

Product Specifications

Industrial 16-Port 10/100/1000T Ethernet Switch

IGS-1600T

Version 1.0

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Change History:

Revision:	Date:	Author:	Change List
Version 1.0	2019/11/27	Angeline	Initial Release

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Reviewed By:		Approved By:	Kent Kang

1. PRODUCT DESCRIPTION



PLANET IGS-1600T Industrial high-density 16-port 10/100/1000T Gigabit Ethernet Switch is equipped with a rugged IP30 metal case for stable operation in heavy industrial demanding environments. Thus, the IGS-1600T provides a high level of immunity against electromagnetic interference and heavy electrical surges which are usually found on plant floors or in curbside traffic control cabinets.

Industrial-grade, Flexible and Environmentally-hardened Design

The IGS-1600T possesses an integrated power supply source with a wide range of voltages (12 to 48V DC or 24V AC) for worldwide high availability applications requiring dual or backup power inputs. Being able to operate under wide temperature range from -40 to 75 degrees C, the IGS-1600T can be placed in almost any difficult environment. The IGS-1600T also allows either DIN rail or wall mounting for efficient use of cabinet space.

Robust Protection

The IGS-1600T provides a contact discharge of $\pm 6\text{KV}$ DC and air discharge of $\pm 6\text{KV}$ DC for Ethernet ESD protection. It also supports $\pm 6\text{KV}$ surge immunity to improve product stability and protects users' networks from devastating ESD attacks, making sure the flow of operation does not fluctuate.

Energy Savings

The IGS-1600T, integrated with advanced green networking technologies and IEEE 802.3az protocol based power savings, is able to provide power savings of up to 50% but maintain high performance efficiently.

■ Link Down power savings

The Link Down power savings goes beyond IEEE specifications to automatically lower power consumption for a given port when it is not linked. With the Link Down power saving technology, the IGS-1600T will automatically adjust power usage of the ports that are shut down or not connected to network device.

■ Intelligent power scale based on cable length

Intelligent power scale is an intelligent algorithm that actively determines the appropriate power level based on cable length. When the IGS-1600T is connected with Ethernet cable shorter than 20m, a device can obtain maximum power savings because the IGS-1600T would automatically detect the Ethernet cable length and diminish power usage. The connected device can substantially reduce the overall power consumption, which makes a significant contribution to energy savings.

2. PRODUCT FEATURES

► **Physical Port**

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

► **Layer 2 Features**

- Supports auto-negotiation and 10/100/1000Mbps 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 8K MAC address
- Automatic address learning and address aging

► **Industrial Case and Installation**

- IP30 metal case
- DIN-rail and wall-mount designs
- 12 to 48V DC, redundant power with reverse polarity protection
- 24V AC power input
- 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 COMPONENTS

Switch ASIC:	RTL8382MI	x 1
EEPROM:	AT24C16C	x 1
LED Controller:	IP403	x 1

3.2 FUNCTION SPECIFICATIONS

Product	IGS-1600T
Hardware Specifications	
Gigabit Ethernet Switch Copper Ports	16 10/100/1000BASE-T RJ45 auto-MDI/MDI-X ports
Switch Architecture	Store-and-Forward
Switch Fabric	32Gbps (non-blocking)
Throughput (packet per second)	23.81Mpps@ 64 bytes
Address Table	8K entries, automatic source address learning and aging
Shared Data Buffer	4.1Mbits
Flow Control	IEEE 802.3x pause frame for full-duplex Back pressure for half-duplex
Jumbo Frame	10Kbytes
ESD Protection	6KV DC
Enclosure	IP30 metal case
Installation	DIN-rail kit and wall-mount kit
Connector	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
Alarm	One relay output for power failure. Alarm relay current carry ability: 1A @ 24V DC
Dimensions (W x D x H)	66 x 107 x 152 mm
Weight	743g
Power Requirements	Dual 12~48V DC 24V AC
Power Consumption	DC input: Max. 3.4 watts/11.6BTU (System on) Max. 8.7 watts/29.7BTU (Full loading)

	AC input: Max. 5 watts/17BTU (System on) Max. 13.99 watts/47.8BTU (Full loading)
Standards Conformance	
Regulatory Compliance	FCC Part 15 Class A, CE
Stability Testing	IEC60068-2-32 (free fall) IEC60068-2-27 (shock) IEC60068-2-6 (vibration)
Standards Compliance	IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX IEEE 802.3ab 1000BASE-T IEEE 802.3x flow control and back pressure IEEE 802.1p Class of Service 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)

3.3 PHYSICAL SPECIFICATIONS:

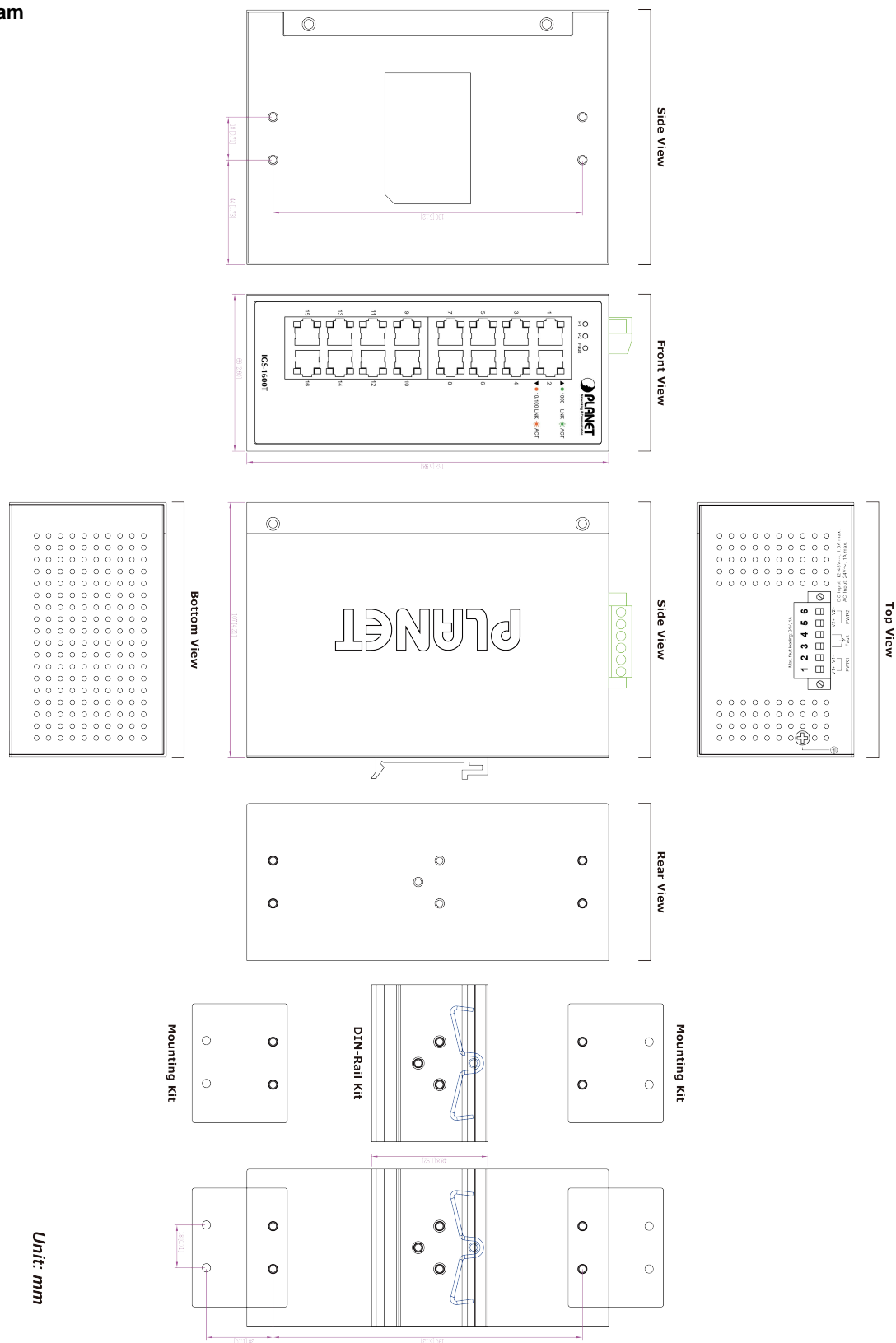
■ Dimensions:

66 x 107x 152 mm (W x D x H)

■ Weight:

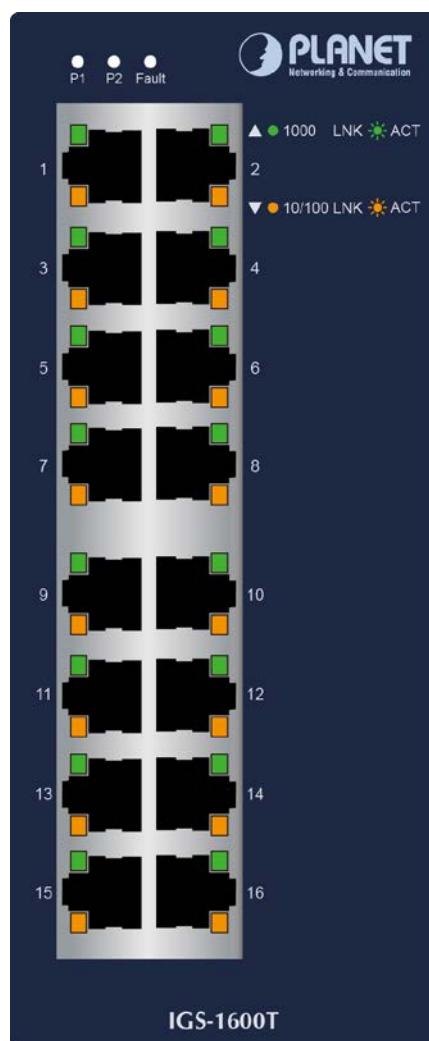
743g

■ Diagram



Unit: mm

■ Front Panel:



■ LED Definition

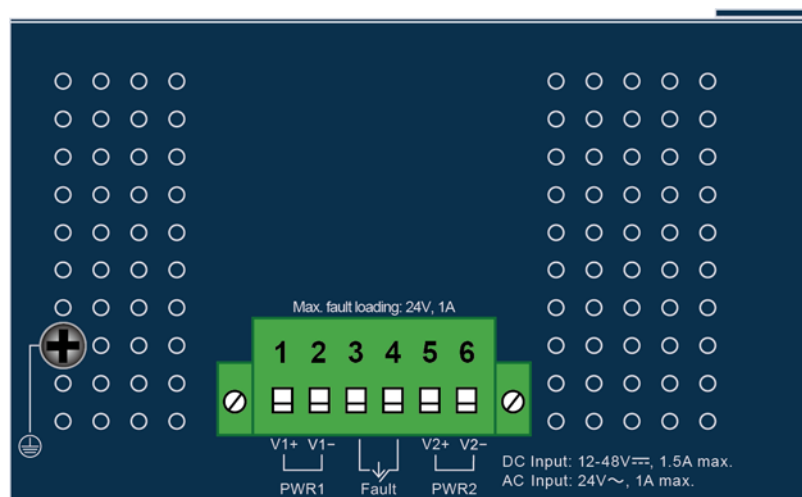
► System

LED	Color	Function
P1	Green	Lights to indicate DC power input 1 has power.
P2	Green	Lights to indicate DC power input 2 has power.
Fault	Red	Lights to indicate that AC or DC power has failed.

► Per 10/100/1000BASE-T Port

LED	Color	Function	
1000 LNK/ACT	Green	Lights:	To indicate the link through that port is successfully established at 1000Mbps .
		Blinks:	To indicate that the switch is actively sending or receiving data over that port.
10/100 LNK/ACT	Amber	Lights:	To indicate the port is successfully established at 10/100Mbps .
		Blinks:	To indicate that the Switch is actively sending or receiving data over that port.

■ Top View



3.4 ENVIRONMENTAL SPECIFICATIONS

Operating:

Temperature: -40°C ~ 75 degrees C

Relative Humidity: 5% ~ 95% (non-condensing)

Storage:

Temperature: -40°C ~ 85 degrees C

Relative Humidity: 5% ~ 95% (non-condensing)

3.5 ELECTRICAL SPECIFICATION

LOADING INPUT	System on without any devices attached	Port-1~Port-16 Link Up with Full Loading
DC 12V	2.64 watts/9BTU	8.28 watts/28.3BTU
DC 24V	2.64 watts/9BTU	8.16 watts/27.9BTU
DC 48V	3.4 watts/11.6BTU	8.7 watts/29.7BTU
AC 24V	5 watts/17BTU	13.99 watts/47.8BTU

3.6 REGULATORY COMPLIANCE

FCC Part 15 Class A, CE

Stability Testing:

- IEC60068-2-32 (Free Fall)
- IEC60068-2-27 (Shock)
- IEC60068-2-6 (Vibration)

3.7 RELIABILITY

MTBF > 100,000Hrs @ 25 degrees C

3.8 BASIC PACKAGING

<input checked="" type="checkbox"/> The IGS-1600T	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 16

3.9 PACKING INFORMATION

Box Dimensions (W x D x H)	300 x 170 x 90 mm
Weight	1.01 kg
Carton Dimensions (W x D x H)	385 x 340 x 490 mm
Carton Weight	10.9 kg
Quantity	10pcs in one carton