

## 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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