

SB6141

Cable Modem

Features:

- Compatible with Windows®, Macintosh®, and UNIX® computers
- DOCSIS 3.0 certified
- Backwards compatible to DOCSIS 2.0
- Capable of downloading at speeds up to 8 times faster than DOCSIS 2.0
- DOCSIS 3.0 compatible, featuring:
 - Channel bonding of up to eight downstream channels and four upstream channels increasing data rates of over 300 Mbps for received data and over 100 Mbps when sending data
 - Supports IPv4 and IPv6 to expand network addressing capabilities
 - Enhanced security: supports AES traffic encryption
- IP multicast support
- GigE (RJ-45) data port with Auto Negotiate and Auto MDIX
- User-friendly online diagnostics
- Includes an internal filter to eliminate potential interference from MoCA signals' intermodulation beats
- Online assistance for easy network set-up
- ARRIS support options via phone, chat, or e-mail

Product Overview

Strengthen your Broadband Leadership — Count on ARRIS SURFboard DOCSIS® 3.0 solutions to deliver innovative, ultra-broadband data services with reliable, high quality products. The easy-to-use SB6141 SURFboard® DOCSIS 3.0 Cable Modem unlocks the power of high-speed data. Utilizing the power of DOCSIS 3.0, the SB6141 enables channel bonding of up to eight downstream channels and four upstream channels, which enables advanced multimedia services with data rates of over 300 Mbps for received data and over 100 Mbps when sending data.

With SURFboard® cable modems, high-speed Internet access is always at your fingertips – always on and always connected. The SB6141 is the ideal solution for the high-end residential user, the small home office owner, and the medium to large business enterprise.



GENERAL SPECIFICATIONS

Cable Interface	F-Connector, female 75 Ω
CPE Network Interface	Single One-Gigabit (10/100/1000) Ethernet port
Data Protocol	TCP/IP
Dimensions	5 (h) x 2.1 (w) x 5 (l) in (127 x 51 x 127 mm)
Power	
Power	9W (nominal)
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)
DOCSIS 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	\leq 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 10dBmV Input Impedance 75 Ω (nominal)
Frequency Range	108 – 1002 MHz (edge to edge) Optional 90 MHz – 1002 MHz (edge to edge)
Frequency Plans	DOCSIS Annex B
Security	DOCSIS 3.0 Security (BPI+, EAE, SSD)
Network Management	SNMP v2 & v3
Provisioning	Supports IP addressing using IPv4 and/or IPv6 (dual stack)
MoCA Interference Rejection	1 GHz Low Pass filter at tuners input



DOCSIS Upstream

Modulation	QPSK and 8, 16, 32, 64, 128 QAM, optional 256 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 (two 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

Level range per channel (three or four 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	75 Ω (nominal)
Frequency Range	5-42 MHz (edge to edge)

Compatibility

PC	Windows XP, Windows 7, Windows 8, connection (older versions of Windows, although not specifically supported, will work with this cable modem), UNIX, Linux®
Macintosh	Power PC or later; OS 10 or higher
Home Networking	Ethernet router or wireless access point connectivity via Ethernet port

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

For information on additional SURFboard products please visit www.SURFboard.com

For product support please visit www.arris.com/consumers

SURFboard™
High-Speed Cable Modems