

# IT-ES6116-IM-4F

**12-ports 10/100M Ethernet + 4-ports 100Base-FX(SC/ST/FC)**
**Managed Industrial Ethernet Switch**

## Features

- Support IEEE802.3, IEEE802.3u, IEEE 802.3x, IEEE802.1Q, IEEE802.1p, IEEE802.1D, IEEE802.1W.
- SW-Ring™ ring network patent technology (Fault recovery time<20ms).
- Support RSTP, way exchange time<50ms.
- Support WEB configuration.
- Support Port based VLAN and IEEE 802.1Q VLAN.
- Support absolutely and opposite priority, support IEEE802.1P, DSCP priority.
- Store and forward switching process type.
- Support MAC address auto-learning, auto-aging.
- Support 8K MAC address.
- Support 12.8Gbps backboard bandwidth.
- Support redundancy power supply (12~48VDC).
- Support 1 channel relay alarm output.
- Operating temperature range from -40 to 75°C.
- DIN rail mounted.
- Metal shell, IP30 protection class.



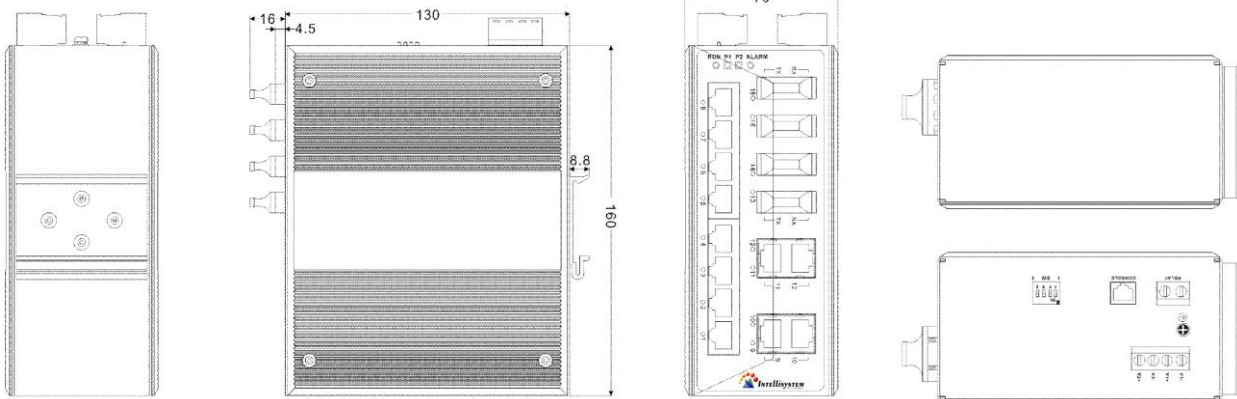
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## Introduction

IT-ES6116-IM-4F is an industrial grade, managed and redundancy Ethernet switch which supports 12 Ethernet ports and 4 Fiber ports. It provided some kinds of advanced network managed function, like as: SW-Ring redundancy ring network, VLAN, Trunking, Quality of Service, Speed control, port mirroring, fault alarm and firmware upgrade online. Standard Industry design, can satisfied every requirement of the industry scene. All components used industry grade, it takes products high reliability.

SW-Ring™ is an arithmetic designed as a rapid redundancy network. It provided recover technology for fault of rapid redundant network, the recovery time<20ms. Product accorded to CE, FCC standard and Industry grade 4 design requirement, support 2 redundant power input and 1 channel relay alarm output, and -40~75°C working temperature, can meet all kinds of Industrial environment requirement.

## Dimensions

**Unit (mm)**


## Specifications

### Technology

Standard: Support IEEE802.3, IEEE802.3u, IEEE 802.3x, IEEE802.1Q, IEEE802.1p, IEEE802.1D, IEEE802.1W  
Protocol: ARP, ICMP, TCP, DHCP, HTTP, Telnet, SW-Ring, RSTP, SNMP  
Flow control: IEEE802.3x flow control, back press flow control

### Functions

Switch function: SW-Ring™, QOS, 802.1QVLAN, RSTP, SNMP, port trunking, static multicast filter, port mirroring, bandwidth management, broadcast storm control, port flow statistics, upgrade online, up and download configuration file, user name access system  
SW-Ring: Support Single, Couple, Chain, Dual homing

### Exchange attributes

100M forward speed: 148810pps  
100M maximum filter speed: 148810pps  
Transmit mode: store and forward  
System exchange bandwidth: 12.8G  
MAC address table: 8K  
Memory: 4M

### Interfaces

Electric port: 10Base-T/100Base-TX auto speed control, Half/full duplex and MDI/MDI-X auto detect  
100M optic fiber port: 100Base-FX, SC/ST/FC connector, support single-mode (20/40/60/80Km optional), multi-mode (2Km), wavelength: 1310nm, 1550nm  
Console port: debug serial port carry out CLI command  
Alarm port: 2 bit terminal block  
1 channel relay alarm output

### Transfer distance

Twisted cable: 100M (standard CAT5/CAT5e cable)  
Multi-mode: 1310nm, 2/5Km  
Single-mode: 1310nm, 20/40/60Km  
1550nm, 80/100/120Km

### LED indicators

Run indicator: Run  
Interface indicator: Link (1~16)  
Power supply indicator: P1, P2  
Alarm indicator: Alarm

### Power supply

Input Voltage: 24VDC (12~48VDC)  
Input method: 4 bits 7.62mm terminal block  
Support DC dual power supply redundancy  
Overload current protect: 1.2A

### Consumption

No-load consumption: 7.68W @24VDC  
Full-load consumption: 9.55W @24VDC

### Working environment

Working temperature: -40~75°C  
Storage temperature: -40~85°C  
Relative Humidity: 5%~95% (no condensation)

### Mechanical Structure

Shell: IP30 protect grade, metal shell  
Installation: DIN rail mount  
Size (W×H×D): 70mm×160mm×130mm

### Industry Standards

EMI: FCC Part 15, CISPR (EN55022) class A  
EMS: EN61000-4-2 (ESD), Level 4  
EN61000-4-3 (RS), Level 3  
EN61000-4-4 (EFT), Level 4  
EN61000-4-5 (Surge), Level 3  
EN61000-4-6 (CS), Level 3  
EN61000-4-8, Level 5  
Shock: IEC 60068-2-27  
Free fall: IEC 60068-2-32  
Vibration: IEC 60068-2-6

### Certifications

CE, FCC, RoHS, PAL, UL508 (Pending)

**Warranty:** 5 years

## Ordering Informations

**IT-ES6116-IM-4F (M):** 12 ports 10/100Base-T(X) + 4 ports 100Base-FX Multi-mode SC/ST/FC, 12-48VDC

**IT-ES6116-IM-4F (S):** 12 ports 10/100Base-T(X) + 4 ports 100Base-FX Single-mode SC/ST/FC, 12-48VDC

**IT-ES6116-IM-4F (SS):** 12 ports 10/100Base-T(X) + 4 ports 100Base-FX single-mode, single fiber SC/ST/FC, 12-48VDC

## Packing List

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1. Ethernet switch IT-ES6116-IM-4F (plus terminal block) ×1
2. User manual ×1
3. CD ×1
4. Certificate of quality ×1
5. Warranty card ×1