

RP-IPG65240IX-4FR-D**24-P Gigabit PoE + 4-SFP (1G/2.5G/10G)
slot L3 Managed Industrial PoE Switch
with DI/DO/RS485**

RP-IPG65240IX-4FR-D is a dependable Layer 3 managed industrial PoE switch boasting 24 ports for 10/100/1000Base-T PoE and 4 ports for 1G/2.5G/10GBase-X SFP+. It adheres to IEEE802.3af/at PoE standards, delivers total PoE power budget up to 370 watts. With its full gigabit downlink and 10G uplink capabilities, it excels in high-performance data transfer, handling substantial volumes of video, voice, and data seamlessly. This switch supports G.8032 ERPS, MSTP/RSTP/STP redundancy technologies, DI/DO/RS485, Layer 3 static routing & dynamic routing features, and offers robust Layer 2 management and security functions, making it an excellent choice for large-scale industrial networks.

RP-IPG65240IX-4FR-D is a cost-effective, user-friendly device designed to meet essential industrial Ethernet networking needs. It boasts a wide voltage input range of 44-57VDC, a redundant power design with DC/DC support, and a rugged IP40 fan-less housing that's suitable for rack-mount installations. Its impressive operational temperature range from -40°C to 75°C and high-level EMI/EMC capabilities make it ideal for harsh and critical environments, such as heavy industrial factories, transportation, oil & gas, chemical facilities, IP surveillance setups, and processing automation areas.

RP-IPG65240IX-4FR-D stands out as a reliable, high-performance, and cost-effective solution for industrial networking requirements. Its robust features, wide operating parameters, and resistance to challenging environmental conditions make it the preferred choice for various industrial applications where durability and performance are paramount.

Features

- 24*10/100/1000Base-T PoE, 4*1G/2.5G/10GBase-X SFP
- Redundant power 44-57V input with polarity reverse/over-current protection
- Complies with IEEE802.3af PoE and IEEE802.3at PoE+ standard
- Support DI/DO/RS485 and USB one key configuration & upgrading
- Layer 3 feature: Support IPv4/IPv6 static routing, DHCP server, DHCP relay; Support ECMP,

- VRRP, RIP, OSPF, BGP4, IS-IS; 13K routing entries
- 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/ PoE management/sFlow/Web/SNMP/MQTT/Telnet/TFTP/ Web upgrading
- Support G.8032 ERPS protocol, recovery time $\leq 20\text{ms}$
- Support 6KV surge protection and ESD: Air-15kV, Contact-8kV Protection
- IP40 fan-less and rack-mount hardware design
- Operation temperature: $-40\text{ }^{\circ}\text{C} \sim +75\text{ }^{\circ}\text{C}$

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 • IEEE 802.3ae 10GBase-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 • IEEE 802.3af Power-Over-Ethernet • IEEE 802.3at Power Over Ethernet plus PSE
Interface	• 24 x 10/100/1000Base-T RJ45 PoE • 4 x 1G/2.5G/10GBase-X SFP+
Size of RAM	• 1GB
Size of Flash	• 512MB
Management port	• 1 x RJ45 Console port • 1 x USB 2.0 for configuration and firmware update
Data channel	• 1 channel RS485 • 1 channel DI(digital input) • 1 channel DO(digital output)
Switching capacity	• 128Gbps
Packet forwarding rate	• 190.4Mpps
MAC address table	• 16K
VLAN	• 4K
Buffer	• 12M bit
Forwarding delay	• $<5\mu\text{s}$

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)
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
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
GVRP	• Normal mode • Fixed mode • Forbidden mode
QinQ	• Port-based QinQ • VLAN-based QinQ • Flow-based QinQ
SPAN	• Number of Session:7 • Many-to-one
RSPAN	• Remote Switch Port Analyzer
MSTP	• 802.1D STP

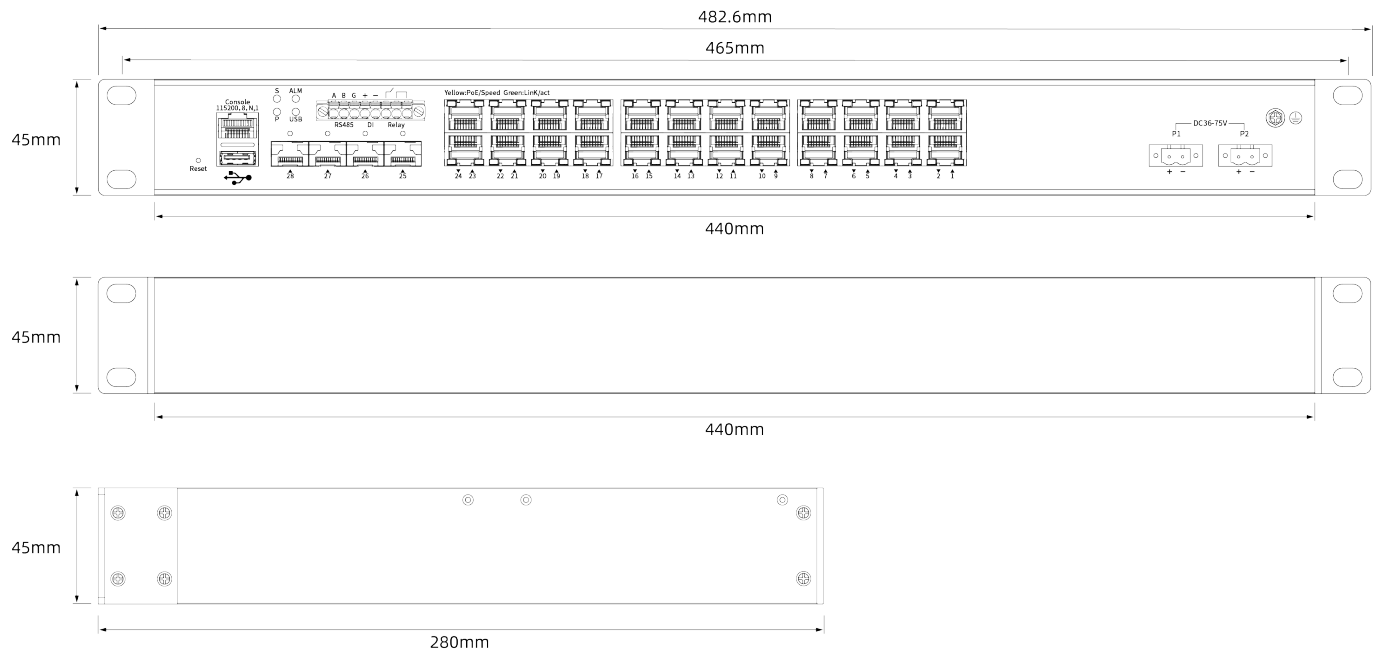
	• 802.1W RSTP • 802.1S MSTP • BPDU Guard • Number of Single Ring Device Connections:20
ERPS G.8032	• Major ring • Sub ring • Recovery time≤20ms • Number of Single Ring Device Connections:No limit
Qos	• QoS Class, Remarking • Support SP, WRR Queue Scheduling • Ingress Port-based Rate-limit • Egress Port-based 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
Layer 2 Mlticast	
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, base 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 • 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
sFlow	• Sampled flow
SNMP	• Version SNMPV2C/3
MQTT	• Message Queuing Telemetry Transport
RMON	• Support RMON(Remote Monitoring) alarm
PoE management	• Support 802.3af/802.3at • Support PD watchdog • Support PoE priority management • Support Max PoE power configuration for each port

	• Support alarm threshold configuration • Support reserved power configuration • Support PoE schedule • Support PoE legacy mode
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 and 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 by4
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	• 44-57VDC (802.3af) • 52-57VDC (802.3at) • Redundant power input

Input current	• 9A Max
PoE power	• Full loading without PoE≤20W • PoE power budget ≤ 370W
Connector	• Removable 2*2-pin terminal block
Reverse polarity protection	• Support
Over-current protection	• Support
Mechanical structure	
LED Indicators	• P (Power indicator) • S (System status indicator) • USB (USB status indicator) Green • ALM (Fault status indicator) Red • 1-24 (Copper ports indicators) Green / (PoE) Yellow • 25-28 (Fiber ports indicators) Green
Case protection	• IP40
Installation method	• Rack mountable
Dimension	• 440x280x44mm (WxDxH)
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 DC:6KV/4KV (8/20us) • Surge protection of Ethernet ports: IEC 61000-4-5 6KV/6KV (10/700us) • RS : IEC 61000-4-3 80 MHz-1 GHz : 10 V/m • EFT : IEC 61000-4-4 power 4K, signal 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

RP-IPG65240IX-4F-D 24-P Gigabit PoE + 4-SFP (1G/2.5G/10G) slot L3 Managed
Industrial PoE Switch, with DI/DO/RS485, Dual DC 44-57V input