4-Port 10/100Base-TX + 1-Port 100Base-FX Industrial Fast Ethernet Switch

All of the RJ-45 copper interfaces in the ISW-511 / ISW-511S15 support 10/100Mbps Auto-Negotiation for optimal speed detection through RJ-45 Category 3, 4 or 5 cables. The standard Auto-MDI/MDI-X support can detect the type of connection to any Ethernet device without requiring special straight or crossover cables.

PHYSICAL PORT

- 4-Port 10/100Base-TX RJ-45 with auto MDI/MDI-X function

- 1-Port 100Base-FX interface for up to 2km (Multi-mode fiber 50/125μm) on ISW-511

- 1-Port 100Base-FX interface for up to 15km (Single-mode fiber 9/125μm) on ISW-511S15

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): 1Gbps

- Integrated address look-up engine, support 2K absolute MAC addresses

- 1 Mbit on-chip frame buffer

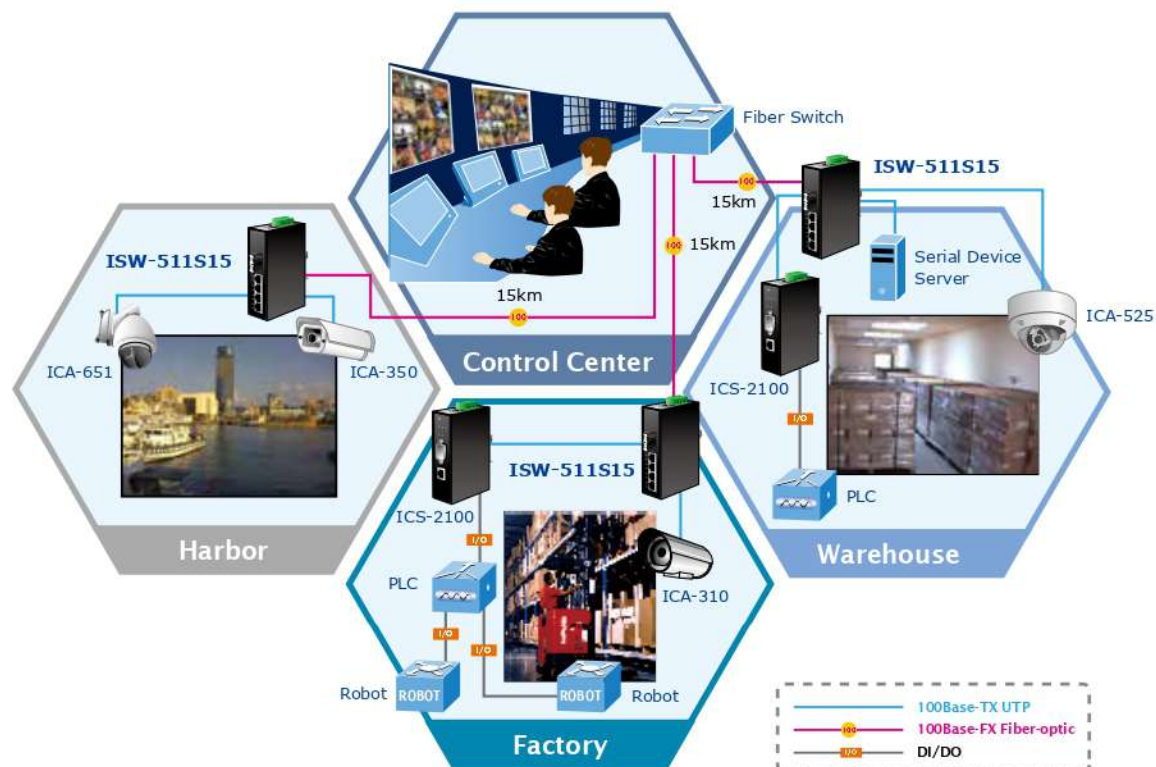- Automatic address learning and address aging

- CSMA/CD Protocol

INDUSTRIAL CASE / INSTALLATION

- IP-30 Metal case / Protection

- DIN Rail and Wall Mount Design

- 12 to 48V DC, redundant power with polarity reverse protect function and connective removable terminal block for master and slave power

- Supports EFT protection 6000 VDC for power line

- Supports 6000 VDC Ethernet ESD protection

- -10 to 60 Degree C operation temperature

New slim type with more practicability and convenience

PLANET releases the advanced industrial hardened Ethernet Switch with new slim type, IP-30 metal case: ISW-511 / ISW-511S15. Each of them equips with 4 10/100Base-TX Auto-negotiation ports. The ISW-511 has 1 100Base-FX multi-mode SC interface for transmission distance up to 2km, and the ISW-511S15 has 1 100Base-FX single-mode SC interface for transmission distance up to 15km, both of them operate reliably in Heavy Industrial demanding environments. Meanwhile, the compact, IP-30 standard metal case allows either DIN rail or wall mounting for efficient use of cabinet space.

Stable operate performance under difficult environments

The ISW-511 / ISW-511S15 provide 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. Being able to operate under the temperature range from -10 to 60 Degree C coupled with hazardous location certification (Class 1 Division 2), the ISW-511 / ISW-511S15 can be placed in almost any difficult environment. The ISW-511 / ISW-511S15 also possess an integrated power supply source with wide range of voltages (12 to 48V DC) for worldwide high availability applications requiring dual or backup power inputs.

Robust Switch performance

The ISW-511 / ISW-511S15 each provides 4 10/100Base-TX Ethernet ports and 1 100Base-FX optic-fiber SC interface, and boasts a high performance switch architecture that is capable of providing non-blocking switch fabric and wire-speed throughput as high as 1Gbps. With 2K MAC Address table, they offer wire-speed packets transfer performance without risk of packet loss. The Flow Control function allows the ISW-511 / ISW-511S15 for fast and reliable data transfer.

APPLICATIONS

Industrial area Switch for data collect and forward

The ISW-511/ ISW-511S15 equip with 4 10/100Mbps ports that offers auto MDI / MDIX feature, 1 100Base-FX optic-fiber SC interface, 1Gbps 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-511 / ISW-511S15 with the slim type IP 30 metal shape is ideal for most Heavy Industrial demanding environments.

SPECIFICATION

Product	4-Port 10/100Base-TX + 1-Port 100Base-FX Industrial Fast Ethernet Switch	
Model	ISW-511	ISW-511S15
Hardware Specification		
Copper — Ports	4 x 10/100Base-TX, Auto-negotiation, Auto-MDI/MDI-X	
Copper — Cable	10Base-T : 2-pair UTP Cat. 3, 4, 5 cable (100meters, max.)	
	100Base-TX : 2-pair UTP Cat. 5 cable (100meters, max.)	
Optical — Port	1 x 100Base-FX	
Optical — Cable	50/125μm fiber	9/125μm fiber
Optical — Mode	Multi-mode	Single-mode
Optical — Distance	2km	15km
Optical — Frequency	1310nm	1310nm
Optical — Launch Power	Max. -14dBm, Min. -19dBm	Max. -7dBm, Min. -20dBm
Optical — Receive Sensitivity	-34.5dBm	-28dBm
Optical — Max. Input Power	-14dBm	-8dBm
Dimension (W x D x H)	135 x 97 x 32 mm	
Weight	436g	
Power Requirement	12~48V DC, Redundant power with polarity reverse protection function	
Power Consumption / Dissipation	9.1 Watts / 31BTU	
Installation	DIN rail kit and wall mount ear	
Alarm	Provides one relay output for power fail Alarm Relay current carry ability: 1A @ DC 24V	
Switch Specification		
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 Full-duplex flow control	
Temperature	Operating: -10~60 Degree C Storage: -40~85 Degree C	
Humidity Operating	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)	

ORDERING INFORMATION

ISW-511	4+1 100FX Port Multi-mode Industrial Ethernet Switch - 2km (-10~60 Degree C operate temperature)
ISW-511S15	4+1 100FX Port Single-mode Industrial Ethernet Switch - 15km (-10~60 Degree C operate temperature)

RELATED PRODUCTS

ISW-511T	4+1 100FX Port Multi-mode Industrial Ethernet Switch - 2km (-40~75 Degree C operate temperature)
ISW-511TS15	4+1 100FX Port Single-mode Industrial Ethernet Switch - 15km (-40~75 Degree C operate temperature)
ISW-621	4+2 100FX Port Multi-mode Industrial Ethernet Switch - 2km (-10~60 Degree C operate temperature)
ISW-621S15	4+2 100FX Port Single-mode Industrial Ethernet Switch - 15km (-10~60 Degree C operate temperature)
ISW-621T	4+2 100FX Port Multi-mode Industrial Ethernet Switch - 2km (-40~75 Degree C operate temperature)
ISW-621TS15	4+2 100FX Port Single-mode Industrial Ethernet Switch - 15km (-40~75 Degree C operate temperature)

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