

SURFboard™

High-Speed Cable Modems

ARRIS

SBG6400

DOCSIS 3.0

Wireless Gateway



Product Overview

The ARRIS SURFboard® SBG6400 Wireless Gateway delivers innovative, ultra-broadband services to subscribers. Easy to set up and use, the SBG6400's advanced feature set includes DOCSIS 3.0 channel bonding in a cost-effective package, with the ARRIS engineered quality and performance delivering the speed and reliability demanded by today's smart home applications. Equipped with such features as a Wi-Fi pairing button and user-friendly, online configuration and diagnostics, the SBG6400 is as easy to set up as it is to use.

Product Highlights

Easy to Setup and Use

- Plug-and-play installation
- Wi-Fi pairing button for easy Wi-Fi Protected Setup™ (WPS) Wi-Fi connection
- Supports standard Internet browser software
- Front panel, multicolor, LEDs indicate status and simplify troubleshooting
- Enhanced User Interface

Advanced Services Ready

- DOCSIS 3.0
- Channel bonding of up to eight downstream and four upstream channels; capable of WAN / LAN data rates of over 340 Mbps in DOCSIS received (downstream) data stream and over 100 Mbps in the send (upstream) data stream
- 1 GHz-capable tuner
- Best-in-class RF Immunity, built into ARRIS SURFboard products since 2006, protects against potential service impacting interference
- Use of full downstream bandwidth to capture up to eight DOCSIS channels for bonding
- Spectrum analyzer capability for local and remote troubleshooting
- Supports IPv4 and IPv6 to expand network addressing capabilities
- Versatile and convenient
- Integrated 2.4 802.11n 802.11n wireless using the 2.4 GHz radio spectrum with a 2x2 MIMO antenna array Wi-Fi access point
- Backwards compatible to 802.11a/b/g
- 2x2 MIMO antenna arrays offer cost-effective performance benefits for wireless LAN (WLAN) connected clients
- Two-gigabit Ethernet ports enable flexible, high-speed connectivity with Auto Negotiate and Auto MDIX
- Support for multicast IP services
- Eight SSIDs per radio
- Support for multiple public and/or private SSIDs
- MoCA reject filter ensures care-free operation in environments also supporting a MoCA network
- USB 2.0 port for connecting your storage devices, or charging your USB supported device

Reliable and Secure

- WEP/ WPA/WPA2 Wi-Fi® security
- Advanced firewall with Stateful Packet Inspection, DoS protection, and intrusion prevention
- Enhanced security: supports AES traffic encryption

Wi-Fi Services Ready

- 802.11n wireless using the 2.4 GHz radio spectrum with a 2x2 MIMO antenna array
- Throughput of up to 300 Mbps
- MIMO Antennas provide enhanced performance

GENERAL SPECIFICATIONS

Cable Interface	F-Connector, female 75 Ω
Network Interface	Two 1-gigabit (10/100/1000) Ethernet ports
2.4 Wi-Fi Interface	802.11n Wi-Fi (also certified for 802.11a/b/g)
Dimensions	5 (h) x 2.1 (w) x 5 (l) in (127 x 51 x 127 mm)
Regulatory	RoHS compliant, FCC, UL listed (U.S. and Canada), Industry Canada
DOCSIS 3.0	BCM3383G
Security	DOCSIS 3.0 Security (BPI+, EAE, SSD)
Provisioning	IPv4 IPv6 (dual stack)

Input Power

North America	105 to 125 VAC, 60 Hz
Outside North America	100 to 240 VAC, 50 to 60 Hz
Power Management	802.11e WMM power save/U-APSD (Unscheduled-Automatic Power Save Delivery), 802.3az EEE

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	Full bandwidth capture window 108 MHz – 1002 MHz
Maximum PHY Rate	DOCSIS: 343.072 Mbps (8 channels) / 42.884 (single channel) @ 256 QAM at 5.36 Msym/s
Symbol Rate	64 QAM 5.057 Msym/s; 256 QAM 5.361 Msym/s
Operating Level Range	-15 to 15 dBmV (DOCSIS)
Frequency Range	108 – 1002 MHz (edge to edge) Optional 88 MHz – 1002 MHz (edge to edge)
Frequency Plans	DOCSIS Annex B

DOCSIS Upstream

Modulation	QPSK and 8, 16, 32, 64, 128, 256 QAM
Maximum PHY Rate @ 256 QAM at 6.4 MHz	122.8 Mbps: 4 channels 30.72 Mbps: single channel
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
Frequency Range	5–42 MHz (edge to edge)

GENERAL SPECIFICATIONS (continued)

Compatibility

PC	Windows XP, Windows 7, Windows 8, (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 and wireless access point

Network

Gateway	DHCP, NAT, DNS, VPN tunneling, GRE tunneling; static routing and dynamic IP routing (RIPv1, RIPv2); SPI firewall with DoS protection and intrusion prevention; port, packet, and URL keyword filtering; full suite of ALGs; UPnP IGD 1.0; L2TPv3, L2VPN, eRouter, DLNA
WLAN	802.11a/b/g/n Wi-Fi, WDS bridging, 802.11e WMM admission control, QoS, QoS per Interface, Beamforming
Radios	802.11n 2.4 GHz, 2x2 MIMO antenna array
Security	Default = security enabled WPA2, WPA-PSK, WEP 64/128, WPA, TKIP, AES, 802.1x, 802.11i (pre-authentication)
USB	USB 2.0 Port Rear
Wi-Fi Pairing	WPS 2.0
Regulatory Domains	US, Canada, ETSI, World

Wi-Fi throughput, reach, and range are factors that are greatly impacted by the operating environment and the connected client capabilities. Please contact ARRIS for additional test information.



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

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

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