



SBG900

SURFboard® Wireless Cable Modem Gateway



Three networking products in one

Integrated DOCSIS® 2.0 SURFboard cable modem, router with one 10/100 Fast Ethernet port and auto-MDIX cross-over cable detection, and IEEE 802.11b/g wireless access point

Easy setup

Installation Wizard makes modem and wireless setup fast and easy

Web-based management

Manage data and wireless network using a Web-based interface

Advanced security

Built-in firewall with stateful Packet Inspection (SPI), intrusion detection, and Denial of Service (DoS) attack prevention

Extensible networking

Network up to 253 desktop computers, laptops, and other Ethernet or wireless devices² to create a full Class C network

Enterprise-capable

VPN pass-through (IPSec, PPTP, L2TP)

State-of-the-art wireless networking technology in a cost-effective, conveniently-sized package.

Using the latest DOCSIS® 2.0 Advanced Time Division Multiple Access (A-TDMA) and Synchronous Code Division Multiple Access (S-CDMA) technology, Motorola's SBG900 SURFboard Wireless Cable Modem Gateway combines an industry-leading cable modem, an IEEE 802.11b/g wireless access point, and an advanced firewall into one compact product. It's the perfect networking solution for the home, home office, or small business, allowing users to create a custom network to share a single broadband connection, files, and networked printers and peripherals, with or without wires. Cost-effective and efficient, the SBG900 eliminates the need for three separate products and enables users to maximize the potential of their existing resources. The SBG900 also offers enhanced network security for both wired and wireless users.

SPECIFICATION SHEET

SBG900
SURFboard Wireless Cable Modem Gateway

Integrated DOCSIS 2.0 Cable Modem

The integrated Motorola SURFboard cable modem incorporates the latest DOCSIS 2.0 A-TDMA and S-CDMA technologies to provide up to three times greater upstream capacity than DOCSIS 1.0/1.1 systems. Packed with power, the cable modem is interoperable and backward compatible with DOCSIS 1.0 and 1.1 for a fast and timely transition—operators can deploy today without a service interruption. The Motorola SBG900 is flexible, allowing operators to maximize their current infrastructure investments and also offer additional cost-effective services, all at the same time.

Wireless LAN Mobility

The Motorola SBG900 merges the advantages of the SURFboard cable modem with the mobility of a wireless LAN (WLAN). It includes an integrated IEEE 802.11b/g Wi-Fi® access point that allows users (with optional accessories) to roam around the home or small business and remain connected to the network. Now subscribers can place computers and peripherals where they're convenient, not just where there's an available connection.

Configurable Output Power

The SBG900 offers an array of competitive advantages by providing superior transmission power with a high-gain antenna. The SBG900's adjustable output power can be configured, allowing just the right amount of signal to fill the required area without bleed-over to other homes or businesses.

Commercial-Class Security

Finally, Motorola's SBG900 is secure. It includes an advanced firewall that helps protect the network from hackers and other outside interference while allowing desired data to pass through with ease. The firewall embedded in the gateway provides commercial-class protection through built-in denial-of-service attack prevention, stateful packet inspection, and intrusion detection. The firewall also allows VPN tunnel protocols to pass through, hiding the network from the outside world.

The SBG900 Wireless Cable Modem Gateway delivers:

The speed of a DOCSIS 2.0 cable modem

The mobility of a wireless LAN and the simplicity of "no new wires" technology

The security of a firewall

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LED Indicators

Front-panel LEDs (Power, Receive, Send, Online, PC Activity, and Wireless) make monitoring system activity fast and easy.



Wireless

STANDARDS COMPLIANCE

IEEE	802.11b/g, 802.11b DSSS, 802.11b/g OFDM, 802.1d, 802.3, 802.3u, 802.3i
Other	DOCSIS 2.0, CableHome® 1.0

RF CENTER FREQUENCY RANGE

North America	2.412 GHz to 2.462 GHz
Japan	2.412 GHz to 2.4835 GHz

DATA RATE AND MODULATION TYPES

1 Mbit/s DBPSK; 2 Mbit/s DQPSK; 5.5 Mbit/s, 11 Mbit/s CCK; 6 Mbit/s, 9 Mbit/s, 12 Mbit/s, 18 Mbit/s, 24 Mbit/s, 36 Mbit/s, 48 Mbit/s, 54 Mbit/s OFDM

NUMBER OF CHANNELS

Europe (13), Spain (2), France (4), US (11), Japan (14)

TRANSMIT POWER

17 dBm (EIRP)

RECEIVE SENSITIVITY

-65 dBm at 54 Mbps

Router

NETWORK MANAGEMENT

SNMP v1, v2c, v3; IP v4 addressing; LAN-side DHCP server; NAT, NAPT

INTERFACES

Cable interface	F-connector, female, 75 Ω
CPE wired interface	USB 1.1, 10/100 Fast Ethernet (auto-sensing)
CPE wireless interface	802.11b/g
Data protocol	TCP/IP

Downstream

MODULATION

64 or 256 QAM

MAXIMUM DATA RATE¹

38 Mbps

BANDWIDTH

6 MHz

SYMBOL RATES

64 QAM 5.069 Msym/s, 256 QAM 5.361 Msym/s

OPERATING LEVEL RANGE

-15 to 15 dBmV

INPUT IMPEDANCE

75 Ω (nominal)

FREQUENCY RANGE

88 to 860 MHz

Upstream

MODULATION

84, 16, 324, 644, 1284 QAM or QPSK

MAXIMUM DATA RATE³

30 Mbps

BANDWIDTH

200 kHz, 400 kHz, 800 kHz, 1.6 MHz, 3.2 MHz, 6.44 MHz

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SYMBOL RATES

160, 320, 640, 1280, and 2560, and 51204 ksym/s

OPERATING LEVEL RANGE

A-TDMA	8 to 54 dBmV (32 and 64 QAM) 8 to 55 dBmV (8 and 16 QAM) 8 to 58 dBmV (QPSK)
S-CDMA	8 to 53 dBmV (all modulations)

OUTPUT IMPEDANCE

75 Ω (nominal)

FREQUENCY RANGE

5 to 42 MHz (edge to edge)

Security

ENCRYPTION

SSID, WPA, 64-bit and 128-bit WEP

FIREWALL

Denial-of-service (DOS) attack prevention, stateful packet inspection, intrusion detection, DMZ, MAC filtering, security event logging, radius

Electrical

INPUT VOLTAGE RANGE

100 to 240 VAC, 50 to 60 Hz

POWER CONSUMPTION

9 W (nominal), CEC-compliant

Physical

TEMPERATURE

Operating	32 °F to 104 °F (0 °C to 40 °C), -150 to 10,000 ft
Storage	-22 °F to 176 °F (-30 °C to 80 °C)

HUMIDITY

5% to 95% (non-condensing)

DIMENSIONS

Without antenna	6.7 in H x 1.8 in W x 5.9 in L (17.0 cm x 4.6 cm x 15.0 cm)
With antenna	8.7 in H x 1.8 in W x 5.9 in L (22.1 cm x 4.6 cm x 15.0 cm)

WEIGHT

15 oz (0.42 kg) (unit only)

Compatibility

PLATFORM

PC	80486, Pentium, or later; Windows® Vista, 2000, or XP or Linux with Ethernet connection ⁵
Macintosh	Power PC or later; OS 8 or later; Ethernet connection
UNIX	Ethernet connection

Specifications are subject to change without notice.

¹Actual speeds will vary, and are often less than the maximum possible. Upload and download speeds are affected by several factors, including, but not limited to, network traffic and services offered by your cable operator or broadband service provider, computer equipment, type of server, number of connections to server, and availability of Internet router(s).

²Check with your local cable operator to determine the number of connections allowed and associated service charges.

³Actual speeds will vary. Maximum speeds of 30 Mbps are only attainable with A-TDMA or S-CDMA technology.

⁴With A-TDMA- or S-CDMA-enabled CMTS.

⁵Older versions of Windows, although not specifically supported, will work with this cable modem.



MOTOROLA

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