OVERVIEW

Hitron’s BRG-3520T is a full-featured yet economical, entry-level DOCSIS 2.0-compliant cable modem with both Ethernet and USB interfaces. Its neat, compact design and small footprint make it ideal for home, office or campus use.

The BRG-3520T is the perfect solution for cable operators who want to add the value of broadband Internet connectivity to their current or future customer base. High-speed data transfers up to 38Mbps downstream and 30Mbps upstream are possible over the installed HFC cable plant. Hitron’s software lets operators assign up to 32 IP addresses for deployment in small office or dormitory settings.

Installation is so quick and easy it can even be done by end-users. The USB port allows plug-and-play connectivity without opening the computer or performing complex configurations. Front-panel LEDs clearly display both cable and network status. A browser-based utility allows convenient viewing of key network statistics. DHCP and TFTP clients allow the modem to automatically get its IP address and configuration data from network servers, without the intervention of either the user or installer.

Advanced features include IP address filtering to prevent unwanted traffic on the network and SNMP agents that permit remote configuration and monitoring from a management station equipped with an SNMP server. DES data encryption ensures complete privacy for transmitted information over cable media.

KEY FEATURES

- Full-featured compact, economical cable modem with Ethernet port
- DOCSIS 2.0 -compliant (submitted for DOCSIS 1.1/DOCSIS 2.0 certification in CW25)
- Equipped TurboDOX™ that significantly increases the download speed of TCP applications by factors up to 20 times the downstream throughput.
- Capable of handling downstream data transmission speeds up to 38Mbps; upstream to 30Mbps (64QAM)
- RJ-45 10/100BaseT Ethernet port provides traditional industry-standard connection
- Extensive SNMP management support: MIB-II, Ethernet-like MIB, Bridge MIB, Cable Device MIB, Baseline privacy Interface MIB, RF Interface MIB
- IP address filtering
### Upstream (Transmitter)
- **Modulation**: QPSK/16QAM
- **Symbol Rate**: 160, 320, 640, 1,280, and 2,560 ksym/sec
- **Frequency Range**: 5 to 42 MHz
- **Bandwidth**: 200, 400, 800, 1,600, and 3,200 kHz
- **Signal Level**: 8 to 55 dBmV (16QAM) 8 to 58 dBmV (QPSK)
- **Output impedance**: 75 ohms
- **Output Return Loss**: >6 dB
- **Channel frequency accuracy**: ±50 ppm
- **Symbol rate accuracy**: ±50 ppm
- **Symbol timing jitter**: <0.02 of the nominal symbol duration over a 2-sec period
- **Reed-Solomon codes with T=1 to 10 or no FEC coding**
- **Arbitrarily programmable seed scrambler**
- **Programmable variable-length preamble**

### Downstream (Receiver)
- **Modulation Type**: 64QAM/256QAM
- **Symbol Rate**: 5.056941 (64QAM)/5.360537 (256QAM) Msym/sec
- **Frequency Range**: 91 to 857 MHz
- **Bandwidth**: 6 MHz
- **Signal Level**: -15 dBmV to +15 dBmV
- **Total input power (40-900 MHz)**: 30 dBmV
- **Input impedance**: 75 ohms
- **Input Return Loss**: 6 dB
- **Downstream Protocol**: ITU J.83-B with a subset interleave mode
- **CM BER performance**:
  - 64QAM: <10^-6 @ Es/No of 23.5 dB or greater
  - 256QAM: <10^-6 @ Es/No of 30 dB or greater

### Network Features
- **MAC Protocol**: MCNS/DOCSIS 1.1 Compliant
- **MCNS/DOCSIS 2.0 Compliant**
- **Protocol**: UDP, IP, ARP, ICMP, DHCP, TFTP, SNMP, HTTP
- **Management**: SNMP, MIB-II, Ethernet-like MIB, Bridge MIB, Cable Device MIB, Baseline privacy Interface MIB, RF Interface MIB
- **Security**: Baseline Privacy
- **DA Filtering**: 32 unicast addresses

### Equipment Specification
- **CPE Interface**: RJ-45 10/100BaseT
- **Cable Interface**: Female “F” type RF Connector
- **Power Supply**: 12V/1.25A
- **Power Consumption**: <6 Watts
- **Dimensions**: 120 mm x 142 mm x 30 mm
- **Stroage Temperature**: -20 to +70°C
- **Operating Temperature**: 0 to 40°C
- **Operating Humidity**: 10% to 90% (Non-Condensing)

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