Networking \& Communication

# 4-Port 10/100Base-TX + 2-Port 100Base-FX SFP Industrial Ethernet Switch with Wide Operating Temperature 



Highly Convenient and Distance Extendable Industrial Robust Switch PLANET ISW-621TF is a new Industrial Ethernet Switch that can operate under WIDE-TEMPERATURE environment ranging from -40 up to 75 degrees $C$ and is equipped with two 100Base-FX SFP slots. With two mini-GBIC 100Base-FX SFP (Small-Form Factor Pluggable) interfaces supported, the deployed distance of the ISW-621TF can be extended from 2 kilometers (via multi-mode fiber) up to above 60 kilometers (via single-mode fiber), respectively. In other words, the ISW-621TF provides more flexibility for Transportation, Manufacturing, Security and Surveillance with distance extension without any limitation and is a suitable model either for long or short distance network deployment.

## Hardened Design

The ISW-621TF can operate stably in harsh environment with wide operating temperature support. It 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.

## Easy Installation and Wide Range of Power Usages

The ISW-621TF is 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 12 V DC to 48 V 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
- 2-port 100Base-FX SFP interface


## Layer 2 Features

- Complies with IEEE 802.3, IEEE 802.3u 10/100Base-TX, 100Base-FX Ethernet standard
- Supports auto negotiation and $10 / 100 \mathrm{Mbps}$ 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): 1.2Gbps
- Integrated address look-up engine, supporting 2K absolute MAC addresses
- 1Mbit on-chip frame buffer
- Automatic address learning and address aging
- CSMACD Protocol


## Industrial Case / Installation

- IP30 metal case protection
- DIN rail and wall mount design
- 12 to $48 \mathrm{~V} D C$, 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-621TF is equipped with four 10/100Mbps ports offering auto MDI / MDIX feature, and two 100Base-FX SFP slots providing 1.2Gps 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-621TF, which come in the slim type IP30 metal case, is ideal for the most heavy industrial demanding environments.


## Specifications

| Model |  | ISW-621TF |
| :---: | :---: | :---: |
| Hardware Specifications |  |  |
| Copper Interface | Ports | $4 \times 10 / 100$ Base-TX, auto negotiation, auto-MDI/MDI-X |
|  | Cable | 10Base-T: 2-pair UTP Cat. 3, 4, 5 cable ( 100 meters, max.) 100Base-TX: 2-pair UTP Cat. 5, 5e, 6 cable ( 100 meters, max.) |
| Optical Interface | Port / Type | $2 \times 100 \mathrm{Base}-\mathrm{FX} / \mathrm{LC}$ interfaces |
|  | Cable | Multi-mode: $50 / 125 \mu \mathrm{~m} / 62.5 / 125 \mu \mathrm{~m}$ fiber Single-mode: $9 / 125 \mu \mathrm{~m}$ fiber |
| Dimensions ( $\mathrm{W} \times \mathrm{D} \times \mathrm{H}$ ) |  | Cable |
| Weight |  | 442 g |
| Power Requirements |  | 12~48V DC, <br> Redundant power with polarity reverse protection |
| Power Consumption / Dissipation |  | Max. 16 watts / 54 BTU |
| Installation |  | DIN rail kit / wall mount ear |
| Alarm |  | Provides one relay output for power failure Alarm relay current carry ability: 1A @ DC 24V |
| Switch Specifications |  |  |
| Switch Processing Scheme |  | Store-and-Forward |
| Address Table |  | 2K entries |
| Buffer |  | 1Mbit |
| Flow Control |  | Back pressure for half duplex <br> IEEE 802.3x pause frame for full duplex |
| Switch Fabric |  | 1.2Gbps |
| Throughput (Packet Per Second) |  | 0.89Mpps @ 64Bytes |


| Standards Conformance |  |
| :--- | :--- |
| IEEE 802.3 Ethernet, 10Base-T |  |
| Standards Compliance | IEEE 802.3u Fast Ethernet, 100Base-TX, 100Base-FX <br> IEEE 802.3x Flow Control |
| Regulation Compliance | FCC Part 15 Class A, CE |$|$| IEC60068-2-32 (Free fall) |  |
| :--- | :--- |
| IEC60068-2-27 (Shock) |  |
| Stability Testing | IEC60068-2-6 (Vibration) |
| Environment | Operating: -40~75 degrees C <br> Storage: -40~85 degrees C |
| Temperature | Operating: $5 \sim 90 \%$ <br> Storage: $5 \sim 90 \%$ (non-condensing) |
| Humidity |  |

## Dimensions

ISW-621TF:


Dimensions ( unit $=\mathbf{m m}$ )

## Ordering Information

4-Port 10/100Base-TX + 2-Port 100Base-FX SFP Industrial Ethernet Switch ( $-40 \sim 75$ degrees $C$ operating temperature)

## Related Product

ISW-621T
ISW-621TS15
ISW-511T
ISW-511TS15

4+2 100FX Port Multi-mode Industrial Ethernet Switch -2 km ( $-40 \sim 75$ degrees $C$ operating temperature ) $4+2$ 100FX Port Single-mode Industrial Ethernet Switch -15 km (-40~75 degrees C operating Temperature )
$4+1$ 100FX Port Multi-mode Industrial Ethernet Switch $-2 \mathrm{~km}(-40 \sim 75$ degrees C operating Temperature )
$4+1$ 100FX Port Single-mode Industrial Ethernet Switch -15 km (-40~75 degrees C operating Temperature )

Fax: 886-2-2219-9528 www.planet.com.tw

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