

# IFS-1602GS-8PH

## Industrial FE PoE Switch

### 16x FE RJ45 + 2x 1000Base-X SFP with 8x PoE 240W, 48VDC

- » 4KV Surge Protection for PoE UTP and PoE Ports
- » Wide Operating Temperature -40 ~ 75°C
- » IP30 Rugged Metal Housing and Fanless
- » EN50121-4, EN61000-6-2, EN61000-6-4, CE and FCC Certified



The industrial PoE Ethernet switch, unmanaged plug-and-play easy for use, has 16 10/100Mbps UTP ports of which 8 PoE ports support the IEEE802.3af/at standard, each port supports 30W PoE+. Equipped with 2 Gigabit SFP slots for fiber optic connections to meet the requirements for extended transmission distance, fanless design, high MTBF, supports wide operating temperature, redundant 48VDC power input, suitable for heavy-duty applications in harsh environments, such as industrial factory automations, data centers, intelligent transportation systems, military and utility market applications where environmental conditions exceed commercial product specifications.

## Features

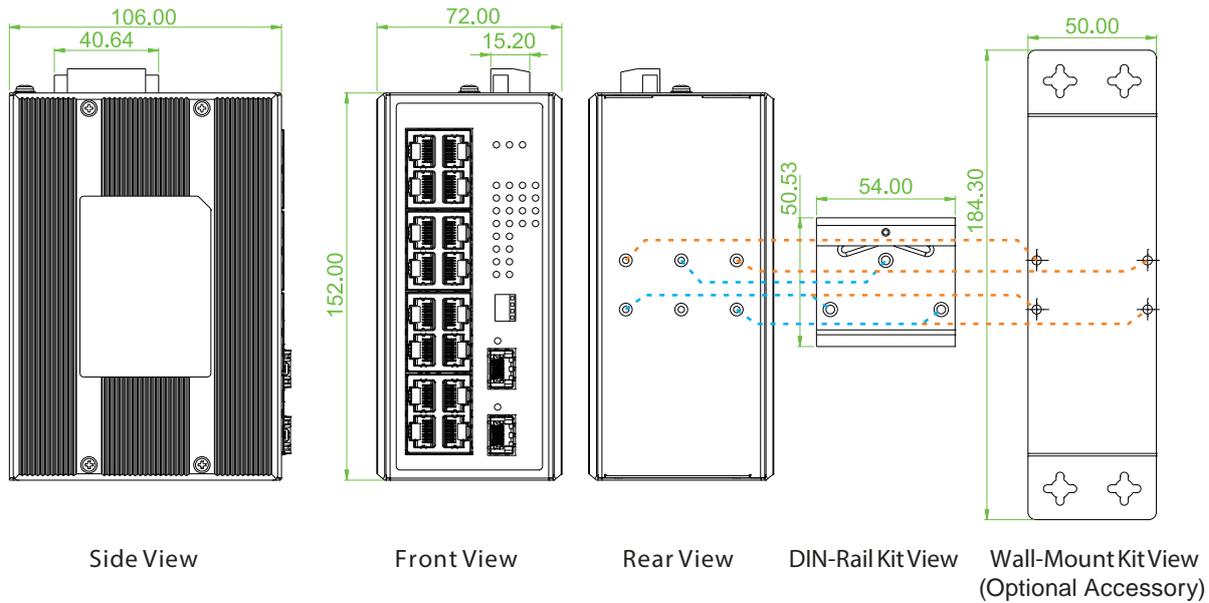
- Provides 8-port IEEE 802.3at/af PoE output (30W/port)
- Maximum PoE output power budget 240W
- 48VDC (44~57VDC) redundant dual power input
- Supports power failure alarm message by relay
- Supports flow control
- Provides broadcast storm protection
- DIN Rail mounting or wall mounting

## Specifications

<b>Standard</b>	IEEE 802.3	10Base-T Ethernet
	IEEE 802.3u	100Base-TX Fast Ethernet
	IEEE 802.3z	1000Base-X Gigabit Ethernet over fiber optical
	IEEE 802.3x	Flow Control and Back Pressure
	IEEE 802.3af	PoE (Power over Ethernet)
	IEEE 802.3at	PoE+ (Power over Ethernet enhancements)
	<b>Switch Architecture</b>	Back-Plane (Switching Fabric): 7.2Gbps (Full Wire-Speed)
<b>Data Processing</b>	Store and Forward	
<b>Flow Control</b>	IEEE 802.3x flow control, back pressure flow control	
<b>MAC Address Table</b>	16K	
<b>Packet Buffer Size</b>	4Mbits	
<b>Max Frame Size</b>	1664 Bytes	
<b>Jumbo Frame</b>	16K Byte	
<b>PoE Standard</b>	IEEE 802.3at/af	
<b>PoE RJ-45 Pin Assignment</b>	RJ-45 port #9~# 16 support IEEE 802.3at/af End-Span, Alternative A mode	
	Positive (V+): RJ-45 pin 1, 2.	
	Negative (V-): RJ-45 pin 3, 6.	
	Data (1, 2, 3, 6)	
<b>Network Connector</b>	16x RJ-45 for 10/100Base-TX, Auto negotiation speed, Auto MDI/MDI-X function, Full/Half duplex	
	2x 1000Base-X SFP	

<b>Network Cable</b>	UTP/STP Cat. 5e cable or above EIA/TIA-568 100-ohm (100meter) Fiber Cable (Multi-mode): 50/125um, 62.5/125um / Fiber Cable (Single-mode): 9/125um			
<b>Protocols</b>	CSMA/CD			
<b>LED</b>	System: Power 1 (Green), Power 2 (Green), Fault (Amber) UTP: 10 Link/Active (Green), 100 Link/Active (Yellow) SFP Slot: Link/Active (Green) PoE: ON (Green)			
<b>DIP SW</b>	DIP 1	Power failure alarm OFF : Enable ON : Disable		
	DIP 2	Broadcast Protection OFF : Enable ON : Disable		
<b>Reverse Polarity Protection</b>	Supported for Power Input			
<b>Overload Current Protection</b>	Supported			
<b>Power Supply</b>	Redundant dual 48VDC (44~57VDC) input power (Removable terminal block) (50~57V input is recommended for IEEE802.3at in 30W applications)			
<b>Power Consumption</b>	<b>Input Voltage</b>	<b>Total Power Consumption</b>	<b>Device Power Consumption</b>	<b>PoE Budget</b>
	50 VDC	253.2W	8.9W	240W
<b>PoE Power Budget</b>	Maximum PoE Output power budget 240W (30W/port)			
<b>Alarm Relay Contact</b>	Relay outputs with current carrying capacity of 1A @24VDC			
<b>Removable Terminal Block</b>	Provides 2 Redundant power, Alarm relay contact, 6 Pin			
<b>Operating Temperature</b>	-10 ~ 60°C (IFS-1602GS-8PH) -40 ~ 75°C (IFS-1602GS-8PHE)			
<b>Operating Humidity</b>	5% to 95% (Non-condensing)			
<b>Storage Temperature</b>	-40 ~ 85°C			
<b>Housing</b>	Rugged metal, IP30 Protection and fanless			
<b>Dimensions</b>	106 x 72 x 152mm (D x W x H)			
<b>Weight</b>	850g			
<b>Installation Mounting</b>	DIN Rail mounting or wall mounting (Optional)			
<b>MTBF</b>	493,382Hours (MIL-HDBK-217)			
<b>Certification</b>				
<b>EMC</b>	CE			
<b>EMI (Electromagnetic Interference)</b>	FCC Part 15 Subpart B Class A, CE			
<b>EMS (Electromagnetic Susceptibility) Protection Level</b>	EN61000-4-2 (ESD) Level 3, Criteria B EN61000-4-3 (RS) Level 3, Criteria A EN61000-4-4 (Burst) Level 3, Criteria A EN61000-4-5 (Surge) Level 3, Criteria B EN61000-4-6 (CS) Level 3, Criteria A EN61000-4-8 (PFMF, Magnetic Field) Field Strength: 300A/m, Criteria A			
<b>Railway Traffic</b>	EN50121-4			
<b>Immunity for Heavy Industrial Environment</b>	EN61000-6-2			
<b>Emission for Heavy Industrial Environment</b>	EN61000-6-4			
<b>4KV Surge Protection</b>	Supported for PoE, UTP and SFP port			
<b>Shock</b>	IEC 60068-2-27			
<b>Freefall</b>	IEC 60068-2-32			
<b>Vibration</b>	IEC 60068-2-6			

## Dimensions



## Ordering Information

Model Name	Total Port	RJ45		SFP		PoE		Input Power			Certification			Operating Temperature
		10/100 Base-TX	1000 Base-X	1000 Base-X	IEEE802.3 at/af	Power Budget	Redundant	EN50121-4	EN61000-6-2 EN61000-6-4	CE FCC				
IFS-1602GS-8PH	18	16	2	2	8	240W	48VDC	V	V	V	-10~60°C			
IFS-1602GS-8PHE	10	8	2	2	8	240W	48VDC	V	V	V	-40~75°C			

## Optional Accessories

### ■ Wall Mount Kit

IND-WMK02	Wall Mount kit for Industrial product (Wide) (184*50mm)
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### ■ Industrial SFP Transceiver

The ISFP series of industrial grade SFP modules have been fully tested with all CTC Union industrial grade Ethernet switches for guaranteed compatibility and performance. Best performance can be guaranteed, even in mission-critical applications. (Please see CTC Union's Industrial SFP datasheets for more items and detailed information.)

ISFP-M7000-85-D(E)	Industrial SFP GbE 1000Base-SX, M/M, 500 meter, wave length 850nm, 7.5dB, LC, DDMI, -10~70°C (-40~85°C)
ISFP-S7020-31-D(E)	Industrial SFP 1000Base-LX, S/M, 20km, wave length 1310nm, 15dB, LC, DDMI, -10~70°C (-40~85°C)
ISFP-T7T00-00-(E)	Industrial SFP 10/100/1000Base-T UTP 100meter, -10~70°C (-40~85°C)

### ■ Industrial Power Supply

NDR-240-48	Industrial Power, Input 90 ~ 264VAC/127 ~ 370VDC, Output 48VDC, 240W, -20 ~ 70°C
NDR-480-48	Industrial Power, Input 90 ~ 264VAC/127 ~ 370VDC, Output 48VDC, 480W, -20 ~ 70°C