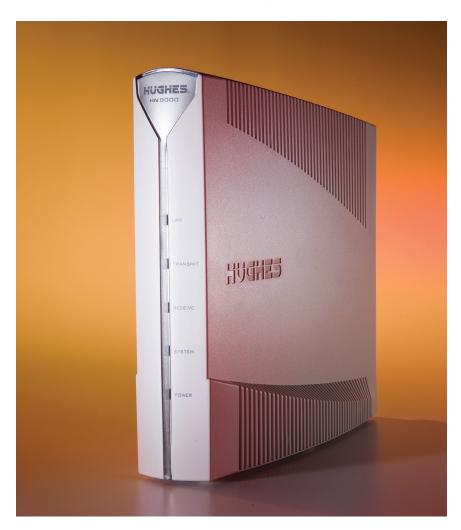## High-performance, scalable broadband satellite modem

S P A C E W A Y®

SPACEWAY® 3 is the world's first commercial satellite system to employ on-board traffic switching and routing. Developed, owned, and operated by Hughes, the SPACEWAY 3 system operates in the Ka-band and encompasses numerous satellite technology advances, such as on-board fast packet switching, a phased array antenna, and dynamic beam forming. With a gross traffic capacity of 10 Gbps, unprecedented in the industry, and incorporating bandwidth-on-demand functionality, SPACEWAY 3 is enabling an ever-expanding range of HughesNet® broadband services over North America to enterprises, consumers/small businesses, and government agencies. These include high-speed Internet access of up to 5 Mbps per site, single-hop, mesh IP networking between sites, and high-availability, and QoS solutions among many sites, all utilizing compact and cost-efficient broadband routers and terminals manufactured by Hughes.

The Hughes HN9000 is a high-performance broadband modem designed to deliver a wide range of HughesNet broadband services to consumers, small-to-medium businesses, and government agencies in North America, utilizing the unique high-capacity SPACEWAY 3 satellite system. A variety of service plans are available with the HN9000, delivering throughputs up to 1 Mbps on the uplink, and up to 5 Mbps on the downlink.

Operating as an IP modem, the HN9000 incorporates several advanced features to increase throughput performance and maximize the user's experience and satisfaction. Performance Enhancing Proxy (PEP) mitigates delay and increases overall throughput over satellite channels, while the unique Hughes TurboPage® feature provides HTTP acceleration for lightning-fast browser performance.

Features

- Implements Performance Enhancement Proxy (PEP) software to accelerate throughput by optimizing TCP transmission over the satellite, delivering superior user experience and link efficiency

- Delivers high-performance Web access via TurboPage technology

- Bidirectional data compression

- Configuration, status monitoring, and commissioning

- User-friendly LED display indicating terminal operational status

- Operates as a local router providing:

    - Static and dynamic addressing
    - DHCP server or relay
    - DNS caching
    - NAT/PAT

Technical Specifications

Physical Interfaces

10/100BaseT Ethernet LAN RJ-45 ports
2 SAT RF ports – 1 Receive (RX) and 1 Transmit (TX)
DC input port

Mechanical and Environmental Specifications

Weight (IDU): 1.6 lbs (.726 kg)
Dimensions (IDU): 8.05” H x 1.55” W x 8.95” D
(20.4 cm H x 3.9 cm W x 22.7 cm D)
Operating temperature:
   IDU: +5° C to +40° C
   ODU: -30° C to +55° C
Input Power: 48V; 13.5V (external AC/DC supply required)

Satellite and Antenna Specifications

Information Rate (Downlink): 440 Mbps
Information Rate (Uplink): 128, 512, 1024 kbps
Frequency Range: Ka-band
Modulation (Downlink): QPSK
Modulation (Uplink): CE-OQPSK
Antenna: 74 cm, 98 cm, 120 cm, 180 cm
Radio: 1, 2, 4 and 10 watt

Electromagnetic Interference (EMI) Certifications

FCC Part 15 for the United States
ICES-003 for Canada

Safety Standard Certifications

UL60950-1 for the United States
CAN/CSA-C22.2 No. 60950-1 for Canada

For additional information, please visit www.hughes.com.

HughesNet

Hughes Network Systems, LLC (HUGHES) is the global leader in providing broadband satellite networks and services for large enterprises, governments, small businesses, and consumers. HughesNet encompasses all broadband solutions and managed services from Hughes, bridging the best of satellite and terrestrial technologies. Hughes broadband satellite products are based on global standards approved by TIA, ETSI, and ITU, including IPoS/DVB-S2, RSM-A, and GMR-1. To date, Hughes has shipped more than 1.9 million terminals to customers in over 100 countries.

www.hughes.com

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