SPECIFICATION SHEET

MOTOROLA

SBG940

Wireless Cable Modem Gateway

HIGHLIGHTS

Easy to use and simple to set up

- Plug-and-play installation
- Front-panel easy-to-read operational status LEDs
- Intuitive, built-in, Web-based diagnostics for quick and easy troubleshooting

High-speed data access through 4 10/100Base-T Ethernet (RJ-45) ports

- Half-/full-duplex operation
- Auto-MDIX crossover cable detection

IEEE 802.11 b/g wireless access point

Includes advanced firewall with Stateful Packet Inspection (SPI), intrusion detection, and Denial of Service (DoS) attack prevention

Supports VPN pass-through (IPSec, PPTP, L2TP)

DOCSIS® 2.0 (interoperable with DOCSIS 1.0 and 1.1)

Supports networking up to 253 PCs and peripherals[1] (full Class C network)

Easy to use and simple to set up. The Motorola SBG940 Wireless Cable Modem Gateway delivers a complete broadband networking solution. It is high-speed Internet access, wireless networking, and security—all in one.

The Motorola SBG940 Wireless Cable Modem Gateway is an integrated high-speed cable modem, 802.11 b/g wireless access point, and four-port 10/100Base-T Ethernet (RJ-45) router with built-in advanced firewall, in one compact, convenient package. The perfect networking solution for the home, home office, or small business or enterprise, the SBG940 allows users to create a network to share a single broadband connection, with or without wires.

Cost-effective and efficient, the SBG940 eliminates the need for four separate products and allows users to maximize the potential of their existing resources. The SBG940 also offers enhanced network security for both wired and wireless networks.

The SBG940 incorporates DOCSIS 2.0's A-TDMA and S-CDMA technologies to provide up to three times greater upstream capacity than legacy DOCSIS 1.0 / 1.1 systems. Packed with power, the SBG940 is interoperable and backward-compatible with DOCSIS 1.0 and 1.1 systems for fast and timely transition—operators can deploy today without a service interruption.

The SBG940 merges the advantages of a Motorola cable modem with the mobility of a wireless LAN (WLAN). It includes an integrated 802.11 b/g access point that allows users to roam around the home or small business and remain connected to the network. Now subscribers can place computers and peripherals where they are convenient, not just where there is an available connection.

The SBG940 offers an array of competitive advantages by providing superior transmission power. Its detachable antenna can be replaced by an optional, external high-gain antenna (choose from directional, bi-directional, or omni-directional), and its 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.

The Motorola SBG940 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. It also allows VPN tunnel protocols to pass through, hiding the network from the outside world.

As part of Motorola's broadband family of products, the Motorola SBG940 Wireless Cable Modem Gateway delivers a complete broadband networking solution. It is high-speed Internet access, wireless networking, and security—all in one.

As easy to install as it is to use, the SBG940 Wireless Cable Modem Gateway is the perfect networking solution for the home, home office, or small business or enterprise.

SPECIFICATIONS

WIRELESS

Standards Compliance	IEEE 802.11g; IEEE 802.11b DSSS; IEEE 802.11g OFDM
RF Frequency Range	11 channels with center frequencies 2.412 to 2.462 GHz (North America)
Data Rate and Modulation	1 Mbps DBPSK; 2 Mbps DQPSK; 5.5 or 11 Mbps CCK; 6, 9, 12, 18, 24, 26, 48, or 54 Mbps OFDM
Number of Channels	Europe—13; Spain—2; France—4; US—11
Transmit Power	17 dBm (EIRP)
Receive Sensitivity	–65 dBm at 54 Mbps

ROUTER

Ethernet Standards Compliance	IEEE 802.3; IEEE 802.3u
Protocols Supported	RIP v2
Number of Uplink Ports	4

ELECTRICAL

Input Voltage Range	100 to 240 VAC, 50 to 60 Hz
Power Consumption	9 W (nominal)

ENVIRONMENTAL

Operating Temperature	0 °C to 40 °C (0 °F to 104 °F)
Storage Temperature	–30 °C to 80 °C (–22 °F to 176 °F)
Humidity	5 to 95% RH, non-condensing
Mechanical Antenna	1 external removable antenna with a unique connector per FCC requirements; 1 external adjustable non-removable antenna
LED Indicators	Power, Receive, Send, Online, Internet, USB, Wireless, Ethernet (4)
Interfaces	1 AC power, 1 F-type, 4 RJ-45, 1 USB Series B

GENERAL

Cable Interface	F-connector, female, 75 Ω
CPE Network Wired Interface	USB, Ethernet 10/100Base-T (auto-sensing)
CPE Network Wireless Interface	IEEE 802.11g
Data Protocol	TCP/IP
Dimensions	290 mm W x 160 mm D x 70 mm H (11.5 in W x 5.5 in D x 2.5 in H)
Weight	0.8 kg (1.8 lb) (unit only)

DOWNSTREAM

Modulation	64 or 256 QAM
Maximum Data Rate[2]	38 Mbps
Bandwidth	6 MHz
Symbol Rate	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 30 kHz minimum step size)

UPSTREAM

Modulation	8[4], 16, 32[4], 64[4], 128[4] QAM or QPSK
Maximum Data Rate[3]	30 Mbps
Bandwidth	
A-TDMA	200, 400, 800, 1600, 3200, and 6400 kHz
S-CDMA	1600, 3200, and 6400 kHz
Symbol Rates	160, 320, 640, 1280, 2560, and 5120[4] ksym/s
Operating Level Range	
A-TDMA	8 to 54 dBmV (32 QAM, 64 QAM); 8 to 55 dBmV (8 QAM, 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)
Output Return Loss	>6 dB (5 to 42 MHz)

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

2 Actual 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).

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

4 With A-TDMA or S-CDMA enabled CMTS.

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