



# SB5102E

## SURFboard® Cable Modem

### Highlights

**Compatible with Windows®, Macintosh®, and UNIX® computers**

**Euro-DOCSIS® 1.1- and 2.0-certified**

**10/100 Ethernet (RJ-45) high-speed data port**  
Ethernet cable included

**Front-panel LEDs indicate status and simplify troubleshooting**

**User-friendly online diagnostics**

**Supports up to 63 computers on a single Internet connection**

Additional networking hardware required

**Remote configuration and monitoring from the headend using SNMP and TFTP**

**Stylish and space-saving enclosure**

The easy-to-install SB5102E packs a wealth of features in a compact unit, with no USB driver required (reducing support costs), no Standby button (eliminating accidental network drops), an internal power supply, and a small footprint for easier, less expensive warehousing and transport. The SB5102E is the right choice for the cost-conscious cable operator.

### Next-Generation Technology

Powerful, flexible, and easy to install and use, Motorola's next-generation SB5102E cable modem maximizes your current infrastructure investment while allowing you to offer new value-added services to your customers. Incorporating Euro-DOCSIS 2.0 technology, which provides up to three times the upstream capacity of Euro-DOCSIS 1.0 or 1.1, the SB5102E allows your customers to surf the Internet at speeds as high as 30 Mbps. For a smooth transition, the SB5102E is backwards-compatible with Euro-DOCSIS 1.0 and 1.1.

### Simple, Convenient Installation

The SB5102E can be deployed without service interruption. With just three connections required, installation couldn't be simpler or more convenient. Just connect the coaxial cable to the SB5102E and an existing cable outlet, connect the power, and connect the PC to the SB5102E's Ethernet port. Troubleshooting is a breeze, too, thanks to front-panel status indicator LEDs and online diagnostics.

### Reliable

Motorola cable modems provide a historically reliable platform. The SB5101, on which the SB5102E is based, has an annualized field failure rate of just 0.1%. With the power and speed of Motorola's SB5102E cable modem, easy and reliable high-speed Internet access is always at your customers' fingertips.

## DATA SHEET

SB5102E  
SURFboard® Cable Modem

### GENERAL SPECIFICATIONS

Cable Interface	F-connector, female, 75 W
CPE Network Interface	10/100 Ethernet
Data Protocol	TCP/IP
Dimensions	6.2 in H X 2.3 in W X 6.0 in D (15.8 cm X 5.8 cm X 15.2 cm)
Power	9 W (nominal)
Input Power	100 to 240 VAC, 50 to 60 Hz

### ENVIRONMENTAL

Operating Temperature	32 °F to 104 °F (0 °C to 40 °C)
Storage Temperature	-22 °F to 176 °F (-30 °C to 80 °C)
Operating Humidity	5 to 95% R.H. (non-condensing)

### DOWNSTREAM

Modulation	64 or 256 QAM
Max. Data Rate*	≤51 Mbps
Bandwidth	8 MHz
Symbol Rate	64 QAM 6.952 Msym/s, 256 QAM 6.952 Msym/s
Operating Level Range	64 QAM 43 to 73 dB $\mu$ V, 256 QAM 47 to 77 dB $\mu$ V
Input Impedance	75 $\Omega$ (nominal)
Frequency Range	108 to 860 MHz

### UPSTREAM

Modulation	8***, 16, 32***, 64***, 128**** QAM or QPSK
Max. Channel Rate**	≤30 Mbps
Bandwidth	200 kHz, 400 kHz, 800 kHz, 1.6 MHz, 3.2 MHz, 6.4*** MHz
Symbol Rates	160, 320, 640, 1280, 2560, 5120*** ksym/s
Operating Level Range	
A-TDMA	68 to 114 dB $\mu$ V (32 QAM, 64 QAM) 68 to 115 dB $\mu$ V (8 QAM, 16 QAM) 68 to 118 dB $\mu$ V (QPSK)
S-CDMA	68 to 113 dB $\mu$ V (all modulations)
Output Impedance	75 $\Omega$ (nominal)
Frequency Range	5 to 65 MHz (edge to edge)

### COMPATIBILITY

PC	80486, Pentium, or later; Windows® 2000 or XP or Linux with Ethernet connection (older versions of Windows, although not specifically supported, will work with this cable modem)
Macintosh	Power PC or later; OS 8 or higher; Ethernet connection
UNIX	Ethernet connection
Home Networking	Ethernet router or wireless access point

\* Actual speeds will vary, and are often less than the maximum possible. Data transmission speed is approximate and depends on the configuration and capacity of your network, as well as the amount of traffic on the network.

\*\* 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 CMTS.

\*\*\*\* With S-CDMA-enabled CMTS.

Certain features may not be activated by your service provider, and/or their network settings may limit the feature's functionality. Additionally, certain features may require a subscription. Contact your service provider for details.

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



# MOTOROLA

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