X function

Layer 2 Features

- Complies with IEEE 802.3 10Base-T, IEEE 802.3u 100Base-TX Ethernet standard
- Supports auto negotiation and 10/100Mbps half / full duplex mode
- High performance Store and Forward architecture, broadcast storm control, 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): 1Gbps
- Integrated address look-up engine, supporting 2K absolute MAC addresses
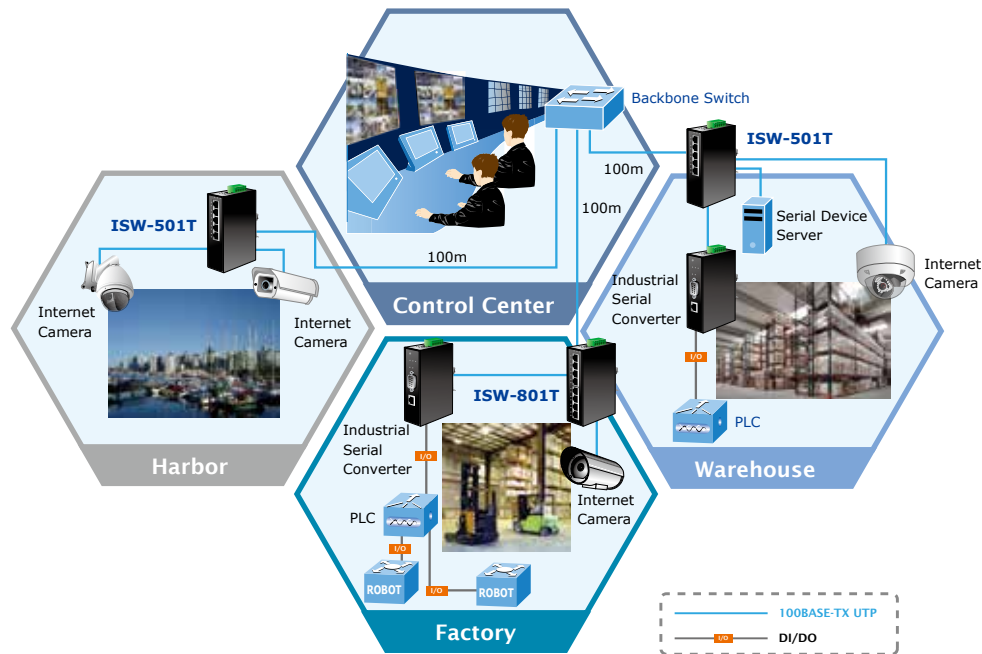- Automatic address learning and address aging
- CSMA / CD Protocol

Industrial case / installation

- IP30 metal case
- DIN rail and wall mount design
- 12 to 48V DC, redundant power with polarity reverse protect function and connective removable terminal block for master and slave power
- Supports EFT protection 6000V DC for power line
- Supports 6000V DC Ethernet ESD protection
- -40 to 75 degrees C operating temperature
- Free fall, shock, vibration industrial stability

Applications

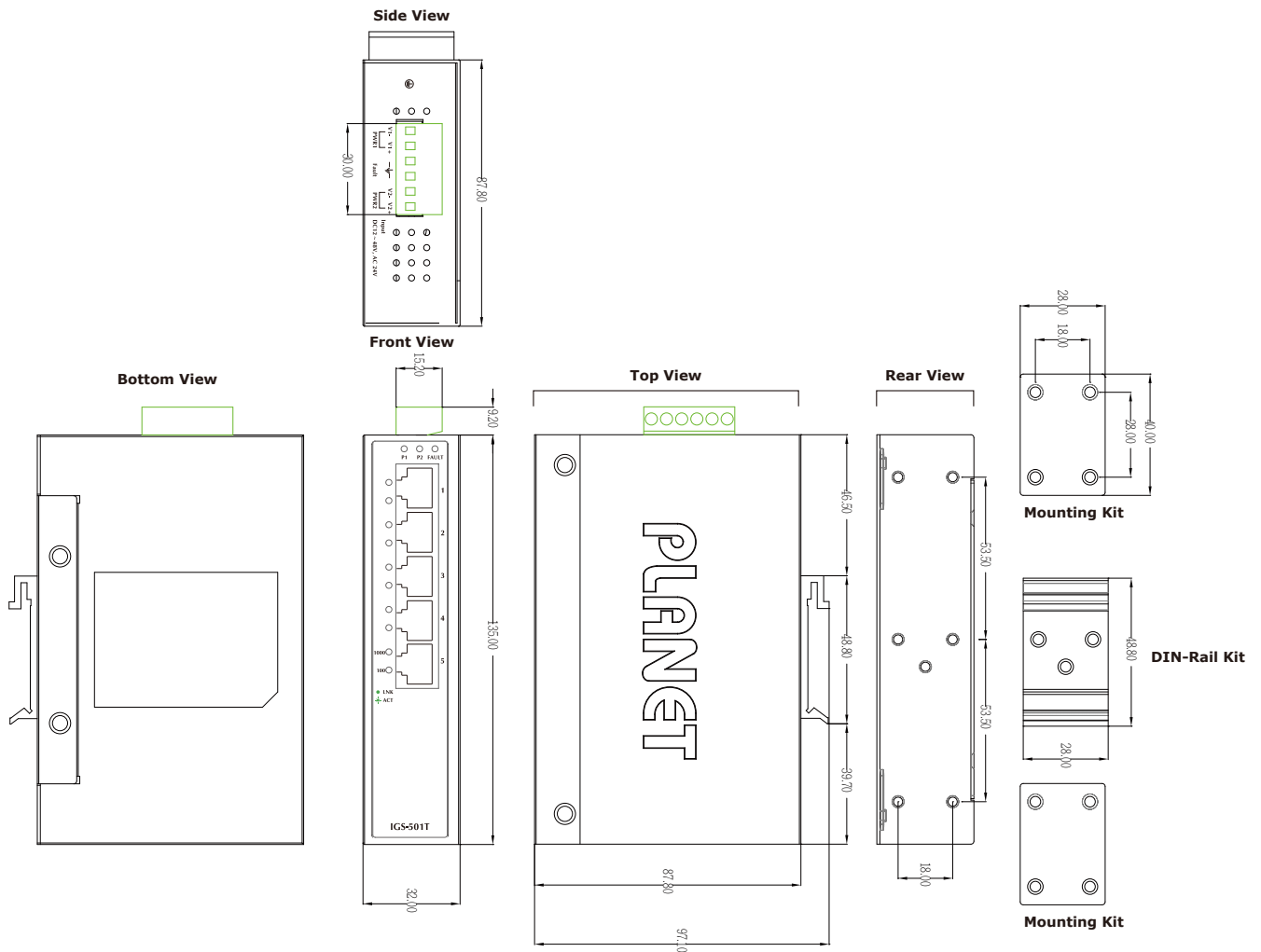*Industrial area switch for data collection and forwarding*

The ISW-501T is equipped with five 10/100Mbps ports that offer auto MDI / MDIX feature, 1Gbps non-blocking switch fabric and 2K MAC Address table; therefore, it can perform wire-speed packets transfer without risk of packet loss. The ISW-501T, with the slim type IP30 metal case protection, is ideal for the most heavy industrial demanding environments.

Product Specifications

Model	ISW-501T
Hardware Specifications	
10/100Base-TX Ports	5
Dimensions (W x D x H)	135 x 87 x 32 mm
Weight	438g
Power Requirements	12~48V DC, redundant power with polarity reverse protection function
Power Consumption / Dissipation	3.9 watts / 13BTU
Installation	DIN rail kit and wall mount ear
Alarm	Provides one relay output for power failure Alarm relay current carry ability: 3A @ DC 30V
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	1Gbps
Throughput (packet per second)	0.74Mpps
Network Cables	10/100Base-TX: Cat. 3, 4, 5, 5e, 6 UTP cable (100meters, max.) EIA/TIA-568 100-ohm STP (100meters, max.)
Standards Conformance	
Standards Compliance	IEEE 802.3 Ethernet IEEE 802.3u Fast Ethernet IEEE 802.3x full-duplex flow control
Regulation Compliance	FCC Part 15 Class A, CE
Stability Testing	IEC60068-2-32(Free fall),IEC60068-2-27(Shock),IEC60068-2-6(Vibration)
Environmental Specifications	
Temperature	Operating: -40~75 degrees C Storage: -40~75 degrees C
Humidity	Operating: 5~90% Storage: 5~90% (non-condensing)

Dimension

Side View

Front View

Bottom View

Top View

Rear View

Mounting Kit

DIN-Rail Kit

Mounting Kit

IGS-501T

Dimensions (unit = mm)

Ordering Information

ISW-501T	5-Port 10/100Mbps Industrial Fast Ethernet Switch (-40~75 degrees C operating temperature)

Related Products

ISW-511 / ISW-511S15	4-Port 10/100Base-TX + 1-Port 100Base-FX Industrial Fast Ethernet Switch (-10~60 degrees C operating temperature)
ISW-621 / ISW-621S15	4-Port 10/100Base-TX + 2-Port 100Base-FX Industrial Fast Ethernet Switch (-10~60 degrees C operating temperature)
ISW-801T	8-Port 10/100Mbps Industrial Fast Ethernet Switch (-40~75 degrees C operating temperature)

C-ISW-501T