

# SURFBOARD® SVG1202

## WIRELESS VOICE GATEWAY

IP telephony, high-speed data with router and firewall, and a wireless access point converge in one convenient package.

### Seamless Mobility in A Stylish Package

Show your premium customers that you appreciate their business and you are serious about yours. Designed for seamless mobility, Motorola's SURFboard SVG1202 Wireless Voice Gateway is a fully-integrated telecommunications solution that combines the functionality of a cable modem, embedded Multimedia Terminal Adapter (eMTA), router with advanced firewall, and an 802.11b/g wireless access point, all in one convenient, sleek, stylish package for the sophisticated consumer. The Motorola SVG1202 SURFboard Wireless Voice Gateway is an advanced, integrated, and robust residential and commercial telecommunications solution ideal for seamless mobility and PacketCable™ Multimedia (PCMM) architectures. The SVG1202 combines all the IP functionality today's consumers demand, in a single compact and stylish unit.

### High-Speed Internet Access

A 10/100 Ethernet RJ-45 port and an integrated 802.11b/g wireless access point on the full-featured home network router provide both high-speed Internet access and a single platform for home networking, eliminating the need for stand-alone routers, hubs, and access points.

### Digital Voice Telephone Service

The SVG1202 delivers up to two lines of primary-line digital voice telephone service (terminating in RJ-11 connectors) over cable's broadband connection to the home.



Voice traffic is prioritized over Internet traffic, giving the user high-quality voice calls, even while surfing the Web. The SVG1202 also supports a variety of rich CLASS features, such as caller ID, call waiting, three-way calling, and call forwarding.

### Wireless Gateway

An 802.11b/g/e/i wireless gateway allows consumers to network computers, gaming consoles, and other peripherals anywhere in the home. With Motorola's SURFboard integrated home networking CPE solutions, cable operators can now offer a complete provisioning, configuration, management, and support system for their customers—from the gateway to the desktop and beyond.

### Highlights

Easy to set up and use  
Versatile and convenient

- 10/100 Ethernet (RJ-45) port enables flexible, high-speed connectivity
- Integrated 802.11b/g wireless access point and up to two lines (RJ-11) of full-featured telephone service provide maximum convenience in a small footprint

Advanced router and firewall

Power management enhancements optimize Wi-Fi handset battery performance

### Service Assurance

Supporting the Wi-Fi home network is a new challenge for the cable industry. As the leading worldwide provider of DOCSIS® products, Motorola is helping ease cable operators into Wi-Fi delivery. By combining the highest-performing and lowest cost of ownership modems in the industry, with easy-to-use Wi-Fi installation and pairing tools as well as advanced remote management features, the SVG1202 is offering an all-in-one approach to broadband home networking. In addition, Motorola's field-proven Edge device management software platform provides the MSO with intelligent management, auto-provisioning, and remote management features to improve accuracy, efficiency, and customer satisfaction. These value-adding features enable remote device administration for improved accuracy and reduced support costs. The SVG1202 is compatible with Motorola's Edge scalable, carrier-grade software platform that enables cable operators to remotely access, configure, monitor, and troubleshoot their full portfolio of consumer devices, home networks, and services.

### Dual Mobile and Landline Delivery

Integrating both cellular and wireless local area network (WLAN) capability, the SVG1202 is designed to provide a seamless gateway for mobile and landline analog voice calls and data communication.

### Enhanced Power Management

The SVG1202 offers a number of power management features, including 802.11e U-APSD (WMM Power Save), which enable users to optimize the battery life of their Wi-Fi handset. A highlight of the 802.11e power management standard is the synchronization between the SVG1202 and the Wi-Fi handset. The Wi-Fi cell phone receives data from the SVG1202 at infrequent intervals, allowing the Wi-Fi handset to enter sleep mode when the phone is not in use, thereby minimizing the phone's "on-time" and improving its battery utilization.

### Built-In Security

The SVG1202 is equipped with a number of security features, including:

- 802.11i security (WEP-64/128, WPA-PSK, WPA, WPA2, TKIP, AES, 802.1x)
- 802.11i (pre-authentication)
- IPSEC/PPTP/L2TP NAT pass-through for VPN tunneling
- Wi-Fi-Protected Setup
- User-friendly, secure mobile pairing
  - Push button configuration for Wi-Fi Protected Setup (WPS) compliant clients

### More Highlights

#### Expandable

Features up to 16 Service Identifiers (SIDs) for future expansion of enhanced features

#### Remote configuration and monitoring

Help to reduce support costs and aid troubleshooting DOCSIS 2.0 and PacketCable; interoperable with DOCSIS 1.1 and compatible with PacketCable 1.5: SIP

**SPECIFICATIONS**

<b>Standards</b>	DOCSIS 2.0 and PacketCable 1.5; interoperable with DOCSIS 1.1 and compatible with PacketCable 1.5: SIP	
<b>Cable Interface</b>	F-Connector, female, 75 Ω	
<b>Network Interface</b>	One 10/100 Ethernet port	
<b>Wireless Interface</b>	802.11b/g	
<b>Dimensions</b>	6.5 in H x 1.5 in W x 6.1 in D (16.5cm x 3.81 cm x 15.49 cm)	
<b>Regulatory</b>	RoHS compliant, Anatel	
<b>INPUT POWER</b>		
<b>North America</b>	105 to 125 VAC, 60 Hz	
<b>Outside North America</b>	100 to 240 VAC, 50 to 60 Hz	
<b>ENVIRONMENTAL</b>		
<b>Operating Temperature</b>	32 °F to 104 °F (0 °C to 40 °C)	
<b>Storage Temperature</b>	-22 °F to 158 °F (-30 °C to 70 °C)	
<b>Operating Humidity</b>	5 to 95% R.H. (non-condensing)	
<b>DOWNSTREAM</b>		
<b>Modulation</b>	64 or 256 QAM	
<b>Maximum Data Rate*</b>	38 Mbps (256 QAM at 5.361 Msym/s)	
<b>Bandwidth</b>	6 MHz	
<b>Symbol Rates</b>	64 QAM @ 5.069 Msym/s, 256 QAM 5.361 Msym/s	
<b>Operating Level Range</b>	-15 to +15 dBmV	
<b>Frequency Range</b>	88 to 860 MHz	
<b>Input Impedance</b>	75 Ω (nominal)	
<b>UPSTREAM</b>		
<b>Modulation</b>	8***, 16, 32***, 64***, 128*** QAM or QPSK	
<b>Maximum Channel Rate</b>	30 Mbps**	
<b>Bandwidth</b>	200 kHz, 400 kHz, 800 kHz, 1.6 MHz, 3.2 MHz, 6.4 MHz***	
<b>Symbol Rates</b>	160, 320, 640, 1280, 2560, and 5120*** ksym/s	
<b>Operating Level Range</b>	A-TDMA	8 to 54 dBmV (32 QAM, 64 QAM) 8 to 55 dBmV (8 QAM, 16 QAM) 8 to 58 dBmV (8 QAM, 16 QAM)
	S-CDMA	8 to 53 dBmV (all modulations)
<b>Output Impedance</b>	75 Ω (nominal)	
<b>Frequency Range</b>	SVG1202	5 to 42 MHz (edge to edge)

**TELEPHONY**

<b>Line Type</b>	2-wire	
<b>Hook State Signaling</b>	Loop start	
<b>Maximum Line Length</b>	500 ft (AWG 26/0.4 mm @ 65°C) (one-way)	
<b>DTMF Level Sensitivity Range</b>	0 and -20 dBm	
<b>Speech Coding</b>	64 kbps PCM, $\mu$ -law or A-law companding; support for G.711, G.726, G.728, G.729, G.723.1, iLBC, and V16/32 codecs	
<b>Line Termination</b>	Configurable based on market needs	
<b>Loss Plan</b>	Receive Transmit	(D/A) 4 dB (A/D) 2 dB (configurable based on market needs)
<b>Loss Plan Tolerance</b>	$\pm 1$ dB; 60/50 Hz loss >20 dB (one-way; referenced to offhook loss at 1,004 Hz)	
<b>Ringing Wave Form</b>	Quasi-trapezoidal	
<b>Ringing Crest Factor</b>	1.2 <CF <1.6	

**NETWORK**

<b>Gateway</b>	DHCP, NAT, VPN tunneling; static routing and dynamic IP routing (RIPv1, RIPv2); SPI firewall with DoS protection and intrusion prevention; port, packet, and URL keyword filtering; full suite of ALGs; UPnP IGD 1.0	
<b>Wireless LAN</b>	802.11b/g Wi-Fi, WDS bridging, 802.11e WMM admission control, QoS	
<b>Power Management</b>	802.11e WMM power save/UAPSD (Unscheduled-Automatic Power Save Delivery)	
<b>802.11i Security</b>	WEP-64/128, WPA-PSK, WPA, WPA2, TKIP, AES, 802.1x, 802.11i (pre-authentication)	
<b>Mobile Pairing</b>	User-friendly Wi-Fi-protected setup (WPS) for secure mobile pairing with compatible dualmode handset	
<b>Regulatory Domains</b>	Brazil	
<b>Transmit Power Output</b>	IEEE 802.11b IEEE 802.11g	19 dBm +1/-1.5 dB at all rates in all channels 16 dBm +1/-1 dB at 54 Mbps in all channels
<b>Receiver Sensitivity</b>	> -90 dBm at 11 Mbps; > -74 dBm at 54 Mbps	

\*When comparing download speeds with a traditional 28.8k analog modem. Actual speeds will vary and are often less than the maximum possible. Several factors affect upload and download speeds, including, but not limited to, network traffic and services offered by your cable operator or broadband service provider, computer equipment, type of service, number of connections to server, and availability of Internet route(s).

\*\*Actual data throughput will be less due to physical layer overhead (error correction coding, burst preamble, and guard interval).

\*\*\*With A-TDMA or S-CDMA enabled Cable Modem Termination System (CMTS)

All features, functionality, and other product specifications are subject to change without notice or obligation.