

# 4-Port 10/100Base-TX + 2-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-621T and ISW-621TS15 for use in environments with wide operating temperature. The capital 'T' (ISW-621T and ISW-621TS15) 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-621T and ISW-621TS15, will be the right products for Transportation, Manufacturing, Security and Surveillance network deployments in those harsh environments. The ISW-621T / ISW-621TS15 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-621T and ISW-621TS15) each include four 10/100Base-TX auto-negotiation ports and two 100Base-FX ports. The ISW-621T is equipped with 100Base-FX multi-mode SC interfaces for transmission distance up to 2km while the ISW-621TS15 is equipped with 100Base-FX single-mode SC interfaces for transmission distance up to 15km. The two 100Base-FX ports provide more flexibility for Transportation, Manufacturing, Security and Surveillance with distance extension without any limitation, making the ISW-621T / ISW-621TS15 suitable either for long distance (ISW-621TS15) or short distance (ISW-621T) network deployment.

## Easy Installation and Wide Range of Power Usages

The ISW-621T and ISW-621TS15 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-621T series
- 2-port 100Base-FX interface on ISW-621T for up to 2km (multi-mode fiber 62.5/125 $\mu$ m, 50/125 $\mu$ m) transmission distance
- 2-port 100Base-FX interface on ISW-621TS15 for up to 15km (single-mode fiber 9/125 $\mu$ m) 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, broadcast storm control, runt/CRC filtering eliminates erroneous packets to optimize the network bandwidth
- Prevents packet loss with back pressure (half-duplex) and IEEE 802.3x pause frame flow control (full-duplex)
- Backplane (Switching Fabric): 1.2Gbps
- Integrated address look-up engine, supporting 2K absolute MAC addresses
- 1Mbit on-chip frame buffer
- Automatic address learning and address aging
- CSMA/CD Protocol

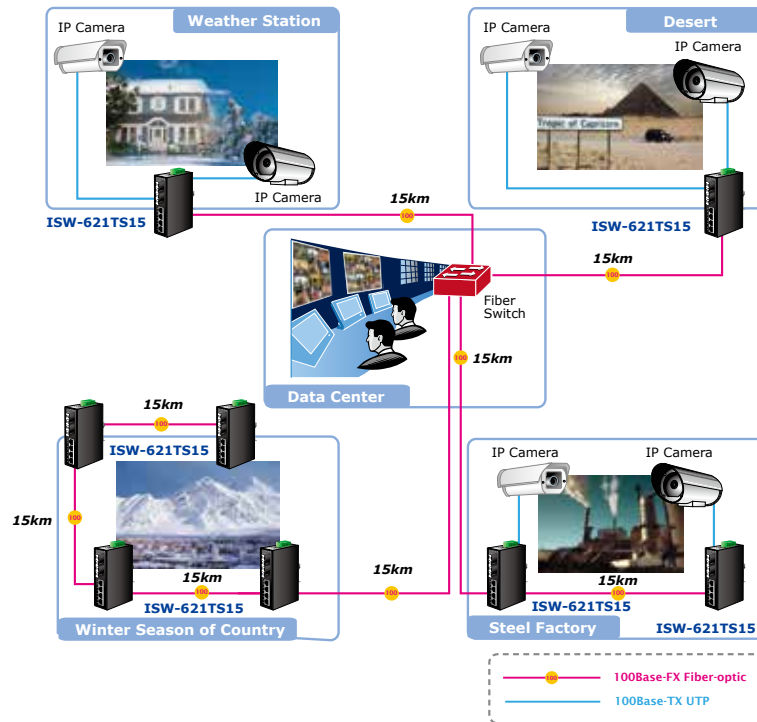
## Industrial Case / Installation

- 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-621T and ISW-621TS15 are equipped with four 10/100Mbps ports offering auto MDI / MDIX feature, and two 100Base-FX optic-fiber SC interfaces providing 1.2Gbps 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-621T / ISW-621TS15, which come in the slim type IP30 metal case, is ideal for the most Heavy Industrial demanding environments.



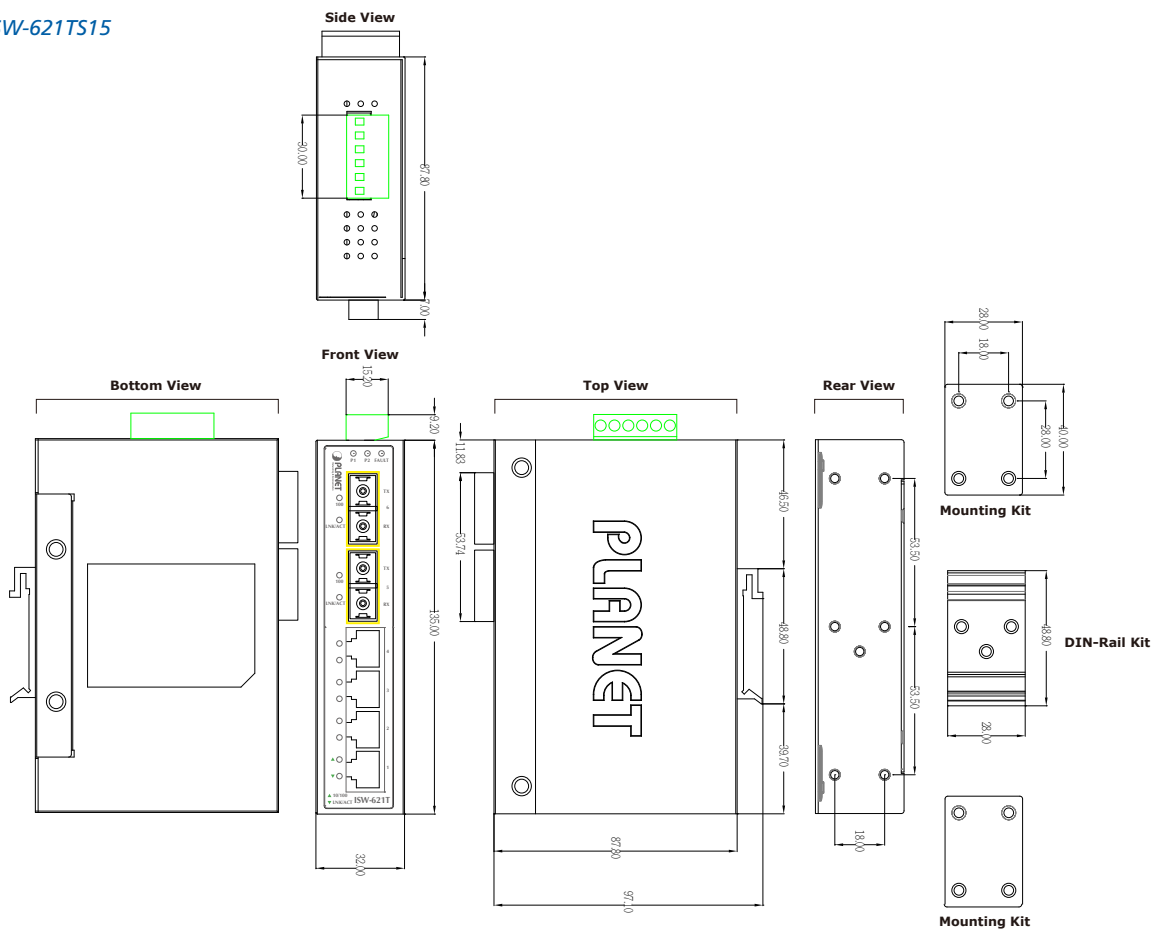
## Specifications

|                                 |   |  |
|---------------------------------|---|--|
| Model                           | ISW-621T / ISW-621TS15  |  |
| <b>Hardware Specifications</b>  |   |  |
| 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 (100 meters, max.)<br>100Base-TX : 2-pair UTP Cat. 5 cable (100 meters, max.) |
| Optical Interface               | Port  | 2 x 100Base-FX   |
|                                 | Cable   | ISW-621T: 50/125µm / 62.5/125µm fiber<br>ISW-621TS15: 9/125µm fiber  |
|                                 | Mode  | ISW-621T: Multi-mode<br>ISW-621TS15: Single-mode   |
|                                 | Distance  | ISW-621T: 2km<br>ISW-621TS15: 15km   |
|                                 | Wavelength  | ISW-621T: 1310nm<br>ISW-621TS15: 1310nm  |
|                                 | Launch Power  | ISW-621T: Max. -14dBm, Min. -20dBm<br>ISW-621TS15: Max. 0dBm, Min. -20dBm  |
|                                 | Receive Sensitivity   | ISW-621T: -32dBm<br>ISW-621TS15: -32dBm  |
|                                 | Max. Input Power  | ISW-621T: -14dBm<br>ISW-621TS15: 0dBm  |
| Dimensions (W x D x H)          | 135 x 97 x 32 mm  |  |
| Weight                          | 442g  |  |
| Power Requirements              | 12~48V DC<br>Redundant power with polarity reverse protection function                        |  |
| Power Consumption / Dissipation | Max. 16 watts / 54 BTU  |  |
| Installation                    | DIN rail kit and wall mount ear   |  |
| Alarm                           | 12~48V DC<br>Redundant power with polarity reverse protection function                        |  |
| <b>Switch Specifications</b>    |   |  |
| Switch Processing Scheme        | Store-and-Forward   |  |
| Address Table                   | 2K entries  |  |
| Buffer                          | 1Mbit   |  |
| Flow Control                    | Provides one relay output for power failure<br>Alarm relay current carry ability: 1A @ DC 24V |  |

|                                |  |
|--------------------------------|--|
| Switch Fabric                  | 1.2Gbps  |
| Throughput (Packet Per Second) | 0.89Mpps @ 64Bytes   |
| <b>Standards Conformance</b>   |  |
| Standards Compliance           | IEEE 802.3 Ethernet, 10Base-T<br>IEEE 802.3u Fast Ethernet, 100Base-TX, 100Base-FX<br>IEEE 802.3x Flow Control |
| Temperature                    | Operating: -40~75 degrees C<br>Storage: -40~85 degrees C   |
| Operating Humidity             | Operating: 5~90%<br>Storage: 5~90% (Non-condensing)  |
| Regulation Compliance          | FCC Part 15 Class A, CE  |
| Stability Testing              | IEC60068-2-32(Free fall)<br>IEC60068-2-27(Shock)<br>IEC60068-2-6(Vibration)                                    |

## Dimensions

ISW-621T / ISW-621TS15



## Ordering Information

|             |   |
|-------------|---|
| 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) |

## Related Products

|                        |  |
|------------------------|--|
| ISW-511T / ISW-511TS15 | 4-Port 10/100Base-TX + 1-Port 100Base-FX Industrial Ethernet Switch with Wide Operating Temperature (-40~75 degrees C) |
| ISW-621TF              | 4-Port 10/100Base-TX + 2-Port 100Base-FX Industrial Ethernet Switch with Wide Operating Temperature (-40~75 degrees C) |

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### C-ISW-621T / ISW-621TS15

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