

## Gateways / SR652ac 35b VDSL2 Bonding IAD + 5-Port 802.11ac WiFi

POWERED BY  
**SMART/OS**



The SR652ac is a 35b VDSL2 Bonding IAD, equipping Broadband Service Providers with a high-performance, yet cost-effective solution for broadband subscribers. With built-in 802.11ac WiFi and VoIP functionality, all powered by SmartOS, the SR652ac is an all-in-one, state-of-the-art platform, delivering the very highest VDSL2 speeds.

Inside the SR652ac is a complement of Intel chips, supporting 6-band 35b VDSL2 Bonding with fallback to all legacy A/VDSL modes. Integrated 802.11ac Wave 2 MU-MIMO WiFi delivers a strong, reliable WiFi signal throughout subscribers' homes. And, as with all SmartRG products, Service Providers can take advantage of industry-leading TR-069/TR-181 remote management.

### / HIGHLIGHTS

#### SmartOS

Setting the bar for a new generation of broadband access devices, SmartOS is designed for the connected homes of today and tomorrow, where the explosive increase of connected devices and new software services demand the most advanced, open-source-based, Carrier-Grade Broadband Operating System, made in the USA.

#### TR-069 Remote Management

SmartRG has a rich TR-069 heritage, leading the market in innovative TR-069 enabled services and solutions. Superior remote manageability reduces Service Provider operational expenses and maintenance costs. Preloaded with SmartOS, the SR652ac comes standard with support for TR-181 Device Data Model and TR-104 VoIP Provisioning.

#### Vectored 35b Bonding

With integrated support for the ITU-T G.993.5 Vectoring specification and the very highest speed VDSL profile, the SR652ac works in conjunction with vectoring-enabled DSLAMs to remove crosstalk interference, allowing lines to reach their full bandwidth potential, as if they were the only line in the cable binder.

#### IPv6 Enabled

SmartOS enables IPv6, out-of-the-box today and protects Service Provider investment for years to come.

### / HARDWARE FEATURES

- 35b VDSL2 Vectored Bonding
- 5 Gigabit Ethernet ports (4 LAN + 1 WAN)
- Dual-band 802.11ac Wave 2 MU-MIMO Access Point
- SIP-enabled FXS POTS port
- USB 3.0 Device port
- WPS and Wireless on/off buttons
- Wall-mountable form-factor

### / BUILT-IN SOFTWARE SUPPORT

- VDSL2 Vectored Bonding with G.inp
- VDSL2 profiles up to 35b, with automatic fallback to ADSL2/2+ Annexes A, L (Reach-Extended) and M (Extended Upstream Bandwidth)
- Up to 8 PVCs/VLANs
- WiFi Beamforming - improves rate/reach for all clients
- Multi-Language UI (English, Spanish, French, & more)
- Support for SmartRG Home Analytics & Device Manager
- TR-181 Device Data Model
- TR-104 VoIP Provisioning Parameters
- Custom Default Configuration & Quickstart

## / PRODUCT FEATURES

### DSL

ITU-T G.998.1/2 (ATM/PTM Bonding) up to 35b profile

ITU-T G.993.1/2 (VDSL/VDSL2)

ITU-T G.993.5 (G.vector)

ITU-T G.992.3/5 (ADSL2+/2+)

- Annex L (Reach Extended ADSL2)
- Annex M (Extended Upstream Bandwidth)

ITU-T G.992.1/2 (G.dmt/G.lite)

ANSI T1.413 Issue 2

ITU-T G.998.4 (G.inp) Impulse Noise Protection

SRA (Seamless Rate Adaptation)

### WAN

Asynchronous Transfer Mode (ATM) and Packet Transfer Mode (PTM) in both VDSL2 and ADSL2+

Per-PVC packet level QoS

Supports UBR, VBR and CBR traffic shaping

Diffserv and 802.1Q prioritization

### Wireless

Dual-band 802.11ac 1600Mbps AP

- 3x3 MU-MIMO 5GHz + 2x2 SU-MIMO 2.4GHz

250mW power output

Multiple SSIDs, including isolated Guest SSID

WiFi Network Scan, Hitless Channel Change

WiFi QoS (WMM) and PowerSave

Wireless Security:

- Wi-Fi Protected Access (WPA2)
- AES encryption

### Remote Management

TR-069 Device Management

TR-181 Device Data Model

TR-104 Provisioning Parameters for VoIP

HTTP/HTTPS, SSH, and SNMP

Syslog logging (local/remote)

Real-time Status and Reporting

Remote/Live Updates

Configuration Backup and Restore

Custom Defaults & Themes

### Routing and Networking

RFC2516 PPPoE and PPPoE pass-through

RFC5072 PPPoE over IPv6

RFC2684 Multiprotocol Encapsulation over ATM

RFC2364 PPPoA

802.1Q VLAN

DNS Proxy Server & Dynamic DNS client

DHCP Server and Client + Options 60 and 121

IGMPv2/v3 Proxy and Snooping

LAN port to VLAN mapping

SmartQoS with Bufferbloat protection

### VoIP

SIP/RTP/RTCP/SDP

Outbound Proxy

Fax/modem passthrough & ITU-T T.38 Fax Relay

RFC2833 DTMF tone detection/generation

ITU-T G.168 Echo Cancellation

Silence Suppression (VAD-DTX-CNG)

Codecs:

- G.711  $\mu$ -law, G.726, G.729, iLBC
- Solicited/Unsolicited MWI and AMWI

### Security

Stateful Packet Inspection Firewall

Denial of Service attack prevention

TCP/IP/Port/interface filtering rules

Day-time Parental Control

DMZ host

## / SPECIFICATIONS AND STANDARDS

### Mechanical

Dimensions: 50mm\*190mm\*215mm (L\*W\*H)

Weight: 500g

### Electrical

Power Supply Adapter:

AC power adapter: 100VAC to 240VAC @ 50/60Hz

DC voltage: 12V, 2.5A

LED power indicator

### EMC & Safety

FCC Part 15, Subpart B and ICES-003 for Class B

FCC Part 15, Subparts C and IC RSS-247 for RF

FCC Part 68 and ISED CS-03 registered

UL 60950-1 (Bureau Veritas listed)

Overvoltage/Overcurrent: K.21 compliant

### Environmental

Meets or exceeds Telcordia GR-63-CORE for:

#### Temperature:

- 0 to 40° Celsius (Standard Operating)
- -20 to 70° Celsius (Non-operating)

#### Humidity:

- 10% to 95% (Non-condensing, Standard Operating)
- 5% to 95% (Non-condensing, Non-operating)

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