

IS-RG828HS Series (Preliminary)

28-port Gigabit 19" Managed Layer 3 Lightning Protected Hot-Swap Power Industrial Ethernet Switch



The IS-RG828HS Series are 28-port full Gigabit L3 Industrial Ethernet Switches with hot-swappable redundant power supply. The IS-RG828HS Series are built for various kinds of high density network connection infrastructures; a full Gigabit network provides higher throughput than legacy Fast Ethernet network. The IS-RG828HS Series reduce the response time for timing sensitive applications which may be mixed of video, voice, and data stream in the traffic flow. With the powerful software and hardware features, the IS-RG828HS Series prioritize, partition and optimize user's network and provide reliable and quality services. The IS-RG828HS Series switches are suitable for all kinds of Industrial applications.



Key features

- ▶ Hot-swappable redundant power Input 100/240 VAC, 50Hz ~ 60Hz
- ▶ 24 Gigabit RJ45 Copper ports plus 4 100 / 1000 Based SFP (SX/LX/LHX) ports or 28 100 / 1000 Based SFP (SX/LX/LHX) ports
- ▶ Support IPV4/V6
- ▶ Layer 3 Wired-Speed switching engine
- ▶ Layer 2 Line-Speed Switching Fabric, non-blocking
- ▶ Layer 3 function, Static routing, RIPv1/RIPv2, OSPF, VRRP
- ▶ Layer 3 function, DVMRP, PIM-DM, PIM-SM, BGP, EGP (IS-RG828HS-28F Only)
- ▶ Layer 4 ACL (Access Control List), QCL (QoS Control List), Port Control
- ▶ Network redundancy LACP, Spanning Tree Protocol, STP, RSTP, MSTP
- ▶ I.A. Ring, I.A. Chain (Network Load Balancing), 250pcs@20ms
- ▶ Ring Coupling, Multiple Ring, Dual Homing
- ▶ Port-based VLANs, IEEE 802.1Q tag-based VLANs, IEEE 802.1v protocol-based VLANs, IEEE 802.1ad Double Tagging (Q in Q), Private VLAN, MVR
- ▶ Multicasting support IGMP v1/v2/v3, proxy & snooping
- ▶ IEEE 802.1X Port-based access control / RADIUS Server
- ▶ Per VLAN mirroring
- ▶ SNMP v1/v2c/v3, Trap / Inform, RMON
- ▶ 20KV / 10KV Lightning Protection (Power Module)
- ▶ 10A fuse (Power Module)
- ▶ Power On/Off switch (Power Module)
- ▶ Port Power Saving
- ▶ -40~75°C operating temperature
- ▶ IP 30 Protection
- ▶ 1.5KV Hipot, 2KV surge immunity on RJ45 Copper port
- ▶ Rugged Fan-less design
- ▶ Support Rack Mount, Wall Mount, Installation

Specification

Ethernet

Operating Mode	Store and Forward, L2 wire-speed/non-blocking switching engine
MAC addresses	16K
Packet Buffer	8 Mbits
Jumbo frame	9K
Back Plant	56Gbps

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(Hipot), 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 μm for multimode (mm) Typical 8 or 9/125 μm for single mode (sm)

Network Redundancy

I.A.Ring / I.A. Chain	Link Loss Recovery < 20ms@250pcs
Network Topology Optimize Functions	Ring Coupling, Multiple-Ring, Dual-Homing
Spanning Tree Protocol	IEEE 802.1D/1w/1s, STP/RSTP/MSTP
Port Trunk / LACP	Static Trunk or LACP (Link Aggregation Control Protocol)

Layer 3 Routing

Layer 3 routing functions	Static routing, RIPv1/RIPv2, OSPF, VRRP
Layer 3 routing functions	DVMRP, PIM-DM, PIM-SM (IS-RG828HS-28F Only)

Bridge, VLANs, Protocols

Flow Control	IEEE 802.3x (Full Duplex) and Back-Pressure (Half Duplex)
Max VLANs	2048
VLAN Types	Port-Based VLAN, Private VLAN, MAC-Based VLAN
	IEEE 802.1Q tag-based VLAN, IP Subnet-Based VLAN, Voice VLAN
	IEEE 802.1ad Double Tagging (QinQ), Protocol-Based VLAN
Multicast protocols	IGMP v1, v2, V3, up to 512 multicast groups
	IGMP snooping, querying, MVR, Immediate leave and leave proxy
	Throttling and filtering
LLDP	IEEE 802.1ab LLDP / LLDP-MED

Traffic management & QoS

Priority	IEEE 802.1p QoS, Ingress / Egress, QCL
Number of queues per port	8
Scheduling schemes	SPQ, WRR, SPQ+WRR
Traffic Shaper	Port-based shaping

Security

Port Security	IP and MAC-based Access Control/Filter, Auth User / Privilege Level Control
	IEEE 802.1X Authentication Network Access Control / RADIUS Server
Storm Control	Multicast / Broadcast / Flooding Storm Control / Port Access Control / Limiters

Management

User Management Interfaces	Cisco-Like CLI (Command Line Interface)
	Web-based Management, Windows Utility for quick startup
	SNMP V1, V2c, V3 USM, RMON, Trap / Inform / Retry, Telnet (5 sessions)
Management Security	HTTPs, SSH, Access Management
Upgrade & Restore	TFTP for Configuration Import / Export
	TFTP for Firmware Upgrade
Diagnostic	Syslog, Level Info / Warning / Error, Detailed Syslog, ICMP Ping
	Port Mirror, Per VLAN mirroring, CPU Load Monitor, Traffic Counter
MIBs	RFC 1757RMON 1, 2, 3, 9; RFC 2674 Q-Bridge MIB
	RFC 1213 MIB II; RFC 1493 Bridge MIB; RFC 2233 IF MIB
DHCP	Client Mode
NTP/SNTP	YES
System Status	Device info/status; Ethernet port status
Green Ethernet	Port Power Savings
Layer 4 Security	Policy / Profile-based Access Control List

Protocols & Standards

IEEE 802.3, IEEE 802.3u, IEEE 802.3ab, IEEE 802.3z, IEEE 802.3x, IEEE 802.1D/w/s, IEEE 802.1Q/p, IEEE 802.1ab, IEEE 802.1X, IEEE 802.3ad LLDP, IPv4/IPv6, SNMP v1/v2c/v3, DHCP Option 82, BootP, TFTP, ARP, RARP, Telnet, Syslog, Flow Control, Back Pressure, ICMP, UPD, TCP

Power

Power Input	Hot-Swappable Redundant AC Input, IEC Connector
Input Voltage Range	100/240 VAC, 50Hz~60Hz
Power Module Protection	20KV / 10KV Lightning Protection, 10A fuse, Power On/Off switch
Transient protection	> 15, 000 Watts peak
Power Consumption	25 Watt

Indicators

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

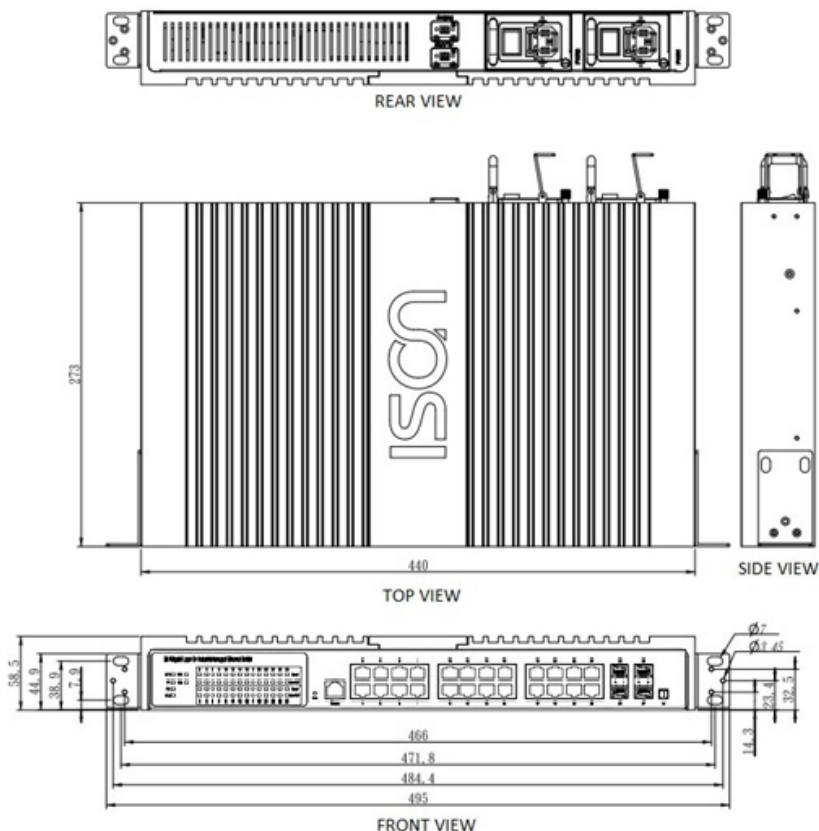
Environmental and Compliances

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	58.5mm x 440mm x 273mm(LxWxD)
Weight	4.8 kg
Installation	19" Rack mount
Relay Output	1A, 30V, Normal Open
Ethernet port indication	Link & speed

Dimension Diagram



(IS-RG828HS20)

Ordering Information

Available Models	Description	10/100/1000Mb TX	100/1000Mb FX
IS-RG828HS20-4F-2A	Industrial 28 port Gigabit Layer 3 Managed Switch, 4 SFP Slot, Hot-Swap Power, Dual AC, 20KV Lightning Protection, -40~75°C	24	4
IS-RG828HS10-4F-2A	Industrial 28 port Gigabit Layer 3 Managed Switch, 4 SFP Slot, Hot-Swap Power, Dual AC, 10KV Lightning Protection, -40~75°C	24	4
IS-RG828HS20-28F-2A	Industrial 28 port Gigabit Layer 3 Managed Switch, 28 SFP Slot, Hot-Swap Power, Dual AC, 20KV Lightning Protection, -40~75°C	0	28
IS-RG828HS10-28F-2A	Industrial 28 port Gigabit Layer 3 Managed Switch, 28 SFP Slot, Hot-Swap Power, Dual AC, 10KV Lightning Protection, -40~75°C	0	28

Accessories

1. Gigabit SFP Modules
2. IS-PM20L-12
3. IS-WK2U wall mount kit

Package Checklist

- IS-RG828HS Switch
- Quick Installation Guide (Printed)
- Documentation & Software CD
- RS232 Console Cable
- 19" 1U Standard Rack-Mount Kit
- RJ45/SFP Cap