

IFS-402CGSW

4x FE RJ45 + 2x 100/1000 SFP, Compact size



- 4KV surge protection for UTP and SFP ports
- Compact size for easy installation



The IFS-402CGSW is a managed industrial grade L2 switch with 4 10/100Base-TX ports and 2 GbE/100M SFP ports. Housed in rugged DIN rail or wall mountable enclosures, the switch is designed for harsh environments, such as industrial networking. It is an ideal solution for Smart City, surveillance, Intelligent traffic control systems, production automation applications. 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
 - Cable diagnostics
 - Supports SmartView™ for Centralized Management*
- *Please see Chapter 1- **Software Management** for more details

Specifications

Standard	IEEE 802.3	10Base-T 10Mbit/s Ethernet
	IEEE 802.3u	100Base-TX, 100Base-FX, Fast Ethernet
	IEEE 802.3z	1000Base-X Gbit/s Ethernet over Fiber-Optic
	IEEE 802.1d	STP (Spanning Tree Protocol)
	IEEE 802.1w	RSTP (Rapid Spanning Tree Protocol)
	IEEE 802.1s	MSTP (Multiple Spanning Tree Protocol)
	IEEE 802.1Q	Virtual LANs (VLAN)
	IEEE 802.1X	Port based and MAC based Network Access Control, Authentication
	IEEE802.3ac	Max frame size extended to 1522Bytes
	IEEE 802.3ad	Link aggregation for parallel links with LACP(Link Aggregation Control Protocol)
	IEEE 802.3x	Flow control for Full Duplex
	IEEE 802.1ad	Stacked VLANs, Q-in-Q
	IEEE 802.1p	LAN Layer 2 QoS/CoS Protocol for Traffic Prioritization
	IEEE 802.1ab	Link Layer Discovery Protocol (LLDP)
	IEEE 802.3az	EEE (Energy Efficient Ethernet)
Switch Architecture	Back-plane (Switching Fabric): 4.8Gbps Full wire-speed	
Data Processing	Store and Forward	
Flow Control	IEEE 802.3x for full duplex mode Back pressure for half duplex mode	
Network Connector	4x 10/100Base-TX 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 DDMI	
Console	RS-232 (RJ-45)	
Network Cable	UTP/STP Cat. 5e cable or above EIA/TIA-568 100-ohm (100meter)	
Protocols	CSMA/CD	
Reverse Polarity Protection	Supported for power input	
Overload Current Protection	Supported	
CPU Watch Dog	Supported	
Power Supply	Redundant Dual 12/24/48VDC (9.6~60VDC) Input power (Removable Terminal Block)	

Power Consumption	Input Voltage	Total Power Consumption
	12VDC	4.7W
	24VDC	4.8W
	48VDC	5.3W

LED	Per unit: Power 1 (Green), Power 2 (Green) Per RJ-45 port: 100 Link/Active (Green) 10 Link/Active (Amber) SFP Fiber port: 100 Link/Active (Green) 1000 Link/Active (Amber)
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Jumbo Frame	10K
IEEE802.3ac	Max frame size extended to 1522Bytes (allow Q-tag in packet)

MAC Address Table	4K
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Memory Buffer	1.75M bits for packet buffer
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Device Memory	128M Bytes Flash ROM, 256M Bytes RAM
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Warning Message	System Syslog, SMTP/ e-mail event message
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Removable Terminal Block	Provides 2 redundant power, 4 Pin
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Operating Temperature	-10 ~ 60°C (IFS-402CGSW) -40 ~ 75°C (IFS-402CGSW-E)
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Operating Humidity	5% to 95% (Non-condensing)
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Storage Temperature	-40 ~ 85°C
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Housing	Rugged Metal, IP30 Protection, Fanless
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Dimensions	106x 31.6x 142mm (Dx Wx H)
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Weight	535g
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Installation Mounting	DIN Rail mounting, or wall mounting (Optional)
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MTBF	1038,003Hours (MIL-HKBK-217)
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Warranty	5 years
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Certification	
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EMC	CE (EN55032, EN55035)
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EMI (Electromagnetic Interference)	FCC Part 15 Subpart B Class A,CE
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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
Surge Protection	4KV for UTP and Fiber ports

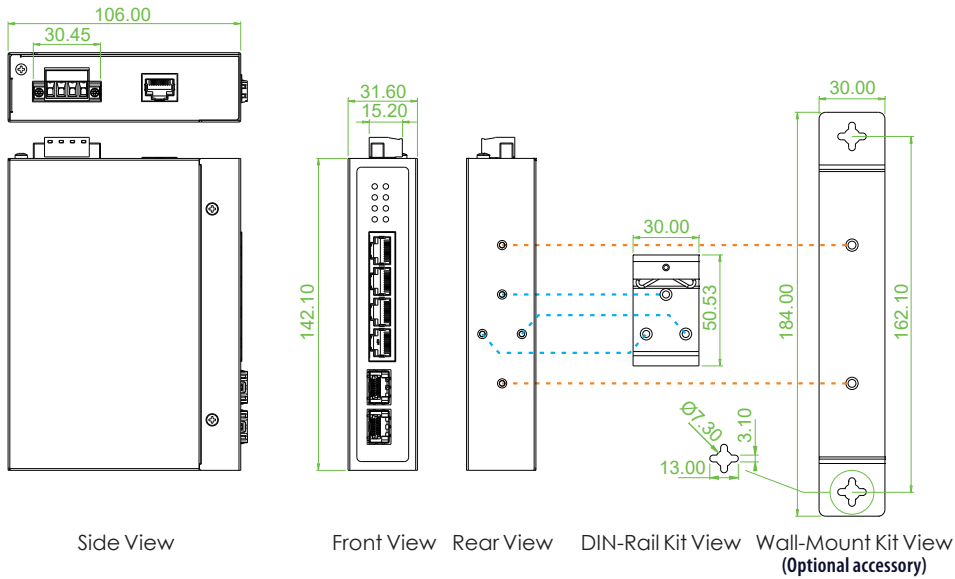
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-31
Vibration	IEC 60068-2-6

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) Voice VLAN
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 "kpbs" and 1~1,000 when the "Unit" is "Mbps"
Bandwidth Control for Egress	100~1,000,000 when the "Unit" is "kpbs" 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 Password Authentication	Local Authentication Remote Authentication (via RADIUS / TACACS+)
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
sFlow	Supported
ModBus/TCP	Supports management and monitoring
SW & Configuration Upgrade	TFTP, HTTP Redundant firmware in case of upgrade failure
FTP client	Supports for upload/download configuration
RMON	RMON I (1, 2, 3, 9 group), RMON II
MIB	RFC1213 MIB II, Private MIB
UPnP	Supported
BOOTP	Supported
DHCP	Server, Client, Relay, Relay option 82 , Snooping
RARP	Supported
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

Dimensions



Ordering Information

Model Name	Total Port	RJ45	Fiber	Input Power	Certification	Operating 10/100Base-TX
		10/100Base-TX	100/1000 Base-X	Redundant	CE, FCC	
IFS-402CGSW	6	4	2 SFP	12/24/48VDC	V	-10~60°C
IFS-402CGSW-E	6	4	2 SFP	12/24/48VDC	V	-40~75°C

Package List

- IFS-402CGSW device
- Console cable (RJ-45 to DB9)
- Din Rail with screws
- Terminal block
- Protective caps for SFP ports

Optional Accessories

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 all CTC Union industrial grade Ethernet switches for guaranteed compatibility and performance. Best performance can be guaranteed, even in mission-critical applications. (Please see CTC Union's Industrial SFP datasheets for more items and detailed information.)

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

MDR-20-24	Industrial Power, Input 85 ~ 264VAC/120 ~ 370VDC, Output 24VDC, 24W, -20 ~ +70°C
MDR-40-48	Industrial Power, Input 85 ~ 264VAC/120 ~ 370VDC, Output 48VDC, 40W, -20 ~ +70°C