

RP-ISG6316I-4F-D**16-P Gigabit + 4-SFP(1G/2.5G) slot****L2+ Managed Industrial Ethernet Switch****With DI/DO/RS485**

The RP-ISG6316I-4F-D is a highly reliable Layer 2+ managed industrial Ethernet switch, equipped with 16×10/100/1000Base-T RJ45 ports and 4×1G/2.5GBase-X SFP slots. With full gigabit capability, it delivers high performance and rapid transmission of large volumes of video, voice, and data, making it well-suited for high-bandwidth industrial applications.

This model supports rich Layer 2 management features, including DI/DO/RS485 interfaces, G.8032 ERPS ring protection, MSTP/RSTP/STP redundancy, IPv4/IPv6 static routing, and a built-in DHCP server. With advanced network security and traffic control, it ensures stable and resilient connectivity for mission-critical networks.

Engineered for tough environments, it features a fan-less IP40-rated metal housing, DIN-rail installation, dual 12–75V DC power inputs, and a wide -40°C to 75°C operating range. With strong EMI/EMC resistance, it is ideal for deployment in industrial automation, transportation systems, energy sectors, and surveillance networks.

Features

- 12-75V redundant DC power supply with polarity reverse/over-current protection
- Support DI/DO/RS485 and USB one key configuration & upgrading
- Layer 3 features: Support IPv4/IPv6 static routing, DHCP server, DHCP relay
- Layer 2 features: VLAN/GVRP/QinQ/SPAN/RSPAN/STP, RSTP, MSTP/DHCP/Multicast/ACL/QoS/LLDP/802.1x/AAA/Loop Detect/Dying Gasp/SFP DDM/IPV6 management/Dual Stack/sFlow/Web/SNMP/MQTT/Telnet/TFTP/Web upgrading
- Support G.8032 ERPS protocol, recovery time ≤20ms
- Support 6KV surge protection and ESD: Air-15kV, Contact-8kV Protection
- IP40 fan-less and Din-rail hardware design
- Operation temperature: -40°C ~ + 75°C

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 • 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	• 16 x 10/100/1000Base-T RJ45 • 4 x 1G/2.5GBase-X SFP
Size of RAM	• 512MB
Size of Flash	• 512MB
Management port	• 1 x RJ45 Console port (115200,8,N,1) • 1 x USB 2.0 for configuration and firmware update
Switching capacity	• 52Gbps
Packet forwarding rate	• 77.3Mpps
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 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;

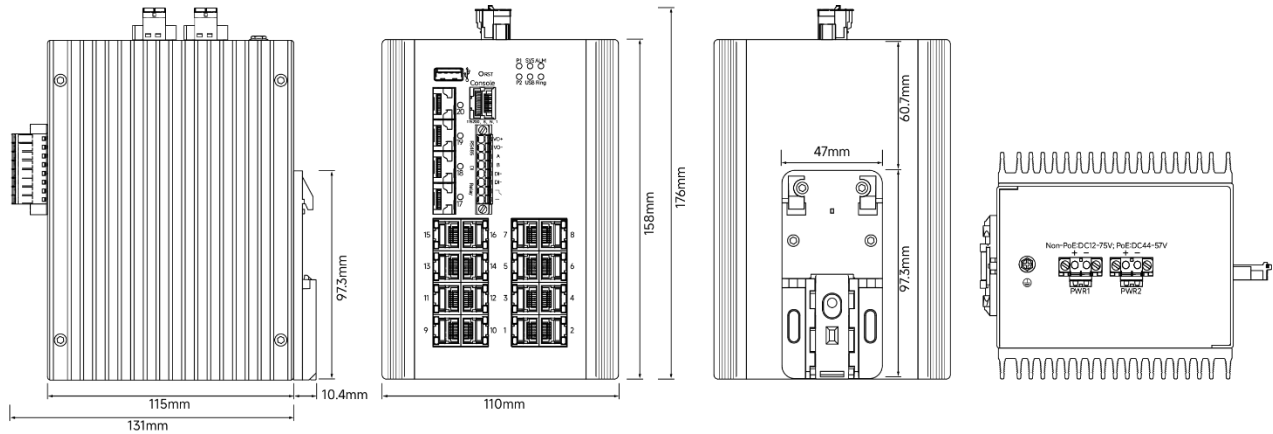
	unknown multicast; unknown unicast)
Mac-address table management	• Support static Mac-address management • Support dynamic Mac-address Management • Support filtering Mac-address • Support MAC limit based on port and VLAN • Support MAC flapping based on port and VLAN • 16K Mac-address table size
VLAN	• 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	• LLDP (Link Layer Discovery Protocol) • Med
SPAN	• Number of Sessions: 7 • Many-to-one
RSPAN	• Remote Switch Port Analyzer
MSTP	• 80.21D 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 Detec	• 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 functions	
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
DHCPv4 Client	• Dynamic host configuration protocol for IPv6
DHCPv4 Relay	• DHCP Relay for IPv4
DHCPv4 Server	• DHCP Server for IPv4
Power parameter	
Input voltage	• 12-75VDC, redundant power input
Input current	• 1.7A Max
Total power consumption	• Full loading ≤ 20W
Connector	• Removable 2x2-pin terminal block
Reverse polarity protection	• Support
Over-current protection	• Support
Mechanical structure	
LED Indicators	• P1/P2 (Power indicator) • SYS (System status indicator) • USB (USB status indicator) Green • ALM(Fault status indicator) Red • Ring(Ring network indicator) • 1-16 (Copper ports indicators) Green: ports link / Yellow: Off: ports on 10/100M; On: ports on 1000M • 17-20 (Fiber ports indicators) Green
Case protection	• IP40
Installation method	• Din-rail
Dimension	• 110 x 115 x 158mm (WxDxH)
Environment	• Operating temperature: -40°C~+75°C • Storage temperature -40°C~+85°C • Operating Humidity: 10 to 90% (Non-Condensing)
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

Dimension



Ordering information

RP-ISG6316I-4F-D 16 x Gigabit + 4-SFP(1G/2.5G) L2+ Managed Industrial Ethernet Switch with DI/DO/RS485