



## IGS-501S

5x 10/100/1000Base-T + 1x 100/1000Base-X SFP

## IGS-500

5x 10/100/1000Base-T

## IGS-800

8x 10/100/1000Base-T

The series models are 5/8-port 10/100/1000Base-T Ethernet non-managed 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. 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

- 5x 10/100/1000Base-T RJ-45 + 1x100/1000Base-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 IEEE802.3az 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
- Industrial Grade EMS, EMI, EN61000-6-2, EN61000-6-4 certified

### Specifications

<b>IEEE Standard</b>	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 IEEE802.3x Flow Control IEEE 802.3z 1000Base-X Gbit/s Ethernet over Fiber-Optic
<b>Switch Architecture</b>	Back-plane (Switching Fabric): 12Gbps (IGS-501S) 10Gbps (IGS-500) 16Gbps (IGS-800) Full wire-speed
<b>Data Processing</b>	Store and Forward
<b>Flow Control</b>	IEEE 802.3x flow control for Full duplex, back pressure for half duplex
<b>Provides Broadcast Storm Protection</b>	Present
<b>Jumbo Frame</b>	9.6KBytes
<b>MAC Address Table</b>	8K
<b>Packet Buffer Size</b>	128KByte
<b>Network Connector</b>	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
<b>Network Cable</b>	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)
<b>Protocols</b>	CSMA/CD
<b>LED</b>	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)
<b>DIP SW</b>	DIP 1 ON : Disable OFF : Enable power failure alarm DIP 2 ON : Disables broadcast storm protection OFF : Enable broadcast storm protection Green Ethernet DIP 3 ON : Disable Green Ethernet OFF : Enable 802.3az Green Ethernet DIP 4 SFP speed (only for IGS-501S) ON : 100M OFF : 1000M

<b>Reserve Polarity Protection</b>	Present for Power Input																
<b>Overload Current Protection</b>	Present																
<b>Power Supply</b>	Redundant Dual DC 12/24/48V (9.6~60VDC), or AC 24V (18~36VAC) Input power (Removable Terminal Block) Provides DC Power JACK adapter cable for external power supply																
<b>Power Consumption</b>	<table border="1"> <thead> <tr> <th>Input</th> <th>IGS-500</th> <th>IGS-501S</th> <th>IGS-800</th> </tr> </thead> <tbody> <tr> <td>12VDC</td> <td>3.3W</td> <td>3.9W</td> <td>7.0W</td> </tr> <tr> <td>24VDC</td> <td>3.4W</td> <td>3.9W</td> <td>7.0W</td> </tr> <tr> <td>48VDC</td> <td>4.8W</td> <td>5.3W</td> <td>8.7W</td> </tr> </tbody> </table>	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
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														
<b>Alarm Relay Contact</b>	Relay outputs with current carrying capacity of 1 A @24VDC, NC																
<b>Removable Terminal Block</b>	Provides 2 redundant power, alarm relay contact, 6 Pin																
<b>Operating Temperature</b>	-10°C~60°C (IGS-501S, IGS-500, IGS-800) -40°C~75°C (IGS-501S-E, IGS-500-E, IGS-800-E)																
<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 31.6 x 142 mm (D x W x H)																
<b>Weight</b>	0.415kg (IGS-501S) 0.41kg (IGS-500) 0.44kg (IGS-800)																
<b>Installation Mounting</b>	DIN Rail mounting or wall mounting																
<b>MTBF</b>	569,039hrs (IGS-501S) 612,034hrs (IGS-500) 301,121hrs (IGS-800) (MIL-HDBK-217)																
<b>Warranty</b>	5 years																
<b>Certification</b>																	
<b>EMC/EMS</b>	CE																
<b>EMI (Electromagnetic Interference)</b>	FCC Part 15 Subpart B Class A, CE EN55022 Class 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																

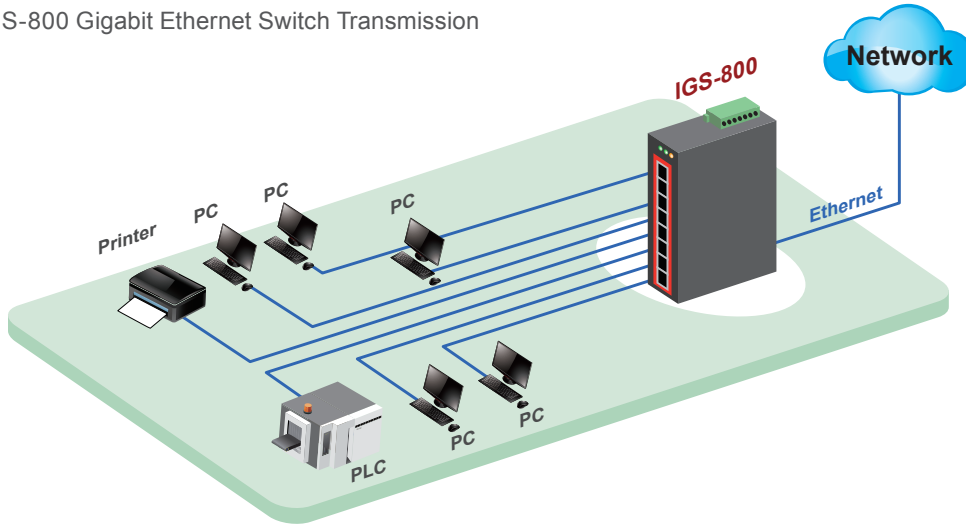
# Industrial Unmanaged GbE Switch

EMS	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

Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6

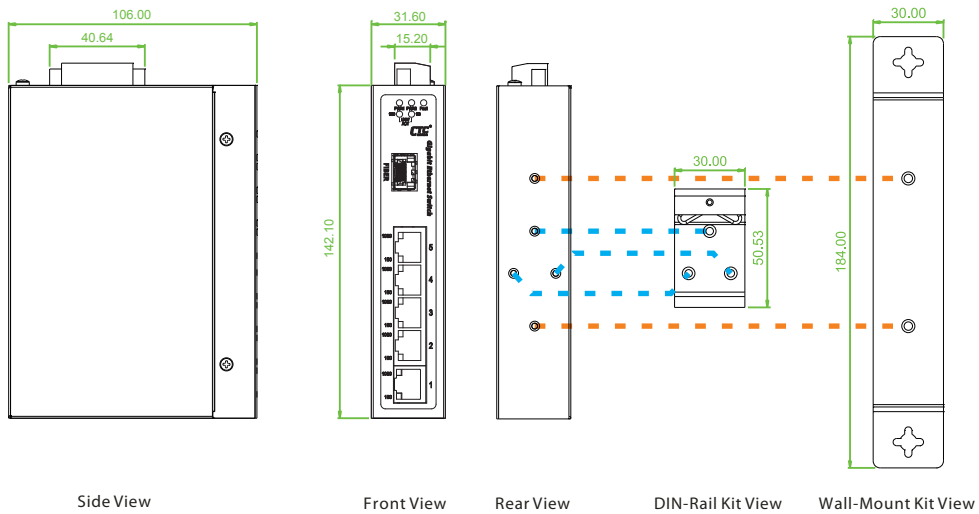
## Application

► **Figure : IGS-800 Gigabit Ethernet Switch Transmission**

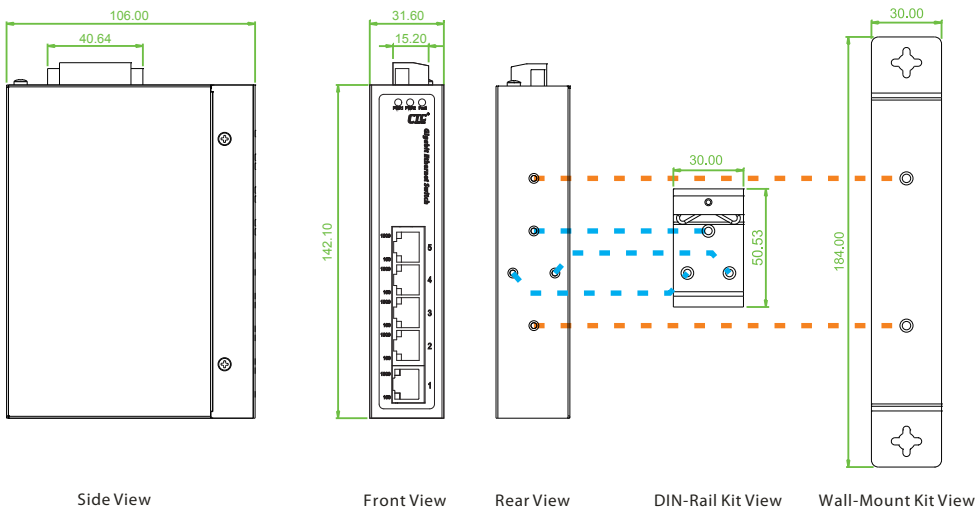


## Dimensions

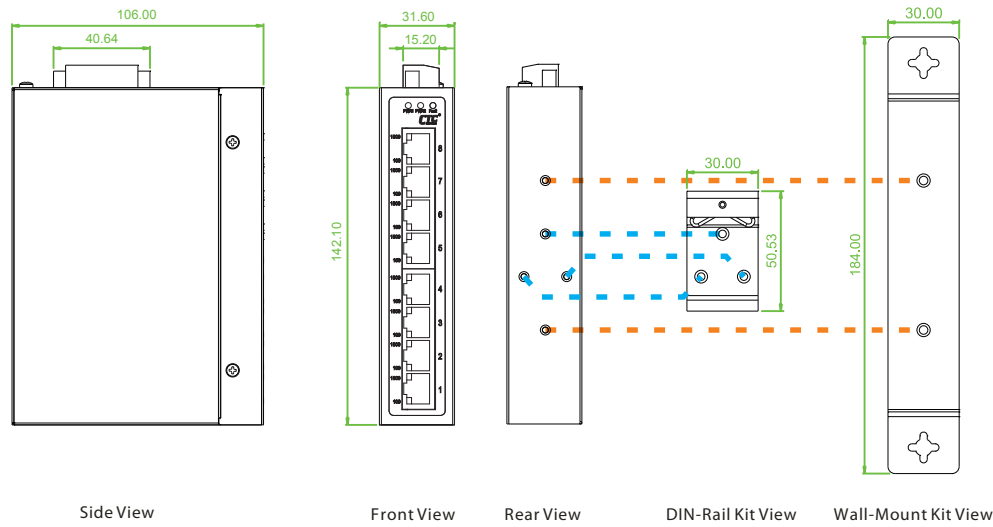
► **IGS-501S**



► **IGS-500**



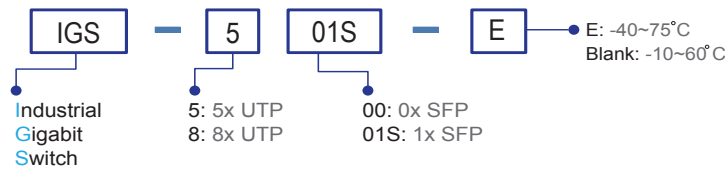
## IGS-800



## Ordering Information

Model Name	Total Port	UTP Port		Fiber Port		Certification			Operating Temperature	
		10/100/1000 Base-T		100/1000Base-X		Railway EN50121-4	EN61000-6-2 EN61000-6-4	CE		FCC
IGS-501S	6	5		1x SFP		V	V	V	V	-10~60 C
IGS-501S-E	6	5		1x SFP		V	V	V	V	-40~75 C
IGS-500	5	5				V	V	V	V	-10~60 C
IGS-500-E	5	5				V	V	V	V	-40~75 C
IGS-800	8	8				V	V	V	V	-10~60 C
IGS-800-E	8	8				V	V	V	V	-40~75 C

### Model Naming Rule



Example: IGS - 500 - E

## Optional Accessories

### Industrial Power Supply

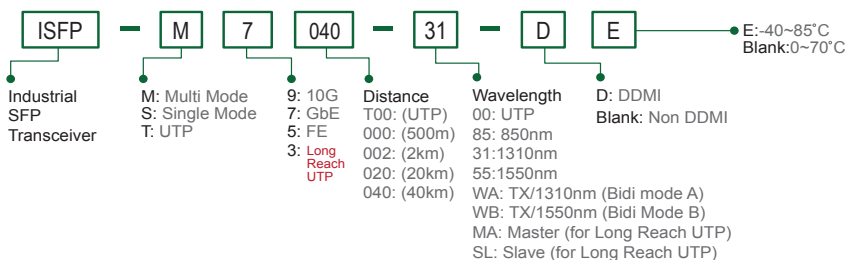
DR-4524	Industrial Power, Input 85 ~ 264VAC, Output 24VDC, 48W, -10 ~ +50°C
MDR-40-24	Industrial Power, Input 85 ~ 264VAC, Output 24VDC, 40W, -20 ~ +70°C

### Industrial SFP Transceiver

(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°C (-40~85°C)
ISFP-S7020-31-(E)	Industrial SFP 1000Base-LX, S/M, 20km, wave length 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-M5002-31-(E)	Industrial SFP 155M 100Base-FX, MM, 2km, wave length 1310nm, 12dB, LC, -10~70°C (-40~85°C)
ISFP-S5030-31-(E)	Industrial SFP 155M 100Base-FX, SM, 30km, 1310nm, 19dB, LC, -10~70°C (-40~85°C)
ISFP-T3T00-MA-(E)	Industrial SFP 100Mbps, long reach UTP (2 wire) (500meter), Master, -10~70°C (-40~85°C)
ISFP-T3T00-SL-(E)	Industrial SFP 100Mbps, long reach UTP (2 wire) (500meter), Slave, -10~70°C (-40~85°C)

### SFP Naming Rule



## Package List

- One device of the series
- Protective caps for SFP ports (for IGS-501S)
- Quickly installation guide
- Din Rail with screws
- Wall mount bracket with screws
- Terminal block
- DC Power JACK adapter cable