IFS-802GS-8PH

8x 10/100Base–TX+ 2x 1000Base–X SFP Slot with 8x PoE+ Switch (240 Watts)

IFS-1602GS-8PH NEW

16x 10/100Base–TX+ 2x 1000Base–X SFP Slot with 8x PoE+ Switch (240 Watts)

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

The IFS-802GS-8PH and IFS-1602GS-8PH are 10/18 Ports unmanaged industrial grade Ethernet PoE switches with 8x 10/100Base-TX PoE 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, security automation applications, IP Surveillance, intelligent transportation systems (ITS) and are also suitable for many military and utility market applications where environmental conditions exceed commercial product specifications (See figure 1). 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.

Features

- 8x 10/100Base-TX RJ45 + 2x1000Base-X SFP with 8x PoE (IFS-802GS-8PH)
- 16x 10/100Base-TX RJ45 + 2x 1000Base-X SFP with 8x PoE (IFS-1602GS-8PH)
- Provides 8-port IEEE802.3at/af PoE output (30W/Per Port)
- Maximum PoE output power budget 240W
- 48VDC (44~57VDC) redundant dual input power
- Wide operating temperature -40 ~ 75°C ("E" model)
- Supports power failure alarm message by relay
- Supports flow control
- Provides broadcast storm protection (IFS-1602GS-8PH)
- IP30 rugged metal housing and fanless
- DIN Rail mounting or wall mounting
- CE, FCC, railway EN50121-4 certification
- Heavy industrial grade EMS, EMI, EN61000-6-2, EN61000-6-4 certification
- 4KV surge protection for UTP and PoE ports (IFS-1602GS-8PH)
- 2.25K VDC Hi-pot isolation protection for Ethernet ports and power (IFS-1602GS-8PH)

Specifications

IEEE Standard	IEEE 802.3 10Base-T Ethernet
	IEEE 802.3u 100Base-TX Fast Ethernet
	IEEE 802.3z 1000Base-X Gigabit Ethernet
	IEEE 802.3x Flow Control and Back Pressure
	IEEE 802.3at PoE+ (Power over Ethernet enhancements)
	IEEE802.3af PoE (Power over Ethernet)
Switch Architecture	Back-plane (Switching Fabric): 5.6Gbps (IFS-802GS-8PH) 7.2Gbps (IFS-1602GS-8PH)
Data Processing	Store and Forward
Flow Control	IEEE 802.3x flow control, back pressure flow control
MAC Address Table	8K (IFS-802GS-8PH) 16K (IFS-1602GS-8PH)
Packet Buffer Size	1Mbits (IFS-802GS-8PH) 4Mbits (IFS-1602GS-8PH)
Max Frame Size	1632 Bytes (IFS-802GS-8PH) 1664 Byte (IFS-1602GS-8PH)
PoE standard	IEEE 802.3at/af
PoE RJ-45 pin Assignment	RJ-45 port #1~# 8 support IEEE 802.3at/af (IFS-802GS-8PH) RJ-45 port #9~# 16 support IEEE 802.3at/af (IFS-1602GS-8PH) End-Span, Alternative A mode
	Positive (V+): RJ-45 pin 1, 2.
	Negative (V-): RJ-45 pin 3, 6.
	Data (1, 2, 3, 6)
Network Connector	8x RJ-45 for 10/100Base-TX (IFS-802GS-8PH) 16x RJ-45 for 10/100Base-TX (IFS-1602GS-8PH) auto negotiation speed, Auto MDI/MDI-X function, Full/Half duplex
	2x 1000Base-X SFP
Network Cable	UTP/STP above Cat. 5e cable
	EIA/TIA-568 100-ohm (100m)
	Fiber Cable (Multi-mode): 50/125um, 62.5/125um Fiber Cable (Single-mode): 9/125um
Protocols	CSMA/CD
LED	Per unit: Power 1 (Green), Power 2 (Green), Fault (Amber)
	Per RJ-45 port : Link/Active (Green) Speed 100 (Yellow)

LED	Fiber Per port: Link/Active (Green)	
	Per PoE Port LED : • Active : ON • Inactive : OFF	
DIP SW	DIP 1	Power failure alarm OFF : Enable ON : Disable
	DIP 2	Broadcast Protection (IFS-1602GS-8PH) OFF : Enable ON : Disable
Reverse Polarity Protection	Supported for Power Input	
Overload Current Protection	Supported	
Power Supply	Redundant dual 48VDC (44~57VDC) input power (Removable terminal block) (50~57V input is recommended for IEEE802.3at in 30W applications)	
Power Consumption	IFS-802GS-8PH power consumption	

Input Voltage	Total Power Consumption	Device Power Consumption	PoE Power Budget
48 VDC	251W	5.2W	240W

IFS-1602GS-8PH power consumption

TBD

PoE Power Budget	Maximum PoE Output power budget 240W (30W/ Per Port)
Alarm Relay Contact	Relay outputs with current carrying capacity of 1A @24VDC
Removable Terminal Block	Provides 2 Redundant power, Alarm relay contact, 6 Pin
Operating Temperature	-10 ~ 60°C (IFS-802GS-8PH, IFS-1602GS-8PH)
	-40 ~ 75°C (IFS-802GS-8PHE, IFS-1602GS-8PHE)
Operating Humidity	5% to 95% (Non-condensing)
Storage Temperature	-40 ~ 85°C
Housing	Rugged metal, IP30 Protection and fanless
Dimensions	106 x 72 x 152 mm (D X W X H)
Weight	765g (IFS-802GS-8PH) TBD (IFS-1602GS-8PH)
Installation Mounting	DIN Rail mounting, or wall mounting (Optional)

MTBF	635,446Hours (IFS-802GS-8PH) TBD (IFS-1602GS-8PH) (MIL-HDBK-217)
Warranty	5 years
Certification	
EMC	CE
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
Safety	UL60950-1 (Pending)
Hi-pot isolation protection	DC 2.25KV for power to chassis ground, and UTP/PoE port to chassis ground (IFS-1602GS-8PH)
4KV surge protection	Supported for PoE & UTP Port (IFS-1602GS-8PH)
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6

Application

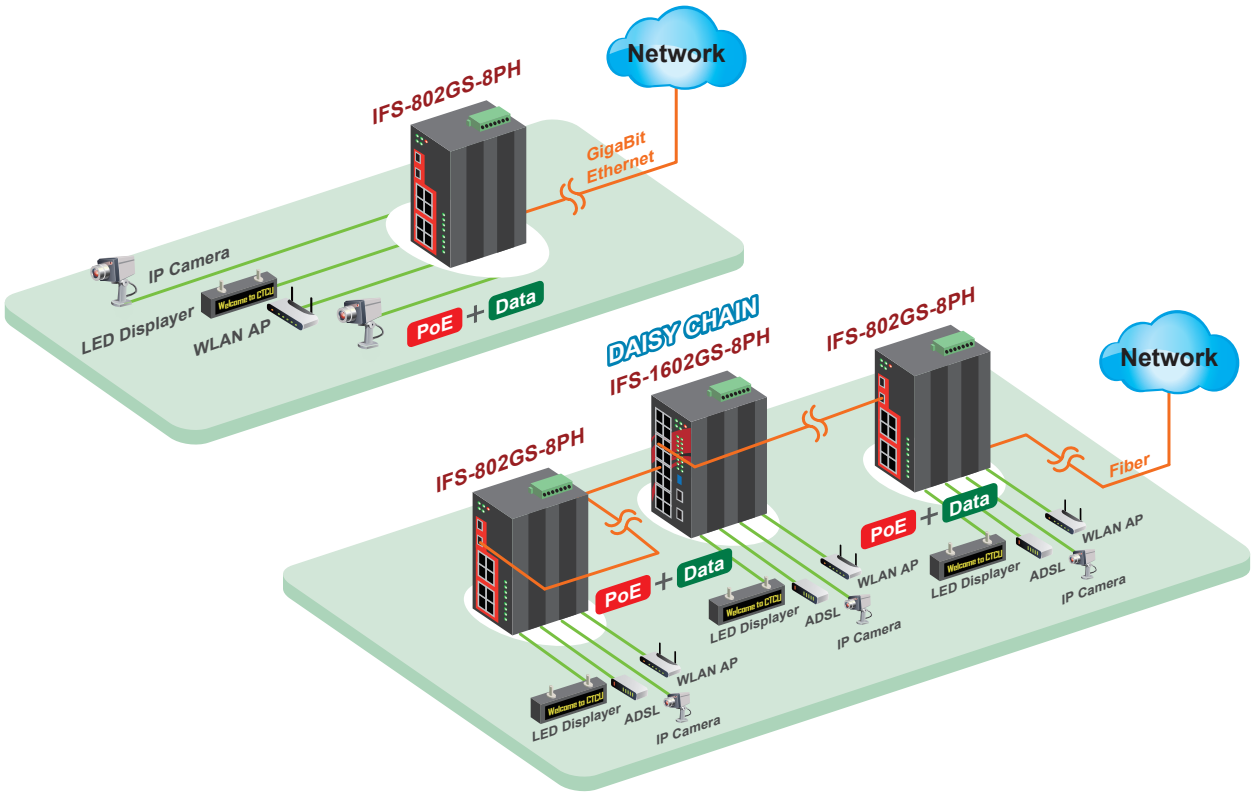
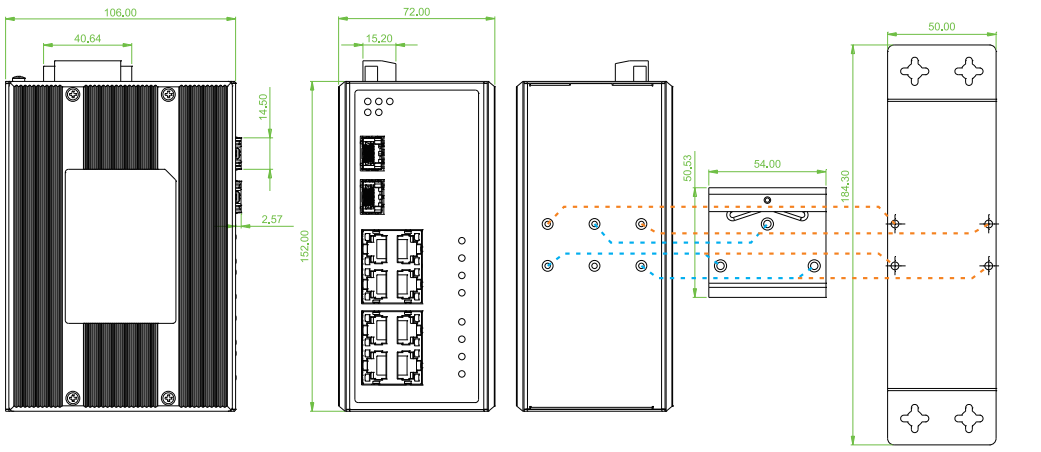


Figure 1 : IFS-802GS-8PH & IFS-1602GS-8PH PoE Ethernet Switch Transmission

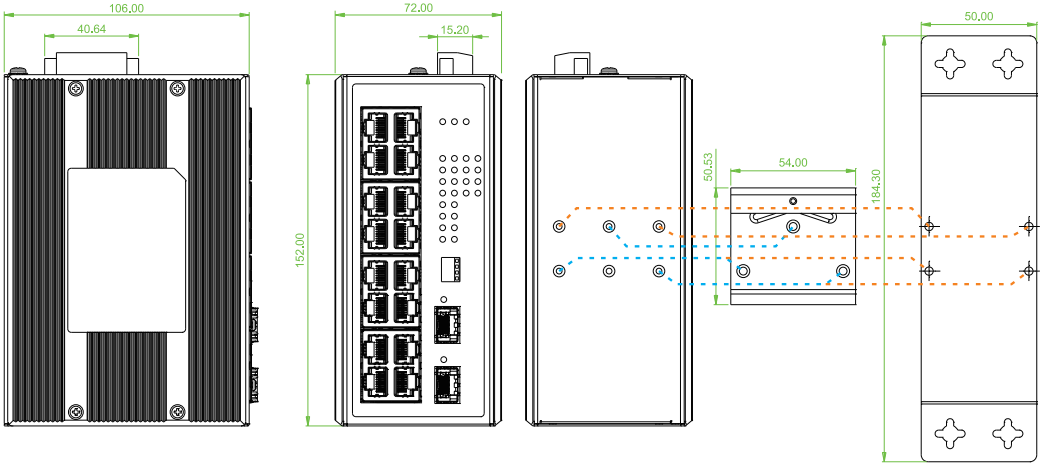
Dimensions

▶ IFS-802GS-8PH



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

▶ IFS-1602GS-8PH



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

Ordering Information

Model Name	Total port	RJ45 UTP Port	Fiber Port	PoE Port		Input Power	Certification			Operating Temperture
		10/100 Base-T(X)	1000 Base-X	IEEE802.3at	Power Budget	Redundant	Railway EN50121-4	EN61000-6-2 EN61000-6-4	CE, FCC	
IFS-802GS-8PH	10	8	2 SFP	8	240W	48VDC	V	V	V	-10~60℃
IFS-802GS-8PHE	10	8	2 SFP	8	240W	48VDC	V	V	V	-40~75℃
IFS-1602GS-8PH	18	16	2 SFP	8	240W	48VDC	V	V	V	-10~60℃
IFS-1602GS-8PHE	18	16	2 SFP	8	240W	48VDC	V	V	V	-40~75℃

Model Naming Rule

IFS - 16 - 02GS - 8PH - E

- IFS: Industrial Fast Ethernet Switch
- 16: 8: 8x FE UTP; 16: 16x FE UTP
- 02GS: 2x GbE SFP
- 8PH: 8x High Power PoE
- E: E: -40 - 75˚C; blank: -10 - 60˚C

Optional Accessories

■ Wall mount kit accessories

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

■ Industrial SFP Transceiver

The ISFP series of industrial grade SFP modules have been fully tested with the series 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,wave length 850nm, 7.5dB, LC, -10~70℃ (-40~85℃)
ISFP-S7020-31-(E)	Industrial SFP 1000Base-LX, S/M, 20km, wave length 1310nm, 15dB, LC, -10~70℃ (-40~85℃)
ISFP-T7T00-00-(E)	Industrial SFP 1000Base-T UTP 100meter, -10~70℃ (-40~85℃)

SFP Naming Rule

ISFP - S - 7 - 040 - 31 - D - E

- ISFP: Industrial SFP Transceiver
- S: M: Multi Mode; S: Single Mode; T: UTP
- 7: 9: 10G; 7: GbE; 5: FE
- 040: Distance — T00: (UTP); 000: (500m); 002: (2km); 020: (20km); 040: (40km)
- 31: Wavelength — 00: UTP; 85: 850nm; 31:1310nm; 55:1550nm; WA: TX/1310nm (Bidi mode A); WB: TX/1550nm (Bidi Mode B)
- D: D: DDMI; Blank: Non DDMI
- E: E:-40~85˚C; Blank:0~70˚C

Package List

- IFS-802GS-8PH or IFS-1602GS-8PH device
- Protective caps for SFP ports
- Quickly installation guide
- Din Rail with screws
- Terminal block