RP-IPG6308IX-4F-D-12V

8-P Gigabit PoE + 4-SFP(1G/2.5G/10G) slot L2+ Managed Industrial PoE Switch, DI/DO/RS485, DC12-57V input

The RP-IPG6308IX-4F-D-12V is a reliable industrial L2+ managed PoE switch featuring 8 Gigabit PoE ports and 4 SFP slots supporting 1G/2.5G/10G fiber. It integrates boost technology to operate from 12–57V DC input, enabling stable PoE output even with limited power sources.

Designed for flexible deployment, it converts 12–24V input into standards-compliant PoE, supporting IEEE 802.3af/at with up to 30W per port. It also supports ERPS ring redundancy with sub-20ms recovery, ensuring continuous network operation in critical industrial applications.

Built for harsh environments, it features IP40 fanless housing, DIN-rail mounting, and wide temperature support from -40°C to 75°C. With DI/DO/RS485 interfaces and comprehensive management functions, it is ideal for transportation, solar-powered, and DC-based industrial systems.

Features

- 8*10/100/1000Base-T RJ45 PoE, 4*1G/2.5G/10GBase-X SFP
- Redundant power 12-57V input with polarity reverse/over-current protection
- Complies with IEEE802.3af PoE and IEEE802.3at PoE+ standard.
- Automatically allocate PoE power according to the input voltage
- 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/SFP DDM/IPV6 management/Dual Stack/ PoE management/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 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 IEEE 802.3af PoE IEEE 802.3at PoE+	
Interface	8 x 10/100/1000Base-T RJ45 PoE 4 x 1G/2.5G/10GBase-X SFP	
Management port	1 x RJ45 Console port (115200,8,N,1) 1 x USB 2.0	
Data & Alarm channel (Removable 8-pin terminal block)	Vout: VO＋, VO－	5V output (0.2A MAX)
	1 channel RS485: A, B	Serial server: Supports Modbus protocol transparent transmission Network Side: Supports TCP protocol, supports client and server mode Serial Port Side: Supports RTU communication mode and serial port transmission parameter settings
	1 channel digital input: DI+，DI-	Status “1”: 12V-30V Status”0”: -30V~3V Max input current: 8 mA
	1 channel digital output	Normally open，Normally closed，Pulse 2A@30V DC，0.3A@125V AC
CPU	Marvell AC5 series 1.2GHz	
Size of RAM	512MB	
Size of Flash	512MB	

Switching capacity	96Gbps
Packet forwarding rate	142.8Mpps
MAC address table	16K
VLAN	4K
Buffer	12Mbit
Forwarding delay	<5us
Jumbo Frame	Support 10Kbytes
MDX/MIDX	Support
Watchdog	Support

Layer 2 switching	
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
	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 features	
ACL	IP Standard ACL IP Extended ACL MAC extend ACL IPv6 ACL Time Range ACL apply on VLAN ACL Entrys, 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 TARCAS
	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
	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	FTP/TFTP based remote configuration import and export

/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
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, IPv6
	Support public key-based login
TACACS	Support TACACS (the terminal access controller accesses the control system)
TFTP	Support TFTP Client
Layer 3 features	
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

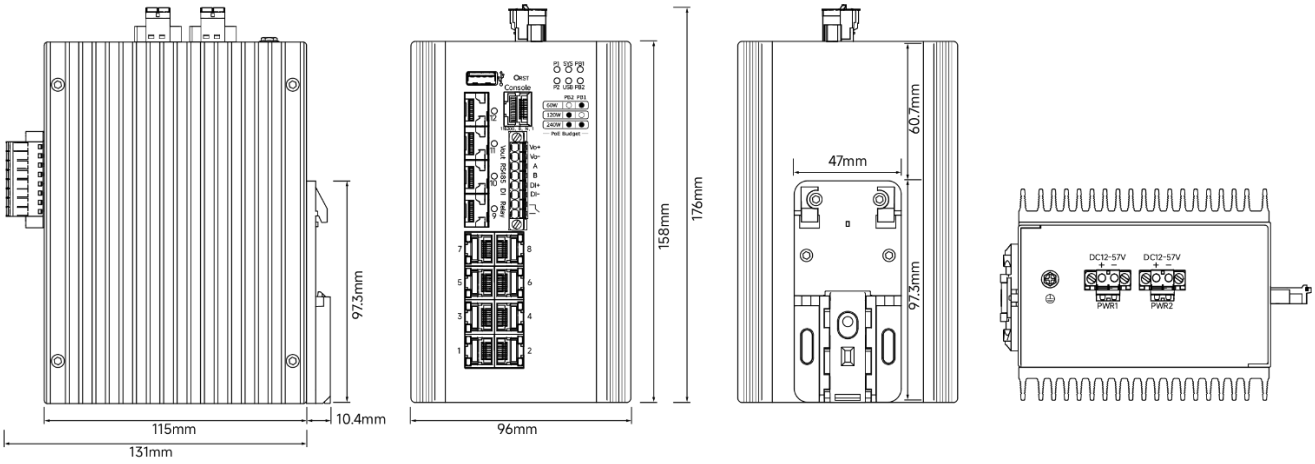
Power parameter	
Input voltage	12-57VDC redundant power input
Input current	5.8A Max
Total power consumption	Full loading without PoE≤14.5W PoE power budget: ≤240W@53-57VDC Power input ≤120W@24-52VDC Power input ≤60W@12-23VDC Power input ※ Automatically allocate PoE power according to the input voltage
Connector	Removable 2x2 pin terminal block
Reverse polarity protection	Support
Over-voltage protection	Support
Over-current protection	Support

LED Indicators		
P1/P2 (Power indicator)	Off: the device is power off or failed	On: the device power on is normal
SYS (System status indicator)	Blinking: device initialization	On: device on normal operation
USB (USB status indicator) Green	Off: USB flash drive not insert or not detected by device	
	On: USB flash drive is detected by device	
	Blinking: the device is reading and writing the data from USB flash drive	
PB1/PB2 (PoE Max budget indicators)	PB1 & PB2 Off: No PoE budget output	**PB1 on:** PoE output budget 60W **PB2 on:** PoE output budget 120W **PB1 & PB2 on:** PoE output budget 240W
1-8 (Copper ports	Off: ports link down	

indicators) Green	On: ports link up
	Blinking: data on TX/RX
1-8 (PoE status indicators) Yellow	Off: PoE not working
	On: PoE working
9-12 (Fiber ports indicators) Green	Off: ports link down
	On: ports link up
	Blinking: data on TX/RX

Mechanical structure	
Case protection	IP40
Installation method	Din-rail
Dimension	96x158x115mm (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 DC: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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Brief features:

- Redundant power DC 12-57V input
- Complies with IEEE802.3af /802.3at PoE standard
- Supports DI/DO/RS485 and USB one-touch setup.
- VLAN/VLAN Classification/QinQ/STP, RSTP,
- MSTP/Port Mirroring/DHCP/Multicast/
- ACL/IGMP/QoS/LLDP/802.1X/Dying Gasp/SFP
- DDM/PoE management/IPV6 management
- SNMP/Telnet/TFTP/Web upgrading
- Support G.8032 ERPS protocol, recovery time ≤20ms