IFS-1602GS
Industrial Fast Ethernet Switch

16x FE RJ45 + 2x 1000Base-X SFP

≫ *Provides a DIP-Switch to Set Functions*
≫ *Supports Power Failure Alarm Message by Relay*
≫ *12/24/48VDC (9.6~60VDC) Redundant Dual Power input*
≫ *EN50121-4, EN61000-6-2, EN61000-6-4, CE and FCC Certified*

CE FC EN50121-4 EN61000-6-2 EN61000-6-4

The industrial unmanaged Ethernet switch IFS-1602GS provides stable and reliable Ethernet transmission, features 16 ports 10/100 UTP and equipped with 2 1000Base-X SFP slots. Housed in rugged enclosures, designed for harsh environments, fanless, high MTBF, supports wide operating temperature, and redundant 12/24/48VDC power input, it is suitable for heavy-duty applications 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.
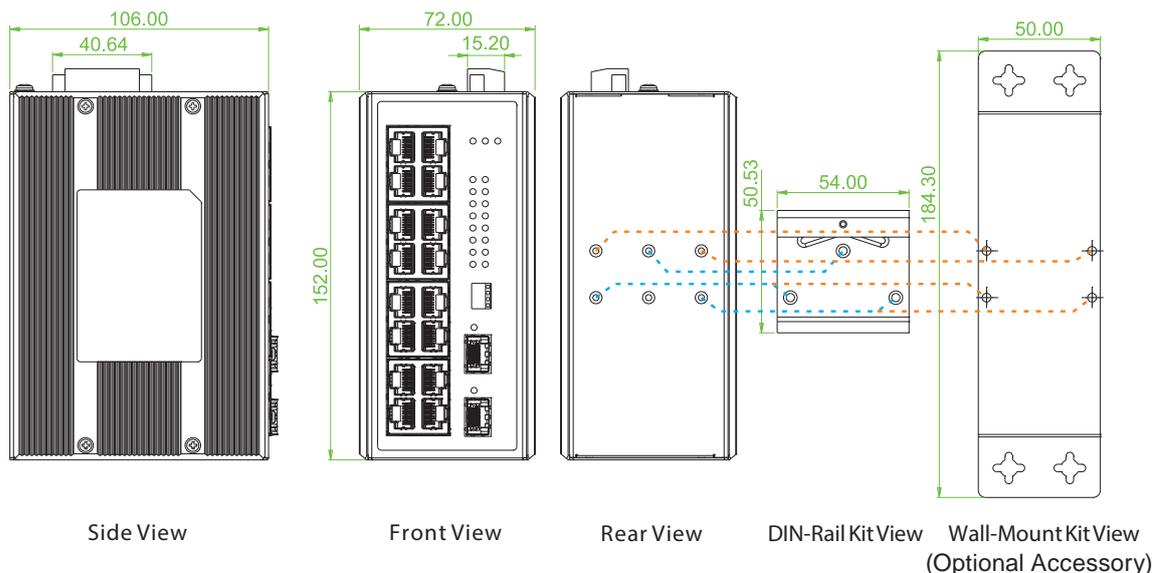
Features

- Wide operating temperature -40 ~ 75°C (-E model)
- Provides broadcast storm protection
- 4KV surge protection for UTP ports
- 2.25K VDC Hi-pot isolation protection for Ethernet ports and power

Specifications

Standard	IEEE 802.3	10Base-T Ethernet
	IEEE 802.3u	100Base-TX and 100Base-FX Fast Ethernet
	IEEE 802.3z	1000Base-X Gigabit Ethernet over fiber-optic
	IEEE 802.3x	Flow Control and Back Pressure
Switch Architecture	Back-Plane (Switching Fabric): 7.2Gbps (Full Wire-Speed)	
Data Processing	Store and Forward	
Transfer Rate	14,880pps for Ethernet port	
	148,800pps for Fast Ethernet port	
	1,488,000pps for Giga Ethernet port	
Flow Control	IEEE 802.3x flow control, back pressure flow control	
Jumbo Frame	16K Byte	
MAC Address Table	16K	
Packet Buffer Size	4M bit	
Network Connector	16x RJ-45, 2x SFP	
	RJ-45 Port: Auto MDI/MDI-X function, 10/100Base-TX Auto negotiation speed, Full/Half duplex	
	2x 1000Base-X SFP port	
Fiber Cable	UTP/STP Cat. 5e cable or above	
	EIA/TIA-568 100-ohm (100meter)	
	Fiber Cable (Multi-mode): 50/125um~62.5/125um	

Network Cable	Fiber Cable (Single-mode): 8/125um~10/125um		
	Wavelength: 1310nm (Multi-mode/Single-mode)		
	SFP: Distance depend on SFP Fiber Transceiver		
Protocol	CSMA/CD		
LED	System: Power 1 (Green), Power 2 (Green), Fault (Amber)		
	UTP: Link/Active (Green), Speed 100 (Yellow)		
	SFP Slot : Link/Active (Green)		
DIP SW	DIP 1	OFF : Enable power failure alarm	
		ON : Disable	
	DIP 2	Broadcast storm protection	
		OFF : Enable ON : Disables	
Reverse Polarity Protection	Supported for Power Input		
Overload Current Protection	Supported		
Power Supply	Redundant Dual DC 12/24/48V (9.6~60VDC) Input power (Removable Terminal Block)		
Power Consumption	8.7W		
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-1602GS)		
	-40 ~ 75°C (IFS-1602GS-E)		
Operating Humidity	5% to 95% (Non-condensing)		
Storage Temperature	-40 ~ 85°C		
Housing	Rugged Metal, IP30 Protection and Fanless		
Dimensions	106 x 72 x 152mm (D x W x H)		
Weight	0.82kg		
Installation Mounting	DIN Rail mounting or wall mounting (Optional)		
MTBF	461,653 Hours (MIL-HDBK-217)		

Certification

EMC/EMS	CE (EN55032, EN55035)
EMI (Electromagnetic Interference)	FCC Part 15 Subpart B Class A, CE
Railway Traffic	EN50121-4
Immunity for Heavy Industrial Environment	EN61000-6-2
Emission for Heavy Industrial Environment	EN61000-6-4
EMS (Electromagnetic Susceptibility) Protection Level	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
Hi-Pot Isolation Protection	DC 2.25KV for power to chassis ground, and UTP port to chassis ground
4KV Surge Protection	Supported for UTP Port
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6

Dimensions

Side View   Front View   Rear View   DIN-Rail Kit View   Wall-Mount Kit View
(Optional Accessory)

Ordering Information

| Model Name | Total Port | RJ45 | SFP | Certification | | | Operating Temperature |
		10/100Base-TX	1000Base-X	EN50121-4	EN61000-6-2, EN61000-6-4	CE, FCC	
IFS-1602GS	18	16	2	V	V	V	-10~60°C
IFS-1602GS-E	18	16	2	V	V	V	-40~75°C

Optional Accessories

■ Wall Mount Kit

IND-WMK02	Wall Mount kit for Industrial product, 184 x 50mm (Wide)

■ 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

MDR-20-24	Industrial Power, Input 85 ~ 264VAC/120 ~ 370VDC, Output 24VDC, 24W, -20 ~ 70°C
MDR-40-48	Industrial Power, Input 85 ~ 264VAC/120 ~ 370VDC, Output 48VDC, 40W, -20 ~ 70°C