

## 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 15km. 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 15km (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

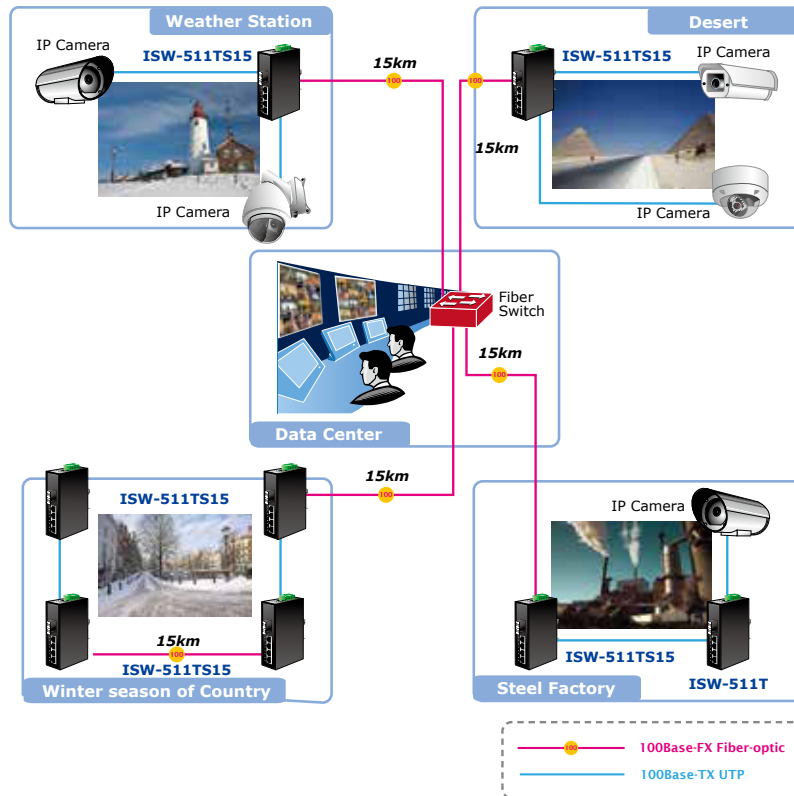
### Industrial Case / Installation

- IP30 metal case / protection
- DIN rail and wall mount design
- 12 to 48V DC, redundant power with polarity reverse protection and 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.



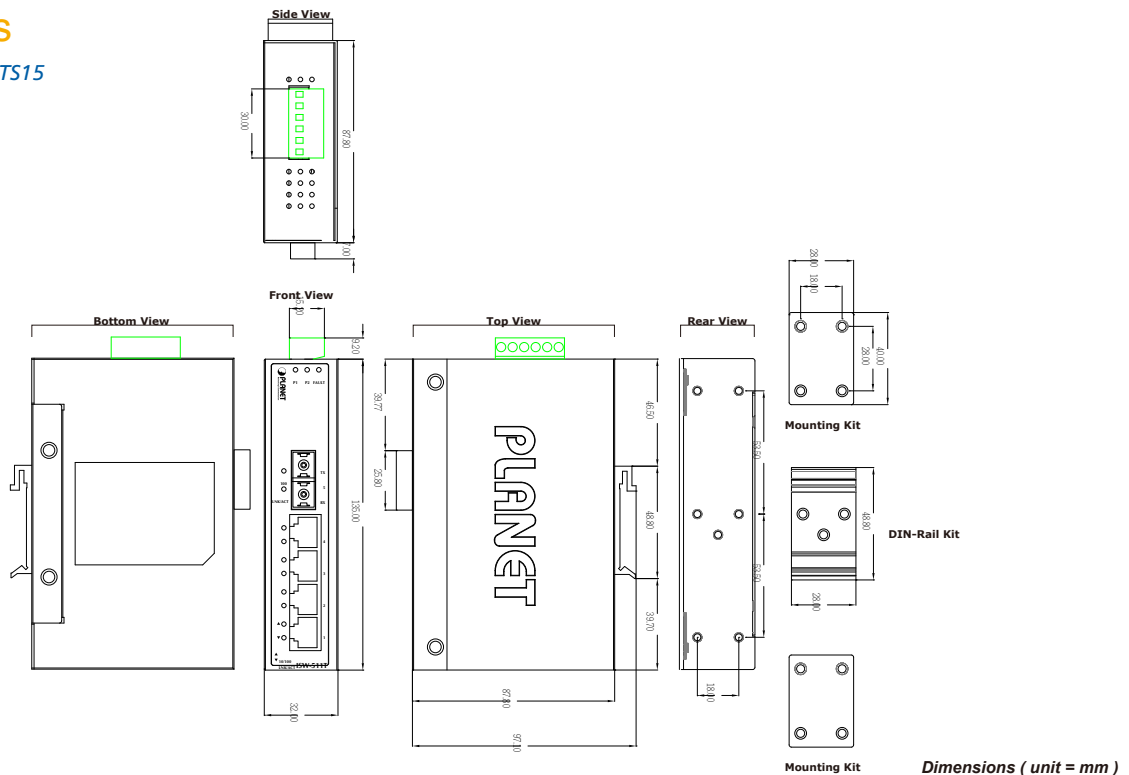
## Specifications

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: 15km
	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
<b>Switch Specifications</b>	
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
<b>Standards Conformance</b>	
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



## Ordering Information

ISW-511T	Art. N° 158652	4+1 100FX Port Multi-mode Industrial Ethernet Switch - 2km (-40 ~ 75 degrees C operating temperature)
ISW-511TS15	Art. N° 158677	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 – 15km (-40~75 degrees C operating Temperature )
ISW-621TF	4+2 100FX SFP Industrial Ethernet Switch (-40~75 degrees C operating Temperature )