HN7000S Satellite Router

HUGHES

Scalable, high-performance broadband satellite router for enterprises

The HN7000S, part of Hughes' HN7000S family, is a high-performance broadband satellite router designed to provide high-speed access for the consumer, small office/home office, and enterprise markets. Designed to provide both versatility and performance, the HN7000S provides unsurpassed performance for even the most bandwidth-intensive applications.

The HN7000S operates with all Hughes HN systems and uses the industry standards DVB-S or DVB-S2. As a result, the HN7000S 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 HN7000S provides an integrated broadband LAN solution to Windows®, UNIX®, Apple® Macintosh®, and other platforms running IP over Ethernet. The HN7000S coexists with prior generations of DW terminals, thereby ensuring protection of service operators' investments.

The HN7000S receives and transmits data over the satellite via the Hughes HN Network Operations Center (NOC). TCP connections can be initiated to or from hosts at remote locations. Security is assured

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.

through DES encryption and integrated conditional access. In addition, all user intranet communications can be isolated from other enterprise intranets and from remote terminals accessing the "public" Internet operating in the same network.

The HN7000S broadband 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 HN7000S incorporates Hughes' advanced Performance Enhancing Proxy (PEP) feature, which increases throughput performance and maximizes the user's experience and satisfaction. The HN7000S also supports Hughes' TurboPage® feature, providing HTTP acceleration for lightning fast browser performance. The HN7000S supports advanced Quality of Service features to ensure that customers get the priority and bandwidth they require.

HughesNet™

HughesNet encompasses all broadband solutions and managed services from HUGHES, for large enterprises, governments, small businesses, and consumers. HughesNet solutions and services are marketed directly by Hughes and its authorized resellers and distributors throughout North America, Europe, India, and Brazil. In all other regions of the world, Hughes products and services are available from a growing family of value-added providers and resellers. Hughes satellite products are based on the IPoS (IP over Satellite) global standard approved by TIA, ETSI, and ITU.

Features

■ Supports unicast and multicast IP traffic

■ Software and configuration updates via download from the NOC

■ Implements Performance Enhancement Proxy (PEP) software to accelerate 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), bidirectional DSCP, and outbound bandwidth management.

■ Supports Hughes VPN Accelerator

■ Bi-directional data compression

■ Configuration, status monitoring, and commissioning via the NOC

■ 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

■ 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

Technical Specifications

■ Physical Interfaces

One 10/100BaseT Ethernet LAN RJ45 port

■ 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 - 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:	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, 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 (29.21cm W x 4.7 cm H x 27.94 cm D)
Operating temperature:	
IDU	0° C - +40° C
ODU	-30° C - +55° C
Input power:	90-264 VAC; 50-60 Hz
DC power supply (optional):	12 - 24 VDC

■ 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

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

www.hughes.com

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HUGHES®

11717 Exploration Lane Germantown, MD 20876 USA