HN7700S Satellite Router

Scalable, high-performance broadband satellite router for enterprises

The HN7700S, part of Hughes' HN7000S family, is a high-performance broadband satellite router designed to provide high-speed access for the large enterprise, government, and small/medium enterprise (SME) markets. Recognizing the worldwide demands by enterprises worldwide for ever-increasing amounts of bandwidth and the ability to support many simultaneous users, the HN7700S has been designed to provide unsurpassed performance for even the most bandwidth-intensive applications. With support for two simultaneous LAN subnets, the HN7700S has the flexibility and power to handle new enterprise IP networking requirements. Further, the HN7700S supports integrated serial connectivity, thus providing the ideal solution for bridging legacy applications into an IP environment.

The HN7700S enables applications such as:

- High-speed Internet/intranet access
- Video services including remote site security monitoring
- Diverse satellite backup of primary broadband access
- ePayments such as POS/credit and loyalty
- Polling, enterprise CRM and ERP
- Corporate training and eLearning
- Real-time multimedia streaming and large file content distribution

The HN7700S operates with all Hughes HN systems and uses the industry standards DVB-S or DVB-S2. As a result, the HN7700S can be easily configured to support a wide range of downstream data rates by selecting different modulation, symbol, and FEC coding rates. The downstream is scalable up to 121 Mbps and the upstream return channel is scalable up to 1.6 Mbps. The HN7700S provides an integrated broadband LAN solution to Windows®, UNIX®, Apple® Macintosh®, and other platforms running IP over Ethernet. The power of the HN7700S allows the same platform to scale as the need for higher-speed business applications grows, protecting the customer's investment well into the future. The HN7700S also coexists with prior Hughes DW terminals, ensuring existing customers' investment is protected.

The HN7700S receives and transmits data over the satellite via the Hughes HN Network Operations Center (NOC). Security is ensured through DES encryption and an integrated conditional access. The HN7700S also supports Hughes' innovative VPN Accelerator technology to ensure broadband speeds are maintained even when using IPSec VPN clients from market leaders such as Cisco, Nortel, and Check Point.

DVB-S2 ACM

Supporting Adaptive Coding and Modulation (ACM) on the outbound channel means that operators can gain significant bandwidth efficiencies and provide high-availability services as well.

The HN7700S satellite router passes IP data packets to and from any IP device on the LAN and has much of the functionality of an IP router. The HN7700S incorporates Hughes' advanced Performance Enhancing Proxy (PEP) feature, which increases throughput performance and maximizes the user's experience and satisfaction. The HN7700S also supports Hughes' TurboPage® feature, providing HTTP acceleration for lightning-fast browser performance and advanced Quality of Service features to ensure that applications get the priority and bandwidth they require.

The integrated serial port with protocol processing to support SDLC, X.25, or XPAD (asynchronous data) protocols means the HN7700S can be used to support legacy applications such as Automatic Teller Machines (ATM) or credit card devices.

An integrated V.90 modem provides the ability to use the optional automatic dial backup capability through a public switched terrestrial network for virtually 100 percent availability.

Features

- Supports unicast and multicast IP traffic
- Software and configuration updates via download from the NOC
- Implements dynamic, self-tuning Performance Enhancement Proxy (PEP) software to accelerate the throughput performance by optimizing the TCP transmission over the satellite, delivering superior user experience and link efficiency
- Implements TurboPage software to accelerate HTTP traffic for fast browser access
- Quality of Service features include: IQoS (Inbound Quality of Service), bi-directional DSCP, and outbound bandwidth management
- Supports Hughes VPN Accelerator
- Bi-directional data compression
- Configuration, status monitoring, and commissioning via the NOC
- Embedded Web interface for local status and troubleshooting
- Acts as a local router providing:
  - Static and dynamic addressing
  - DHCP server or relay
  - DNS caching
  - Full RIPV2 routing support
  - Multicasts to the LAN by using IGMP
  - NAT/PAT
  - VLAN tagging
  - Firewall support through integrated access control lists
- Serial protocols supported:
  - SDLC end to end (PU4 to PU2.0/PU2.1)
  - SDLC remote, LLC NOC (PU4 to PU2.0/PU2.1)
  - X.25
  - XPAD
  - Veriphone 3200 (Visa)
  - Veriphone 3300 (Visa)
- Throughput:
  - At least 45 Mbps of multicast/streaming traffic, or
  - At least 4 Mbps of FTP traffic, or
  - At least 2 Mbps of HTTP accelerated traffic, or
  - At least 10 Mbps of UDP traffic, or
  - Any combination of the above with proportional performance
- Remote terminal management via the Hughes Vision® Network Management System or Unified Element Manager and SNMP agent
- Universal power supply supports international voltage ranges and frequencies and has a detachable power cord
- User-friendly LED display indicating terminal operational status

Technical Specifications

Physical Interfaces

Two 10/100BaseT Ethernet LAN RJ45 ports
One RS-232 serial port
One V.90 modem with RJ-11 interface

Satellite & Antenna Specifications

Outbound transmission format:	DVB-S, DVB-S2
Information Rate (Receive or DW Outbound Channel):	up to 121 Mbps (DVB-S2)
Information Rate (Transmit or DW Inbound Channel):	up to 1.6 Mbps
Symbol Rate (Receive):	1 to 45 Msps (in 1 Msps steps)
Symbol Rate (Transmit):	128, 256, 512, 1024 Ksps
Encoding (Receive):	DVB-S Convolutional with concatenated Reed Solomon, DVB-S2 LDPC
Encoding (Transmit):	Turbocode FEC ½, 2/3 and 4/5
Frequency Range:	C-, Extended C-, Ku- and Ka-band
Modulation (Receive):	QPSK, 8PSK (DVB-S2)
Modulation (Transmit):	OQPSK
Bit Error Rate (Receive):	10^{-10} or better
Bit Error Rate (Transmit):	10^{-7} or better
Antenna:	74 cm, 89 cm, 98 cm, 120 cm, 180 cm
Radio:	1 and 2 watt Ku-band, 2 watt C-band, 1, 2 and 3½ watt Ka-band

Mechanical & Environmental

Weight (IDU):	4.8 lbs (2.18 kg)
Dimensions (IDU):	11.5" W x 1.8" H x 11" D (29.21 cm W x 4.7 cm H x 27.94 cm D)
Operating temperature:	
IDU	+5° C to +40° C
ODU	-30° C to +55° C
Input power:	90-264 VAC; 50-60 Hz
DC power supply (optional):	12 to 24 VDC

For additional information, please contact us at globalsales@hns.com.

HughesNet

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