

DIRECWAY®

DIRECWAY® is a family of high-speed broadband satellite solutions brought to you by Hughes Network Systems, Inc. (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 highspeed multimedia applications.

Provides Serial Data Connectivity with High Performance Delivery of IP Traffic

The DW4030 is a cost-effective satellite terminal simultaneously providing serial data connectivity along with high performance delivery of accelerated IP traffic to large corporations, small/medium enterprises (SMEs), and small office/home offices (SOHOs) alike. With simultaneous support of serial data and IP over Ethernet, the DW4030 is the perfect solution for integrating legacy serial devices within an IP network. Thus, the DW4030 provides a smooth transition path for users who want to upgrade serial legacy networks to IP, as well as providing an effective way to integrate standalone serial devices into an IP environment.

Based on the highly successful DW4020 terminal and supporting all of the same IP networking features including IP acceleration, the DW4030 terminal integrates seamlessly into existing DIRECWAY networks. The DW4030 terminal supports up to four serial ports, which can be used to connect such devices as credit card scanners, SCADA terminals, lottery terminals, or gas station pump controllers. Serial protocols over these interfaces are “spoofed” (terminated locally) by the DW4030 terminal to provide good performance over the satellite link. Supported serial protocols include SDLC, X.25, and a variety of asynchronous protocols for credit card devices and environmental controllers. One of the ports can be configured for Automatic DialBackup, thereby providing the option for virtual 100% availability.

The DW4030 terminal is a self-hosted, stand-alone networking unit. In addition to serial data support, the DW4030 performs many of the functions of a typical IP router, thereby eliminating the need for a separate external router. Router functions performed by the unit



include IP routing using RIPV1, RIPV2, or static IP addresses; DHCP server; Network Address Translation (NAT); and firewall using filters. In addition, by implementing HNS' HTTP Performance Enhancement Proxy (HPEP) feature, the terminal is able to greatly enhance IP performance over satellite through such features as header compression and acknowledgment reduction. The HPEP feature minimizes latency over the space link and accelerates performance so that data can be delivered quickly to the user.

The DW4030 works within a DIRECWAY system by receiving and transmitting data through the terminal's antenna and outdoor electronics to the DIRECWAY Network Operations Center (NOC) where connectivity to the Internet or intranet is achieved. 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. With DIRECWAY, corporate intranets can be extended to remote locations without raising concerns about security. The DIRECWAY network incorporates multiple security mechanisms, conditional access, and encryption to ensure the privacy of information.

Key System Features

- Provides easy migration solution for converting serial legacy network to IP
- Supports up to four serial RS-232 connections simultaneously with unicast and multicast IP traffic
- Supports a variety of SDLC and X.25 configurations in “spoofed” mode for satellite efficiency
- Supports a variety of asynchronous protocols for devices such as SCADA, credit card, lottery, and POS terminals
- Supports DIRECWAY Automatic Dial-Backup for very high availability requirements
- Provides field upgradable serial capability to already deployed DW4000
- Acts as a local router providing:
 - Static and dynamic addressing
 - PPPoE for connecting multiple computer users
 - Responses to ICMP messages
 - Multicasts to the LAN by using the IGMP
 - DHCP server
 - Simple NAT and firewall support
 - Remote terminal management via the HNS Vision™ Network Management System and SNMP agent
 - Universal power supply supports international voltage ranges and frequencies
 - User friendly LED indicating terminal operational status



Technical Specifications

Data Protocol Support

- Serial Protocols: Veriphone 3200 (VISA) – IP
Veriphone 3300 (VISA) – IP
SDLC (PU2/PU2.1) – SDLC (PU4)
SDLC (PU2/PU2.1) – LLC
XPAD – X.25
X.25 – X.25
DSPAD – X.25
- LAN Connection: Compatible with 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

- Two RS-232 synchronous/asynchronous serial ports (DB-25F)
- Two RS-232 asynchronous serial ports (DB-9F)
- One 10/100BaseT Ethernet LAN RJ45 port

Data Rate Specifications

- Serial Data Rates:
 - Synchronous: 1,200–64,000 (bps)
 - Asynchronous: 1,200–56,000 (bps)

Satellite Antenna Power

- Ku-band: 1.0 and 2.0 watt

Mechanical & Environmental

- Shipping Weight: 5.3 lbs (2.4 kg)
- Unit Weight: 2.2 lbs (1 kg)
- Dimensions: 1.8 W x 9.5 H x 10.5 D (inches)
4.6 W x 24.1 H x 26.7 D (cm)
- Operating Temperature: 41–104° F
5–40° C
- Input power: 100–240 V ~ 1A max
50–60 Hz
15 W typical