RES-P3242GCL Series

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Industrial IEC 61850-3 26-port rack mount managed Ethernet switch with 24x10/100Base-T(X) and 2xGigabit combo ports, SFP socket

Features





- Designed for Railway application and fully compliant with the requirement of IEC 61850-3 and IEEE 1613
- World's fastest Redundant Ethernet Ring: O-Ring (recovery time < 10ms over 250 units of connection)
- **Open-Ring** support the other vendor's ring technology in open architecture
- **O-Chain** allow multiple redundant network rings
- Support standard IEC 62439-2 **MRP***NOTE (Media Redundancy Protocol) function
- Support Modbus TCP protocol
- MSTP/RSTP:2004/STP(IEEE 802.1s/w/D)
- Secured ACL supported
- IGMP v2/v3 (IGMP snooping support) for filtering multicast traffic
- Port Trunking for easy of bandwidth management
- SNMP v1/v2c/v3 support for secured network management
- Support IPV6 new internet protocol version
- Support LLDP (Link Layer Discovery Protocol)
- Support TACACS+ and 802.1x User Authentication for security
- Provided HTTPS/SSH protocol to enhance network security
- Port lock to prevent access from unauthorized MAC address
- Event notification through Syslog, Email, SNMP trap, and Relay Output
- Bundled Windows utility (**Open-Vision**) support centralization management and configurable by Web-based ,Telnet, Console (CLI)
- LED in front and Line in back design
- Isolation redundant power inputs with 12 ~ 36VDC or 36 ~ 72VDC or 100 ~ 240VAC power supply range
- 19 inches rack mountable

RoHS Lead Free CE FC

IPv6 READY | O-Ring | Redundant PWR | -40~85°C Temperature | IEC61850

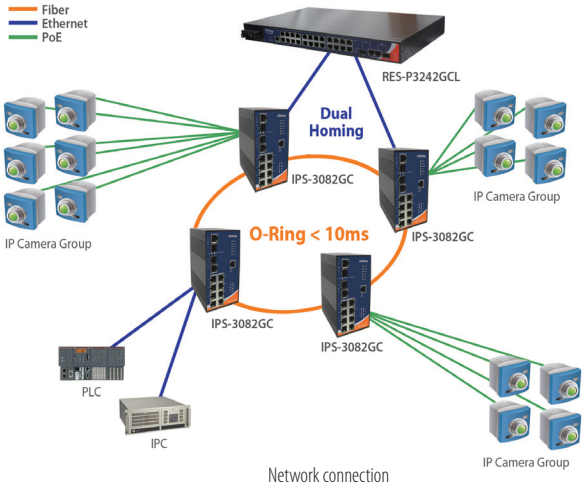
Introduction

RES-P3242GCL series is 26-port rack mount managed Redundant Ring Ethernet switch with 24x10/100Base-T(X) and 2xGigabit Combo ports, SFP socket. These switches are designed for power substation application and rolling stock application, fully compliant with the requirement of IEC 61850-3 and IEEE 1613. With completely support of Ethernet Redundancy protocol, O-Ring (recovery time < 10ms over 250 units of connection), Open-Ring, O-Chain, and MSTP/RSTP:2004/STP (IEEE 802.1s/w/D) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. RES-P3242GCL series can be managed centralized and convenient by a powerful windows utility — Open-Vision. RES-P3242GCL series also supports functions of network management, such as SNMP, RMON, Port Trunking, and Port/Tag-based VLAN security. RES-P3242GCL series provided multi power inputs design, such as two DC inputs or two AC inputs, the redundant power inputs guarantee a non-stop operation. And support wide operating temperature from -40 to 85°C. One additional relay output is provided for system alarm warning, Therefore, RES-P3242GCL series is one of the most reliable choice for highly-managed and Fiber Ethernet power substation and rolling stock application.

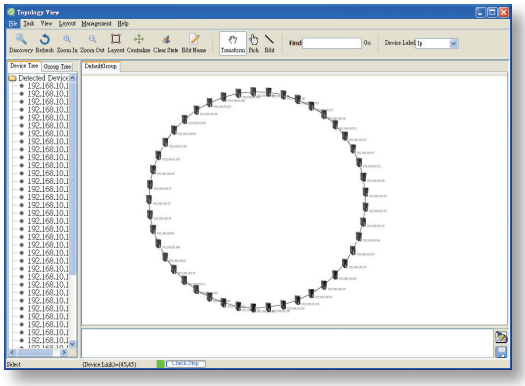
***NOTE: This function is available by request only**

Open-Vision

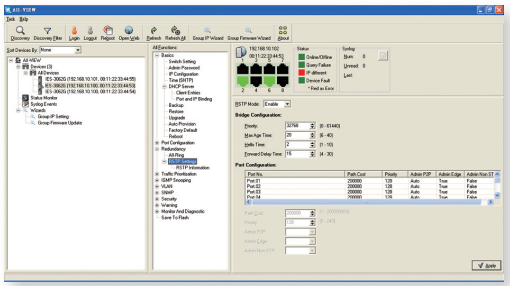
ORing's switches are intelligent switches. Being different from other traditional redundant switches, ORing provides a set of Windows utility (Open-Vision) for user to manage and monitor all of industrial Ethernet switches on the industrial network.

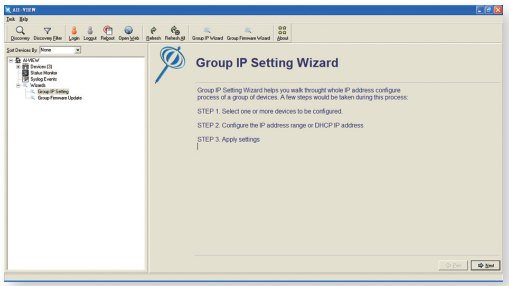


Network connection



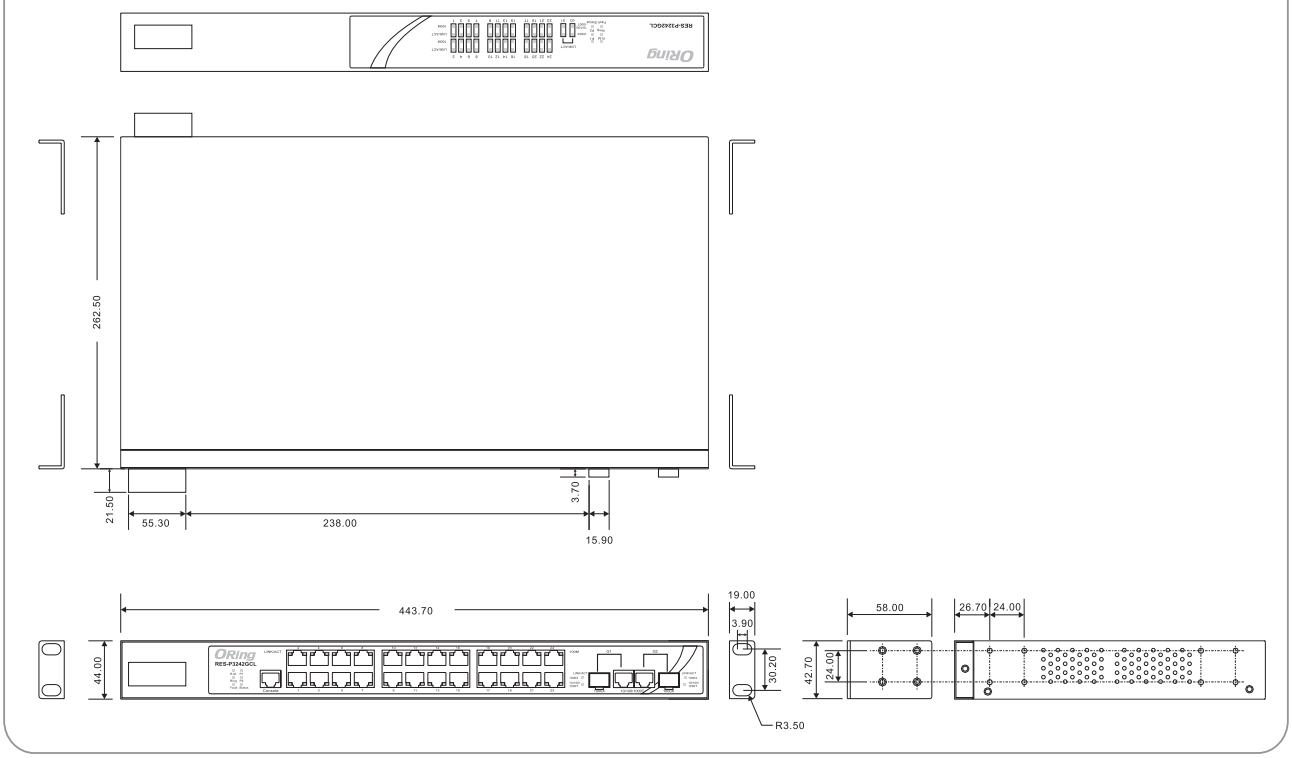
Topology View





Monitoring and Configuration interface

Dimensions



(Unit=mm)

Specifications

ORing Switch Model	RES-P3242GCL-LV(Preliminary)	RES-P3242GCL-HV
Physical Ports		
10/100Base-T(X) Ports in RJ45 Auto MDI/MDIX	24	
Gigabit combo port with 10/100/1000Base-T(X) and 1000Base-X SFP	2	
RS-232 Serial Console Port	RS-232 console cable. 9600bps, 8, N, 1	
Technology		
Ethernet Standards	IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-TX IEEE 802.3ab for 1000Base-T IEEE 802.3z for 1000Base-X IEEE 802.3x for Flow control IEEE 802.3ad for LACP (Link Aggregation Control Protocol) IEEE 802.1p for COS (Class of Service) IEEE 802.1Q for VLAN Tagging IEEE 802.1D for STP (Spanning Tree Protocol) IEEE 802.1D-2004 for RSTP:2004 (Rapid Spanning Tree Protocol 2004) IEEE 802.1w for RSTP(Rapid Spanning Tree Protocol) IEEE 802.1s for MSTP (Multiple Spanning Tree Protocol) IEEE 802.1X for Authentication IEEE 802.1AB for LLDP (Link Layer Discovery Protocol)	
MAC Table	8192 MAC addresses	
Priority Queues	4	
Processing	Store-and-Forward	
Switch Properties	Switching bandwidth : 8.8Gbps Max. Number of Available VLANs : 4096 IGMP multicast groups : 1024 Port rate limiting : User Define	
Security Features	Enable/disable ports, MAC based port security ACL supported Port based network access control (802.1x) VLAN (802.1q) to segregate and secure network traffic Radius centralized password management SNMP v1/v2c/v3 encrypted authentication and access security Https / SSH enhance network security	
Software Features	STP/RSTP:2004/MSTP (IEEE 802.1D/w/s) Redundant Ring (**O-Ring**) with recovery time less than 10ms over 250 units TOS/Diffserv supported Quality of Service (802.1p) for real-time traffic VLAN (802.1Q) with VLAN tagging and GVRP supported IGMP Snooping for multicast filtering Port configuration, status, statistics, monitoring, security SNTP for synchronizing of clocks over network Support **PTP** Client (Precision Time Protocol) clock synchronization DHCP Server / Client support Port Trunk support MVR (Multicast VLAN Registration) support Modbus TCP	
Network Redundancy	O-Ring O-Chain Open-Ring STP MRP*NOTE RSTP:2004 MSTP	
Warning / Monitoring System	Relay output for fault event alarming Syslog server / client to record and view events Include SMTP for event warning notification via email Event selection support	
LED Indicators		
Power Indicator	Green : Power LED x 2	
System Ready Indicator	Green : Indicate system ready. Blinking for system is upgrading firmware.	
Ring Master Indicator	Green : Indicate system operated in O-Ring Master mode	
O-Ring Indicator	Green : Indicate system operated in O-Ring mode Blinking to indicate Ring is broken.	

***NOTE: This function is available by request only**

Fault indicator	Amber : Indicate unexpected event occurred	
10/100Base-T(X) RJ45 port indicator	Green at left for port Link/Act. Amber at right for 100Mbps indicator	
10/100/1000Base-T(X) RJ45 port indicator with combo port	Green at down for port Link/Act	
1000Base-X SFP port indicator with combo port	Green at up for port Link/Act	
Fault Contact		
Relay	Relay output to carry capacity of 1A at 24VDC	
Power		
Redundant Input Power	Dual 24/48VDC(20~72VDC)power inputs	Dual 88 ~300VDC/100 ~ 240VAC power inputs
Power Consumption (Typ.)	21Watts	18Watts
Overload Current Protection	Present	Present on terminal block
Physical Characteristics		
Dimensions (W x D x H)	443.7(W) x 262.7(D) x 44(H) mm (17.46 x 10.34 x 1.73 inch)	
Weight (g)	3460g	3890g
Environmental		
Operating Temperature	-40 to 85°C (-40 to 185°F)	
Operating Humidity	5% to 95% Non-condensing	
Regulatory Approvals		
Power Automation	IEC 61850-3, IEEE 1613	
EMI	FCC Part 15, CISPR (EN55022) class A, EN50155 (EN50121-3-2, EN55011, EN50121-4)	
EMS	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11	
Warranty	5 years	

Ordering Information

RES-P3 AA B CC L - DD

Code Definition	10/100Base-T(X) Port Number	Additional Port Number	Additional Port Type	Model Type
Option	**- 24:** 24 ports	**- 2:** 2 ports	**-GC**: gigabit combo port	-**LV** : Dual 12 ~ 36VDC power inputs -**MV** : Dual 36 ~ 72VDC power inputs -**HV** : Dual 88 ~ 300VDC / 100 ~ 240VAC power inputs

	Model Name	Description
Available Model	RES-P3242GCL-LV(Preliminary)	Industrial IEC 61850-3 26-port rack mount managed Ethernet switch with 24x10/100Base-T(X) and 2xGigabit combo ports, SFP socket, dual 12 ~ 36VDC power inputs
	RES-P3242GCL-MV(Preliminary)	Industrial IEC 61850-3 26-port rack mount managed Ethernet switch with 24x10/100Base-T(X) and 2xGigabit combo ports, SFP socket, dual 36 ~ 72VDC power inputs
	RES-P3242GCL-HV_US	Industrial IEC 61850-3 26-port rack mount managed Ethernet switch with 24x10/100Base-T(X) and 2xGigabit combo ports, SFP socket, Dual 88 ~ 300VDC / 100 ~ 240VAC power inputs, US power cord
	RES-P3242GCL-HV_EU	Industrial IEC 61850-3 26-port rack mount managed Ethernet switch with 24x10/100Base-T(X) and 2xGigabit combo ports, SFP socket, Dual 88 ~ 300VDC / 100 ~ 240VAC power inputs, EU power cord

Packing List

- RES-P3242GCL
- Rack-Mount Kit
- Console Cable
- ORing Tool CD
- Quick Installation Guide

Optional Accessories (Can be purchased separately)

- Open-Vision M500, Powerful Network Management Windows Utility Suite, 500 IP devices
- SFP1G series, 1Gbps SFP optical transceiver
- DR-45 series : 45 Watts DIN-Rail power supply
- DR-75 series : 75 Watts DIN-Rail power supply
- DR-120 series : 120 Watts DIN-Rail power supply