

Industrial Multi-port 10/100TX Fast Ethernet Switch ISW-1600T/IFGS-1822TF

Version 1.0
User's Manual

2. Product Specifications

Product	ISW-1600T	IFGS-1822TF
Hardware Specifications		
Fast Ethernet Copper Ports	16 10/100BASE-TX RJ45 auto-MDI/MDI-X ports	
Gigabit Ethernet Copper Ports	--	Two 10/100/1000BASE-T RJ45 auto-MDI/MDI-X ports (shared with Port-17 and Port-18)
SFP Slots	--	Two 1000BASE-SX/LX/BX SFP interfaces (shared with Port-17 and Port-18)
Switch Architecture	Store-and-Forward	
Switch Fabric	3.2Gbps (non-blocking)	7.2Gbps (non-blocking)
Throughput (packet per second)	2.38Mpps@ 64 bytes	5.36Mpps@ 64 bytes
Address Table	8K entries, automatic source address learning and aging	
Shared Data Buffer	4Mbits	

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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 802.3az Energy Efficient Ethernet (EEE)	IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX/ 100BASE-FX IEEE 802.3ab Gigabit 1000T IEEE 802.3z Gigabit SX/LX 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)	

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3.2 LED Definition:

➤ System

LED	Color	Function
DC1	Green	Lights to indicate DC power input 1 has power.
DC2	Green	Lights to indicate DC power input 2 has power.
Fault	Red	Lights to indicate that AC or DC power has failed.

➤ Per 10/100BASE-TX Port







LED	Color	Function
LNK/ACT	Green	Lights to indicate the link through that port is successfully established.
		Blinking to indicate that the switch is actively sending or receiving data over that port.
		Off to indicates that the port is linked down.
100 Speed	Amber	Lights to indicate that the port is operating at 100Mbps .
		Off to indicates that the port is operating at 10Mbps .
		Off to indicates that the port is linked down.

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1. Package Contents

Thank you for purchasing PLANET Industrial Multi-port 10/100TX Fast Ethernet Switch, ISW-1600T/IFGS-1822TF. In the following sections, the term "Industrial Ethernet Switch" means the ISW-1600T or IFGS-1822TF.

Open the box of the Industrial Ethernet Switch and carefully unpack it. The box should contain the following items:

Industrial Ethernet Switch x 1 	User's Manual x 1 	Wall-mount Kit x 1 
RJ45 Dust Cap x 16 	DIN-rail Kit 	SFP Dust Cap x 2 (IFGS-1822TF only) 

If any of these are missing or damaged, please contact your dealer immediately; if possible, retain the carton including the original packing material, and use them again to repack the product in case there is a need to return it to us for repair.

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Flow Control	IEEE 802.3x pause frame for full-duplex Back pressure for half-duplex	
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	66 x 107 x 152 mm
Weight	255g	300g
Power Requirements	Dual 12~48V DC, 24V AC	
Power Consumption	Max. 5.3 watts/18BTU (Ethernet full loading)	Max. 6.3 watts/21.4BTU (Ethernet 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)	

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3. Hardware Introduction

3.1 Switch Front Panel

The front panel of the **Industrial Ethernet Switch** consists of Ethernet interfaces and LED indicators.

➤ Front View

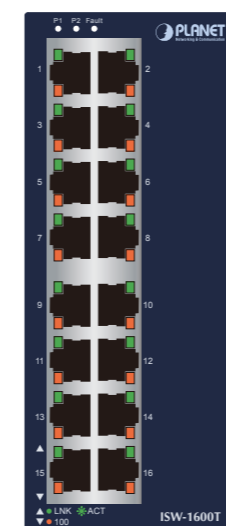


Figure 1:
ISW-1600T Front View

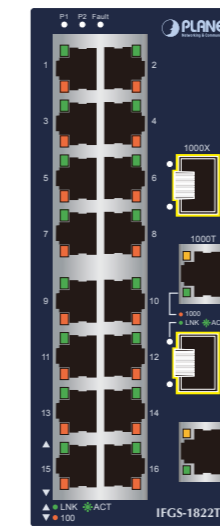


Figure 2:
IFGS-1822TF Front View

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➤ Per Gigabit RJ45/SFP Combo Interface (Port-17~Port-18 of IFGSW-1822TF)

LED	Color	Function
LNK/ACT	Green	Lights to indicate the link through that port is successfully established.
		Blinking to indicate that the switch is actively sending or receiving data over that port.
		Off to indicates that the port is linked down.
1000 Speed	Amber	Lights to indicate that the port is operating at 1000Mbps .
		Off to indicates that the port is operating at 10/100Mbps .
		Off to indicates that the port is linked down.

3.3 Switch Upper Panel

The upper panel of the Industrial Ethernet Switch consists of one terminal block connector within two power input and one relay output.

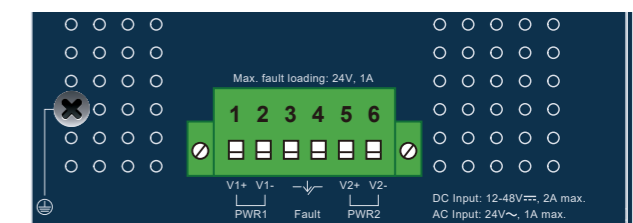


Figure 3: ISW-1600T and IFGS-1822TF Top View

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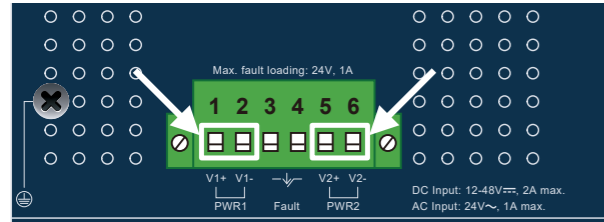
3.4 Wiring the Power Inputs

The 6-contact terminal block connector on the top panel of Industrial Ethernet Switch is used for two DC redundant power inputs. Please follow the steps below to insert the power wire.

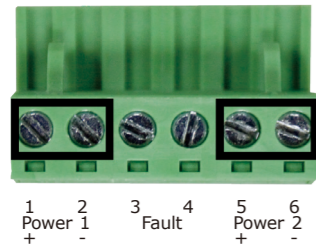


When performing any of the procedures like inserting the wires or tightening the wire-clamp screws, make sure the power is OFF to prevent from getting an electric shock.

1. Insert positive and negative DC power wires into contacts 1 and 2 for POWER 1, or contacts 5 and 6 for POWER 2.



2. Tighten the wire-clamp screws for preventing the wires from loosening.



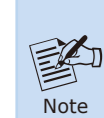
4. Installation

This section describes the functionalities of the Industrial Ethernet Switch's components and guides you to installing it on the DIN rail and wall. Please read this chapter completely before continuing.



This following pictures show how to install the device. However, the device in the picture is not ISW-1600T or IFGS-1822TF.

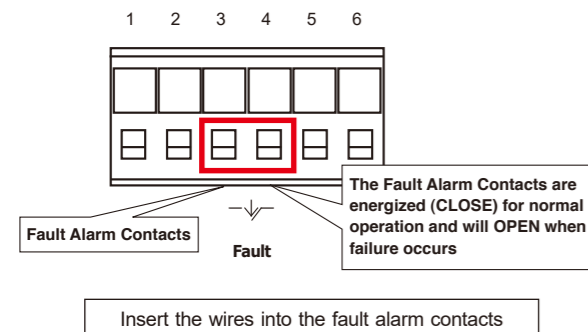
4.1 DIN-rail Mounting Installation



1. The wire gauge for the terminal block should be in the range between 12 and 24 AWG.
2. The power input range is 12V ~ 48V DC and supports 24V AC.
3. Use one power input when using 24V AC.

3.5 Wiring the Fault Alarm Contact

The fault alarm contacts are in the middle of the terminal block connector as the picture shows below. Inserting the wires, the Industrial Ethernet Switch will detect the fault status of the power failure and then forms an open circuit. The following illustration shows an application example for wiring the fault alarm contacts.



1. The wire gauge for the terminal block should be in the range between 12 and 24 AWG.
2. Alarm relay circuit accepts up to 24V DC,1A



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Industrial 16-Port 10/100TX Ethernet Switch

IFGS-1822TF/ISW-1600T



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Warning:
This equipment is compliant with Class A of CISPR 32.
In a residential environment this equipment may cause radio interference.
2350-AH7040-000



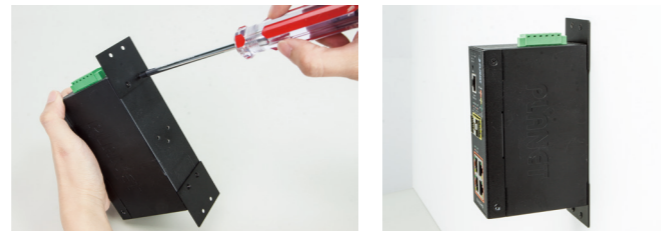
5. Customer Support

Thank you for purchasing PLANET products. You can browse our online FAQ resource on PLANET web site first to check if it could solve your issue. If you need more support information, please contact PLANET switch support team.

PLANET online FAQ:
<http://www.planet.com.tw/en/support/faq>

Switch support team mail address:
support@planet.com.tw

4.2 Wall-mount Plate Mounting



4.3 Side Wall-mount Plate Mounting



FCC Warning

This equipment has been tested and found to comply with the regulations for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with this user's guide, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

CE Mark Warning

This is a Class A product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

WEEE Warning



To avoid the potential effects on the environment and human health as a result of the presence of hazardous substances in electrical and electronic equipment, end users of electrical and electronic equipment should understand the meaning of the crossed-out wheeled bin symbol. Do not dispose of WEEE as unsorted municipal waste and have to collect such WEEE separately.