SURFBOARD DOCSIS BASED TWO-WAY EXTERNAL CABLE MODEM SPECIFICATIONS

MODEL SB2100

FEATURES	SB2100	SB2100I*	SB2100D
Interface to PC:	Ethernet 10BaseT	Ethernet 10BaseT	Ethernet 10BaseT
Data Protocol:	TCP/IP	TCP/IP	TCP/IP
Dimensions:	8.75"H x 3.5"W x 9.5"L	8.75"H x 3.5"W x 9.5"L	8.75"H x 3.5"W x 9.5"L
DOWNSTREAM			
Interface:	F-Connector	F-Connector	F-Connector
Modulation:	64 or 256 QAM	64 or 256 QAM	64 or 256 QAM
Maximum Data Rate	10Mbps (limited by Ethernet)	10Mbps (limited by Ethernet)	10Mbps (limited by Ethernet)
Bandwidth:	6 MHz	6 MHz	6 MHz
Symbol Rates (max.):	5.057 Msym/s (64 QAM) 5.361 Msym/s (256 QAM)	5.057 Msym/s (64 QAM) 5.361 Msym/s (256 QAM)	5.057 Msym/s (64 QAM) 5.361 Msym/s (256 QAM)
Operating Level Range:	-15 to +15 dBmV	-15 to +15 dBmV	-15 to +15 dBmV
Input Impedance:	75 Ω (nominal)	75 Ω (nominal)	75 Ω (nominal)
Total Input Power:	< 30 dBmV	< 30 dBmV	< 30 dBmV
Frequency Range:	88-860 MHz (30 kHz min. step size)	88-860 MHz (30 kHz min. step size)	88-860 MHz (30 kHz min. step size)
ENVIRONMENTAL			
Power:	9 watts (nominal)	9 watts (nominal)	9 watts (nominal)
Input Power:	+12 VDC @ 0.75 ma	+12 VDC @ 0.75 ma	+12 VDC @ 0.75 ma
Operating Temperature:	0 to +40° C	0 to +40° C	0 to +40° C
Storage Temperature:	-20 to +80° C	-20 to +80° C	-20 to +80° C
Operating Humidity:	10-85% RH, non-condensing	10-85% RH, non-condensing	10-85% RH, non-condensing
UPSTREAM			
Interface:	F-Connector	F-Connector	F-Connector
Upstream Modulation:	16 QAM or QPSK variable symbol rates	16 QAM or QPSK variable symbol rates	16 QAM or QPSK variable symbol rates
Maximum Upstream Transmission Rate:	10 Mbps	10 Mbps	10 Mbps
Bandwidth:	200-3200 kHz	200-3200 kHz	200-3200 kHz
Symbol Rates:	160, 320, 640, 1280, and 2560 ksym/s	60, 320, 640, 1280, and 2560 ksym/s	60, 320, 640, 1280, and 2560 ksym/s
Operating Level Range:	+8 to +55 dBmV (16QAM) +8 to +58 dBmV (QPSK)	+8 to +55 dBmV (16QAM) +8 to +58 dBmV (QPSK)	+8 to +55 dBmV (16QAM) +8 to +58 dBmV (QPSK)
Output Impedance:	75 Ω (nominal)	75 Ω (nominal)	75 Ω (nominal)
Total Input Power:	< 35 dBmV (varies by symbol rate)	< 35 dBmV (varies by symbol rate)	< 35 dBmV (varies by symbol rate)
Frequency Range:	5-42 MHz (edge to edge)	5-42 MHz (edge to edge)	5-42 MHz (edge to edge)
UPSTREAM—TELCO			
Interface:	N/A	N/A	RJ-11 connector
Protocol:			V.42, V.32, or V.34
Maximum Upstream Transmission Rate:			33.6 kbps

*Universal power supply and multiple line cord configurations available.

CONCLUSION

With the SURFboard SB2100 family you get the SPEED that leaves traditional modems obsolete... the FLEXIBILITY that allows multiple user access... and the SIMPLICITY of plug-and-play operation. The SB2100 series designs are built on proven General Instrument SURFboard cable modem technology. GI's commitment to excellence enables them to lead the market in innovative and reliable products that consistently provide their customers with outstanding performance and value.

General Instrument®

101 Tournament Drive, Horsham, PA 19044
800.523.6678 www.gi.com
www.surfboard.com

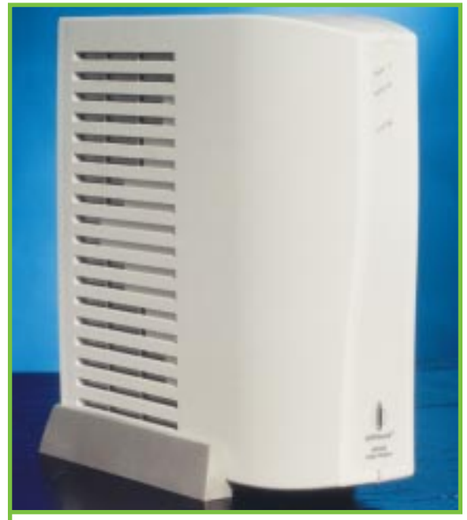
SB2100/SB2100i/SB2100D

ADVANCED NETWORK & TELECOM SYSTEMS

At last, the wait is over. SURFboard technology leaves traditional modems obsolete.

Waiting. It may be the greatest irritant in web surfing. Waiting for your modem to transfer a document. Waiting for the busy signals to stop; waiting for a connection. Waiting. With GI's SURFboard cable modem, the waiting is over. You're always on...always connected.

GI offers 3 models in the SURFboard cable modem family: the SB2100, SB2100i and the SB2100D. The standard SB2100 offers customer friendly, quick Internet access via a single cable. The SB2100i international modem supports universal power supplies providing GI's plug-and-play convenience to customers across the globe. Additionally, the SB2100D dual-return modem automatically detects available return path in one-way or two-way plants and configures itself accordingly. The SB2100D is the same unit as the SB2100, but with factory added components like an analog telephone modem included inside for one-way systems.



- 3 models available: SB2100, SB2100i international version, and the SB2100D dual-return
- High-Speed Access creating more "bandwidth per dollar" with speeds up to 100x's faster than 28.8 telco dial-in
- Telco equipment limitations eliminated with RF-return cable modem
- Increase return on investment for plant upgrades
- Cable operator can compete *today* as high-speed data service provider
- DOCSIS standardization and interoperability of cable modems provide longevity of purchased headend equipment
- Supports up to 32 users

General Instrument®

STANDARDS ORIENTED

The DOCSIS based SB2100 family provides maximum performance and is compatible with desktops, laptop PCs, Macs and workstations. DOCSIS based modems insure that your equipment can function with any DOCSIS system. An ethernet card and a standard HTML browser is the only equipment required in the subscriber's computer, making SURFboard modems platform independent. Relying on the proven SURFboard cable modem design, the SB2100 family of cable modems talk directly to the equipment at the headend, so the user is not required to do any set-up or management—just plug-and-play. That's easy. They ensure the interoperability of cable modems and associated networks manufactured by different suppliers. Interoperability speeds time to market by reducing risk for equipment purchasers and consumers, and creates economies of scale for broadband network operators by creating multiple product sources.

In addition, the SB2100 family supports up to 32 users, and is ideal for a small business or home network. Because all data goes through the cable, upstream and downstream speeds are incredibly fast, and no extra telephone line is required. The wait is over. GI has DOCSIS based modems... now!

"All three models of the SB2100 family are shipping in volume... now."

"The user is not required to do any set-up or management—just plug-and-play."

SB2100 Features

- CableLabs® Certified as DOCSIS 1.0 compliant
- @Home Level 2 approved
- External cable modem with 10BaseT interface
- 64/256 QAM RF downstream receives data speeds up to 38 Mbps
- 16 QAM/QPSK RF upstream provides data transfer at rates up to 10 Mbps
- Remote management via SNMP
- High-performance processor for optimum speed and security
- Easy installation with automatic configuration
- Software upgradable over network
- Platform independent—compatible with all operating systems, including Windows 95/98/NT, Macintosh, and all UNIX variants
- Baseline privacy for secure data transfer
- Appealing vertical orientation design is convenient... saves space
- Dual-flash design for fail-proof software upgrade over network
- Fully interoperable with any DOCSIS qualified CMTS equipment
- 32 user capability
- HTML web-page user interface—accessible through any browser
- Network upgrade capability protects cable modem investment

SB2100i Features

- Same features, casing, and logic board as SB2100
- Several international models available for different power requirements

SB2100D Features

- Same features, casing, and logic board as SB2100
- Includes 33.6 Kbps telco modem
- Extra LED for telco modem
- Automatically detects whether a plant is one-way or two-way and configures itself for the appropriate mode
- No software required to change modes
- Includes DHCP server for offline access to HTML pages using dynamic IP Addressing