

## **RP-IPG63168IX-4FR**

### **16-P Gigabit + 8-TP/SFP(1G) Combo + 4-SFP(1G/2.5G/10G) slot L2+ Managed Industrial PoE Switch**



RP-IPG63168IX-4FR is the highly reliable Layer 2+ managed industrial PoE switch with 16-port 10/100/1000Base-T PoE, 8-port 1000Base Combo and 4-port 1G/2.5G/10GBase-X SFP+. It delivers 30watts power per PoE port and generates a total of 370Watts power to PD devices. With full gigabit downlink and 10G uplink capability, it delivers high-performance data transfer across industrial networks.

RP-IPG63168IX-4FR supports G.8032 ERPS, MSTP/RSTP/STP redundancy technologies, Layer 3 static routing, and robust management features. With wide range voltage input 44-57VDC and redundant power design, it is ideal for large-scale industrial networks.

Robust IP40-rated rugged case protection with rack-mount installation, Its wide operating temperature ranges from -40°C to 75°C, RP-IPG63168IX-4FR is the best choice for heavy industrial factory, transportation, oil & gas, chemical, IP Surveillance and processing automation area where environmental conditions are harsh and critical.

## **Features**

- DC/DC redundant power supply with polarity reverse/over-voltage/over-current protection
- Complies with IEEE802.3af PoE and IEEE802.3at PoE+ standard
- Support USB one key configuration and upgrading
- Layer 3 feature: Support IPv4/IPv6 static routing
- Layer 2 features: VLAN; ERPS, STP/RSTP/MSTP; Link aggregation, IGMP snooping, port mirroring, QinQ, 802.1X, port isolation, RMON, NTP client, DHCP snooping/client, Ping/Tracert test, ACL, QoS and SFP DDM function
- Management and maintenance: IPv4 and IPv6 management, PoE management; Support Web, SNMP, CLI, Telnet/SSH management method; Support user management, system log, configuration upload/download through web interface, firmware upgrade via HTTP/TFTP/USB
- Support G.8032 ERPS protocol, recovery time  $\leq 20$ ms
- Support 6KV surge protection and ESD: Air-15kV, Contact-8kV Protection
- IP40 fan-less and rack-mount hardware design
- Operation temperature: -40°C ~+ 75°C

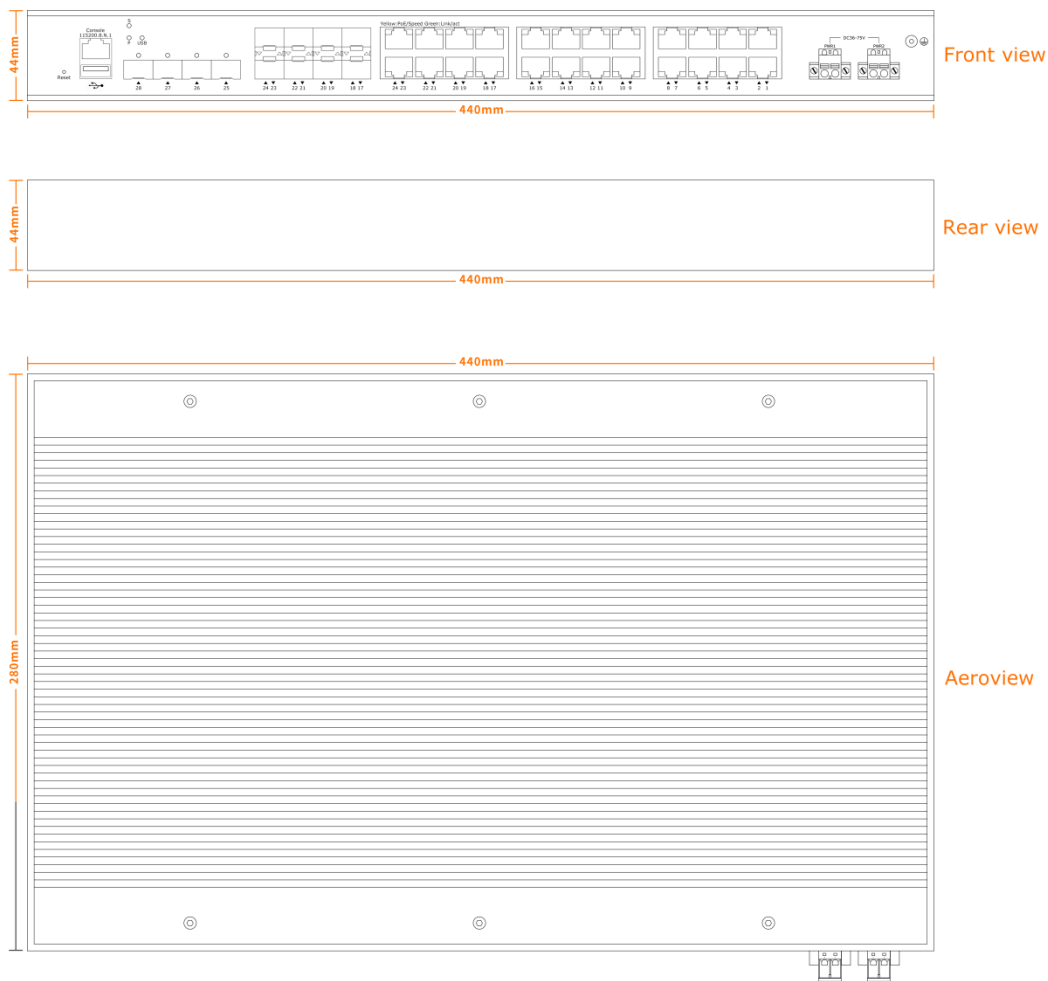
## Specifications

<b>Standards</b>	<ul style="list-style-type: none"> <li>• IEEE 802.3 10Base-T Ethernet</li> <li>• IEEE 802.3u 100Base-TX Ethernet</li> <li>• IEEE 802.3ab 1000Base-T Ethernet</li> <li>• IEEE 802.3z 1000Base-X Ethernet</li> <li>• IEEE 802.3z 1000Base-X Ethernet</li> <li>• IEEE802.3x Flow Control and Back Pressure</li> <li>• IEEE 802.1D Spanning Tree Protocol</li> <li>• IEEE 802.1w Rapid Spanning Tree Protocol</li> <li>• IEEE 802.1Q VLAN</li> <li>• ITU-T G.8032 ERPS</li> <li>• IEEE 802.1X Port Authentication Network Control</li> <li>• IEEE 802.1ab LLDP</li> <li>• IEEE 802.3ad LACP</li> <li>• IEEE 802.3af PoE</li> <li>• IEEE 802.3at PoE+</li> </ul>
<b>Interface</b>	<ul style="list-style-type: none"> <li>• 16 x 10/100/1000Base-T RJ45</li> <li>• 8 x 1G COMBO SFP/RJ45</li> <li>• 4 x 1G/2.5G/10GBase-X SFP+</li> </ul>
<b>Management port</b>	<ul style="list-style-type: none"> <li>• 1 x RJ45 Console port</li> <li>• 1 x USB 2.0 for configuration and firmware update</li> </ul>
<b>Switching capacity</b>	<ul style="list-style-type: none"> <li>• 128Gbps</li> </ul>
<b>Packet forwarding rate</b>	<ul style="list-style-type: none"> <li>• 190.4Mpps</li> </ul>
<b>MAC address table</b>	<ul style="list-style-type: none"> <li>• 16K</li> </ul>
<b>VLAN</b>	<ul style="list-style-type: none"> <li>• 4K</li> </ul>
<b>Buffer</b>	<ul style="list-style-type: none"> <li>• 12M bit</li> </ul>
<b>Forwarding delay</b>	<ul style="list-style-type: none"> <li>• &lt;5us</li> </ul>
<b>Jumbo Frame</b>	<ul style="list-style-type: none"> <li>• Support 10Kbytes</li> </ul>
<b>MDX/MIDX</b>	<ul style="list-style-type: none"> <li>• Support</li> </ul>
<b>Watchdog</b>	<ul style="list-style-type: none"> <li>• Support</li> </ul>
<b>Layer 2 function</b>	
<b>Port aggregation</b>	<ul style="list-style-type: none"> <li>• Support GE port aggregation</li> <li>• Support 2.5GE aggregation</li> <li>• Support 10GE aggregation</li> <li>• Support static aggregation</li> <li>• Support dynamic aggregation</li> </ul>
<b>Port features</b>	<ul style="list-style-type: none"> <li>• Support IEEE802.3x flow control,</li> <li>• Support port traffic statistics,</li> <li>• Support port isolation</li> <li>• Support network storm suppression based on port bandwidth percentage</li> </ul>
<b>VLAN</b>	<ul style="list-style-type: none"> <li>• Support access mode</li> <li>• Support trunk mode</li> <li>• Support hybrid mode</li> </ul>
<b>VLAN Classification</b>	<ul style="list-style-type: none"> <li>• Mac Based VLAN</li> </ul>

	<ul style="list-style-type: none"> <li>• IP Based VLAN</li> <li>• Protocol Based VLAN</li> </ul>
<b>QinQ</b>	<ul style="list-style-type: none"> <li>• Port-based QinQ</li> <li>• VLAN-based QinQ</li> <li>• Flow-based QinQ</li> </ul>
<b>Port mirroring</b>	<ul style="list-style-type: none"> <li>• Many to one port mirroring</li> </ul>
<b>Ring network protocol</b>	<ul style="list-style-type: none"> <li>• Support STP、RSTP、MSTP</li> <li>• Support G.8032 ERPS protocol、single ring, sub Ring and associated sub ring</li> <li>• Recovery time <math>\leq 20\text{ms}</math></li> </ul>
<b>DHCP</b>	<ul style="list-style-type: none"> <li>• Support DHCP Client</li> <li>• Support DHCP Snooping</li> </ul>
<b>Multicast</b>	<ul style="list-style-type: none"> <li>• IGMP snooping</li> </ul>
<b>ACL</b>	<ul style="list-style-type: none"> <li>• IP Standard ACL</li> <li>• MAC extend ACL</li> <li>• IP extend ACL</li> </ul>
<b>QoS</b>	<ul style="list-style-type: none"> <li>• Support QoS Class, Remarking</li> <li>• Support SP, WRR queue scheduling</li> <li>• Ingress Port-based Rate-limit</li> <li>• Egress Port-based Rate-limit</li> <li>• Support Policy-based QoS</li> </ul>
<b>Security</b>	<ul style="list-style-type: none"> <li>• Support Dot1x、port authentication、MAC authentication、RADIUS service</li> <li>• Support port-security</li> <li>• Support IP Source Guard、IP/Port/MAC binding</li> <li>• Support ARP-check and ARP packet filtering for illegal users</li> <li>• Support port isolation</li> </ul>
<b>Management &amp; maintenance</b>	<ul style="list-style-type: none"> <li>• Support LLDP</li> <li>• Support user management and login authentication</li> <li>• Support SNMPV1/V2C/V3</li> <li>• Support web management, HTTP1.1, HTTPS</li> <li>• Support Syslog and alarm grading</li> <li>• Support RMON(Remote Monitoring) alarm</li> <li>• Support NTP</li> <li>• Support temperature monitoring</li> <li>• Support Ping、TRACERT</li> <li>• Support optical transceiver DDM function</li> <li>• Support TFTP Client</li> <li>• Support Telnet Server</li> <li>• Support SSH Server</li> <li>• Support IPv6 Management</li> <li>• Support PoE management</li> <li>• Support TFTP, web upgrading</li> <li>• Support USB upgrading</li> <li>• Support USB importing configuration</li> </ul>

<b>Layer 3 function</b>	
<b>ARP</b>	<ul style="list-style-type: none"> <li>• ARP table aging</li> </ul>
<b>IPv4 / IPv6</b>	<ul style="list-style-type: none"> <li>• Static routing</li> </ul>
<b>Power parameter</b>	
<b>Input voltage</b>	<ul style="list-style-type: none"> <li>• 44-57VDC</li> <li>• redundant power input</li> </ul>
<b>Input current</b>	<ul style="list-style-type: none"> <li>• 9A DC input Max</li> </ul>
<b>PoE power</b>	<ul style="list-style-type: none"> <li>• Full loading without PoE≤36W</li> <li>• PoE power budget ≤ 370W</li> </ul>
<b>Connector</b>	<ul style="list-style-type: none"> <li>• Removable 2-pin terminal block</li> </ul>
<b>Reverse polarity protection</b>	<ul style="list-style-type: none"> <li>• Support</li> </ul>
<b>Over-voltage protection</b>	<ul style="list-style-type: none"> <li>• Support</li> </ul>
<b>Over-current protection</b>	<ul style="list-style-type: none"> <li>• Support</li> </ul>
<b>Mechanical structure</b>	
<b>LED Indicators</b>	<ul style="list-style-type: none"> <li>• P (Power indicator)</li> <li>• S (System status indicator)</li> <li>• USB (USB status indicator)</li> <li>• 1-16 (Copper ports indicators) Green / PoE Yellow</li> <li>• 17-28 (Fiber ports indicators) Green</li> </ul>
<b>Case protection</b>	<ul style="list-style-type: none"> <li>• IP40</li> </ul>
<b>Installation method</b>	<ul style="list-style-type: none"> <li>• Rack mountable</li> </ul>
<b>Dimension</b>	<ul style="list-style-type: none"> <li>• 440 x 280 x 44mm (W*D*H)</li> </ul>
<b>Environment</b>	<ul style="list-style-type: none"> <li>• Operating temperature: -40°C~+75°C</li> <li>• Storage temperature -40°C~+85°C</li> <li>• Operating Humidity: 10 to 90% (Non-Condensing)</li> </ul>
<b>EMS</b>	<ul style="list-style-type: none"> <li>• Surge protection of power: IEC 61000-4-5 DC:6KV/6KV (8/20us)</li> <li>• Surge protection of Ethernet ports: IEC 61000-4-5 6KV/2KV (10/700us)</li> <li>• RS: IEC 61000-4-3 80MHz-1 GHz: 10 V/m</li> <li>• EFT: IEC 61000-4-4 power 4K, signal 2K</li> <li>• CS: IEC 61000-4-6 10V</li> <li>• ESD: IEC 61000-4-2 Contact: 8K; Air: 15K</li> </ul>
<b>EMI</b>	<ul style="list-style-type: none"> <li>• FCC Part 15B Class A</li> </ul>
<b>Shock</b>	<ul style="list-style-type: none"> <li>• IEC 60068-2-27</li> </ul>
<b>Free fall</b>	<ul style="list-style-type: none"> <li>• IEC 60068-2-32</li> </ul>
<b>Vibration</b>	<ul style="list-style-type: none"> <li>• IEC 60068-2-6</li> </ul>
<b>Certification</b>	<ul style="list-style-type: none"> <li>• CCC/CE/FCC/RoHS</li> </ul>

## Dimension



## Ordering information

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