# RES-3242GC / RES-3242GC-E



# Industrial Media Converter

### > Industrial 26-port rack-mount managed Ethernet switch series

#### Features

- Fastest Redundant Ethernet Ring : **O-Ring** (recovery time < 10ms over 250 units of connection)
- **Open-Ring** supports the other vendor's ring technology in open architecture
- O-RSTP supports applications with complex topology
- Secured ACL supported
- MSTP/RSTP/STP(IEEE 802.1s/w/D)
- 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
- Event notification through Syslog, Email, SNMP trap, and Relay Output
- Include 100~240 VAC and Dual +12~+48 VDC or -12~-48 VDC power inputs for "-E" model
- Extend operating temperature from -40 to 70°C for "-E" model
- Bundled Windows utility (Open-Vision) supports centralization management and configurable by Web-based ,Telnet, Console (CLI)
- 19 inches rack-mountable
- Support LLDP Protocol



#### Introduction

RES-3242GC series is 26-port rack-mount managed Redundant Ring Ethernet switch with 24x10/100Base-T(X) and 2xGigabit Combo ports, SFP socket. With complete support of Ethernet Redundancy protocol, O-Ring (recovery time < 10ms over 250 units of connection), Open-Ring, O-RSTP and MSTP/RSTP/ STP (IEEE 802.1s/w/D) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. RES-3242GC series can be managed centralized and convenient by a powerful windows utility — Open-Vision. RES-3242GC series also supports functions of network management, such as SNMP, RMON, Port Trunking, and Port/Tag-based VLAN security. RES-3242GC-E model support one full-range AC and dual DC power inputs from +12~48 VDC or -12~-48 VDC, and support extend operating temperature from -40 to 70°C. One additional relay output is provided for system alarm warning, Therefore, RES-3242GC series is one of the most reliable choice for highly-managed and Fiber Ethernet application.

#### **Open-Vision**

ORing's switches are intelligent switches. 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.





Topology View



Monitoring and Configuration interface



(Unit=mm)

## Specifications

| ORing Switch Model   | RES-3242GC  | RES-3242GC-E |
|--|---|--------------|
| Physical Ports   |   |              |
| 10/100Base-T(X) Ports in RJ45 Auto MDI/MDIX                        | 24  |              |
| Gigabit combo port with 10/100/1000Base-T(X)<br>and 1000Base-X SFP | 2   |              |
| RS-232 Serial Console Port   | RS-232 in DB9 connector with console cable. 9600bps, 8, N, 1  |              |
| Technology   |   |              |
| Ethernet Standards   | IEEE 802.3 for 10Base-T<br>IEEE 802.3u for 100Base-TX<br>IEEE 802.3ab for 1000Base-T<br>IEEE 802.3z for 1000Base-X<br>IEEE 802.3x for Flow control<br>IEEE 802.3ad for LACP (Link Aggregation Control Protocol )<br>IEEE 802.1D for STP (Spanning Tree Protocol)<br>IEEE 802.1p for COS (Class of Service)<br>IEEE 802.1v for VLAN Tagging<br>IEEE 802.1w for RSTP (Rapid Spanning Tree Protocol)<br>IEEE 802.1s for MSTP (Multiple Spanning Tree Protocol)<br>IEEE 802.1X for Authentication<br>IEEE 802.1AB for LLDP (Link Layer Discovery Protocol)                                      |              |
| MACTable   | 8192 MAC addresses  |              |
| Priority Queues  | 4   |              |
| Processing   | Store-and-Forward   |              |
| Switch Properties  | Switching bandwidth : 8.8Gbps<br>Max. Number of Available VLANs : 4096<br>IGMP multicast groups : 1024<br>Port rate limiting : User Define  |              |
| Security Features  | Enable/disable ports, MAC based port security<br>ACL supported<br>Port based network access control (802.1x)<br>VLAN (802.1q) to segregate and secure network traffic<br>Radius centralized password management<br>SNMP v1/v2c/v3 encrypted authentication and access security  |              |
| Software Features  | STP/RSTP/MSTP (IEEE 802.1D/w/s)<br>Redundant Ring (0-Ring) with recovery time less than 10ms over 250 units<br>TOS/Diffserv supported<br>Quality of Service (802.1p) for real-time traffic<br>VLAN (802.1Q) with VLAN tagging and GVRP supported<br>IGMP Snooping for multicast filtering<br>Port configuration, status, statistics, monitoring, security<br>SNTP for synchronizing of clocks over network<br>Supports <b>PTP Client</b> (Precision Time Protocol) clock synchronization<br>DHCP Server / Client support<br>Port Trunk support<br>MVR (Multicast VLAN Registration) support |              |
| Network Redundancy   | O-Ring<br>Open-Ring<br>O-RSTP<br>STP<br>RSTP<br>MSTP  |              |
| Warning / Monitoring System  | Relay output for fault event alarming (only for RES-3242GC-E)<br>Syslog server / client to record and view events<br>Include SMTP for event warning notification via email<br>Event selection support   |              |
| LED Indicators   |   |              |
| Power Indicator  | Green for power on Green : Power LED x 4  |              |
| Status Indicator   | Green : Indicates that the system is ready  |              |
| R.M. Indicator   | Green : Indicates that the system is operating in O-Ring Master mode  | 2            |
| 0-Ring Indicator   | Green : Indicates that the system is operating in O-Ring mode   |              |

| Fault Indocator                             | -  | Amber : Indicates unexpected event occurred  |  |
|---|--|--|--|
| 10/100Base-T(X) RJ45 Port Indicator         | Green for port Link/Act.<br>Amber for 100Mbps link   |  |  |
| 10/100/1000Base-T(X) / SFP Port Indicator   | Green for port Link/Act  |  |  |
| Power                                       |  |  |  |
| Redundant Input Power                       | 100~240VAC with power cord   | 100~240VAC with power cord and dual +12~+48 VDC or<br>-12~-48 VDC inputs in 6-pin terminal block |  |
| Power Consumption (Typ.)                    | 18 Watts   |  |  |
| Overload Current Protection                 | Present  |  |  |
| Physical Characteristics                    |  |  |  |
| Dimensions (W x D x H)                      | 443.7(W) x 200(D) x 44mm(H) mm (17.47x7.88x1.73 inch.)   |  |  |
| Weight (g)                                  | 2490 g   | 2590 g   |  |
| Environmental                               |  |  |  |
| Storage Temperature                         | -40 to 85°C (-40 to 185°F)   |  |  |
| Operating Temperature                       | -10 to 60°C (-14 to 140°F )  | -40 to 70°C (-40 to 158°F )  |  |
| Operating Humidity                          | 5% to 95% Non-condensing   |  |  |
| Regulatory Approvals                        |  |  |  |
| EMI   | FCC Part 15, CISPR (EN55022) class A   |  |  |
| 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 |  |  |
| MTBF (Hours) (MIL-HDBK-217F2, GB, GC, 25°C) | 356,152  | 238,239  |  |
| Warranty                                    | 5 years  |  |  |

### **Ordering Information**



|  | Model Name      | Description  | Operating Temperature |
|--|-----------------|--|-----------------------|
| Available<br>Model   | RES-3242GC_US   | Industrial 26-port rack-mount managed Ethernet switch with 24x10/100Base-T(X) and 2xGigabit combo ports, SFP socket, US power cord   | -10 to 60°C           |
|  | RES-3242GC_EU   | Industrial 26-port rack-mount managed Ethernet switch with $24x10/100Base-T(X)$ and $2xGigabit$ combo ports, SFP socket, EU power cord   | -10 to 60°C           |
|  | RES-3242GC-E_US | Industrial 26-port rack-mount managed Ethernet switch with 24x10/100Base-T(X) and 2xGigabit combo ports, SFP socket, enhanced version, US power cord   | -40 to 70°C           |
|  | RES-3242GC-E_EU | Industrial 26-port rack-mount managed Ethernet switch with $24x10/100Base-T(X)$ and $2xGigabit$ combo ports, SFP socket, enhanced version, EU power cord   | -40 to 70°C           |
| Packing List<br>• RES-3242GC/3242GC-E<br>• Rack-Mount Kit<br>• Console Cable<br>• Power Cable<br>• ORing Tool CD<br>• Quick Installation Guide |                 | Optional Accessories (Can be purchased separately) <ul> <li>Open-Vision M500, Powerful Network Management Windows Utility Suite, 500 IP devices</li> <li>SFP1G series, 1Gbps SFP optical transceiver</li> <li>DR-45-48, 45W DIN-Rail power supply (only for RES-3242GC-E)</li> <li>DR-75-48, 75W DIN-Rail power supply (only for RES-3242GC-E)</li> <li>DR-120-48, 120W DIN-Rail power supply (only for RES-3242GC-E)</li> <li>SDR-240-48, 240W DIN-Rail power supply</li> <li>SDR-480-48, 480W DIN-Rail power supply</li> </ul> |                       |