Industrial 5-Port 10/100TX Compact Ethernet Switch

PLANET ISW-500T Industrial 5-Port 10/100TX Compact Ethernet Switch, suitable for industrial use, features 5 10/100Mbps auto-negotiation ports, IP30-rated rugged but compact case and a wide-ranging redundant power system (12~48V DC or 24V AC). The ISW-500T is able to operate in any harsh environment with operating temperature ranging from -40 to 75 degrees C.

**Physical Port**
- 5-port 10/100BASE-TX RJ45 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
- Prevents packet loss with back pressure (half-duplex) and IEEE 802.3x pause frame flow control (full-duplex)
- Complies with IEEE 802.3az Energy Efficient Ethernet (EEE)
- IEEE 802.1p CoS
- Supports 1K MAC address
- Automatic address learning and address aging

**Industrial Case and Installation**
- IP30 metal case
- DIN rail and wall-mount design
- 12 to 48V DC, redundant power with polarity reverse protect function
- 24V AC power input acceptable
- Supports 6000 VDC Ethernet ESD protection
- -40 to 75 degrees C operating temperature
- Free fall, shock-proof and vibration-proof for industries

As the trend for an IIoT (Industrial Internet of Things) infrastructure is gradually on demand, the ISW-500T is especially designed to make the deployment of an industrial network easy as it comes with a Plug and Play feature. Besides, it is stable and reliable when it comes to fast data and power transmission.
Low Power Consumption for Green Networking
The ISW-500T, adopting the advanced green networking technology, provides the link-on cable length power saving and link-down power saving methods. These features make the ISW-500T consume very low power in full load operation mode, which helps conserve energy effectively but maintains high performance efficiently.

With the Auto Power Saving and IEEE 802.3az Energy Efficient Ethernet (EEE) Protocol, the ISW-500T can automatically detect cable link status and network traffic, and thus is able to adjust power consumption accordingly. It enables the switch to consume less power when it is less active.

Dual Power Input for High Availability Network System
The ISW-500T features a strong dual power input system with wide-ranging voltages (12V~48V DC or 24V AC) incorporated into customer’s automation network to enhance system reliability and uptime. In the example below, when power supply 1 fails to work, the hardware failover function will be activated automatically to keep powering the ISW-500T via power supply 2 alternatively without any loss of operation.

Non-stop Ethernet Service
Dual Power Input with Auto Failover

Robust Protection
The ISW-500T provides contact discharge of ±6KV DC and air discharge of ±8KV DC for Ethernet ESD protection. It also supports ±4KV surge immunity to improve product stability and protects users’ networks from devastating ESD attacks, making sure the flow of operation does not fluctuate.

High Switch Performance
The ISW-500T offers a high-performance switch architecture. With the 5 10/100Mbps Fast Ethernet ports providing non-blocking switch fabric and wire-speed throughput as high as 1Gbps and the 1K MAC address table, the ISW-500T can perform wire-speed packet transfer without the risk of packet loss. The flow control function enables the ISW-500T to provide fast and reliable data transfer.

Plug and Play
All of the RJ45 copper interfaces in the ISW-500T support 10/100Mbps auto negotiation for optimal speed detection through RJ45 Category 6, 5 or 5e 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

**Designed for Heavy Industries**

The ISW-500T’s IP30-rated metal case is particularly designed for heavy industries, such as factories, harbors, warehouses, and more. When installed at these establishments, it can enhance the work performance of these establishments by speedily transferring incoming and outgoing data.
## Specifications

<table>
<thead>
<tr>
<th>Product</th>
<th>ISW-500T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper Ports</td>
<td>5 10/100BASE-TX RJ45 auto-MDI/MDI-X ports</td>
</tr>
<tr>
<td>Switch Architecture</td>
<td>Store-and-Forward</td>
</tr>
<tr>
<td>Switch Fabric</td>
<td>1Gbps (non-blocking)</td>
</tr>
<tr>
<td>Throughput (packet per second)</td>
<td>0.74Mpps@ 64 bytes</td>
</tr>
<tr>
<td>Address Table</td>
<td>1K entries, automatic source address learning and aging</td>
</tr>
<tr>
<td>Shared Data Buffer</td>
<td>448K bits</td>
</tr>
<tr>
<td>Flow Control</td>
<td>IEEE 802.3x pause frame for full-duplex Back pressure for half-duplex</td>
</tr>
<tr>
<td>ESD Protection</td>
<td>6KV DC</td>
</tr>
<tr>
<td>Enclosure</td>
<td>IP30 metal case</td>
</tr>
<tr>
<td>Installation</td>
<td>DIN rail kit and wall-mount kit</td>
</tr>
<tr>
<td>Connector</td>
<td>Removable 6-pin terminal block for power input Pin 1/2 for Power 1, Pin 3/4 for fault alarm, Pin 5/6 for Power 2</td>
</tr>
<tr>
<td>Alarm</td>
<td>One relay output for power failure. Alarm relay current carry ability: 1A @ 24V DC</td>
</tr>
</tbody>
</table>

### LED Indicator
- **System:** Power 1 (Green) Power 2 (Green) Fault Alarm (Red)
- **Per 10/100TX RJ45 Ports:** 10/100 LNK/ACT (Green)

### Dimensions (W x D x H)
70 x 104 x 30 mm

### Weight
255g

### Power Requirements
Dual 12~48V DC, 24V AC

### Power Consumption
- Max. 1.1 watts/3.77BTU (Power on without any connection)
- Max. 2 watts/6.86BTU (Ethernet full loading)

### Standards Conformance
- Regulatory Compliance: FCC Part 15 Class A, CE
- Standards Compliance: IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX/100BASE-FX IEEE 802.3x flow control and back pressure IEEE 802.1p Class of Service IEEE 802.1X Port Authentication Network Control IEEE 802.3az Energy Efficient Ethernet (EEE)

### Environment
- Operating Temperature: -40 ~ 75 degrees C
- Storage Temperature: -40 ~ 85 degrees C
- Humidity: 5 ~ 95% (non-condensing)
Diagram

Dimensions (unit = mm)

Ordering Information

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>ISW-500T</td>
<td>Industrial 5-Port 10/100TX Compact Ethernet Switch (-40~75 degrees C operating temperature)</td>
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Related Products

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<tr>
<th>Model</th>
<th>Description</th>
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<tbody>
<tr>
<td>ISW-800T</td>
<td>Industrial 8-Port 10/100TX Compact Ethernet Switch (-40~75 degrees C operating temperature)</td>
</tr>
<tr>
<td>ISW-501T</td>
<td>Industrial 5-Port 10/100TX Fast Ethernet Switch (-40~75 degrees C operating temperature)</td>
</tr>
<tr>
<td>ISW-801T</td>
<td>Industrial 8-Port 10/100TX Fast Ethernet Switch (-40~75 degrees C operating temperature)</td>
</tr>
<tr>
<td>IGS-501T</td>
<td>5-Port 10/100/1000T Industrial Gigabit Ethernet Switch (-40~75 degrees C operating temperature)</td>
</tr>
<tr>
<td>IGS-801T</td>
<td>8-Port 10/100/1000T Industrial Gigabit Ethernet Switch (-40~75 degrees C operating temperature)</td>
</tr>
<tr>
<td>IGS-1020TF</td>
<td>Industrial 8-Port 10/100/1000T + 2 1000X SFP Ethernet Switch (-40~75 degrees C)</td>
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