4-Port 10/100BASE-TX + 1-Port 100BASE-FX Industrial Ethernet Switch with Wide Operating Temperature (-40~75 degrees C)

Highly Convenient and Feasible Industrial Robust Switch

PLANET has upgraded two models named ISW-511T and ISW-511TS15 for use in environments with wide operating temperature. The capital 'T' (ISW-511T and ISW-511TS15) shown in the model names means that they can support and operate under WIDE-TEMPERATURE environment ranging from -40 up to 75 degrees C. As we know the temperature in many places and countries of the world are lower than -10 degrees C, these two new models, ISW-511T and ISW-511TS15, will be the right products for Transportation, Manufacturing, Security and Surveillance network deployments in those harsh environments. The ISW-511T / ISW-511TS15 also 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.

Flexibly Extendable Distance

They (the ISW-511T and ISW-511TS15) each include four 10/100BASE-TX auto-negotiation ports and one 100BASE-FX port. The ISW-511T is equipped with 100BASE-FX multi-mode SC interfaces for transmission distance up to 2km while the ISW-511TS15 is equipped with 100BASE-FX single-mode SC interfaces for transmission distance up to 20km. Users can choose either model suitable for network deployment, either for a long-distance (ISW-511TS15) or short-distance (ISW-511T) transmission.

Easy Installation and Wide Range of Power Usages

The ISW-511T and ISW-511TS15 are designed with a compact case that allows either DIN rail or panel mounting for the efficient usage of cabinet space. It provides an integrated power supply with a wide range of voltages for worldwide operation. It also offers dual-redundant, reversible polarity 12V DC to 48V DC power supply inputs for high availability applications requiring dual or backup power inputs.

Physical Port

- 4-port 10/100BASE-TX RJ-45 with auto MDI / MDI-X function for ISW-511T series
- 1-port 100BASE-FX interface on ISW-511T for up to 2km (multi-mode fiber 62.5/125µm, 50/125µm) transmission distance
- 1-port 100BASE-FX interface on ISW-511TS15 for up to 20km (single-mode fiber 9/125µm) transmission distance

Layer 2 Features

- Complies with IEEE 802.3, IEEE 802.3u 10/100BASE-TX, 100BASE-FX Ethernet standard
- Supports auto negotiation and 10/100Mbps half / full duplex mode for each copper port
- High performance Store and Forward architecture
- 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, supporting 2K absolute MAC addresses
- 1Mbit on-chip frame buffer
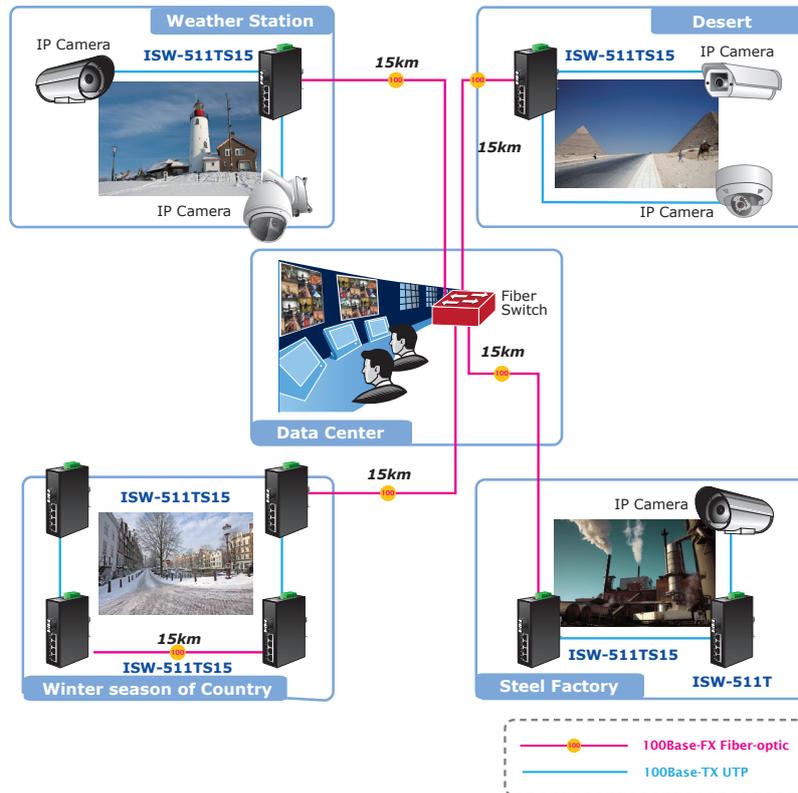- Automatic address learning and address aging
- CSMA / CD Protocol

Industrial Case / Installation

- IP30 metal case / protection
- DIN rail and wall mount design
- 12 to 48V DC, redundant power with reverse polarity protection
- Connective removable terminal block for master and slave power
- Supports EFT protection 6KV DC for power line
- Supports 6KV DC Ethernet ESD protection
- -40 to 75 degrees C wide operating temperature

Applications

Industrial Switch for High Performance Data Collection and Forwarding

The ISW-511T and ISW-511TS15 are equipped with four 10/100Mbps ports offering auto MDI / MDIX feature and one 100BASE-FX optic-fiber SC interface providing 1Gps non-blocking switch fabric and the 2K MAC address table so that they can perform wire-speed packets transfer without risk of packet loss. The ISW-511T / ISW-511TS15, which come in the slim type IP30 metal, is ideal for the most heavy industrial demanding environments.
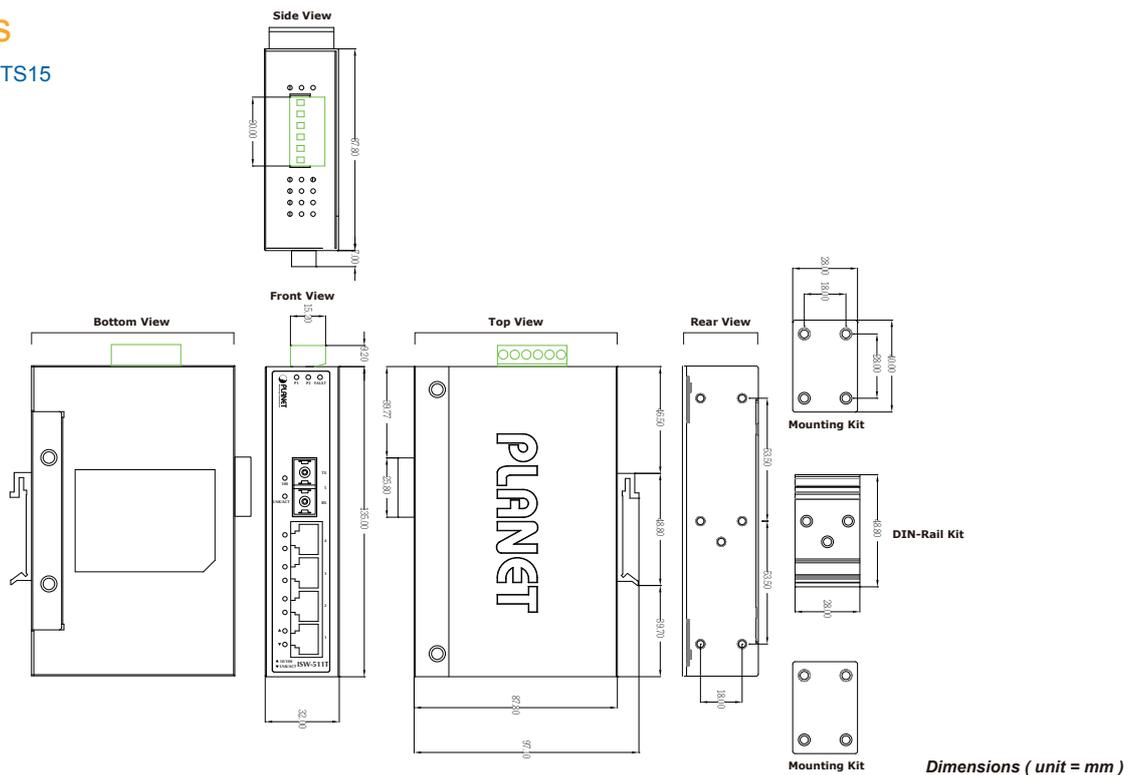

Specifications

Model	ISW-511T / ISW-511TS15		
Hardware Specifications			
Copper Interface	Ports	4 x 10/100BASE-TX, auto negotiation, auto-MDI / MDI-X	
	Cable	10BASE-T : 2-pair UTP Cat. 3, 4, 5 cable (100meters, max.) 100BASE-TX : 2-pair UTP Cat. 5 cable (100meters, max.)	
	Port	1 x 100BASE-FX	
	Cable	ISW-511T: 50/125μm / 62.5/125μm fiber ISW-511TS15: 9/125μm fiber	
	Mode	ISW-511T: Multi-mode ISW-511TS15: Single-mode	
	Distance	ISW-511T: 2km ISW-511TS15: 20km	
	Wavelength	ISW-511T: 1310nm ISW-511TS15: 1310nm	
	Launch Power	ISW-511T: Max. -14dBm, Min. -20dBm ISW-511TS15: Max. 0dBm, Min. -20dBm	
	Receive Sensitivity	ISW-511T: -32dBm ISW-511TS15: -32dBm	
	Max. Input Power	ISW-511T: -14dBm ISW-511TS15: 0dBm	
Dimensions (W x D x H)	135 x 97 x 32 mm		
Weight	436g		
Power Requirements	12~48V DC Redundant power with polarity reverse protection function		

Power Consumption / Dissipation	13.7 watts / 46 BTU
Installation	DIN rail kit and wall mount ear
Alarm	Provides one relay output for power failure Alarm relay current carry ability: 1A @ DC 24V
Switching Specifications	
Switch Processing Scheme	Store-and-Forward
Address Table	2K entries
Buffer	1Mbit
Flow Control	Back pressure for half duplex, IEEE 802.3x pause frame for full duplex
Switch Fabric	1Gbps
Throughput (Packet Per Second)	0.74Mpps @ 64Bytes
Standards Conformance	
Standards Compliance	IEEE 802.3 Ethernet, 10BASE-T IEEE 802.3u Fast Ethernet, 100BASE-TX, 100BASE-FX IEEE 802.3x Flow Control
Temperature	Operating: -40~75 degrees C Storage: -40~85 degrees C
Operating Humidity	Operating: 5~90% Storage: 5~90% (Non-condensing)
Regulation Compliance	FCC Part 15 Class A, CE
Stability Testing	IEC60068-2-32 (Free fall) IEC60068-2-27 (Shock) IEC60068-2-6 (Vibration)

Dimensions

ISW-511T / ISW-511TS15

Dimensions (unit = mm)

Ordering Information

ISW-511T	4+1 100FX Port Multi-mode Industrial Ethernet Switch - 2km (-40 ~ 75 degrees C operating temperature)
ISW-511TS15	4+1 100FX Port Single-mode Industrial Ethernet Switch - 15km (-40 ~ 75 degrees C operating temperature)

Related Product

ISW-621T	4+2 100FX Port Multi-mode Industrial Ethernet Switch ─ 2km (-40~75 degrees C operating temperature)
ISW-621TS15	4+2 100FX Port Single-mode Industrial Ethernet Switch ─ 20km (-40~75 degrees C operating Temperature)
ISW-621TF	4+2 100FX SFP Industrial Ethernet Switch (-40~75 degrees C operating Temperature)

ISW-511T / ISW-511TS15