# Industrial Unmanaged FE Switch

**IFS-800**

8x 10/100Base-TX FE Switch

This series models are non-managed industrial grade gigabit switches with 4 or 8 10/100/1000Base-T ports and 0~2 fiber ports, that provide stable and reliable Ethernet transmission. Housed in rugged DIN rail or wall mountable enclosures, these switches are designed for harsh environments, such as industrial networking, intelligent transportation systems (ITS) and are also suitable for many military and utility market applications where environmental conditions exceed commercial product specifications. Standard operating temperature range models (-10 to 60°C) and wide operating temperature range models (-40 to 75°C) fulfill the special needs of industrial automation applications.

## Feature
- 8x 10/100Base-TX RU45 (IFS-800)
- Redundant dual DC input power 12/24/48VDC (9.6~60VDC)
- IP30 rugged metal housing and Fanless
- Wide operating temperature -40 ~ 75°C (-E model)
- Provides broadcast storm protection (IFS-800)
- Supports DIP SW for alarm setting and broadcast storm protection

## Specifications

### IEEE Standard
- IEEE 802.3 10Base-T Ethernet
- IEEE 802.3u 100Base-TX and 100Base-FX Fast Ethernet
- IEEE 802.3 3x Flow Control and Back Pressure
- IEEE 802.3 1000Base-X Gbit/s Ethernet over Fiber-Optic

### Switch Architecture
- Back-plane (Switching Fabric) : 1.2Gbps (IFS-402F)
- 1.6Gbps (IFS-800)
- 5.6Gbps (IFS-802GS)
- Full wire-speed

### Data Processing Transfer Rate
- 14,880pps for Ethernet port
- 44,800pps for Fast Ethernet port
- 148,800pps for Giga Ethernet port

### Flow Control
- IEEE 802.3 3x flow control, back pressure flow control

### Provides Broadcast Storm Protection
- Present, Enable/Disable set by DIP SW (IFS-800)

### MAC Address Table
- 2K (FS-800)

### Packet Buffer Size
- 448Kbit (IFS-800)

### Network Connector
- 4X RJ-45, 2 Fiber (IFS-402F)
- 8x RJ-45 (IFS-800)
- 8x RJ-45, 2 SFP (IFS-802GS)
- RI-45 Port: Auto MDI/MDI-X function, 10/100Base-TX auto negotiation speed, Full/Half duplex
- Fiber Port : 100Base-FX SC/ST, Multi/Single Mode SFP Port : 1000Base-X

### Network Cable
- 10Base-T: 2 pair UTP/STP Cat. 5 cable
- EIA/TIA-568 100-ohm (100m)
- 100Base-TX: 2 pair UTP/STP Cat. 5 cable
- EIA/TIA-568 100-ohm (100m)
- Fiber Cable (Multi-mode): 50/125um~62.5/125um
- Fiber Cable (Single-mode): 8/125um~10/125um
- Wavelength: 1310nm (Multi-mode), 1550nm (Single-mode)
- Available distance: 2KM (Multi-Mode), 30KM (Single-Mode), 50KM (Single Mode)
- SFP: Distance depend on SFP Fiber Transceiver

### Protocol
- CSMA/CD

### LED
- Per unit: Power 1 (Green), Power 2 (Green), Fault (Amber), RJ-45 Per port: Link/Active (Green), Speed 100 (Yellow)

### DIP SW
- DIP 1 : OFF, Enable power failure alarm
- DIP 2 : ON : Disable broadcast storm protection
- DIP 2 : OFF : Enable broadcast storm protection

### Reverse Polarity Protection
- Present

### Overload Current Protection
- Present

### Power Supply
- Redundant Dual DC 12/24/48V (9.6~60VDC) Input power (Removable Terminal Block.)
- Provides DC Power JACK adapter cable for external power supply

### Power Consumption
- 3.9W (IFS-800)

### Alarm Relay Contact
- Relay outputs with current carrying capacity of 1A @ 24VDC, NC

### Removable Terminal Block
- Provides 2 Redundant power, Alarm relay contact, 6 Pin

### Operating Temperature
- -10 ~ 60°C (IFS-800)
- -40 ~ 75°C (IFS-800-E)

### Operating Humidity
- 95% (Non-condensing)

### Storage Temperature
- -40 ~ 85°C

### Housing
- Rugged Metal, IP30 Protection and Fanless

### Dimensions
- 106 x 31.6 x 142mm (D x W x H) (IFS-800)

### Weight
- 0.43kg (IFS-800)

### Installation Mounting
- DIN Rail mounting or wall mounting

### MTBF
- 552,587 Hrs (IFS-800)
- MIL-HDBK-217

### Warranty
- 5 years
Industrial Unmanaged FE Switch

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**Application**

► **Figure 1**: IFS-402F Fast Ethernet Switch Transmission with Daisy Chain

► **Figure 2**: IFS-800 Fast Ethernet Switch Transmission

Specifications & design are subject to change without prior notice. Please visit CTC Union website for more details.

www.ctcu.com

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Industrial Unmanaged FE Switch

**Dimensions**

- **IFS-402F**
- **IFS-800**
- **IFS-802GS**

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Ordering Information

<table>
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<th>Fiber Port</th>
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Fiber Option Type: SC, ST (only for IFS-402F)
002: 2km 030: 30km 050: 50km
020: WDM Bidirectional (TX: 1310nm)
028: WDM Bidirectional (TX: 1550nm)

IFS – 402F - □ - □□□□□
Example: IFS – 402F – E – SC002

Model Naming Rule
IFS - 4: 4x UTP 8: 8x UTP 02F: 2x Fiber 00: 0x Fiber 02GS: 2x GbE SFP

Temperature: -40~75°C Blank: -10~60°C

IFS 402F E
Industrial Fast Ethernet Switch
4: 4x UTP 8: 8x UTP

Fiber Option Type: SC, ST
002: 2km 030: 30km 050: 50km
020: WDM Bidirectional (TX: 1310nm)
028: WDM Bidirectional (TX: 1550nm)

Industrial Power Supply
DR-4524 Industrial Power, Input 85 ~ 264VAC, Output 24VDC, 48W, -10 ~ +50°C
MDR-40-24 Industrial Power, Input 85 ~ 264VAC, Output 24VDC, 40W, -20 ~ +70°C

Industrial SFP Transceiver
(ISFP series of industrial grade SFP modules have been fully tested with the IFS-802GS product for guaranteed compatibility and performance. The best performance can be guaranteed even in mission-critical applications.)
(Please see CTC Union’s Industrial SFP datasheet for more details and more items.)
ISFP-M7000-85-(E) Industrial SFP GbE 1000Base-SX, M/M, 500-meter, wavelength 850nm, 7.5dB, LC, -10~70°C (-40~85°C)
ISFP-S7020-31-(E) Industrial SFP 1000Base-LX, S/M, 20km, wavelength 1310nm, 15dB, LC, -10~70°C (-40~85°C)
ISFP-T7T00-00-(E) Industrial SFP 1000Base-T UTP 100meter, -10~70°C (-40~85°C)
ISFP-T7000-MA-(E) Industrial SFP 100Mbps, long reach UTP (2 wire) (500meter), Master, -10~70°C (-40~85°C)
ISFP-T7000-SL-(E) Industrial SFP 100Mbps, long reach UTP (2 wire) (500meter), Slave, -10~70°C (-40~85°C)

SFP Naming Rule
ISFP - M - 040 - 31 - D - E
Industrial SFP Transceiver
M: Multi Mode S: Single Mode T: UTP
10G: 10Gbps 7G: 7Gbps 5G: 5Gbps 3: Long Range UTP
Distance: 000: (500m) 002: (20km) 020: (50km) 040: (100km)
Wavelength: 000: 850nm 002: 1310nm 020: 1550nm WA: TX/1310nm (Bidi mode A) WB: TX/1550nm (Bidi Mode B) MA: Master (for Long Reach UTP) SL: Slave (for Long Reach UTP)

Package List
- One device of the series
- Quickly installation guide
- Din Rail with screws
- Wall mount bracket with screws
- Terminal block
- Protective caps for SFP ports (for IFS-802GS)
- DC Power Jack adapter cable