MOTOROLA SB6141

DOCSIS 3.0 CABLE MODEM

FEATURES

- DOCSIS® 3.0 Certified
- Channel bonding of up to 8 downstream and 4 upstream channels increasing data rates in well over 100 Mbps when sending data
- Supports IPv4 and IPv6 to expand network addressing capabilities
- Enhanced security: supports AES traffic encryption
- Enhanced network management
- IP multicast support
- GigE (RJ-45) data port with Auto Negotiate and Auto MDIX
- User-friendly online diagnostics
- Backwards compatible to DOCSIS 2.0
- Features a 10/100/1000 Base-T Ethernet

PRODUCT SPECIFICATIONS

GENERAL

Cable Interface	75Ω F-connector
CPE Network Interface	10/100/1000 Base-T Ethernet (RJ-45)
Data Protocol	TCP-IP
Dimensions	5.24 in. (H) x 5.24 in. (W) x 1.65 in. (D)
Power	9W (nominal)
Input Power	
North America	105 to 125 VAC, 60 Hz
Outside North America	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 158˚F (-30˚C to 70˚C)
Operating Humidity	5 to 95% R.H. (non-condensing)

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PRODUCT SPECIFICATIONS

RF DOWNSTREAM

Modulation	64 or 256 QAM
Capture Bandwidth	Dual 96 MHz Capture windows
Maximum Theoretical Data Rate	
DOCSIS	343.072 Mbps (8 channels) / 42.884 (single channel) @256 QAM at 5.36 Msym/s
Bandwidth	
DOCSIS	≤ 48 MHz
Symbol Rate	
DOCSIS	64 QAM 5.057 Msym/s; 256 QAM 5.361 Msym/s
Operating Level Range	-15 to 15 dBmV
Bonded Channel RF	
Level Tolerance	10 dBmV
Input Impedance	75Ω (nominal)
Frequency Range	108 to 1002 MHz (edge to edge)
Frequency Plan	
DOCSIS	Annex B
Security	DOCSIS 3.0 Security (BPI+, EAE, SSD)
Network Management	SNMP v2 and v3
Provisioning	Supports IP addressing using IPv4/IPv6 (dual stack)
MoCA Interference Rejection	1 GHz Low Pass filter at tuners input

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PRODUCT SPECIFICATIONS

RF UPSTREAM

Modulation	QPSK and 8, 16, 32, 64, 128 QAM
Maximum Channel Rate	
DOCSIS	131.072 Mbps (4 channels) / 32.768 Mbps (single channel): @ 128 QAM at 6.4 MHz
Channel Width	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	Level range per channel (Multiple Transmit Channel mode disabled, or only Multiple Transmit Channel mode enabled with one channel in the TCS)
DOCSIS	
TDMA	Pmin to +57 dBmV (32 QAM, 64 QAM)
	Pmin to +58 dBmV (8 QAM, 16 QAM)
	Pmin to +61 dBmV (QPSK)
S-CDMA	Pmin to +56 dBmV (all modulations), where:
	Pmin = +17 dBmV, 1280 kHz modulation rate
	Pmin = +20 dBmV, 2560 kHz modulation rate
	Pmin = +23 dBmV, 5120 kHz modulation rate

Level Range per channel (2 channels in the TCS)

TDMA	Pmin to +54 dBmV (32 QAM, 64 QAM)
	Pmin to +55 dBmV (8 QAM, 16 QAM)
	Pmin to +58 dBmV (QPSK)
S-CDMA	Pmin to +53 dBmV (all modulations), where:
	Pmin = +17 dBmV, 1280 kHz modulation rate
	Pmin = +20 dBmV, 2560 kHz modulation rate
	Pmin = +23 dBmV, 5120 kHz modulation rate

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PRODUCT SPECIFICATIONS

RF UPSTREAM (CONT.)

Operating Level Range (cont.)

Level Range per channel (3-4 channels in the TCS)

TDMA	Pmin to +51 dBmV (32 QAM, 64 QAM)
	Pmin to +52 dBmV (8 QAM, 16 QAM)
	Pmin to +55 dBmV (QPSK)
S-CDMA	Pmin to +53 dBmV (all modulations), where:
	Pmin = +17 dBmV, 1280 kHz modulation rate
	Pmin = +20 dBmV, 2560 kHz modulation rate
	Pmin = +23 dBmV, 5120 kHz modulation rate
Output Impedance	75Ω (nominal)
Frequency Range	DOCSIS 5-42 MHz (edge to edge)
Compatibility	PC: Windows Vista™, 2000, XP, 7, Windows 8 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 9 or higher, Ethernet connection
	UNIX: Ethernet connection
	Home Networking: Ethernet router or wireless access point