

# **SURFboard® SB5101**

## **Cable Modem**



Motorola's next-generation SURFboard SB5101 cable modem incorporates DOCSIS 2.0 technology, providing up to three times the upstream capacity of DOCSIS 1.0 or 1.1.

For a smooth transition, the SB5101 is backwards compatible with DOCSIS 1.0 and 1.1. Operators can deploy the SB5101 without a service interruption, maximizing their current infrastructure investment while simultaneously offering new value-added services.

With a Motorola SURFboard cable modem, high-speed Internet access is always at your fingertips. Always on and always connected, a cable modem is much faster than a traditional dial-up modem. Large files can download in seconds! New online gaming possibilities become available!

The SB5101 is convenient for operators and end-users alike. The top-mounted Standby switch provides increased security by enabling users to disconnect from the Internet when their cable modem is not in use.

*Take advantage of tomorrow's technology today with Motorola's SURFboard SB5101 cable modem.*

### **HIGHLIGHTS:**

- Compatible with Windows®, Macintosh®, and UNIX® computers
- DOCSIS® 1.1 and 2.0 certified
- 10/100Base-T Ethernet (RJ-45) and USB high-speed data ports
- Ethernet and USB cables included
- Installation Assistant program on CD-ROM guides you through installation on the PC
- Top-mounted Standby switch for increased security
- Front-panel LEDs indicate status and simplify troubleshooting
- User-friendly online diagnostics page
- Supports standard Internet software
- 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
- Multi-language User Guide on CD-ROM



## SB5101 SPECIFICATIONS

### General

|                       |                                  |
|-----------------------|----------------------------------|
| Cable Interface       | F-Connector, female, 75 $\Omega$ |
| CPE Network Interface | USB, Ethernet 10/100Base-T       |
| Data Protocol         | TCP/IP                           |
| Dimensions            | 6.2" H x 2.3" W x 6.0" D         |
| Power                 | 9 Watts (nominal)                |
| Input Power           |                                  |
| North America         | 105-125 VAC, 60 Hz               |
| International         | 100-240 VAC, 50-60 Hz            |

### Environmental

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

### Downstream

|                       |   |
|-----------------------|---|
| Modulation            | 64 or 256 QAM                               |
| Maximum Data Rate*    | 38 Mbps (256 QAM at 5.361 Msym/s)           |
| Bandwidth             | 6 MHzp                                      |
| Symbol Rate           | 64 QAM 5.057 Msym/s<br>256 QAM 5.361 Msym/s |
| Operating Level Range | -15 to +15 dBmV                             |
| Input Impedance       | 75 $\Omega$ (nominal)                       |
| Frequency Range       | 88 to 860 MHz                               |

### Upstream

|                        |  |
|------------------------|--|
| Modulation             | 8***, 16, 32***, 64***, 128**** QAM or QPSK  |
| Maximum Channel Rate** | 30 Mbps (64 QAM at 5.120 Msym/s)   |
| Bandwidth              | 200 kHz, 400 kHz, 800 kHz, 1.6 MHz, 3.2 MHz, 6.4*** MHz                                    |
| Symbol Rates           | 160, 320, 640, 1280 and 2560 and 5120**** ksym/s   |
| Operating Level Range  |  |
| A-TDMA                 | +8 to +54 dBmV (32 QAM, 64 QAM)<br>+8 to +55 dBmV (8 QAM, 16 QAM)<br>+8 to +58 dBmV (QPSK) |
| S-CDMA                 | +8 to +53 dBmV (all modulations)   |
| Output Impedance       | 75 $\Omega$ (nominal)  |
| Frequency Range        | 5 to 42 MHz (edge to edge)   |

### Compatible With

|                 |   |
|-----------------|---|
| PC              | 80486, Pentium, or later running Windows® 95, Windows 98, Windows ME, or Windows XP having an Ethernet or USB connection required<br>Linux with Ethernet connection   |
| Macintosh       | Power PC or later running OS 8 or higher and an Ethernet connection required  |
| UNIX            | Ethernet connection required  |
| Home networking | Equipment such as Ethernet routers or wireless access points; for information visit <a href="http://broadband.motorola.com/consumers/home_networking.asp">http://broadband.motorola.com/consumers/home_networking.asp</a> |

\* 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.

Specifications are subject to change without notice.



MGBI

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