

IGS-402CSW-4PH

4x GbE RJ45 + 2x 100/1000 SFP with 4x PoE 120W, Compact size

NEW



- 4KV surge protection for PoE, UTP and SFP ports
- EN50121-4, EN61000-6-2, EN61000-6-4, CE, FCC certified
- Compact size for easy installation
- Auto checking and auto reset when PoE PD fail



These Gigabit Ethernet switch models are managed industrial grade L2 switches with 4 10/100/1000Base-T ports and 2 GbE/100M SFP ports which also supports PoE+/PSE and provide stable and reliable transmission. Housed in rugged DIN rail or wall mountable enclosures, these switches are designed for harsh environments, such as industrial networking. They are an ideal solution for Smart City, surveillance, Intelligent traffic control systems, production automation applications and support up to 4 PoE/PoE+ (IEEE 802.3af/IEEE 802.3at) ports which can provide 15.4/30watts power output per port for connecting with heavy-duty industrial PoE devices, such as PTZ IP surveillance cameras, high-performance wireless access points, digital signage and IP phones. 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

- Redundant power input
 - Provides 4 port IEEE 802.3af / 802.3at PoE output
 - Cable diagnostics
 - Provides SmartConfig for quick and easy mass Configuration*
 - Supports SmartView for Centralized Management*
- *Please see Chapter 1- **Software Management** for more details

Specifications

Standard	IEEE 802.3	10Base-T 10Mbit/s Ethernet	Console	RS-232 (RJ-45)											
	IEEE 802.3u	100Base-TX, 100Base-FX, Fast Ethernet	Network Cable	UTP/STP above Cat. 5e cable EIA/TIA-568 100-ohm (100m)											
	IEEE 802.3ab	1000Base-T Gbit/s Ethernet over twisted pair	Protocols	CSMA/CD											
	IEEE 802.3z	1000Base-X Gbit/s Ethernet over Fiber-Optic	Reverse Polarity Protection	Supported for power input											
	IEEE 802.3af	PoE (Power over Ethernet)	Overload Current Protection	Supported											
	IEEE 802.3at	PoE+ (Power over Ethernet enhancements)	CPU Watch Dog	Supported											
	IEEE 802.1d	STP (Spanning Tree Protocol)	Power Supply	Redundant Dual DC48V (44~57VDC) Input power (Removable Terminal Block) (50~57V input is recommended for IEEE 802.3at PoE+ application)											
	IEEE 802.1w	RSTP (Rapid Spanning Tree Protocol)	Power Consumption	<table><tr><th>Input Voltage</th><th>Total Power Consumption</th><th>Device Power Consumption</th><th>Power Budget</th></tr><tr><td>50 VDC</td><td>130W</td><td>8.2W</td><td>120W</td></tr></table>				Input Voltage	Total Power Consumption	Device Power Consumption	Power Budget	50 VDC	130W	8.2W	120W
	Input Voltage	Total Power Consumption						Device Power Consumption	Power Budget						
	50 VDC	130W	8.2W	120W											
	IEEE 802.1s	MSTP (Multiple Spanning Tree Protocol)	PoE Power Budget	Maximum PoE Output power budget 120W, (30W/per port)											
	IEEE 802.1Q	Virtual LANs (VLAN)	LED	Per unit: Power 1 (Green), Power 2 (Green) Per RJ-45 port: 10/100 Link/Active (Green) 1000 Link/Active (Amber) SFP Fiber Per port: Link/Active (Green)											
	IEEE 802.1X	Port based and MAC based Network Access Control, Authentication		PoE Port LED 1 LED /per Port : • PoE Output Power On : ON (Green) • PoE Output Power Off : Off											
	IEEE802.3ac	Max frame size extended to 1522Bytes	Jumbo Frame	10K											
	IEEE 802.3ad	Link aggregation for parallel links with LACP(Link Aggregation Control Protocol)	IEEE802.3ac	Max frame size extended to 1522Bytes (allow Q-tag in packet)											
	IEEE 802.3x	Flow control for Full Duplex	MAC Address Table	4K											
	IEEE 802.1ad	Stacked VLANs, Q-in-Q	Memory Buffer	1.75M bits for packet buffer											
	IEEE 802.1p	LAN Layer 2 QoS/CoS Protocol for Traffic Prioritization	Device Memory	128M Bytes Flash ROM, 256M Bytes RAM											
IEEE 802.1ab	Link Layer Discovery Protocol (LLDP)	Warning Message	System Syslog, SMTP/ e-mail event message												
IEEE 802.3az	EEE (Energy Efficient Ethernet)	Removable Terminal Block	Provide 2 redundant power 4 Pin												
Switch Architecture	Back-plane (Switching Fabric): 12Gbps Full wire-speed		Operating Temperature	-10 ~ 60°C (IGS-402CSW-4PH) -40 ~ 75°C (IGS-402CSW-4PHE)											
	Store and Forward		Operating Humidity	5% to 95% (Non-condensing)											
Data Processing	Store and Forward		Storage Temperature	-40 ~ 85°C											
Flow Control	IEEE 802.3x for full duplex mode Back pressure for half duplex mode		Housing	Rugged Metal, IP30 Protection, Fanless											
Network Connector	4x 10/100/1000Base-T RJ-45 + 2x FE/GbE SFP slot RJ-45 UTP port support Auto negotiation speed, Auto MDI/MDI-X function, SFP ports support FE/GbE with DDMMI		Dimensions	106x 31.6x 142mm (Dx Wx H)											
PoE standard & RJ-45 pin assignment	4x IEEE 802.3af /IEEE 802.3at PoE+ 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)														

Weight	820g
Installation Mounting	DIN Rail mounting, or wall mounting (Optional)
MTBF	820,215Hours (MIL-HDBK-217)
Warranty	5 years
Certification	
EMC	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

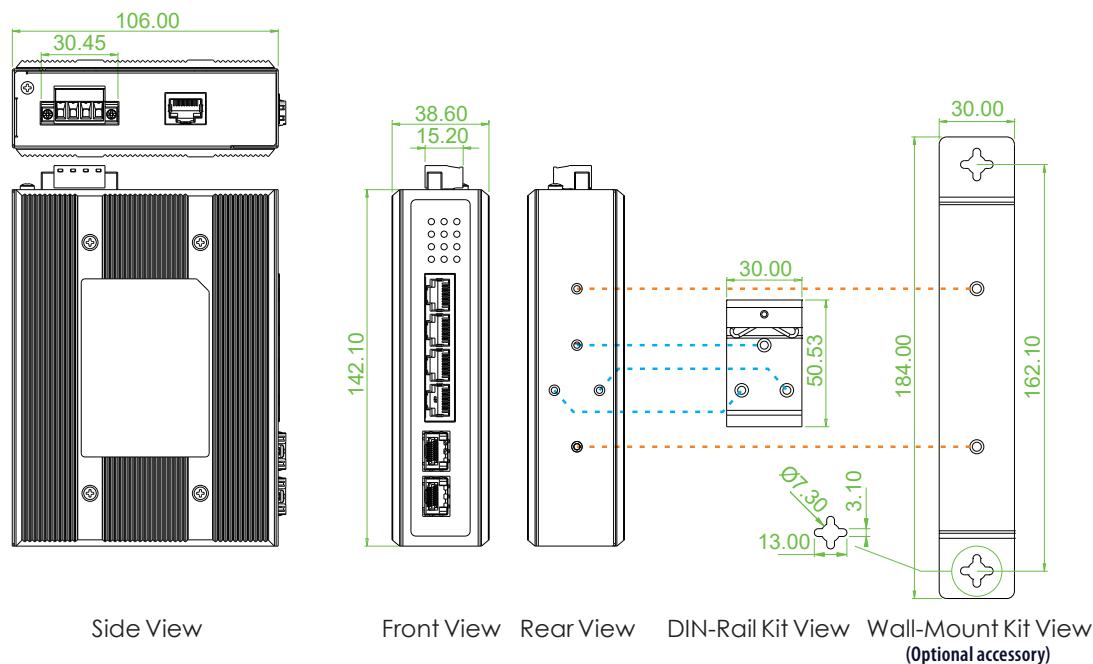
Software Specifications

Topology	
VLAN	IEEE 802.1q VLAN, up to 4094 802.1Q VLAN VID IEEE 802.1q VLAN, up to 4094 Groups IEEE 802.1ad Q-in-Q MAC-based VLAN, up to 256 entries IP Subnet-based VLAN, up to 128 entries Protocol-based VLAN (Ethernet, SNAP, LLC), up to 128 entries VLAN Translation, up to 256 entries Private VLAN for port isolation GVRP (GARP VLAN Registration Protocol) MVR (Multicast VLAN Registration)
Link Aggregation (Port Trunk)	Static (Hash with SA, DA, IP, TCP/UDP port), up to 5 trunk group Dynamic (IEEE 802.3ad LACP), up to 5 trunk group
Spanning Tree	IEEE 802.1d STP IEEE 802.1w RSTP IEEE 802.1s MSTP
Loop Protection	Supported
QoS Features	
Class of Service	IEEE 802.1p 8 active priorities queues for per port
Traffic Classification QoS	IEEE 802.1p based CoS IP Precedence based CoS IP DSCP based CoS QCL(QoS Control List): Frame Type, Source/Destination MAC, VLAN ID, PCP, DEI QCE(QoS Control Entry): Protocol, Source IP, IP Fragment, DSCP, TCP/UDP port number
Bandwidth Control for Ingress	100~1,000,000 when the "Unit" is "kbps" and 1~1,000 when the "Unit" is "Mbps"
Bandwidth Control for Egress	100~1,000,000 when the "Unit" is "kbps" and 1~1,000 when the "Unit" is "Mbps" Per queue / Per port shaper
DiffServ (RF 2474) Remarking	
Storm Control	for Unicast, Broadcast, Multicast
IP Multicasting Features	
IGMP / MLD Snooping	IGMP Snooping v1, v2, v3 / MLD Snooping v1, v2 Port Filtering Profile Throttling, Fast Leave Maximum Multicast Group : up to 1022 entries Query / Static Router Port
Security Features	
IEEE 802.1X	Port-Based MAC-Based
ACL	Number of rules : up to 256 entries for L2 / L3 / L4 L2 : Mac address SA/DA/VLAN L3: IP address SA/DA, Subnet L4: TCP/UDP
RADIUS authentication & accounting	
TACACS+ authentication & accounting, TACACS+ 3.0	
HTTPS, HTTP	Supported
SSL / SSH v2	Supported
User Name	Local Authentication
Password	Remote Authentication (via RADIUS / TACACS+)
Authentication	

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	EN62368-1 (Pending)
Surge protection	4KV for PoE, UTP and Fiber ports
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-31
Vibration	IEC 60068-2-6

Management Interface Access Filtering	Web, Telnet / SSH, CLI RS-232 console
Management Features	
CLI	Cisco® like CLI
Web Based Management	
Telnet	Supports for management and monitoring
SNMP	V1, V2c, V3
ModBus/TCP	Supports management and monitoring
SW & Configuration Upgrade	TFTP, HTTP
FTP client	Redundant firmware in case of upgrade failure
RMON	Supports for upload/download configuration
MIB	RMON I (1, 2, 3, 9 group), RMON II
UPnP	RFC1213 MIB II, Private MIB
BOOTP	Supported
DHCP	Supported
RARP	Server, Client, Relay, Relay option 82, Snooping
IP Source Guard	Supported
Port Mirroring	Supported
Event Syslog	Syslog server (RFC3164)
Warning Message	System syslog, e-mail
DNS	Client, Proxy
NTP	Client
LLDP (IEEE 802.1ab)	Link Layer Discovery Protocol LLDP-MED
IPv6 Features	
IPv6 Management	Telnet Server/ICMP v6
SNMP over IPv6	Supported
HTTP over IPv6	Supported
SSH over IPv6	Supported
IPv6 Telnet	Supported
IPv6 NTP	Client
IPv6 TFTP	Supported
IPv6 QoS	Supported
IPv6 ACL	Number of rules: up to 256 entries for L2 / L3 / L4 L2 : Mac address SA/DA/VLAN L3: IP address SIP, Subnet (32bit) L4: TCP/UDP
Others Features	
Green Ethernet	Supports IEEE 802.3az EEE (Energy Efficient Ethernet) Management to optimize the power consumption Determine the cable length and lowering the power for ports with short cables Lower the power for a port when there is no link
Cable Diagnostic	Measuring UTP cable normal or broken point distance
Advanced PoE Management	
PoE PD failure auto checking ,and auto reset when PD fail	
PoE port on/off weekly scheduling	
PoE Configuration	
PoE Enable/Disable	
Power limit by classification	
Power limit by management	
Power feeding priority	
Total PoE Power budget limitation (maximum 120W)	

Dimensions



Ordering Information

Model Name	Total Port	RJ45	Fiber	PoE Port		Input Power		Certification		Operating Temperature
		10/100/1000 Base-T	100/1000 Base-X	IEEE802.3at	Power Budget	Redundant		Railway EN50121-4	CE, FCC EN61000-6-2 EN61000-6-4	
IGS-402CSW-4PH	6	4	2 SFP	4	120W	48VDC	V	V	V	-10~60°C
IGS-402CSW-4PHE	6	4	2 SFP	4	120W	48VDC	V	V	V	-40~75°C

Optional Accessories

■ Package List

- IGS-402CSW-4PH device
- Console cable (RJ-45 to DB9)
- Din Rail with screws
- Terminal block
- Protective caps for SFP ports

■ Wall Mount Kit

IND-WMK01 Wall Mount kit for Industrial product (184x30mm) (Narrow)

■ 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.

ISFP-M7000-85-D(E)	Industrial SFP GbE 1000Base-SX, M/M, 500 meter, wave length 850nm, 7.5dB, LC, DDML, -10~70°C (-40~85°C)
ISFP-S7020-31-D(E)	Industrial SFP 1000Base-LX, S/M, 20km, wave length 1310nm, 15dB, LC, DDML, -10~70°C (-40~85°C)
ISFP-T7T00-00-(E)	Industrial SFP 10/100/1000Base-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, DDML, -10~70°C (-40~85°C)
ISFP-S5030-31-D(E)	Industrial SFP 155M 100Base-FX, SM, 30km, 1310nm, 19dB, LC, DDML, -10~70°C (-40~85°C)

■ Industrial Power Supply

NDR-120-48	Industrial Power, Input 90 ~ 264VAC/127 ~ 370VDC, Output 48VDC, 120W, -20 ~ +70°C (For IGS-402CSW-4PH)
NDR-240-48	Industrial Power, Input 90 ~ 264VAC/127 ~ 370VDC, Output 48VDC, 240W, -20 ~ +70°C (For more ref.)