

Optical Fiber Bypass Switch

Industrial Layer-3 20-port managed Gigabit Ethernet switch with 8x10/100/1000Base-T(X) ports and 12x100/1000Base-X, SFP socket

Features

- Supports Layer 3 routing, RIP and static routing function
- Supports **O-Ring** (recovery time < 30ms over 250 units of connection) and MSTP(RSTP/STP compatible) for Ethernet Redundancy
- **O-Chain** allow multiple redundant network rings
- Supports standard IEC 62439-2 **MRP^{NOTE}** (Media Redundancy Protocol) function
- Supports IEEE 1588v2 clock synchronization
- Supports IPV6 new internet protocol version
- Supports Modbus TCP protocol
- Supports IEEE 802.3az **Energy-Efficient Ethernet** technology
- Provided HTTPS/SSH protocol to enhance network security
- Supports SMTP client and NTP server protocol
- Supports IP-based bandwidth management
- Supports application-based QoS management
- Supports Device Binding security function
- Supports DOS/DDOS auto prevention
- IGMP v2/v3 (IGMP snooping support) for filtering multicast traffic
- Supports SNMP v1/v2c/v3 & RMON & 802.1Q VLAN Network Management
- Supports ACL, TACACS+ and 802.1x User Authentication for security
- Supports 9.6K Bytes Jumbo Frame
- Supports **backup unit device DBU-01** for quickly backup/restore configuration
- Multiple notification for warning of unexpected event
- Web-based ,Telnet, Console (CLI), and Windows utility (Open-Vision) configuration
- Supports LLDP Protocol
- Rigid IP-30 housing design
- DIN-Rail and wall mounting enabled



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Specifications

ORing Switch Model	IGS-R9812GP
Physical Ports	
10/100/1000Base-T(X) Ports in RJ45 Auto MDI/MDIX	8
100/1000Base-X with SFP port	12
Technology	
Ethernet Standards	IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-TX and 100Base-FX IEEE 802.3ab for 1000Base-T IEEE 802.z for 1000Base-X IEEE 802.3x for Flow control IEEE 802.3ad for LACP (Link Aggregation Control Protocol) IEEE 802.1p for COS (Class of Service) IEEE 802.1Q for VLAN Tagging IEEE 802.1w for RSTP (Rapid Spanning Tree Protocol) IEEE 802.1s for MSTP (Multiple Spanning Tree Protocol) IEEE 802.1x for Authentication IEEE 802.1AB for LLDP (Link Layer Discovery Protocol)
MAC Table	8K
Packet Buffer	32Mbits
Flash Memory	28Mbits
DRAM Size	1Gbits
Priority Queues	8
Processing	Store-and-Forward
Switch Properties	Switching latency: 7 us Switching bandwidth: 40Gbps Max. Number of Available VLANs: 4095 VLAN ID Range : 1 to 4094 IGMP multicast groups: 128 for each VLAN Port rate limiting: User Define
Jumbo frame	Up to 9.6K Bytes
Security Features	Device Binding security feature Enable/disable ports, MAC based port security Port based network access control (802.1x) Single 802.1x and Multiple 802.1x MAC-based authentication QoS assignment Guest VLAN MAC address limit TACACS+ VLAN (802.1Q) to segregate and secure network traffic Radius centralized password management SNMPv3 encrypted authentication and access security Web and CLI authentication and authorization Authorization (15 levels) IP source guard Https / SSH enhance network security
Software Features	Hardware routing, RIP and static routing IEEE 1588v2 clock synchronization IEEE 802.1D Bridge, auto MAC address learning/aging and MAC address (static) Multiple Registration Protocol (MRP) RSTP/MSTP (IEEE 802.1w/s) Redundant Ring (O-Ring) with recovery time less than 30ms over 250 units TOS/Diffserv supported Quality of Service (802.1p) for real-time traffic VLAN (802.1Q) with VLAN tagging Voice VLAN IGMP v2/v3 Snooping IP-based bandwidth management Application-based QoS management DOS/DDOS auto prevention Port configuration, status, statistics, monitoring, security DHCP Server/Client/snooping DHCP Relay Modbus TCP ARP inspection SMTP Client NTP Server

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Network Redundancy	O-Ring O-Chain MRP* NOTE Fast Recovery MSTP (RSTP/STP compatible)
RS-232 Serial Console Port	RS-232 in RJ45 connector with console cable. 115200bps, 8, N, 1
LED Indicators	
Power Indicator(PWR)	Green : Power LED x 3
Ring Master Indicator (R.M.)	Green : Indicates that the system is operating in O-Ring Master mode
O-Ring Indicator (Ring)	Green : Indicates that the system operating in O-Ring mode Green Blinking : Indicates that the Ring is broken.
Fault Indicator(Fault)	Amber : Indicate unexpected event occurred
10/100/1000Base-T(X) RJ45 Port Indicator	Green for Link/Act indicator Dual color LED for speed indicator : Green for 1000Mbps, Amber for 100Mbps, Off-light for 10Mbps
100/1000Base-X SFP port Indicator	Green for port Link/Act.
Fault Contact	
Relay	Relay output to carry capacity of 1A at 24VDC
Power	
Redundant Input Power	Dual DC inputs. 12~48 VDC on 6-pin terminal block
Power Consumption (Typ.)	23 Watts
Overload Current Protection	Present
Reverse Polarity Protection	Present
Physical Characteristics	
Enclosure	IP-30
Dimensions (W x D x H)	96.4 x 145.5 x 154 mm (3.8 x 5.73 x 6.06 inch)
Weight (g)	1520 g
Environmental	
Storage Temperature	-40 to 85°C (-40 to 185°F)
Operating Temperature	-40 to 75°C (-40 to 167°F)
Operating Humidity	5% to 95% Non-condensing
Regulatory Approvals	
EMI	FCC Part 15, CISPR (EN55022) class A
EMS	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11
Shock	IEC60068-2-27
Free Fall	IEC60068-2-31
Vibration	IEC60068-2-6
Safety	EN60950-1
Warranty	5years

*NOTE: This function is available by request only

Ordering Information

IGS-R9 **A** **BB** **CC**

Code Definition	10/100/1000Base-T(X) Port Number	100/1000Base-(F)X SFP Port Number	Additional Port Type
Option	- 08 : 8 ports	- 12 : 12 ports	- GP : Gigabit SFP ports

Available Model	Model Name	Description
	IGS-R9812GP	Industrial Layer-3 20-port managed Gigabit Ethernet switch with 8x10/100/1000Base-T(X) and 12x100/1000Base-X, SFP socket
Packing List		Optional Accessories (Can be purchased separately)
<ul style="list-style-type: none"> IGS-R9812GP DIN-Rail Kit Wall-mount Kit Console Cable ORing Tool CD Quick Installation Guide 		<ul style="list-style-type: none"> Open-Vision M500, Powerful Network Management Windows Utility Suite, 500 IP devices SFP100 series, 100Mbps SFP optical transceiver SFP1G series, 1Gbps SFP optical transceiver DR-45 series, 45W DIN-Rail power supply DR-75 series, 75W DIN-Rail power supply DR-120 series, 120W DIN-Rail power supply