



SBV5120 VoIP Cable Modem

IP telephony converges with cable data service in one convenient package

Easy to use. Motorola's SBV5120 Voice-over-IP (VoIP) cable modem unlocks the potential of telephone service over your broadband cable connection.

The next-generation Motorola Voice-over-IP (VoIP) cable modem is based on Motorola's proven cable modem experience. By using industry-standard Signaling protocols, the SBV5120 provides high-speed Internet access and telephone service over cable's broadband connection to the home.

The SBV5120 supports two telephone lines that are terminated in two RJ-11 connectors. In addition, its integrated cable modem connects to a computer through either a 10/100Base-T Ethernet or a USB data port.

The Motorola SBV5120 VoIP cable modem is the intelligent way to communicate, converging voice and data on one network. The SBV5120 enables:

- One infrastructure for communications services
- One bill for voice and data services
- Simultaneous use of phone lines and high-speed data services
- All CLASS features provided today by the phone company (i.e., caller ID, call waiting, etc.)

As part of Motorola's broadband family of telephony products, the SBV5120 converges voice and data, on one network, in one product. By combining multiple services in one unit, consumers can enjoy an efficient solution that offers many advantages over competing technologies.

HIGHLIGHTS:

- Enables the delivery of up to 2 lines of full-featured telephone service
- High-speed data access enabled through either a 10/100Base-T Ethernet (RJ-45) or a USB port
- Voice-over-data prioritization allows users to talk on the phone while using the Internet without a reduction in voice quality
- Supports all CLASS services (caller ID, call waiting, three-way calling, etc.)
- Automatic fax modem processing
- Top mounted standby function provides increased data security by disabling both the Ethernet and USB ports
- Remotely configurable and monitorable by ISP using SNMP and TFTP
- Supports all DOCSIS® features, interoperable with DOCSIS 1.0 and 1.1, and compatible with PacketCable™ standards
- Telco interface configures to meet multiple market standards (ETSI harmonized impedance, 600 Ohms)
- Supports G.711 and low-rate vocoders
- DC powering via transformer or uninterruptible power supply (UPS)

To view our full line of Broadband Networking Products, visit our Web site at broadband.motorola.com/consumers

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Technical Specifications

GENERAL

Cable Interface	F-Connector, female, 75 Ω
CPE Network Interface	USB, Ethernet 10/100Base-T
Data Protocol	TCP/IP
Dimensions	7.91" (20.09cm) H x 6.27" (15.93cm) D x 2.62" (6.65cm) W
Power	9 Watts (nominal)
Input Power	
North America	105–125 VAC, 60 Hz
Outside North America	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	0–95% R.H. (non-condensing)

DOWNSTREAM

Modulation	64 or 256 QAM
Maximum Data Rate*	38 Mbps (256 QAM at 5.361 Msym/s)
Bandwidth	6 MHz
Symbol Rate	64 QAM 5.069 Msym/s
Symbol Rate	256 QAM 5.361 Msym/s
Operating Level Range	-15 to 15 dBmV
Input Impedance	75 Ω (nominal)
Frequency Range	88–860 MHz

UPSTREAM

Modulation	8***, 16, 32***, 64***, 128*** QAM or QPSK
Maximum 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 and 2560 and 5120*** 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	5–42 MHz (edge to edge) **

TELEPHONY

Line Type	2 wire
Hook State Signaling	Loop start
Maximum Line Length (one-way)	500 feet (AWG 26/0.4 mm @ 65° C)
DTMF Level Sensitivity Range	0 and -20 dBm
Speech Coding	64 kbps PCM, μ -law or A-law companding, support for G.711 plus other low-rate CODECs
Line Termination	Configurable based on market needs
Loss Plan	Receive (D/A) 4 dB Transmit (A/D) 2 dB Configurable based on market needs
Loss Plan Tolerance (one-way)	\pm 1 dB
60/50 Hz Loss	> 20 dB (Referenced to off-hook loss at 1004 Hz)
Ring Wave Form	Quasi-trapezoidal
Ring Crest Factor	1.2 < CF < 1.6
Ring Trip (maximum)	200 mS with 300 W termination

*When comparing download speeds with a traditional 28.8k analog modem. 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).

**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).

Specifications are subject to change without notice.

Be advised that any services provided through this equipment are not intended to replace or be a substitute for primary line voice services or Plain Old Telephone Service (POTS) and are not meant to provide guaranteed 911 or E911 services or to permit access to 411 directory assistance services. Your service provider, not Motorola, is responsible for the provision of Voice-over-IP (VoIP) telephony services through this equipment. Motorola shall not be liable for, and expressly disclaims, any direct or indirect liabilities, damages, losses, claims, demands, actions, causes of action, risks, or harms arising from or related to the services provided through this equipment. Important: be aware that you will not be able to make any calls using this VoIP device if your broadband connection is not functioning properly. You will also not be able to make any calls using this VoIP device if you have lost electrical power.

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