

## RPG5-2812-SFP8-10GSFP4 Series

28-Port Industrial Rack-mount Managed Gigabit Ethernet PoE+ Switch

### Interfaces

- 16-port 10/100/1000BASE-T Gigabit Ethernet with IEEE 802.3at compliant PoE, 30W/port
- 4-port 1G/2.5G/10GbE SFP+ slots
- 8-port 100/1000BASE-X SFP slots
- One console and USB interface

### High Reliability and Availability

- G.8032 ERPS v2
- STP/ RSTP/ MSTP
- iPoE Budget Control
- Redundant power inputs design
- Wide operating temperature from -40°C ~ 75°C

### L3 Routing Protocol

- Static Route
- RIP
- OSPF
- VRRP

### Versatile Management Capability

- HTTP, HTTPS
- CLI Command, Telnet and SSH
- SNMP v1/v2c/v3

### Robust Security

- RADIUS, TACACS+, 802.1X Authentication
- ACL, IP Source Guard, SNMPv3

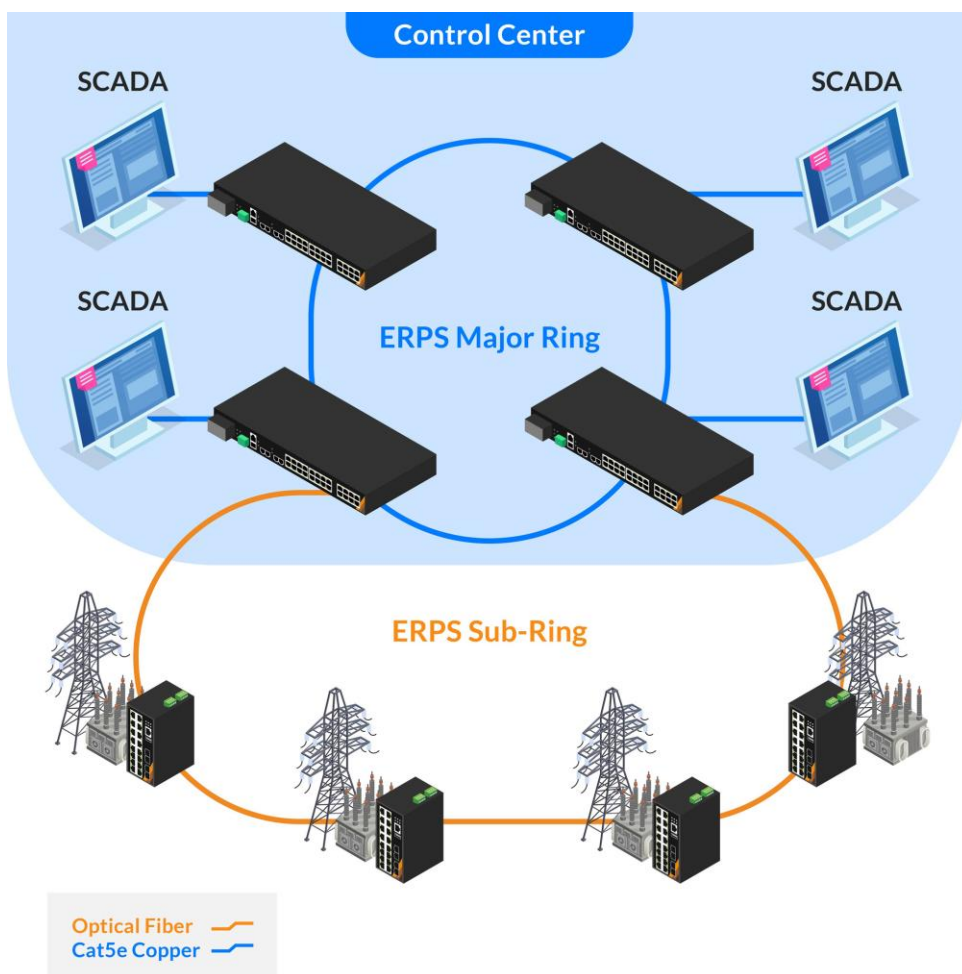


## Introduction

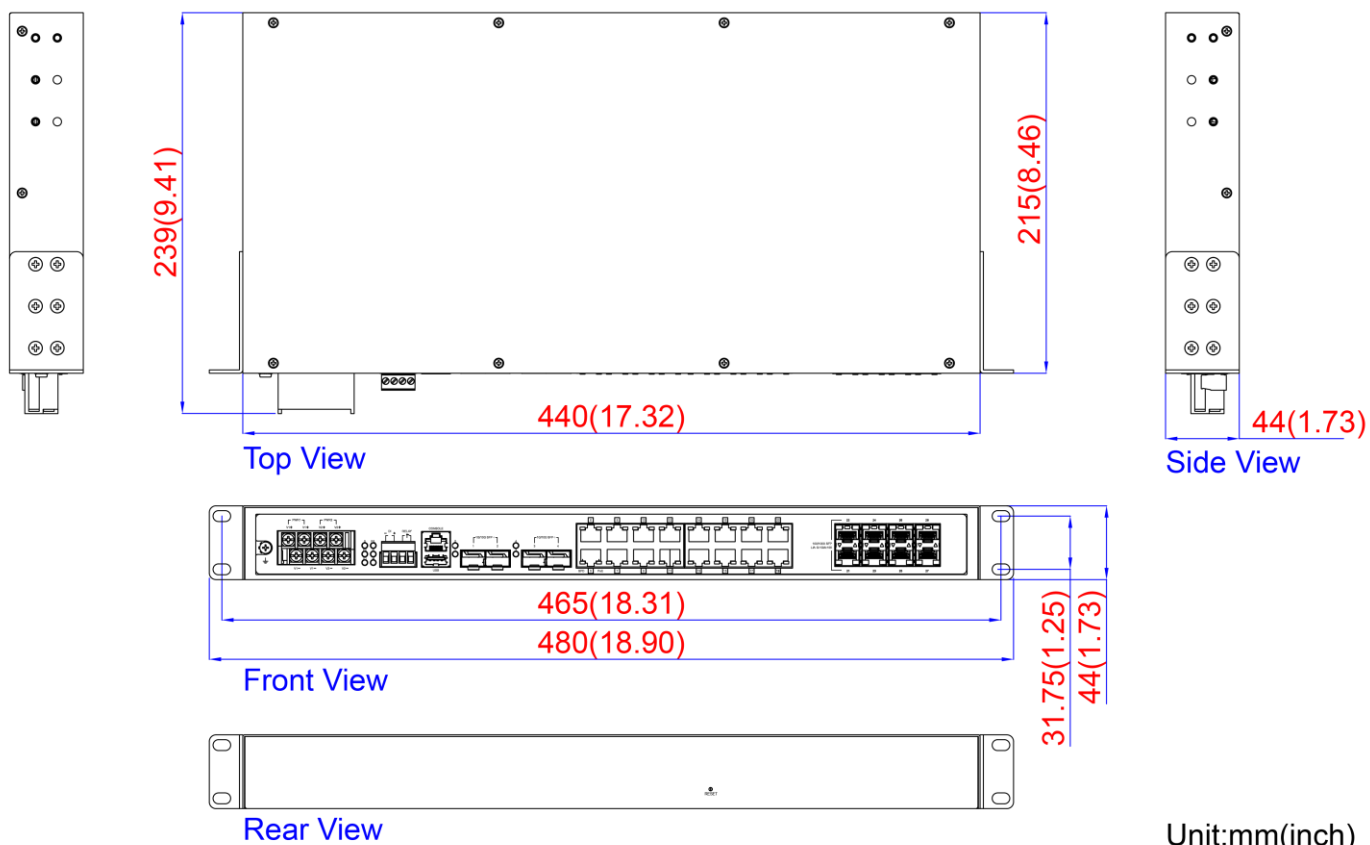
Leonton's RPG5-2812-SFP8-10GSFP4 Series is a 28-port Industrial Rack-mount Managed Gigabit Ethernet PoE+ Switch, which provides 16\*10/100/1000BASE-T Gigabit Ethernet, 8\*100/1000BASE-X SFP slots and 4\*1G/2.5G/10GbE SFP+ slots. RPG5-2812-SFP8-10GSFP4 Series is full manageable Layer-2 Ethernet switch series and supporting power inputs redundancy and PoE function with 30W per port output. RPG5-2812-SFP8-10GSFP4 Series offers standardized network redundancy ITU-T G.8032 ERPS v2 (Ethernet Ring Protection Switch) protocol, providing <50ms recovery time to the network, to give user the chance to choose your Ethernet switch but not tied up with particular brand's product.

RPG5-2812-SFP8-10GSFP4 Series provides comprehensive network security and management capability by supporting Multisusers account, IGMP, GVRP, VLAN, QoS, SNMP, RADIUS, TACACS+, Aggregation (Static, LACP), SSH, SSL, IP source guard to create a highly-secured network environment. For power saving purpose, assuring PD priority and enhancing security level of the network, RPG5-2812-SFP8-10GSFP4 Series also supports PoE scheduling and PoE output limit function to set up PoE output duration and watt at will.

RPG5-2812-SFP8-10GSFP4 Series as an industrial Ethernet switch product line, is designed to withstand harsh and extreme environment conditions. With fan less design, RPG5-2812-SFP8-10GSFP4 Series still manages to be applied in extremely polarized temperature, from -40°C to 75°C, making it the best choice in various industrial applications.



Dimension



Unit:mm(inch)

## Technical Specifications

### Interface

|                |                                                                                                                                                                                                                                           |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Copper Ports   | 16 x 10/100/1000 BASE-T Gigabit Ethernet with IEEE 802.3at compliant PoE, 30W/port<br>Auto-Negotiation, Full/Half Duplex, Auto-MDI/MDI-X                                                                                                  |
| Fiber Port     | 4 x 1G/2.5G/10GbE SFP+ slots<br>8 x 100/1000BASE-X SFP slots                                                                                                                                                                              |
| Console Port   | 1 x RS232 in RJ45 connector, baud rate 115,200bps,8,N,1                                                                                                                                                                                   |
| LED Indicators | <ul style="list-style-type: none"><li>• System: Power 1, Power 2, Master (M), Ring (R), Status, PoE Load (P/L)</li><li>• Ethernet ports: Speed/Link/Active</li><li>• PoE: On-connected to PD devices</li><li>• SFP: Link/Active</li></ul> |
| PoE Pin Out    | V-, V-, V+, V+, for pin 1, 2, 3, 6; V+, V+, V-, V-, for pin 4, 5, 7, 8<br>*Support Modes: Mode A, Mode B, 4-Pair Mode                                                                                                                     |
| Relay Contact  | 24 VDC, 1A resistive                                                                                                                                                                                                                      |
| DI             | 1 x Digital Input (DI): State 0: -30~8VDC / State 1: 10~30VDC, Max. input current: 8mA                                                                                                                                                    |

### Switch Properties

|                    |                                                                                                                                                          |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Switching Capacity | 128Gbps                                                                                                                                                  |
| Forwarding Rate    | 416.64 Mpps                                                                                                                                              |
| MAC Table Size     | 32K                                                                                                                                                      |
| Packet Buffer      | 32Mbits                                                                                                                                                  |
| Jumbo Frame        | 10Kbytes                                                                                                                                                 |
| Max. VLAN Number   | 4095                                                                                                                                                     |
| VLAN ID            | 1 to 4095                                                                                                                                                |
| IGMP Groups        | 1024                                                                                                                                                     |
| Transfer Rate      | 14,880pps for Ethernet port<br>148,800pps for Fast Ethernet port<br>1,488,000pps for Gigabit Ethernet Port<br>14,880,000pps for 10 Gigabit Ethernet Port |

### Power Requirements

|                             |                                                                                                                                               |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Input Voltage               | RPG5-2812-SFP8-10GSFP4 Series: Dual 48-55VDC redundant power inputs<br>RPG5-2812-SFP8-10GSFP4-24 Series: Dual 12-55VDC redundant power inputs |
| Power Connection            | 1 removable 8-contact terminal block                                                                                                          |
| Overload Current Protection | Present (Slow-Blow Fuse)                                                                                                                      |
| Reverse Polarity Protection | Present                                                                                                                                       |
| System Power Consumption    | Max. 38.5W full loading                                                                                                                       |
| Max. PoE Power Budget       | RPG5-2812-SFP8-10GSFP4 Series: 480W<br>RPG5-2812-SFP8-10GSFP4-24 Series: 150W@12VDC, 300W@24VDC, 480W@48-55VDC with iPoE budget control       |
| PoE Power Output            | 30W max. per PoE port                                                                                                                         |

### Mechanical Characteristics

|                        |                                                                                                                                                                                                            |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Housing                | Metal, IP30 protection                                                                                                                                                                                     |
| Dimensions (W x H x D) | 440 x 44 x 215 - mm (17.32 x 1.73 x 8.46 inch)                                                                                                                                                             |
| Weight                 | RPG5-2812-SFP8-10GSFP4 Series: Unit weight: 4.00 kg (8.82 lb), Shipping weight: 5.00 kg (11.02 lb)<br>RPG5-2812-SFP8-10GSFP4-24 Series: Unit weight: 4.27 kg (9.41 lb), Shipping weight: 5.00kg (11.02 lb) |
| Mounting               | Rack mounting                                                                                                                                                                                              |

### Environmental Limits

|                           |                                                                                                                                |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Operating Temperature     | <ul style="list-style-type: none"><li>• STD: -10°C ~ 65°C (14°F ~ 149°F)</li><li>• EOT: -40°C ~ 75°C (-40°F ~ 167°F)</li></ul> |
| Storage Temperature       | -40°C ~ 85°C (-40°F ~ 185°F)                                                                                                   |
| Ambient Relative Humidity | 5 to 95%, (non-condensing)                                                                                                     |

### Software Features

|      |                                                                                                                                        |                                                                                                                                             |
|------|----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| VLAN | <ul style="list-style-type: none"><li>• Private VLAN</li><li>• Port-based VLAN</li><li>• IP Subnet-based VLAN</li><li>• GVRP</li></ul> | <ul style="list-style-type: none"><li>• Guest VLAN</li><li>• MAC-based VLAN</li><li>• Protocol-based VLAN</li><li>• VLAN Trucking</li></ul> |
|------|----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| L2 Features        | <ul style="list-style-type: none"> <li>• STP</li> <li>• MSTP</li> <li>• Port Mirror</li> <li>• Loop Guard</li> <li>• BPDU Guard</li> <li>• MEP</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                       | <ul style="list-style-type: none"> <li>• RSTP</li> <li>• G.8032 ERPS v1/v2</li> <li>• Loop Detection</li> <li>• LACP</li> <li>• Error Disable Recovery</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                       |
| L2 Multicast       | <ul style="list-style-type: none"> <li>• IGMPv1/v2/v3 Snooping</li> <li>• IGMP Filtering</li> <li>• IPMC Filtering Leave Proxy</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                       | <ul style="list-style-type: none"> <li>• MLDv1/v2 Snooping</li> <li>• IPMC Throttling</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| L3 Features        | <ul style="list-style-type: none"> <li>• ARP</li> <li>• NAT</li> <li>• OSPFv2, OSPFv3</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <ul style="list-style-type: none"> <li>• Static Route</li> <li>• RIPv2, RIPv3</li> <li>• VRRPv2, VRRPv3</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| QoS                | <ul style="list-style-type: none"> <li>• 802.1p</li> <li>• Port/Queue/ACL Policer</li> <li>• Queue Egress Shaper</li> <li>• Tag Remarking</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                            | <ul style="list-style-type: none"> <li>• Input Priority Mapping</li> <li>• Port Egress Shaper</li> <li>• DiffServ (DSCP)</li> <li>• Scheduler Mode</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                           |
| Power Saving       | <ul style="list-style-type: none"> <li>• ActiPHY</li> <li>• 802.3az Energy Efficient Ethernet (EEE)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <ul style="list-style-type: none"> <li>• PerfectReach</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| PoE                | <ul style="list-style-type: none"> <li>• Power Budget Protection</li> <li>• PoE Alive Check</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <ul style="list-style-type: none"> <li>• PoE Output Scheduling</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Security           | <ul style="list-style-type: none"> <li>• SSHv2</li> <li>• Port-based 802.1X</li> <li>• MAC-based Authentication</li> <li>• QoS Assignment</li> <li>• TACACS+</li> <li>• Web/CLI Authentication</li> <li>• Port Security</li> <li>• IP Source Guard</li> <li>• DHCP Snooping</li> <li>• Secure Copy Protocol (SCP)</li> </ul>                                                                                                                                                                                                                                                    | <ul style="list-style-type: none"> <li>• IP Based Access Filter</li> <li>• Access Control List (ACL)</li> <li>• ACL for Filtering/Policing/Port Copy</li> <li>• VLAN Assignment</li> <li>• IP MAC Binding</li> <li>• User Privilege (15 levels)</li> <li>• RADIUS Authentication and Accounting</li> <li>• ARP Inspection</li> <li>• Broadcast/Multicast/Unicast Storm Control</li> <li>• Secure FTP</li> </ul>                                                                                                                                         |
| Management         | <ul style="list-style-type: none"> <li>• IPv4/IPv6</li> <li>• LLDP / LLDP-MED</li> <li>• DHCP Client</li> <li>• DHCP Server</li> <li>• DNS Proxy</li> <li>• Syslog</li> <li>• Daylight Saving</li> <li>• RMON</li> <li>• Command Line Interface (CLI)</li> <li>• Relay Trigger</li> <li>• Telnet Server and Client</li> <li>• Dual Image Protection</li> <li>• Ping6</li> <li>• DDMI</li> <li>• SMTP</li> </ul>                                                                                                                                                                 | <ul style="list-style-type: none"> <li>• SNMP v1/v2c/v3</li> <li>• HTTP / HTTPS</li> <li>• DHCPv6 Client</li> <li>• DNS Client</li> <li>• ICMPv6</li> <li>• Time Zone</li> <li>• NTP Client</li> <li>• sFlow</li> <li>• Power Lost Warning</li> <li>• DHCP Option 82</li> <li>• TFTP</li> <li>• Ping</li> <li>• USB Configuration Backup/Restore</li> <li>• Modbus TCP</li> </ul>                                                                                                                                                                       |
| Standards and MIBs | <ul style="list-style-type: none"> <li>• IEEE 802.3 10BASE-T Ethernet</li> <li>• IEEE 802.3ab 1000BASE-T</li> <li>• IEEE 802.3af/at Power over Ethernet</li> <li>• IEEE 802.3ae 10 Gigabit Ethernet</li> <li>• IEEE 802.3x Flow Control</li> <li>• IEEE 802.1w RSTP (Rapid Spanning Tree Protocol)</li> <li>• ITU-T G.8032 / Y.1344 ERPS v1/v2 (Ethernet Ring Protection Switch)</li> <li>• IEEE 802.1Q Virtual Local Area Network (VLAN)</li> <li>• IEEE 802.1X Network Authentication</li> <li>• IEEE 802.3ad Link Aggregation (LACP)</li> <li>• RFC 2674 VLAN MIB</li> </ul> | <ul style="list-style-type: none"> <li>• IEEE 802.3u 100BASE-TX Fast Ethernet</li> <li>• IEEE 802.3z 1000BASE-X Gigabit Fiber</li> <li>• IEEE 802.1D STP (Spanning Tree Protocol)</li> <li>• IEEE 802.1s MSTP (Multiple Spanning Tree Protocol)</li> <li>• IEEE 802.1p QoS/CoS Protocol for Traffic Prioritization</li> <li>• IEEE 802.1AB Link Layer Discovery Protocol (LLDP)</li> <li>• IEEE 802.3x flow control, back pressure flow control</li> <li>• IEEE-802.1Q bridge MIB 2008</li> <li>• RFC 1213 MIB II</li> <li>• RFC 4188 bridge</li> </ul> |

- RFC 2819 RMON (group 1, 2, 3, and 9)
- RFC 1215 TRAPS
- RFC 4292 IP forwarding table
- RFC 5519 multicast group membership discovery
- RFC 4670 RADIUS accounting
- RFC 2863 interface group MIB using SMI v2
- RFC 4133 entity MIB v3
- RFC 3414 user-based security model for SNMPv3
- RFC 2613 SMON – PortCopy
- IEEE 802.3ad (LACP MIB included in a clause of the STD)
- TIA 1057 LLDP-MED
- (MIB is part of the STD)
- RFC 4293 management information base for the Internet Protocol (IP)
- RFC 4668 RADIUS auth. client
- RFC 3635 Ethernet-like
- RFC 3636 802.3 MAU
- RFC 3411 SNMP management frameworks
- RFC 3415 view-based access control model for SNMP
- IEEE 802.1AB LLDP-MIB (LLDP MIB included in a clause of the STD)
- IEEE 802.1X
- (PAE MIB included in a clause of the STD)

## Regulatory Approvals

|                                            |                                                                                                                                                         |                                                                                                                                                                       |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EMI                                        | <ul style="list-style-type: none"> <li>• FCC Part 15 Subpart B Class A,</li> <li>• EN61000-6-4 Class A</li> </ul>                                       | <ul style="list-style-type: none"> <li>• CE EN55032</li> </ul>                                                                                                        |
| EMS                                        | <ul style="list-style-type: none"> <li>• CE EN55035</li> <li>• IEC61000-4-2 (ESD)</li> <li>• IEC61000-4-4 (EFT)</li> <li>• IEC61000-4-6 (CS)</li> </ul> | <ul style="list-style-type: none"> <li>• EN61000-6-2</li> <li>• IEC61000-4-3 (RS)</li> <li>• IEC61000-4-5 (Surge)</li> <li>• IEC61000-4-8 (Magnetic Field)</li> </ul> |
| Free Fall                                  | <ul style="list-style-type: none"> <li>• IEC60068-2-32</li> </ul>                                                                                       |                                                                                                                                                                       |
| Shock                                      | <ul style="list-style-type: none"> <li>• IEC60068-2-27</li> </ul>                                                                                       |                                                                                                                                                                       |
| Vibration                                  | <ul style="list-style-type: none"> <li>• IEC60068-2-6</li> </ul>                                                                                        |                                                                                                                                                                       |
| Green                                      | <ul style="list-style-type: none"> <li>• RoHS Compliant</li> </ul>                                                                                      |                                                                                                                                                                       |
| Safety                                     | <ul style="list-style-type: none"> <li>• UL61010-1 (Pending)</li> <li>• UL61010-2-201(Pending)</li> <li>• ISA 12.12.01(Pending)</li> </ul>              |                                                                                                                                                                       |
| Compliance                                 | <ul style="list-style-type: none"> <li>• IEC-61850-3 (Pending)</li> </ul>                                                                               |                                                                                                                                                                       |
| MTBF (Telcordia SR-332, Issue 3, GB, 25°C) | RPG5-2812-SFP8-10GSFP4 Series: 166,201 hrs.<br>RPG5-2812-SFP8-10GSFP4 -24 Series: 162,280 hrs.                                                          |                                                                                                                                                                       |
| Warranty                                   | 5 Years                                                                                                                                                 |                                                                                                                                                                       |

**NOTE: Due to continuous improvement, all product specifications are subject to change without further notice.**

## Packet Contents

RPG5-2812-SFP8-10GSFP4(-24)(-T) Ethernet switch x 1  
 RJ45 (Male) to DB-9 RS-232 (Female) serial console cable x 1  
 Rack-mount installation kits x 1  
 Quick installation guide (printed) x 1

## Comparison Table

| Model Name                  | 10/100/1000B ASE-T PoE+ | 1G/2.5G/10 GbE SFP+ | 100/1000B ASE-X SFP | Power Inputs | PoE Max. Power Budget                     | Operating Temperature |
|-----------------------------|-------------------------|---------------------|---------------------|--------------|-------------------------------------------|-----------------------|
| RPG5-2812-SFP8-10GSFP4      | 16                      | 4                   | 8                   | 48-55VDC     | 480W                                      | -10°C ~ 65°C          |
| RPG5-2812-SFP8-10GSFP4-T    | 16                      | 4                   | 8                   | 48-55VDC     | 480W                                      | -40°C ~ 75°C          |
| RPG5-2812-SFP8-10GSFP4-24   | 16                      | 4                   | 8                   | 12-55VDC     | 150W@12VDC<br>300W@24VDC<br>480W@48-55VDC | -10°C ~ 65°C          |
| RPG5-2812-SFP8-10GSFP4-24-T | 16                      | 4                   | 8                   | 12-55VDC     | 150W@12VDC<br>300W@24VDC<br>480W@48-55VDC | -40°C ~ 75°C          |

## Ordering Information

|                             |                                                                                                                                                                                                                                  |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RPG5-2812-SFP8-10GSFP4      | 28-Port Industrial Rack-mount Managed Gigabit Ethernet PoE+ Switch<br>- 16*10/100/1000BASE-T Ethernet with IEEE 802.3at compliant PoE, 30W/port + 4*1G/2.5G/10G SFP+ slots + 8*100/1000BASE-X SFP slots, 48-55VDC, -10°C to 65°C |
| RPG5-2812-SFP8-10GSFP4-T    | 28-Port Industrial Rack-mount Managed Gigabit Ethernet PoE+ Switch<br>- 16*10/100/1000BASE-T Ethernet with IEEE 802.3at compliant PoE, 30W/port + 4*1G/2.5G/10G SFP+ slots + 8*100/1000BASE-X SFP slots, 48-55VDC, -40°C to 75°C |
| RPG5-2812-SFP8-10GSFP4-24   | 28-Port Industrial Rack-mount Managed Gigabit Ethernet PoE+ Switch<br>- 16*10/100/1000BASE-T Ethernet with IEEE 802.3at compliant PoE, 30W/port + 4*1G/2.5G/10G SFP+ slots + 8*100/1000BASE-X SFP slots, 12-55VDC, -10°C to 65°C |
| RPG5-2812-SFP8-10GSFP4-24-T | 28-Port Industrial Rack-mount Managed Gigabit Ethernet PoE+ Switch<br>- 16*10/100/1000BASE-T Ethernet with IEEE 802.3at compliant PoE, 30W/port + 4*1G/2.5G/10G SFP+ slots + 8*100/1000BASE-X SFP slots, 12-55VDC, -40°C to 75°C |

## Optional Accessories - Power Supply Series

### 30W Power Supply Series

|           |                                                                                                                     |
|-----------|---------------------------------------------------------------------------------------------------------------------|
| HDR-30-24 | 36W Industrial DIN-Rail Power Supply, 24VDC/1.5A, Universal 85-264VAC/120-370VDC power input, Plastic, -30°C ~ 70°C |
|-----------|---------------------------------------------------------------------------------------------------------------------|

### 60W Power Supply Series

|           |                                                                                                                     |
|-----------|---------------------------------------------------------------------------------------------------------------------|
| HDR-60-24 | 60W Industrial DIN-Rail Power Supply, 24VDC/2.5A, Universal 88-264VAC/124-370VDC power input, Plastic, -30°C ~ 70°C |
| MDR-60-24 | 60W Industrial DIN-Rail Power Supply, 24VDC/2.5A, Universal 85-264VAC/120-370VDC power input, Plastic, -20°C ~ 70°C |

### 75W Power Supply Series

|           |                                                                                                                   |
|-----------|-------------------------------------------------------------------------------------------------------------------|
| EDR-75-48 | 75W Industrial DIN-Rail Power Supply, 48VDC/1.6A, Universal 90-264VAC/127-370VDC power input, Metal, -20°C ~ 60°C |
| NDR-75-48 | 75W Industrial DIN-Rail Power Supply, 48VDC/1.6A, Universal 90-264VAC/127-370VDC power input, Metal, -20°C ~ 70°C |

### 120W Power Supply Series

|            |                                                                                                                    |
|------------|--------------------------------------------------------------------------------------------------------------------|
| EDR-120-48 | 120W Industrial DIN-Rail Power Supply, 48VDC/2.5A, Universal 90-264VAC/127-370VDC power input, Metal, -20°C ~ 60°C |
| NDR-120-24 | 120W Industrial DIN-Rail Power Supply, 24VDC/5A, Universal 90-264VAC/127-370VDC power input, Metal, -20°C ~ 70°C   |
| NDR-120-48 | 120W Industrial DIN-Rail Power Supply, 48VDC/2.5A, Universal 90-264VAC/127-370VDC power input, Metal, -20°C ~ 70°C |

### 240W Power Supply Series

|            |                                                                                                                          |
|------------|--------------------------------------------------------------------------------------------------------------------------|
| NDR-240-48 | 240W Industrial DIN-Rail Power Supply w/ PFC, 48VDC/5A, Universal 90-264VAC/127-370VDC power input, Metal, -20°C ~ 70°C  |
| SDR-240-24 | 240W Industrial DIN-Rail Power Supply w/ PFC, 24VDC/10A, Universal 88-264VAC/124-370VDC power input, Metal, -25°C ~ 70°C |

### 480W Power Supply Series

|            |                                                                                                                          |
|------------|--------------------------------------------------------------------------------------------------------------------------|
| NDR-480-48 | 480W Industrial DIN-Rail Power Supply w/ PFC, 48VDC/10A, Universal 90-264VAC/127-370VDC power input, Metal, -20°C ~ 70°C |
|------------|--------------------------------------------------------------------------------------------------------------------------|

## OPTIONAL ACCESSORIES - SFP Transceiver Series

### 1Gbps Multi-mode SFP Transceiver Modules Series

|            |                                                                             |
|------------|-----------------------------------------------------------------------------|
| SFP-GM00   | 1Gbps SFP Transceiver/LC, MMF, 550M, 850nm, 0°C ~ 70°C with UPC connector   |
| SFP-GM00-T | 1Gbps SFP Transceiver/LC, MMF, 550M, 850nm, -40°C ~ 85°C with UPC connector |
| SFP-GM02   | 1Gbps SFP Transceiver/LC, MMF, 2KM, 1310nm, 0°C ~ 70°C with UPC connector   |
| SFP-GM02-T | 1Gbps SFP Transceiver/LC, MMF, 2KM, 1310nm, -40°C ~ 85°C with UPC connector |

### 1Gbps Single-mode SFP Transceiver Modules Series

|          |                                                                            |
|----------|----------------------------------------------------------------------------|
| SFP-GS10 | 1Gbps SFP Transceiver/LC, SMF, 10KM, 1310nm, 0°C ~ 70°C with UPC connector |
|----------|----------------------------------------------------------------------------|

|                                                           |                                                                                                  |
|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| SFP-GS10-T                                                | 1Gbps SFP Transceiver/LC, SMF, 10KM, 1310nm, -40°C ~ 85°C with UPC connector                     |
| SFP-GS10-WA                                               | 1Gbps BiDi SFP Transceiver/LC, SMF, 10KM, TX: 1310nm/RX: 1550nm, 0°C ~ 70°C with UPC connector   |
| SFP-GS10-WA-T                                             | 1Gbps BiDi SFP Transceiver/LC, SMF, 10KM, TX: 1310nm/RX: 1550nm, -40°C ~ 85°C with UPC connector |
| SFP-GS10-WB                                               | 1Gbps BiDi SFP Transceiver/LC, SMF, 10KM, TX: 1550nm/RX: 1310nm, 0°C ~ 70°C with UPC connector   |
| SFP-GS10-WB-T                                             | 1Gbps BiDi SFP Transceiver/LC, SMF, 10KM, TX: 1550nm/RX: 1310nm, -40°C ~ 85°C with UPC connector |
| SFP-GS20                                                  | 1Gbps SFP Transceiver/LC, SMF, 20KM, 1310nm, 0°C ~ 70°C with UPC connector                       |
| SFP-GS20-T                                                | 1Gbps SFP Transceiver/LC, SMF, 20KM, 1310nm, -40°C ~ 85°C with UPC connector                     |
| SFP-GS40                                                  | 1Gbps SFP Transceiver/LC, SMF, 40KM, 1310nm, 0°C ~ 70°C with UPC connector                       |
| SFP-GS40-T                                                | 1Gbps SFP Transceiver/LC, SMF, 40KM, 1310nm, -40°C ~ 85°C with UPC connector                     |
| SFP-GS40-WA                                               | 1Gbps BiDi SFP Transceiver/LC, SMF, 40KM, TX: 1310nm/RX: 1550nm, 0°C ~ 70°C with UPC connector   |
| SFP-GS40-WB                                               | 1Gbps BiDi SFP Transceiver/LC, SMF, 40KM, TX: 1550nm/RX: 1310nm, 0°C ~ 70°C with UPC connector   |
| SFP-GS60                                                  | 1Gbps SFP Transceiver/LC, SMF, 60KM, 1550nm, 0°C ~ 70°C with UPC connector                       |
| SFP-GS60-T                                                | 1Gbps SFP Transceiver/LC, SMF, 60KM, 1550nm, -40°C ~ 85°C with UPC connector                     |
| SFP-GS60-WA                                               | 1Gbps BiDi SFP Transceiver/LC, SMF, 60KM, TX: 1310nm/RX: 1550nm, 0°C ~ 70°C with UPC connector   |
| SFP-GS60-WB                                               | 1Gbps BiDi SFP Transceiver/LC, SMF, 60KM, TX: 1550nm/RX: 1310nm, 0°C ~ 70°C with UPC connector   |
| SFP-GS80                                                  | 1Gbps SFP Transceiver/LC, SMF, 80KM, 1550nm, 0°C ~ 70°C with UPC connector                       |
| SFP-GS80-T                                                | 1Gbps SFP Transceiver/LC, SMF, 80KM, 1550nm, -40°C ~ 85°C with UPC connector                     |
| SFP-GSH2                                                  | 1Gbps SFP Transceiver/LC, SMF, 120KM, 1550nm, 0°C ~ 70°C with UPC connector                      |
| SFP-GSH2-T                                                | 1Gbps SFP Transceiver/LC, SMF, 120KM, 1550nm, -40°C ~ 85°C with UPC connector                    |
| <b>10Gbps Multi-mode SFP+ Transceiver Modules Series</b>  |                                                                                                  |
| SFP-XM00                                                  | 10Gbps SFP+ Transceiver/LC, MMF, 300M, 850nm, 0°C ~ 70°C                                         |
| SFP-XM00-T                                                | 10Gbps SFP+ Transceiver/LC, MMF, 300M, 850nm, -40°C ~ 85°C                                       |
| <b>10Gbps Single-mode SFP+ Transceiver Modules Series</b> |                                                                                                  |
| SFP-XS10                                                  | 10Gbps SFP+ Transceiver/LC, SMF, 10KM, 1310nm, 0°C ~ 70°C                                        |
| SFP-XS10-T                                                | 10Gbps SFP+ Transceiver/LC, SMF, 10KM, 1310nm, -40°C ~ 85°C                                      |
| <b>Copper SFP Transceiver Modules Series</b>              |                                                                                                  |
| SFP-GC00-SG                                               | SFP to 10/100/1000BASE-T copper Module, 0°C ~ 70°C                                               |
| SFP-GC00-SE                                               | SFP to 1000BASE-T copper Module, 0°C ~ 70°C                                                      |