

Product Specifications

Compact 5-Port 10/100/1000BASE-T Industrial Gigabit Ethernet Switch

IGS-500T

Version 2.0

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Change History:

Revision:	Date:	Author:	Change List
Version 2.0	2021/7/26	Marc Liao	Initial Release <ul style="list-style-type: none"> - Release for new CIS housing printing. - Switch ASIC replacement from Realtek RTL8368MBI to Realtek RTL8367SCI. - DC input change from 12-48V to 9-48V.
Version 1.0	2017/11/07	Solo Hsu	Initial Release

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Reviewed By:		Approved By:	Kent Kang

1. PRODUCT DESCRIPTION



Compact Size for More Practicability and Convenience

PLANET IGS-500T Compact Industrial 5-Port 10/100/1000T Gigabit Ethernet Switch, suitable for industrial use, features 5 1000Mbps auto-negotiation ports, IP30-rated rugged but compact case and a wide-ranging redundant power system (**9~48V DC or 24V AC**). The IGS-500T is able to operate in any harsh environment with operating temperature ranging from **-40 to 75 degrees C**.

As the trend for an IIoT (Industrial Internet of Things) infrastructure is gradually in demand, the IGS-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 IGS-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 IGS-500T consume very low power in full load operation mode, which helps conserve energy effectively but maintains high performance efficiently.

With the **Auto Power Savings** and **IEEE 802.3az Energy Efficient Ethernet (EEE)** Protocol, the IGS-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 IGS-500T features a strong dual power input system with wide-ranging voltages (9V~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 IGS-500T via power supply 2 alternatively without any loss of operation.

High Switch Performance

The IGS-500T offers high-performance switch architecture. With the 5 10/100/1000Mbps Gigabit Ethernet ports providing non-blocking switch fabric and wire-speed throughput as high as 10Gbps and the 2K MAC address table, the IGS-500T can perform wire-speed packet transfer without the risk of packet loss. The flow control function enables the IGS-500T to provide fast and reliable data transfer.

Plug and Play

All of the RJ45 copper interfaces in the IGS-500T support 10/100/1000Mbps 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.

Flexible and Easy Installation with Limited Space

The compact-sized IGS-500T is specially designed to be installed in a narrow environment, such as wall enclosure. It can be installed by fixed wall mounting or DIN-rail mounting, thereby making its usability more flexible and easier in any space-limited location.



DIN-rail Mounting



Wall Mounting



**Side Wall Mounting
(Space saving)**

2. PRODUCT FEATURES

Physical Port

- 5-port 10/100/1000BASE-T RJ45 with auto-MDI/MDI-X function

Layer 2 Features

- Complies with IEEE 802.3 10BASE-T, IEEE 802.3u 100BASE-TX, IEEE 802.3ab 1000BASE-T Ethernet standard
- Supports auto-negotiation and 10/100Mbps half/full duplex and 1000Mbps full duplex
- Prevents packet loss with back pressure (half-duplex) and IEEE 802.3x pause frame flow control (full-duplex)
- High-performance Store and Forward architecture, broadcast storm control and runt/CRC filtering eliminate erroneous packets to optimize the network bandwidth
- Backplane (switching fabric): 10Gbps
- Integrated address look-up engine, supporting 2K absolute MAC addresses
- 9K jumbo packet size
- Automatic address learning and address aging
- CSMA/CD Protocol

Industrial Case and Installation

- IP30 metal case
- DIN-rail and wall-mount designs
- 9 to 48V DC, redundant power with reverse polarity protection, and connective, removable terminal block for master and slave power; 24V AC power support
- Supports 6000 VDC Ethernet ESD protection
- -40 to 75 degrees C operating temperature
- Free fall, shock-proof and vibration-proof for industries

3. PRODUCT SPECIFICATIONS

3.1 MAIN COMPONENT

Switch ASIC	Realtek RTL8367SCI	x 1
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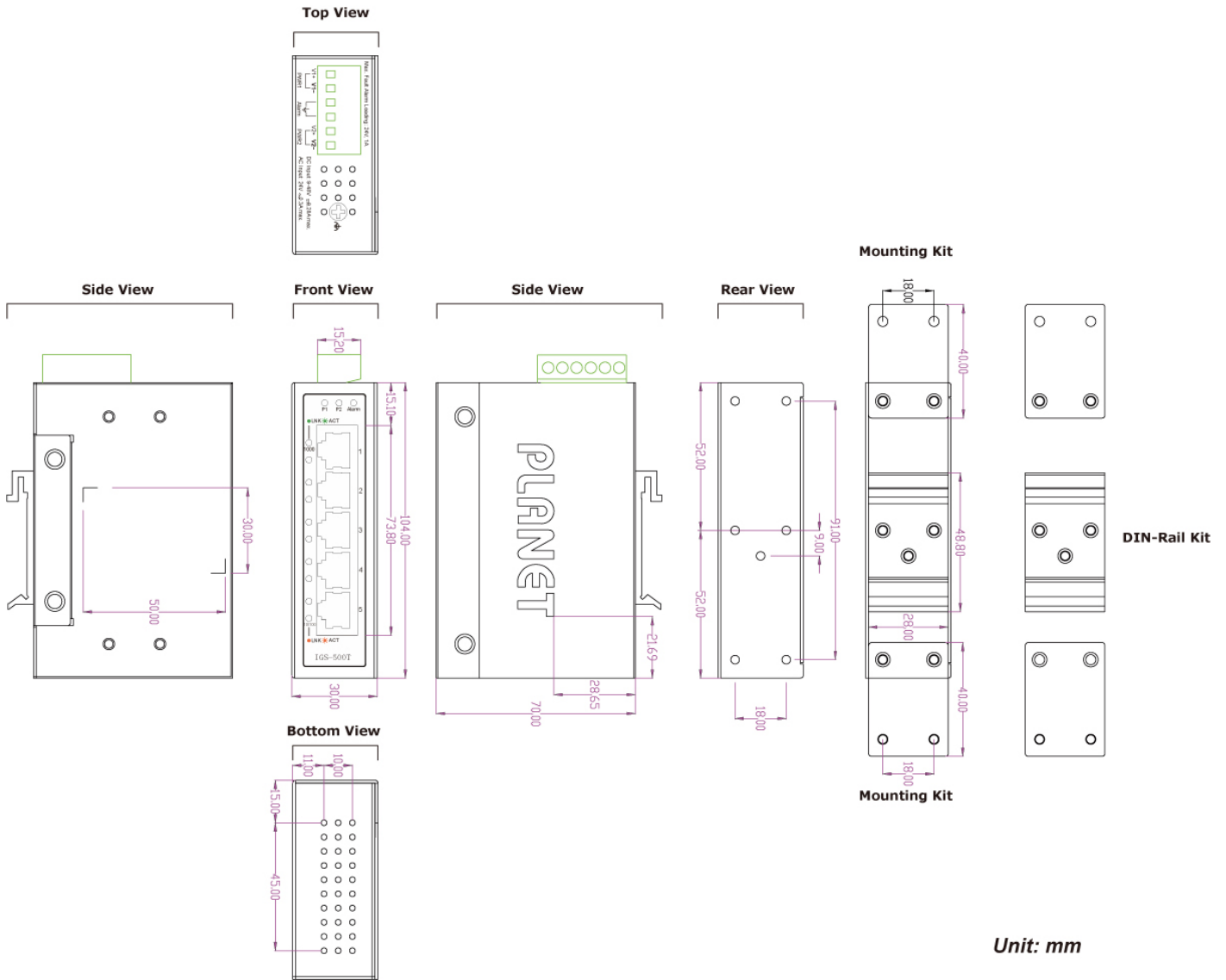
3.2 FUNCTION SPECIFICATIONS

Model	IGS-500T
Hardware Specifications	
Hardware Version	2
Copper Ports	5 x 10/100/1000BASE-T RJ45 TP auto-MDI/MDI-X, auto negotiation
Connector	Removable 6-pin terminal block Pin 1/2 for Power 1; Pin 3/4 for fault alarm; Pin 5/6 for Power 2
Alarm	Provides one relay output for power failure Alarm relay current carry ability: 1A@DC 24V
LED	3 x LED for system and power: <ul style="list-style-type: none"> ■ Green: DC Power 1 ■ Green: DC Power 2 ■ Red: Power Alarm 2 x LED for each copper port <ul style="list-style-type: none"> ■ Green: 1000Mbps LNK/ACT ■ Amber: 10/100Mbps LNK/ACT
ESD Protection	6KV
EFT Protection	6KV
Power Requirements	9~48V DC, redundant power with polarity reverse protection function, 24V AC power support
Power Consumption / Dissipation	1.2 watts/4.09BTU
Installation	DIN-rail kit and wall-mount ear
Enclosure	IP30 metal case
Dimensions (W x D x H)	30 x 70 x 104 mm
Weight	264g
Switch Specifications	
Switch Processing Scheme	Store-and-Forward
Address Table	2K entries
Buffer Memory	4M bits on-chip buffer memory
Flow Control	Back pressure for half duplex IEEE 802.3x pause frame for full duplex
Switch Fabric	10Gbps
Throughput (packet per second)	7.4Mpps@64bytes
Jumbo Frame	9K
Network Cables	10/100/1000BASE-T Cat. 3, 4, 5, 5e, 6 UTP cable (max. 100 meters) EIA/TIA-568 100-ohm STP (max. 100 meters)
Standards Conformance	
Standards Compliance	IEEE 802.3 Ethernet IEEE 802.3u Fast Ethernet IEEE 802.3ab Gigabit Ethernet IEEE 802.3x Full-Duplex Flow Control IEEE 802.3az Energy Efficient Ethernet IEEE 802.1p Class of Service

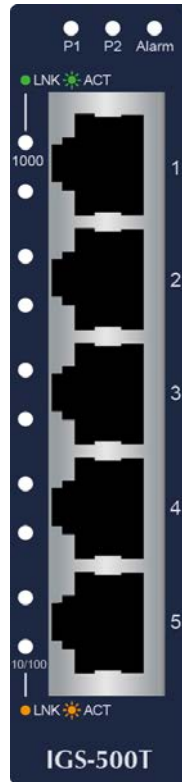
Regulatory Compliance	FCC Part 15 Class A, CE
Stability Testing	IEC 60068-2-32 (free fall) IEC 60068-2-27 (shock) IEC 60068-2-6 (vibration)
Environment	
Temperature	Operating: -40~75 degrees C Storage: -40~75 degrees C
Humidity	Operating: 5~90%, Storage: 5~90% (non-condensing)

3.3 PHYSICAL SPECIFICATIONS:

- **Dimensions:**
30 x 70 x 104 mm (W x D x H)
- **Weight:**
264g
- **Diagram**



Front Panel:



■ **LED Definition**

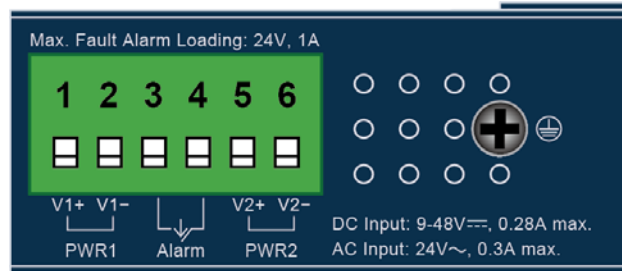
■ **System**

LED	Color	Function
P1	Green	Lit: Indicates power 1 has power.
P2	Green	Lit: Indicates power 2 has power.
Alarm	Red	Lit: Indicates either power 1 or power 2 has no power.

■ **10/100/1000BASE-T Interfaces (Port-1 to Port-5)**

LED	Color	Function	
1000	Green	Lights:	To indicate the port is successfully connecting to the network at 1000Mbps.
		Blinks:	To indicate that the port is actively sending or receiving data.
		Off	To indicate that the port is successfully connecting to the network at 10Mbps or 100Mbps.
10/100	Amber	Lights:	To indicate the port is successfully connecting to the network at 10Mbps or 100Mbps.
		Blinks:	To indicate that the port is actively sending or receiving data.
		Off	To indicate that the port is successfully connecting to the network at 1000Mbps.

■ Top View



3.4 ENVIRONMENTAL SPECIFICATIONS

Operating:

Temperature: -40°C ~ 75 degrees C

Relative Humidity: 5% ~ 90% (non-condensing)

Storage:

Temperature: -40°C ~ 75 degrees C

Relative Humidity: 5% ~ 90% (non-condensing)

3.5 ELECTRICAL SPECIFICATION

Power Requirements:

9~48 V DC, redundant power with reverse polarity protection, and **AC 24V power input**

Power Consumption:

Power Consumption (System on):	DC 9V	0.4 watts/1.36BTU
	DC 12V	0.4 watts/1.36BTU
	DC 48V	0.7 watts/2.38BTU
	AC 24V	0.7 watts/2.38BTU
Power Consumption (Ethernet Full Loading):	DC 9V	1.02 watts/3.48BTU
	DC 12V	1.08 watts/3.68BTU
	DC 48V	1.92 watts/6.55BTU
	AC 24V	1.2 watts/4.09BTU

3.6 REGULATORY COMPLIANCE

FCC Part 15 Class A, CE

3.7 RELIABILITY

MTBF > 100,000Hrs @ 25 degrees C

3.8 BASIC PACKAGING

<input checked="" type="checkbox"/> The IGS-500T	x 1
<input checked="" type="checkbox"/> User's Manual	x 1
<input checked="" type="checkbox"/> DIN-rail Kit	x 1
<input checked="" type="checkbox"/> Wall Mounting Kit	x 1
<input checked="" type="checkbox"/> RJ45 Dust Cap	x 5

3.9 PACKING DIMENSIONS

Box Dimensions (W x D x H):	205 x 144 x 46 mm
Gross Weight:	418g
Carton Dimensions (W x D x H):	435 x 325 x 280 mm
Total Weight:	9.4kg
Quantity:	20pcs in one carton