

# IS-DG406-2F Series

## 6-port Gigabit Din-Rail Layer 2 Web-smart Industrial Ethernet Switch



The IS-DG406 Series are full Gigabit Ethernet Switches with 6 Gigabit Ethernet ports, perfect for upgrading an existing network to a full Gigabit speed Infrastructure; a full Gigabit network provides higher throughput than legacy Fast Ethernet network. The IS-DG406 Series reduce the response time for timing sensitive applications which may combine all video, voice, and data streams in the traffic flow. With the latest IA-RSTP function, flexible network design & planning, the IS-DG406 Series are especially good for those common application that doesn't required complicated software features, the IS-DG406 Series switches are suitable for all kinds of Industrial applications.



### Key features

- ▶ 4 Gigabit RJ45 Copper ports plus 2 100 / 1000 Based SFP(SX/LX/LHX) ports
- ▶ Support 9K Jumbo frames
- ▶ Layer 2 Line-Speed Switching Fabric, non-blocking
- ▶ Network redundancy LACP, Spanning Tree Protocol, STP, RSTP
- ▶ Support IA-RSTP, 100pcs@300ms
- ▶ Private/Port-based VLAN, IEEE 802.1Q Tag-based VLAN
- ▶ VeriPHY Cable Diagnostics, Per VLAN mirroring
- ▶ Redundant Power Input (12~58 VDC) & Reverse power protection
- ▶ SNMP v1/v2c, Trap
- ▶ Din-Rail Mount, Wall Mount Installation
- ▶ -40~75°C operating temperature
- ▶ Loop Protection
- ▶ IP 30 Protection
- ▶ 2KV surge immunity on RJ45 Copper port
- ▶ 1.5KV Hi-pot
- ▶ Rugged Fan-less Design
- ▶ Fault Alarm Notification (Power, Ports)

### Specification

#### Ethernet

Operating Mode	Store and Forward, L2 wire-speed/non-blocking switching engine
MAC addresses	8K
Packet Buffer	4 Mbits
Jumbo frame	9K
Switching Fabric / Back Plane	12Gbps

#### RJ45 Copper ports

Speed	10/100/1000 Mbps
MDI/MDIX Auto-crossover	Support straight or cross wired cables
Auto-negotiation/Duplex	10/100/1000 Mbps speed auto-negotiation; Full & Half Duplex
Ethernet Port Protection	1.5KV VRMS 1minute (Hi-pot), 2KV surge immunity on RJ45 Copper ports

#### Fiber Ports

Port Types supported	100/1000 Base SFP Slot
Fiber port connector	LC/RJ45 connector for fiber ports
Optimal fiber cable	Typical 50 or 62.5/125 $\mu$ m for multimode (mm) Typical 8 or 9/125 $\mu$ m for single mode (sm)

#### Protocols & Standards

IEEE 802.3, IEEE 802.3u, IEEE 802.3ab, IEEE 802.3z, IEEE 802.3x, IEEE 802.1D/w, IEEE 802.1Q/p, IEEE 802.1ab, IEEE 802.1X, IEEE 802.3ad LLDP, IPv4/IPv6, SNMP v1/v2c, TFTP, ARP, RARP, Telnet, Syslog, Flow Control, Back Pressure, ICMP, UDP, TCP

## Network Redundancy

IA-RSTP	Link Loss Recovery < 300ms@100pcs
Spanning Tree Protocol	IEEE 802.1D/1w, STP/RSTP
Port Trunk / LACP	Static Trunk or LACP (Link Aggregation Control Protocol)

## Bridge, VLANs, Protocols

Flow Control	IEEE 802.3x (Full Duplex) and Back-Pressure (Half Duplex)
Max VLANs	256
VLAN Types	Port-Based VLAN, Private VLAN
	IEEE 802.1Q tag-based VLAN
Multicast protocols	IGMP v1, v2, up to 255 multicast groups
	IGMP snooping, querying
LLDP	IEEE 802.1ab LLDP

## Traffic management & QoS

Priority	IEEE 802.1p QoS
Number of queues per port	8
Scheduling schemes	SPQ, WRR

## Security

Port Security	IP and MAC-based Access Control/Filter, Auth User / Privilege Level Control
Storm Control	Multicast / Broadcast / Flooding Storm Control / Port Access Control / Limiters

## Management

User Management Interfaces	Web-based Management, Windows Utility for quick startup
	SNMP V1, V2c, Trap, Telnet (5 sessions)
Management Security	HTTPs, SSH, Access Management, Loop Protection
Upgrade & Restore	TFTP for Configuration Import / Export
	TFTP for Firmware Upgrade
Diagnostic	Syslog, Level Info / Warning / Error
	Port Mirror, Per VLAN mirroring, CPU Load Monitor, Traffic Counter
	VeriPHY Ethernet Cable Diagnostics, ICMP Ping
MIBs	RFC 2674 Q-Bridge MIB; RFC 1213 MIB II; RFC 1493 Bridge MIB; RFC 2233 IF MIB
DHCP	Client Mode, Server Mode, Relay Mode, Snooping
SNTP	YES
System Status	Device info/status; Ethernet port status
Green Ethernet	Port Power Savings

## Power

Power Input	Redundant Power Input, Removable Terminal Block
Input Voltage Range	12-58 VDC
Reverse power protection	YES
Transient protection	> 15, 000 Watts peak
Power Consumption	IS-DG406-2F 12.5Watt

## Indicators

Power status indication	Power Input status
Ethernet port indication	Link & speed

## Environmental and Compliances

Operating Temperature	-40~75°C (Cold startup at -40°C)
Storage Temperature	-40~85°C
Humidity	5~95% (Non-Condensing)
Vibration, shock, free fall	IEC-60068-2-6, -27, -32
Certification Compliance	CE, FCC
Electrical safety	CE
EMC	FCC Part 15, CISPR 22 (EN55022) Class A IEC-61000-4-2, -3, -4, -5, -6 (Level 3)
RoHS & WEEE	RoHS (Pb free) and WEEE Compliant
MTBF	>220,000 hrs

## Mechanical

Protection	IP30
Dimension	TBD
Weight	TBD
Installation	Din-Rail Mount, Wall mount
Relay Output	1A, 24V, Normal Open

## Dimension Diagram

TBD

## Ordering Information

Available Models	Description	10/100/1000Mb TX	100/1000Mb FX
IS-DG406-2F	Industrial 6 port Gigabit Layer 2 Web-smart Managed Ethernet Switch, -40~75°C	4	2

## Accessories

1. 100 Mb SFP Modules
2. Gigabit SFP Modules
3. IS-RK2U rack mount kit
4. IS-RK4U rack mount kit

## Package Checklist

- IS-DG406 Switch
- Quick Installation Guide (Printed)
- Documentation & Software CD
- RJ45 / SFP Cap / Wall Mount kit / DIN-rail kit