



IGS-402S-4PH24

4x 100/1000Base-T+ 2x 100/1000Base-X SFP Slot with 4x PoE+ Ethernet Switch (120 Watts, 24V Booster)

IGS-402F-4PH24

4x 10/100/1000Base-T+ 2x 1000Base-SX/Lx Fiber with 4xPoE+ Ethernet Switch (120 Watts, 24V Booster)

IGS-600-4PH24

6x 10/100/1000Base-T with 4x PoE+ Ethernet Switch (120 Watts, 24V Booster)

This series models are 6 port unmanaged industrial grade gigabit PoE switches with 4x 10/100/1000Base-T PoE ports 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. 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

- 4x10/100/1000Base-T RJ-45+ 2x 100/1000Base-X SFP (Total 6 Port) with 4xPoE+, total 120W power budget (IGS-402S-4PH24)
- 4x10/100/1000Base-T RJ-45+ 2x 1000Base-X SC (Total 6 Port) with 4xPoE+, total 120W power budget (IGS-402F-4PH24)
- 6x10/100/1000Base-T RJ-45 (Total 6 Port) with 4xPoE+, total 120W power budget (IGS-600-4PH24)
- Provides 4-port IEEE802.3at/af PoE output (30W/Per Port)
- 24/48VDC (20~57VDC) redundant dual input power with built-in very high efficiency booster(94~97%) to rise up 55 VDC for PoE output
- Regulate PoE output voltage (55VDC) to stabilize PoE device, and guarantee delivery PoE power distance to 100meter (Figure 2)
- Supports broadcast storm protection
- Supports power failure alarm message by relay
- Supports flow control
- Jumbo frame support
- Supports DIN Rail or wall mounting installation
- IP30 rugged metal housing and fanless
- Wide operating temperature -40 ~ 75°C ("E" model)
- UL60950-1, CE, FCC, EN50121-4 certification
- 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 Fast Ethernet IEEE 802.3ab 1000Base-T Gigabit Ethernet IEEE 802.3z 1000Base-X Gigabit Ethernet IEEE 802.3x Flow Control and Back Pressure IEEE 802.3af PoE (Power over Ethernet) IEEE 802.3at PoE+ (Power over Ethernet enhancements)
Switch Architecture	Back-plane (Switching Fabric): 12Gbps (IGS-402S-4PH24, IGS-402F-4PH24, IGS-600-4PH24) Full wire-speed
Data Processing	Store and Forward
Flow Control	IEEE 802.3x flow control, back pressure flow control
Provides Broadcast Storm Protection	Present, Enable / Disable set by DIP SW
Jumbo Frame	10K Bytes
MAC Address Table	8K
Packet Buffer Size	1Mbits
PoE standard	IEEE 802.3at/af
PoE RJ-45 pin Assignment	RJ-45 port # 1~# 4 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, 4, 5, 7, 8)
Network Connector	4 x RJ-45 (IGS-402S-4PH24, IGS-402F-4PH24) 6 x RJ-45 (IGS-600-4PH24) 10/100/1000Base-T auto negotiation speed, Auto MDI/MDI-X function, Full/Half duplex 2x 100/1000Base-X SFP (IGS-402S-4PH24) 2x1000Base-X Fiber connector: SC Muti Mode or Single Mode (IGS-402F-4PH24)
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)

LED	Per RJ-45 port : Link/Active (Green), Speed 10 (OFF), 100 (Green), 1000 (Yellow) Fiber Per port: Link/Active (Green) Per Port PoE LED • Active : ON • Inactive : OFF • Fault : Flash (Fault: Over Load, Short Circuit, Port failed at Startup)												
DIP SW	DIP 1 ON : Disable power failure alarm OFF : Enable power failure alarm DIP 2 ON : Disables broadcast storm protection OFF : Enable broadcast storm protection DIP 3 ON : Fiber 2 for 100Base-FX SFP OFF : Fiber 2 for Gigabit SFP (Only for IGS-402S-4PH24) ON : Fiber 1 for 100Base-FX SFP DIP 4 OFF : Fiber 1 for Gigabit SFP (Only for IGS-402S-4PH24)												
Reserve Polarity Protection	Present												
Overload Current Protection	Present												
Power Supply	Redundant Dual DC 24/48V (20~57VDC) Input power (Removable Terminal Block) Built-in very high efficiency booster(94~97%) to rise up 55 VDC for PoE output Regulate PoE output voltage (55VDC) to stabilize PoE device, and guarantee delivery PoE power distance to 100meter (Figure 2)												
Power Consumption	<table border="1"> <thead> <tr> <th>Input Voltage</th> <th>IGS-402S-4PH24</th> <th>IGS-402F-4PH24</th> <th>IGS-600-4PH24</th> </tr> </thead> <tbody> <tr> <td>24VDC</td> <td>143.3W</td> <td>143.2W</td> <td>142.9W</td> </tr> <tr> <td>48VDC</td> <td>138.2W</td> <td>138.2W</td> <td>139.6W</td> </tr> </tbody> </table> <p>(Include full load 120W PoE output)</p>	Input Voltage	IGS-402S-4PH24	IGS-402F-4PH24	IGS-600-4PH24	24VDC	143.3W	143.2W	142.9W	48VDC	138.2W	138.2W	139.6W
Input Voltage	IGS-402S-4PH24	IGS-402F-4PH24	IGS-600-4PH24										
24VDC	143.3W	143.2W	142.9W										
48VDC	138.2W	138.2W	139.6W										
PoE Power Output	Maximum PoE Output power budget 120W (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												

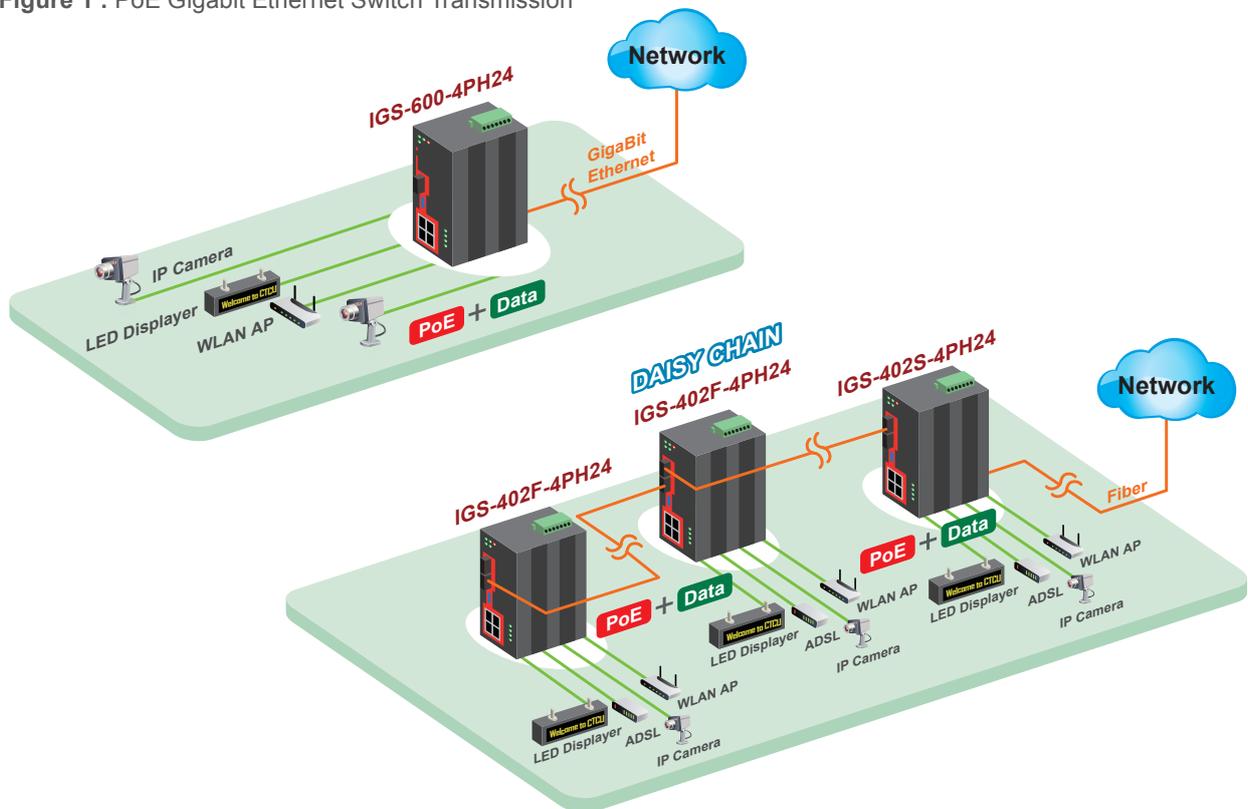
Industrial Unmanaged GbE PoE Switch

Operating Temperature	-10 ~ 60°C (IGS-402S-4PH24, IGS-402F-4PH24, IGS-600-4PH24) -40 ~ 75°C (IGS-402S-4PHE24, IGS-402F-4PHE24, IGS-600-4PHE24)
Operating Humidity	5% to 95% (Non-condensing)
Storage Temperature	-40 ~ 85°C
Housing	Rugged metal, IP30 Protection and fanless
Dimensions	106 x 62.5 x 134.8mm (D X W X H)
Weight	0.84kg (IGS-402S-4PH24) 0.68kg (IGS-402F-4PH24) 0.84kg (IGS-600-4PH24)
Installation Mounting	DIN Rail mounting or wall mounting
MTBF	736,988 Hours @25°C (IGS-402S-4PH24) 635,099 Hours @25°C (IGS-402F-4PH24) 649,579 Hours @25°C (IGS-600-4PH24) (MIL-HDBK-217)
Warranty	5 years
Certification	
EMC	CE

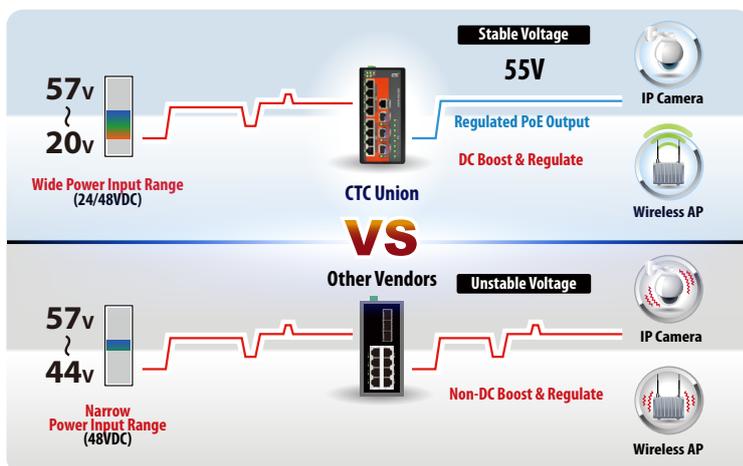
EMI (Electromagnetic Interference)	FCC Part 15 Subpart B Class A, CE EN55022 Class A
Railway Traffic	EN50121-4
Immunity for Heavy Industrial Environment	EN61000-6-2
Emission for Heavy Industrial Environment	EN61000-6-4
EMS (Electromagnetic Susceptibility) Protection Level	EN61000-4-2 (ESD) Level 3, Criteria 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
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6

Application

► Figure 1 : PoE Gigabit Ethernet Switch Transmission



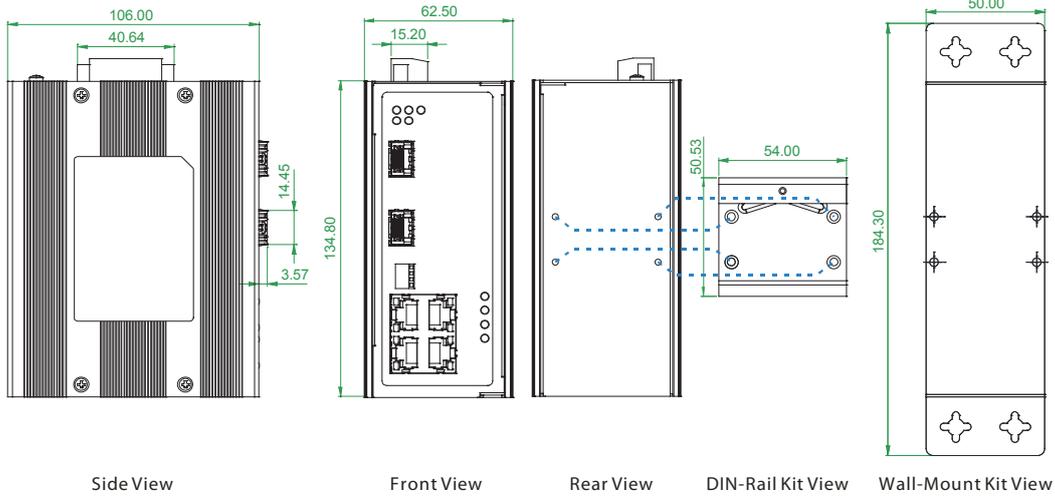
► Figure 2 : High efficiency boost technology for PoE



- Regulated PoE output voltage (55VDC) to stabilize PoE device
- Guarantee delivery PoE power distance to 100 meter
- Wide range input power 24/48VDC (20~57VDC)
- Built-in very high efficiency (94~97%) to boost PoE output voltage

Dimensions

► IGS-402S-4PH24



Side View

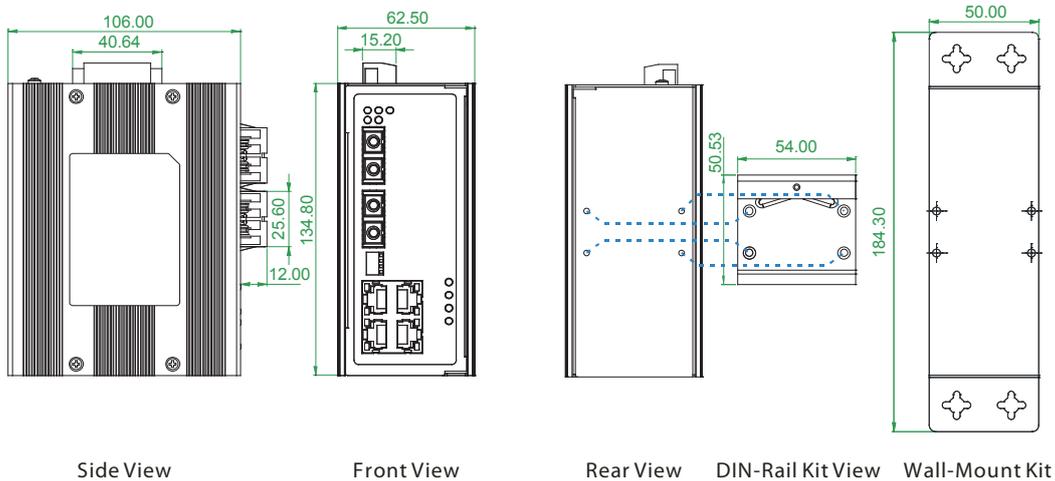
Front View

Rear View

DIN-Rail Kit View

Wall-Mount Kit View

► IGS-402F-4PH24



Side View

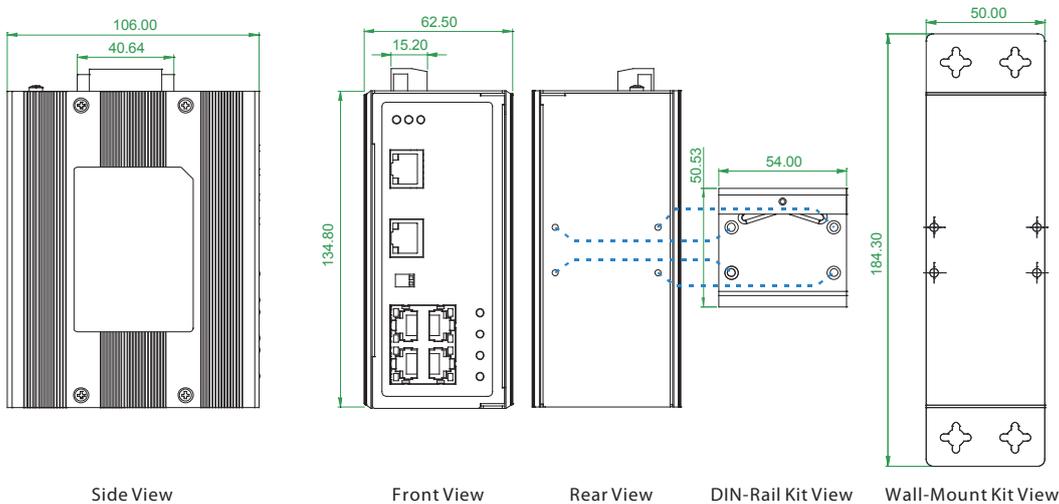
Front View

Rear View

DIN-Rail Kit View

Wall-Mount Kit View

► IGS-600-4PH24



Side View

Front View

Rear View

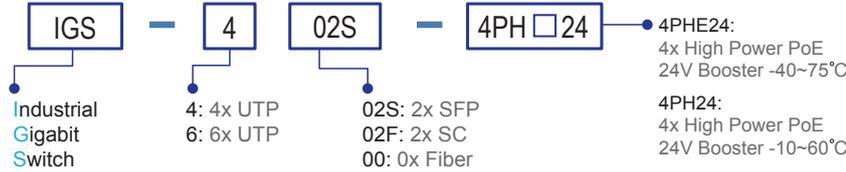
DIN-Rail Kit View

Wall-Mount Kit View

Ordering Information

Model Name	Port	UTP Port	Fiber Port		Certification				Operating Temperature
		10/100/1000 Base-T(X)	1000 Base-X	100/1000 Base-X	Railway EN50121-4	Safety UL60950-1	EN61000-6-2 EN61000-6-4	CE, FCC	
IGS-402S-4PH24	6	4	—	2 SFP	V	V	V	V	-10~60°C
IGS-402S-4PHE24	6	4	—	2 SFP	V	V	V	V	-40~75°C
IGS-402F-4PH24	6	4	2 SC	—	V	V	V	V	-10~60°C
IGS-402F-4PHE24	6	4	2 SC	—	V	V	V	V	-40~75°C
IGS-600-4PH24	6	6	—	—	V	V	V	V	-10~60°C
IGS-600-4PHE24	6	6	—	—	V	V	V	V	-40~75°C

Model Naming Rule



Fiber Connector Type	Connectivity Distance
SC	SC001: 500m (SC, M/M) SC002: 2km (SC, M/M) SC020: 20km (SC, S/M)
(Only for IGS-402F-4PH24)	SC040: 40km (SC, S/M)
	SC020A: WDM 20km A type (TX: 1310nm)
	SC020B: WDM 20km B type (TX: 1550nm)

Optional Accessories

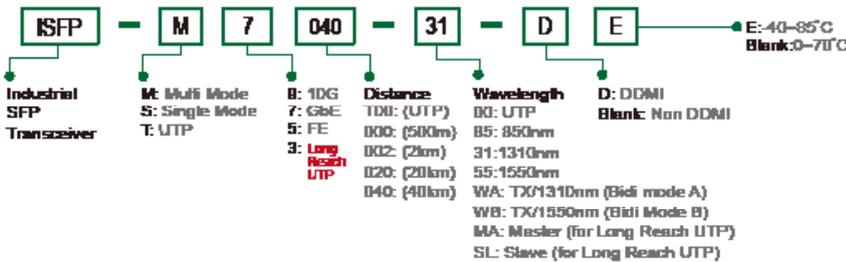
Industrial SFP Transceiver

(The ISFP series of industrial grade SFP modules have been fully tested with the IGS-402S-4PH24 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-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 1000Base-T UTP 100meter, -10~70°C (-40~85°C)
ISFP-M5002-31-D(E)	Industrial SFP 155M 100Base-FX, MM, 2km, wave length 1310nm, 12dB, LC, DDMI, -10~70°C (-40~85°C)
ISFP-S5030-31-D(E)	Industrial SFP 155M 100Base-FX, SM, 30km, 1310nm, 19dB, LC, DDMI, -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-402S-4PH24)
- Quickly installation guide
- Din Rail with screws
- Wall mount bracket with screws
- Terminal block