



## RGW8

Max. FXS/FXO ports: 8

Max. concurrent calls: 8

## Models

| RGW8      | FXS | FXO |
|-----------|-----|-----|
| RGW8-8S   | 8   | 0   |
| RGW8-8FXO | 0   | 8   |
| RGW8-6S/2 | 6   | 2   |
| RGW8-4S/4 | 4   | 4   |

## Features

- IMS/SIP/MGCP protocols
- Unequalled configurability of FXS and FXO ports
- TLS/SRTP
- L2TP/OpenVPN client
- 500 routing and number-manipulation rules
- Configurable SIP ports and IP-address whitelist
- High-speed fax with maximum rate of 33,600 bps by T.38 or G.711 pass-through
- Polarity-reversal/busy-tone detection
- High availability & PSTN failover
- Auto provisioning
- Remote access via the Redstone Cloud\*
- Management with the Redstone or third-party Remote Device Management Systems (TR-069, SNMP)
- Interoperability with popular SIP servers, such as Cisco CallManager/CUCM, Broadsoft, Microsoft Skype for Business (Lync), and Asterisk/Elastix
- Class I lightning protection

\* The Redstone Cloud is based on Amazon.

Developed for low-port-count applications, such as fax-terminal connectivity, small businesses, SOHO, and residential IP-telephony applications, the RGW8 analog VoIP gateway is integrated VoIP-FoIP devices that provide reliable and cost-efficient access methods for deploying converged communication solutions for network operators and enterprises.

The RGW8 is designed as a compact unit with 4, or 8 FXS/FXO ports, 1 WAN port and 1 PC port (both are 10/100/1000Mbps Ethernet ports), which allows users to apply it as an All-in-One system capable of providing versatile solutions by connecting analog phone, fax and POS machine, IP telephony and PSTN.

## Comprehensive Feature Set with Intelligent Engine

As an intelligent gateway running on embedded Linux operating system, the RGW8 is compatible with many highlighted features such as call forward, call transfer, 3-way conference, caller ID, DND, color ringback, forking, automatic routing, digitmap, PSTN failover, and much more to provide a complete and highly reliable VoIP solution applicable to nearly every application scenarios.

## High Reliability

The hardware design of the RGW8, from architecture to component selection, takes full consideration of improving their reliability.

In addition, with high availability featuring primary-standby, active-standby and load balance as well as PSTN failover designed to handle the failure of the SIP proxy servers, power supply and network, the users are provided with carrier class reliability with minimized potential downtime.

## Robust Protection against Intrusions

The RGW8 provides rich set of features to support perimeter protection against malicious intrusions, such as brute force logins and SIP attacks, ensuring a high level of security in your IP telephony environment.

## Easy Remote Management

Embedded with the Redstone Cloud client, the device located behind enterprise NAT or firewall can be easily accessed for maintenance and troubleshooting purpose or by far-end applications.

Real time monitoring, alarm notification, remote packet capture and software upgrading can be performed with the Redstone or third-party Remote Device Management Systems connecting over TR-069 or SNMP protocol.

## Specification

### Protocols

|                     |                                                                          |
|---------------------|--------------------------------------------------------------------------|
| <b>Call control</b> | SIP/UDP and SIP/TCP (RFC3261),<br>IMS (3GPP), MGCP (RFC3435)             |
| <b>Network</b>      | SSH, HTTP, HTTPS, DHCP/PPPoE client,<br>Radius, DNS (A/SRV record), STUN |

### Media Processing

|                                  |                                                                                                       |
|----------------------------------|-------------------------------------------------------------------------------------------------------|
| <b>Caller ID</b>                 | Bellcore/Telcordia, ETSI, BT, DTMF                                                                    |
| <b>Codec</b>                     | G.711 (a/μ), G.729a, G.722, G.722.2                                                                   |
| <b>DTMF</b>                      | In-band audio, RFC2833, SIP-INFO                                                                      |
| <b>Hook-flash</b>                | Local processing, RFC2833, SIP-INFO                                                                   |
| <b>Fax over IP</b>               | T.38, G.711 pass-through<br>T.38 compliant Group 3 Fax Relay<br>Maximum fax rate of 33,600 bps (T.38) |
| <b>Disconnect modes</b>          | Polarity reversal, Busy tone detection, Loop current                                                  |
| <b>QoS</b>                       | DiffServ, TOS, 802.1P/Q VLAN tagging                                                                  |
| <b>Voice-quality enhancement</b> | Echo cancellation (G.168-2004), Jitter buffer,<br>Silence suppression (VAD, CNG), PLC                 |

### Voice

|                               |                                                                                                                                                                                                                  |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Call transfer</b>          | Blind transfer, Consultative transfer                                                                                                                                                                            |
| <b>Call forward</b>           | Call forward all, Call forward no answer,<br>Call forward busy                                                                                                                                                   |
| <b>Call recording storage</b> | Remote recording server for storage                                                                                                                                                                              |
| <b>Call settings</b>          | Routing based on the caller or callee number,<br>Digit map, 3-way calling, Speed dialing, Do not<br>disturb, Call forking, Color ringback tones,<br>Hunt group, Ring cadence, Message Waiting<br>Indicator (MWI) |

### Security

|                             |                                                                                                          |
|-----------------------------|----------------------------------------------------------------------------------------------------------|
| <b>Protocol</b>             | HTTPS, SSH, TLS, SRTP                                                                                    |
| <b>Encryption</b>           | Encrypted password/PIN                                                                                   |
| <b>Intrusion prevention</b> | Brute force login protection, Access list, Firewall,<br>SIP-allowed IP addresses, Alarm and notification |
| <b>VLAN</b>                 | Auto discovery via DHCP, Manual configuration                                                            |
| <b>VPN client</b>           | L2TP, OpenVPN                                                                                            |

### High Availability

|                      |                                                    |
|----------------------|----------------------------------------------------|
| <b>Redundancy</b>    | Primary-Standby, Active-Standby,<br>Load balancing |
| <b>PSTN failover</b> | Power failure, Network failure                     |

### Provisioning, Administration and Maintenance

|                               |                                                                                                     |
|-------------------------------|-----------------------------------------------------------------------------------------------------|
| <b>Device management</b>      | Redstone Remote Device Management<br>System, TR-069 management (TR-069,<br>TR-104 and TR-106), SNMP |
| <b>Remote access over TCP</b> | Redstone Cloud                                                                                      |

|                             |                                                                                                                     |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------|
| <b>Auto provisioning</b>    | Download configuration file via TFTP/FTP/HTTP/<br>HTTPS, Obtaining ACS address via DHCP option<br>66 or redirection |
| <b>Log management</b>       | 8-level logs, Syslog                                                                                                |
| <b>Data capture</b>         | Port capture, Packet capture                                                                                        |
| <b>Status and statistic</b> | Call status and history, Device status monitoring<br>and statistics collection                                      |
| <b>Upgrade</b>              | Firmware upgrade via Web GUI or Auto provisioning                                                                   |

## Hardware

|                   |                                                                    |
|-------------------|--------------------------------------------------------------------|
| CPU               | Dual core, 880 MHz                                                 |
| RAM               | 128 MB                                                             |
| Flash             | 16 MB                                                              |
| H×W×D             | 35 × 228 × 135.5 mm                                                |
| Weight (net)      | 0.825 kg                                                           |
| Power             | 12VDC/1.5A                                                         |
| Power consumption | 12 W                                                               |
| Mounting          | Desktop                                                            |
| Operating         | Temperature: 0 to 40°C<br>Humidity: 10 to 90% RH (non-condensing)  |
| Storage           | Temperature: -40 to 70°C<br>Humidity: 5 to 90% RH (non-condensing) |

