DW6000 Terminal

Satisfying the need for speed for the multimedia Internet

HUGHES NETWORK SYSTEMS

DIRECWAY

DIRECWAY® is a family of high-speed broadband solutions via satellite brought to you by Hughes Network Systems (HNS), the market leader in providing satellite products and services to enterprises and consumers alike. DIRECWAY satisfies the increasing demand by customers for greater bandwidth enabling a variety of high-speed multimedia applications.

The DW6000 DIRECWAY system is a cost- effective satellite terminal providing high-speed broadband access to the large enterprise, small/medium enterprise (SME), small office-home office (SOHO), and rural markets. The DW6000 can supply broadband IP to anywhere in the world and provides highly efficient, two-way satellite services for enterprises of any size. Recognizing the market need for simultaneous support for Internet and other online IP-based applications, HNS designed the DW6000 terminal to provide users with an easy networking solution to connect multiple computers to broadband access via satellite. The DW6000 achieves a high level of functionality with its ability to plug into a variety of external HNS appliances to support voice, legacy protocols and streaming media applications.

The DW6000 terminal delivers broadband access to one or multiple users connected to the same satellite terminal. The system supports two-way connectivity between the remote units and the Internet and intranet networks. The DW6000 receives and transmits data through the system's antenna and outdoor electronics, over the satellite, and via the DIRECWAY Network Operations Center. TCP connections can be initiated to or from hosts at the remote locations. Users' intranet communications are secure and isolated from other enterprise intranets and from remotes accessing the "public" Internet operating in the same network.

The DW6000 is a self-hosted and self-booting standalone terminal. The system complies with the industry's DVB-S standard and, therefore, it is very easy to customize the wide range of outroute data rates by choosing different symbol and FEC coding rates. The downstream is scalable up to 48 Mbps and up to 256 kbps for the return channel. The DW6000 provides

an integrated broadband LAN solution to Windows, UNIX, MAC, and other platforms running IP over Ethernet. The DW6000 terminal passes IP data packets to and from any IP device on the LAN and has the functionality of a typical IP router. The DW6000 offers the HNS advanced Performance Enhancing Proxy (PEP) feature, which increases throughput performance and maximizes the user's experience and satisfaction.

The DW6000 terminal is designed to support content delivery, multicasting, music distribution, distance learning and training, digital media streaming, file transfer, Internet and VPN/intranet access.

Features

- Supports unicast and multicast IP traffic
- Downloads code to the unit over the satellite
- Implements Performance Enhancement Proxy (PEP) software to accelerate the throughput performance by optimizing the TCP transmission over the satellite, delivering data quickly to the user
- Bi-directional data compression
- Configuration, status monitoring, and commissioning via the NOC
- Acts as a local router providing:
  - Static and dynamic addressing
  - PPPoE for multiple computer users
  - Responses to ICMP messages
  - Multicasts to the LAN by using the IGMP
  - DHCP server
  - Simple NAT and Firewall support
- Throughput:
  - Up to 6 Mbps of streaming traffic
  - Up to 2 Mbps of TCP/HTTP spoofed traffic per session
- Remote terminal management via the HNS Vision Network Management System and SNMP agent
- Universal power supply supports international voltage ranges and frequencies and has a detachable power cord
- User friendly LED indicating terminal operational status

Technical Specifications

Compatibility

Operating system:	Any OS running IP over Ethernet
Browsers:	Internet Explorer 4.0 and higher, Netscape Navigator 4.0 and higher
Internet Applications:	All common TCP/IP applications

Physical Interfaces

- One 10/100BaseT Ethernet LAN RJ45 port
- One USB 1.1 port supporting connectivity to PC

Satellite & Antenna Specifications

Encapsulation:	DVB-S
Information Rate (Receive):	≤48 Mbps
Information Rate (Transmit):	64, 128, 256 kbps
Symbol Rate (Receive):	2, 5, 10, 20-30 Msps
Symbol Rate (Transmit):	≤256 ksps
Frequency Range:	Ku Band
Modulation (Receive):	QPSK
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 watt
Encoding:	FEC at rates 7/8, 5/6, 3/4, 2/3 or 1/2 (188/204 bytes Reed-Solomon format for DVB-S) Transmit: Rate 1/2 convolutional

Mechanical & Environmental

Weight:	4.8 lbs (2.18 kg)
Dimensions:	11.5"W x 1.8"H x 11"D (29.21cm W x 4.7cm H x 27.94cm D)
Operating temperature:	
IDU	0° C – +40° C
ODU	-30°C – +55°C
Input power:	90-264 VAC; 50-60 Hz
DC power supply:	12 VDC

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