IGS-501S

5x 10/100/1000Base–T+ 1x 100/1000Base–X SFP Gigabit Ethernet Switch

IGS-500

5x 10/100/1000Base–T Gigabit Ethernet Switch

IGS-800

8x 10/100/1000Base–T Gigabit Ethernet Switch

These models are 5/8-port 10/100/1000Base-T Ethernet unmanaged Gigabit switches, with either 1 or 0 port 1000Base-X SFP port, 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 (See Figure). 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

- 5x 10/100/1000Base-T RJ-45 + 1x 100/1000Base-X SFP (IGS-501S)
- 5x 10/100/1000Base-T RJ-45 (IGS-500)
- 8x 10/100/1000Base-T RJ-45 (IGS-800)
- Supports broadcast storm protection
- Supports power failure alarm message by relay
- Supports flow control
- Jumbo frame support
- Support IEEE 802.3az Green Ethernet
- Supports auto-negotiation and auto-MDI/MDI-X
- Redundant dual DC input power 12/24/48VDC (9.6~60VDC)
- IP30 rugged metal housing, Fanless
- Supports DIN Rail or wall mounting installation
- Wide operating temperature -40~75°C (-E model)
- EN50121-4, CE, FCC Certification
- Heavy industrial grade EMS, EMI, EN61000-6-2, EN61000-6-4 certified

Specifications

IEEE Standard	IEEE 802.3 10Base-T Ethernet
	IEEE 802.3u 100Base-TX, 100Base-FX, Fast Ethernet
	IEEE 802.3ab 1000Base-T Gbit/s Ethernet over twisted pair
	IEEE 802.3x Flow Control
	IEEE 802.3z 1000Base-X Gbit/s Ethernet over Fiber-Optic
Switch Architecture	Back-plane (Switching Fabric): 12Gbps (IGS-501S), 10Gbps (IGS-500), 16Gbps (IGS-800) Full wire-speed
Data Processing	Store and Forward
Flow Control	IEEE 802.3x flow control for Full duplex , back pressure for half duplex
Provides Broadcast Storm Protection	Supported
Jumbo Frame	9.6KBytes
MAC Address Table	8K
Packet Buffer Size	128K Byte (IGS-500, IGS-501S) 512K Byte (IGS-800)
Network Connector	5 x 10/100/1000Base-T RJ-45 (IGS-500, IGS-501S)
	8 x 10/100/1000Base-T RJ-45 (IGS-800)
	1x 100/1000Base-X SFP connector (only for IGS-501S)
	10/100/1000Base-TX auto negotiation speed, Auto MDI/MDI-X function, Full/Half duplex
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 (only for IGS-501S)
	Fiber Cable (Single-mode): 9/125um (only for IGS-501S)
Protocols	CSMA/CD
LED	Per unit: Power 1 (Green), Power 2 (Green), Fault (Amber)
	Per RJ45: Link/Act 1000 (Yellow), Link/Act 10/100 (Green) Fiber LED: Link/Act (Green)

DIP SW	DIP 1	ON : Disable OFF : Enable power failure alarm
	DIP 2	ON : Disables broadcast storm protection OFF : Enable broadcast storm protection
DIP SW	DIP 3	Green Ethernet ON : Disable Green Ethernet OFF : Enable 802.3az Green Ethernet
	DIP 4	SFP speed (only for IGS-501S) ON : 100M OFF : 1000M
Reverse Polarity Protection	Supported for Power Input	
Overload Current Protection	Supported	
Power Supply	Redundant Dual DC 12/24/48V (9.6~60VDC), or AC 24V (18~36VAC) Input power (Removable Terminal Block)	

Power Consumption

Input	IGS-500	IGS-501S	IGS-800
12VDC	3.3W	3.9W	7.0W
24VDC	3.4W	3.9W	7.0W
48VDC	4.8W	5.3W	8.7W

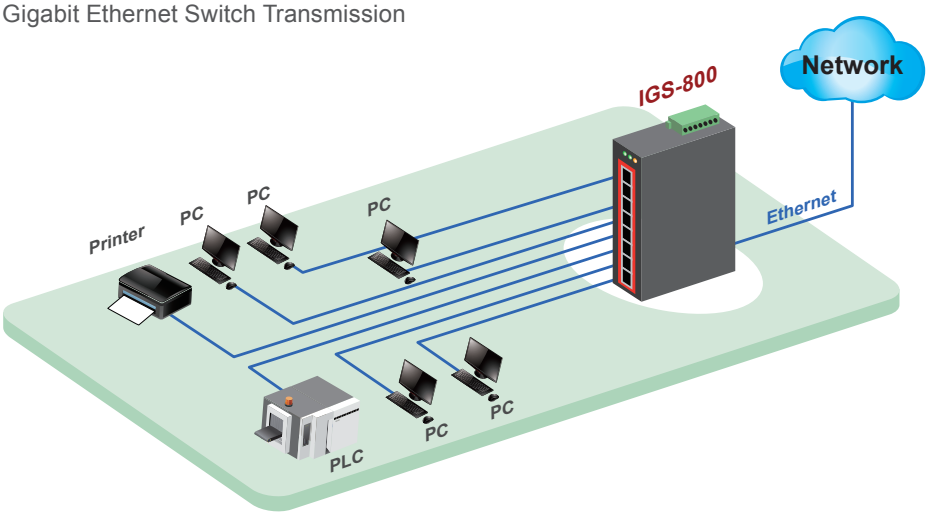
Alarm Relay Contact	Relay outputs with current carrying capacity of 1 A @24VDC, NC
Removable Terminal Block	Provides 2 redundant power, alarm relay contact, 6 Pin
Operating Temperature	-10°C~60°C (IGS-501S, IGS-500, IGS-800) -40°C~75°C (IGS-501S-E, IGS-500-E, IGS-800-E)
Operating Humidity	5% to 95% (Non-condensing)
Storage Temperature	-40 ~ 85°C
Housing	Rugged Metal,IP30Protection and fanless
Dimensions	106 x 31.6 x 142 mm (D x W x H)
Weight	0.415kg (IGS-501S) 0.41kg (IGS-500) 0.44kg (IGS-800)
Installation Mounting	DIN Rail mounting, or wall mounting (Optional)

MTBF	1,101,374 hrs (IGS-501S) 1,154,166hrs (IGS-500) 747,984hrs (IGS-800) (MIL-HDBK-217)
Warranty	5 years
Certification	
EMC/EMS	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
EMS (Electromagnetic Susceptibility) Protection Level	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
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6

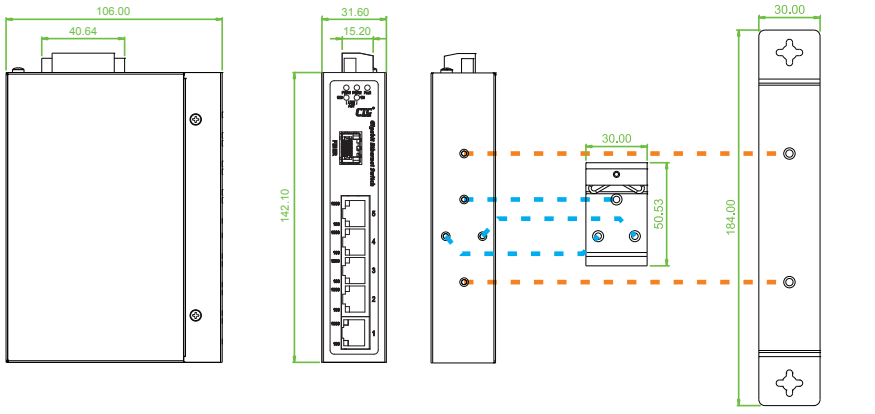
Application

Figure : IGS-800 Gigabit Ethernet Switch Transmission

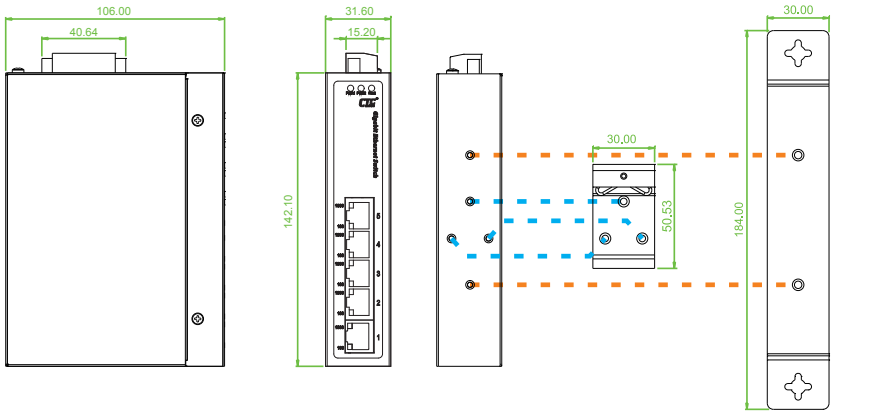


Dimensions

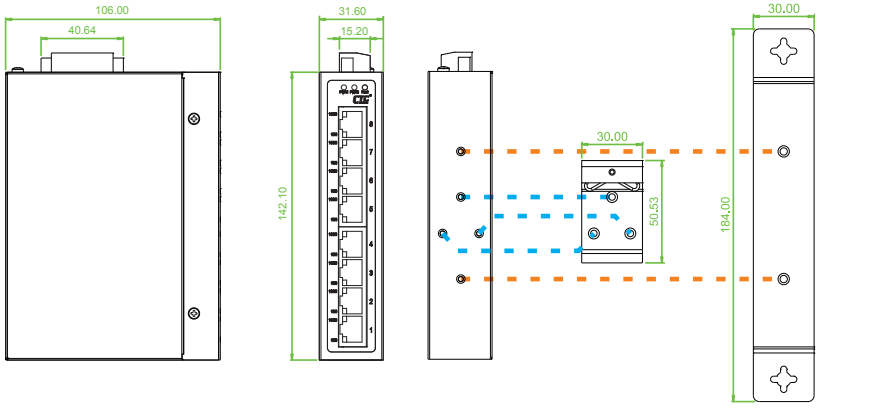
▶ IGS-501S



▶ IGS-500



▶ IGS-800



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	Power Input	Certification				Operating Temperature
		10/100/1000 Base-T	100/1000Base-X	Redundant	Railway EN50121-4	EN61000-6-2 EN61000-6-4	CE	FCC	
IGS-501S	6	5	1x SFP	12/24/48VDC	V	V	V	V	-10~60℃
IGS-501S-E	6	5	1x SFP	12/24/48VDC	V	V	V	V	-40~75℃
IGS-500	5	5		12/24/48VDC	V	V	V	V	-10~60℃
IGS-500-E	5	5		12/24/48VDC	V	V	V	V	-40~75℃
IGS-800	8	8		12/24/48VDC	V	V	V	V	-10~60℃
IGS-800-E	8	8		12/24/48VDC	V	V	V	V	-40~75℃

Model Naming Rule

IGS – 5 – 01S – E → E: -40~75˚C, Blank: -10~60˚C

- IGS: Industrial Gigabit Switch
- 5: 5x GbE UTP; 8: 8x GbE UTP
- 01S: 1x GbE SFP; 00: 0x GbE SFP

Port Number / Temperature

IGS – □□□ – □

Example: IGS – 500 – E

Package List

- One device of the series
- Protective caps for SFP ports (for IGS-501S)
- Quick installation guide
- Din Rail with screws
- Terminal block

Optional Accessories

Wall mount kit accessories

IND-WMK01	Wall Mount kit for Industrial product (184 x 30mm)

Industrial SFP Transceiver

The ISFP series of industrial grade SFP modules have been fully tested with the IGS-501S 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 10/100/1000Base-T UTP 100meter, -10~70℃ (-40~85℃)
ISFP-M5002-31-(E)	Industrial SFP 155M 100Base-FX, MM, 2km, wave length 1310nm, 12dB, LC, -10~70℃ (-40~85℃)
ISFP-S5030-31-(E)	Industrial SFP 155M 100Base-FX, SM, 30km, 1310nm, 19dB, LC, -10~70℃ (-40~85℃)

SFP Naming Rule

ISFP – S – 7 – 040 – 31 – D – E → E:-40~85˚C, Blank:0~70˚C

- 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: DDMI; Blank: Non DDMI

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