

## Product Specification

5-Port 10/100Mbps Industrial Fast Ethernet Switch

### ISW-501T

Version 1.0

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Change History:

Revision	Date	Author	Change List
Version 1.0	2009/9/15	Marc Liao	Initial release

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Reviewed by:	Kent Kang	Approved by:	Tom Shih

## 1. PRODUCT DESCRIPTION

The PLANET ISW-501T is 5-Port 10/100Mbps Industrial Fast Ethernet Switch with non-blocking wire-speed performance and slim type with IP 30 metal shape for easily deployment in Heavy Industrial demanding environments.

With 1Gbps non-blocking switch fabric and the 2K MAC Address table so that it can perform wire-speed packets transfer without risk of packet loss.

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 Degree 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.

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 or crossover cables.

The Flow Control function allows ISW-501T Industrial Fast Ethernet Switch supported routers and Servers to directly connect to this device for fast, reliable data transfer.

## 2. PRODUCT FEATURES

### 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, supports 2K absolute MAC addresses
- Automatic address learning and address aging
- CSMA / CD Protocol

### Industrial Case / Installation

- IP-30 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 6000 VDC for power line
- Supports 6000 VDC Ethernet ESD protection
- 40 to 75 Degree C operation temperature
- Free fall, shock, vibration industrial stability

### 3. PRODUCT SPECIFICATION

#### 3.1 MAIN COMPONENT

Switch ASIC: IC Plus IP178D X1

#### 3.2 FUNCTION SPECIFICATION

<b>Model</b>	<b>ISW-501T</b>
<b>Hardware Specification</b>	
<b>10/100Base-TX Auto MDI/MDIX Ports</b>	5
<b>Installation</b>	DIN rail kit and wall mount ear
<b>Alarm</b>	Provides one relay output for power fail Alarm Relay current carry ability: 3A @ DC 30V
<b>Switch Specification</b>	
<b>Switch Processing Scheme</b>	Store-and-Forward
<b>Address Table</b>	2K entries
<b>Flow Control</b>	Back pressure for half duplex, IEEE 802.3x Pause Frame for full duplex
<b>Switch fabric</b>	1Gbps
<b>Throughput (packet per second)</b>	0.74Mpps
<b>Network cables</b>	10/100Base-TX: Cat. 3, 4, 5, 5e, 6 UTP cable (100meters, max.) EIA/TIA-568 100-ohm STP (100meters, max.)
<b>Standards Conformance</b>	
<b>Standards Compliance</b>	IEEE 802.3 Ethernet IEEE 802.3u Fast Ethernet IEEE 802.3x Full-duplex flow control
<b>Stability testing</b>	IEC60068-2-32(Free fall),IEC60068-2-27(Shock),IEC60068-2-6(Vibration)

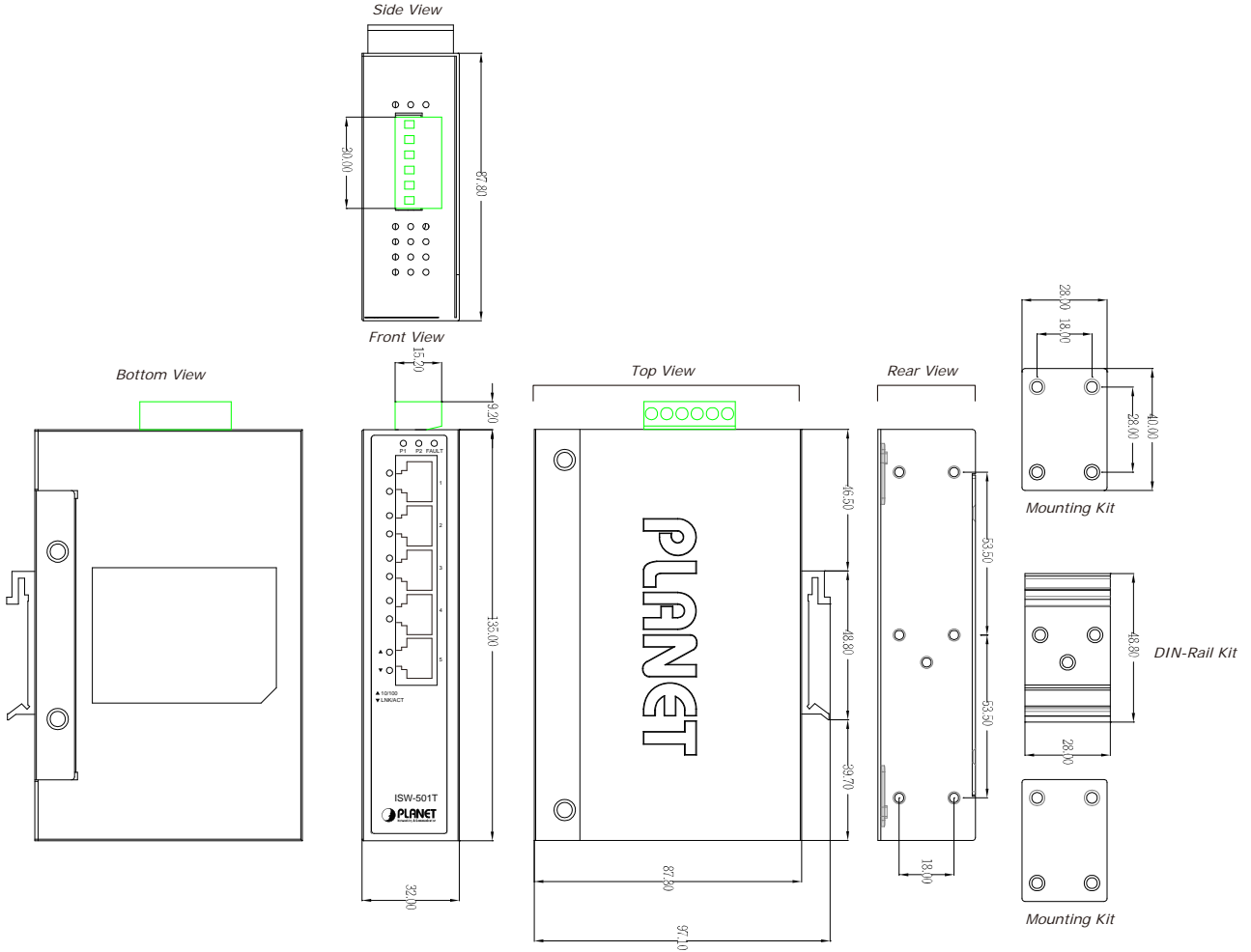
**3.3 PHYSICAL SPECIFICATIONS:**

**Dimensions:**

135mm x 87mm x 32mm (W x D x H)

**Weight:**

438g



*Dimensions ( unit = mm )*

### LED definition

LED	Color	Function
P1	Green	<b>Lit:</b> indicate the power 1 has power.
P2	Green	<b>Lit:</b> indicate the power 2 has power.
FAULT	Green	<b>Lit:</b> indicate the either power 1 or power 2 has no power.
10/100	Green	<b>Lit:</b> indicate the Switch is successfully connecting to the network at 100Mbps. <b>Off:</b> indicate the Switch is successfully connecting to the network at 10Mbps.
LNK/ACT	Green	<b>Lit:</b> indicate the link through that port is successfully established. <b>Blink:</b> indicate that the Switch is actively sending or receiving data over that port.

### 3.4 ENVIRONMENTAL SPECIFICATION

#### Operating:

**Temperature:** -40°C ~75 Degree C  
**Relative Humidity:** 5% ~ 95% (non-condensing)

#### Storage:

**Temperature:** -40°C ~75 Degree C  
**Relative Humidity:** 5% ~ 95% (non-condensing)

### 3.5 ELECTRICAL SPECIFICATION

**Power requirement:** 12~48 VDC, Redundant power with polarity reverse protection function

**Power Consumption:** 3.9 Watts / 13BTU

### 3.6 REGULATORY COMPLIANCE

FCC Part 15 Class A, CE

### 3.7 REALIABILITY

MTBF > 100,000Hrs

### 3.8 BASIC PACKAGING

- Industrial Fast Ethernet Switch x 1
- User's Manual x 1
- DIN Rail Kit x 1
- Wall Mount Kit x 1

### 3.9 PACKING DIMENSION

**Dimension:** 410mm (W) x 310mm (D) x 265mm (H)

**Weight:** 10.8kg (Gross weight)

18pcs in one carton