

RP-ISG6528IX-4F-D

24-P Gigabit + 4-SFP (1G/2.5G/10G) slot L3 Managed Industrial Switch with DI/DO/RS485



The RP-ISG6528IX-4F-D is a Layer 3 managed industrial Ethernet switch with 24 non-PoE Gigabit RJ45 ports and four SFP+ slots that support 1G, 2.5G, and 10G fiber uplinks. Digital inputs and outputs (DI/DO) and the RS-485 interface help integrate the switch into industrial automation systems.

The switch supports IPv4 and IPv6 static routing, dynamic routing protocols such as OSPFv2 and BGP4, and Layer 2 features including VLANs, QoS and access control lists. ITU-T G.8032 Ethernet Ring Protection Switching (ERPS) restores network connectivity within 20 ms after a link failure in the ring.

The switch features a fanless IP40 enclosure, DIN-rail mounting, redundant 12–75 VDC power inputs and an operating temperature range of −40°C to +75°C. Built-in surge protection on the power and Ethernet ports makes it suited to factory automation, transportation networks and oil and gas facilities.

Features

Ports and Industrial Interfaces

- 24 × 10/100/1000 Mbps RJ45 ports
- 4 × SFP+ slots supporting 1G/2.5G/10G fiber connections
- DI/DO and RS-485 interfaces for industrial applications

Layer 3 Routing

- IPv4/IPv6 static routing and RIP, OSPFv2, BGP4 and IS-IS dynamic routing
- Up to 13,000 routing entries
- ECMP, VRRP, DHCPv4 server and DHCPv4 relay

Layer 2 Switching and Redundancy

- ITU-T G.8032 ERPS with major ring and sub-ring support, recovery time ≤20 ms
- STP, RSTP, MSTP and loop detection
- VLAN, GVRP, QinQ, QoS, IGMP snooping and LACP link aggregation

Security and Management

- ACLs, IEEE 802.1X authentication, RADIUS and TACACS
- DHCP snooping, IP source guard and Dynamic ARP Inspection
- IPv4/IPv6 management through web, CLI and SNMPv2c/v3
- sFlow, MQTT, port mirroring and SFP digital diagnostics
- USB configuration import/export and firmware updates

Industrial Design and Protection

- Redundant 12–75 VDC power inputs
- Reverse-polarity and overcurrent protection
- Fanless IP40 enclosure with DIN-rail mounting
- Operating temperature range of −40°C to +75°C
- Up to 6 kV surge protection on power and Ethernet ports
- ESD protection of 15 kV air and 8 kV contact discharge

Specifications

Standards	• IEEE 802.3 10Base-T Ethernet • IEEE 802.3u 100Base-TX Ethernet • IEEE 802.3ab 1000Base-T Ethernet • IEEE 802.3z 1000Base-X Ethernet • IEEE 802.3ae 10Gigabit Ethernet • IEEE802.3x Flow Control and Back Pressure • IEEE 802.1D Spanning Tree Protocol • IEEE 802.1w Rapid Spanning Tree Protocol • IEEE 802.1Q VLAN • ITU-T G.8032 ERPS • IEEE 802.1X Port Authentication Network Control • IEEE 802.1ab LLDP • IEEE 802.3ad LACP
Interface	• 24 x 10/100/1000Base-T RJ45 (1-24 ports) • 4 x 1G/2.5G/10GBase-X SFP (25-28 ports)
Size of RAM	• 1GB
Size of Flash	• 512MB
Management port	• 1 x RJ45 Console port (115200,8,N,1) • 1*USB 2.0 for configuration and firmware update
Switching capacity	• 128Gbps
Packet forwarding rate	• 190.4Mpps
MAC address table	• 16K
VLAN	• 4K
Buffer	• 12Mbit
Forwarding delay	• <5us
Jumbo Frame	• Support 10Kbytes
MDX/MIDX	• Support
Watchdog	• Support
Layer 2 function	

Port aggregation	• Support GE port aggregation • Support 2.5GE aggregation • Support 10GE aggregation • Support static aggregation • Support LACP dynamic aggregation • Up to 64 aggregation groups and up to 8 ports per group
Port features	• Support IEEE802.3x flow control, • Support interface counters, • Support port isolation, • Port mirroring (One-to-One, Many-to-One) • Support loop detection(Port-based; VLAN-based) • Support broadcast storm suppression(broadcast; unknown multicast; unknown unicast)
Mac-address table management	• Support static Mac-address management • Support dynamic Mac-address Management • Support filtering Mac-address • Support MAC limit based on port and VLAN • Support MAC flapping based on port and VLAN • 16K Mac-address table size
VLAN	• IEEE802.1Q tagged VLAN • Mac based VLAN • IP based VLAN • Protocol based VLAN • Voice VLAN, specially divide VLAN for user voice data flow • Private VLAN, divide a VLAN broadcast domain into multiple subdomains to form a double-layer VLAN structure • VLAN range: 1-4094 • Support access mode/trunk mode/hybrid mode
GVRP	• Normal mode • Fixed mode • Forbidden mode
QinQ	• Port-based QinQ • VLAN-based QinQ (VLAN-stacking; VLAN-mapping) • Flow-based QinQ
LLDP	• Link Layer Discovery Protocol • Med
SPAN	• Number of Sessions: 7 • Many-to-one
RSPAN	• Remote Switch Port Analyzer
MSTP	• 802.1D STP • 802.1W RSTP • 802.1S MSTP • BPDU Guard • Number of Single Ring Device Connections: 20

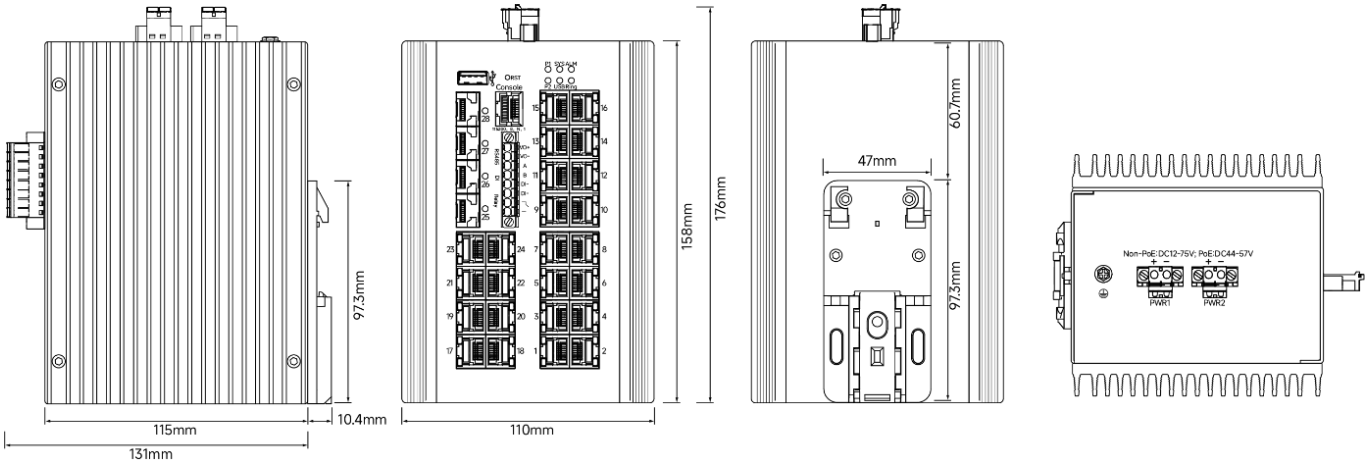
ERPS G.8032	• Major ring • Sub ring • Recovery time≤20ms • Number of Single Ring Device Connections: No limit
Qos	• Qos Class, Remarking • Support SP, WRR Queue Scheduling • Ingress Port-based Rate-limit • Egress Port-based Rate-limit • Egress Port-queue shaper • Policy-based QoS • Port Queue Numbers: 8
DHCPv4 Snooping	• DHCP snooping trust port • DHCP snooping option-82 • DHCP snooping circuit-id and remote-id customized
L2 Multicast	
IGMP	• IGMP v1,v2,v3
IGMP snooping	• Internet Group Management Protocol Snooping • Fast leave • Multicast Table Size: 1K
PIM-SM	• Protocol Independent Multicast-Sparse Mode
Security functions	
ACL	• IP Standard ACL • MAC extend ACL • IP extend ACL • IPv6 ACL • Time Range • ACL apply on VLAN • ACL entries, include input and output
802.1x	• Port access control • Mac-address access control • RADIUS server
Port-security	• Port-security
IP source guard	• IP source Guard, Port-based IP/Mac Binding Access
ARP-check	• Support ARP-check and ARP packet filtering for illegal users
DAI	• Dynamic ARP Inspection
Anti-gateway ARP Spoofing	• Prevent Gateway ARP spoofing
Ddos	• Ddos attack protection
Access control	• Support Telnet/SSH/HTTP/HTTPS user access control
AAA	• RADIUS authentication access switch • TACACS authentication access switch • Authorization
Reliability	
Loop Detect	• Loop detect, based on port or VLAN

EFM	• The Ethernet in the first mile, 802.3ah
Management & Maintenance functions	
Dual Stack	• IPv4 and IPv6 Dual Stack Management
System Log Management	• Syslog Level 7 to 0 Corresponding Debug/Info/Notice/Warning/Err/Critical/Alert • Support connecting up to 3 Servers • For IPv4 and IPv6
User Management	• Support password protection, support MD5/SHA256/SHA512 algorithm • Local Management of User Privilege • Remote authorization by RADIUS or TACACS • Enable privilege protection • User password complexity requirements • User login fail protection • User Privilege Level 0 to 15
Login Service Management	• Up to 8 users online simultaneously • Access control based on IPv4 or IPv6 ACL
Firmware Management	• Firmware upgraded by WEB • Firmware upgraded by CLI • Dual partition
Web Management	• Web Management • Support HTTP V1.1 • Support HTTPS • For IPv4 and IPv6
CLI management	• Console/Telnet command line management
Fault Detection	• Ping/Traceroute, For IPv4 and IPv6 • Dying gasp (the input voltage should be more than 18V) • Optical transceiver DDM • One click fault information collection • Cable detection
DNS	• Domain Name System
NTP	• Network Time Protocol, For IPv4 and IPv6 • Support domain name configuration
Configuration Import/Export	• FTP/TFTP based remote configuration import and export • USB flash drives based local configuration import and export
sFlow	• Sampled flow
SNMP	• Version SNMPV2C/V3
MQTT	• Message Queuing Telemetry Transport
RMON	• Support RMON (Remote Monitoring) alarm
Dual partition management	• Support dual partition switching
Application Protocol Functions	

Telnet server	• Support telnet server for IPv4 and IPv6
Telnet client	• Support telnet client for IPv4 and IPv6
SCP (Secure Copy Protocol)	• SCP client/server for IPv4 and IPv6
SFTP	• Sftp client/server for IPv4 and IPv6
SSH server	• Support login based on user password-SSH2, support IPv4, IPv6 • Support public key-based login
TACACS	• Support TACACS (the terminal access controller accesses the control system)
TFTP	• Support TFTP Client
Layer 3 function	
Static Route	• Support VLAN interface and route port • IPv4 static routing table entry configuration • ARP dynamic learning and static configuration • IPv6 static routing table entry configuration • Neighbor discovery and static configuration • Routing prefix table size 4K for IPv4, for IPv6 divide by 4
DHCPv4 Client	• Dynamic host configuration protocol for IPv4
DHCPv6 Client	• Dynamic host configuration protocol for IPv6
DHCPv4 Relay	• DHCP Relay for IPv4
DHCPv4 Server	• DHCP Server for IPv4
ECMP	• Support ECMP (Equal-cost multi-path routing) • Support the configuration of ECMP Max next-hop • Support capacity balanced configuration
Route policy	• IPv4 prefix-list
VRRP	• virtual router redundancy protocol
Routing Protocol Specification	
RIP	• RIPv1/v2
OSPFv2	• OSPFv2
BGP4	• BGP4 • BGP Support Routing Recursive ECMP • Support to view the number of neighbors and up/down state
IS-IS	• IS-ISv4
Routing Entry	• 13K
Power parameter	
Input voltage	• 12-75V DC, redundant power input
Input current	• 2A Max
Total power consumption	• Full loading ≤24W
Connector	• Removable 2*2-pin terminal block
Reverse polarity protection	• Support
Over-current protection	• Support
Mechanical structure	
LED Indicators	• P1/P2 (Power indicator) Green

	• SYS (System status indicator) • USB (USB status indicator) Green • ALM(Fault status indicator) Red • Ring(Ring network indicator) • 1-24 (Copper ports indicators) Green: ports link up Yellow: port speed on 1000M • 25-28 (Fiber ports indicators) Green
Case protection	• IP40
Installation method	• Din-rail
Dimension	• 110x158x115mm (WxHxD)
Environment	• Operating temperature: -40°C~+75°C • Storage temperature -40°C~+85°C • Operating Humidity: 10 to 90% (Non-Condensing) • Storage humidity: 5%-95% RH
EMS	• Surge protection of power: IEC 61000-4-5 6KV/4KV (8/20us) • Surge protection of Ethernet ports: IEC 61000-4-5 6KV/2KV (10/700us) • RS：IEC 61000-4-3 80 MHz-1 GHz：10 V/m • EFT：IEC 61000-4-4 4K/2K • CS：IEC 61000-4-6 10V • ESD：IEC 61000-4-2 Contact: 8K；Air: 15K
EMI	• FCC Part 15B Class A
Shock	• IEC 60068-2-27
Free fall	• IEC 60068-2-32
Vibration	• IEC 60068-2-6
Certification	• CE/FCC/RoHS

Dimension



Ordering information

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