

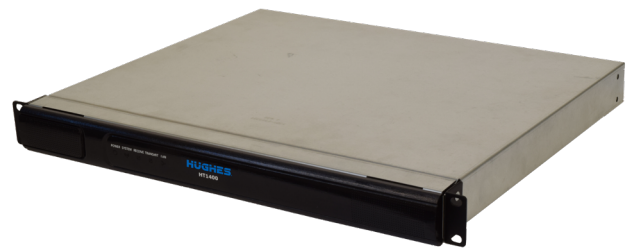
High-performance, enterprise-grade satellite router for high-throughput applications and services

The HT1400 is a high-performance satellite router designed to support high-bandwidth links with an extensive set of Quality of Service (QoS) and IP routing features. The HT1400 enables a variety of bandwidth assignment techniques including CIR/PIR (committed information rate/peak information rate) to support a wide range of enterprise data applications. Furthermore, this terminal is capable of providing Constant Bit Rate (CBR) bandwidth assignment to deliver high-quality, low-jitter bandwidth for real-time traffic, such as Voice over IP (VoIP) and videoconferencing. With integrated IP features including IPv4/IPv6 addressing, NAT/PAT, DHCP, RIPV2, VRRP, and DNS server/relay functionality, as well as TCP acceleration, the HT1400 is the ideal platform to enable high-performance IP connectivity for a variety of applications including cellular backhaul, MPLS extension services, virtual leased line services, and other high-bandwidth applications.

The HT1400 is well suited for operation over conventional satellites, as well as multi-spot-beam, high-throughput satellite systems. The HT1400 features best-in-class throughput performance, delivering more than 100 Mbps of throughput and is capable of supporting bandwidth-intensive, simultaneous multimedia applications.

The HT1400 is designed to be installed in an industry standard 19" equipment rack suitable for data center environments and most enterprise facilities. The highly compact design consumes only one rack space (1U rack mount). In addition, the HT1400 supports industry standard L-band outdoor units, thereby enabling the use of high-power BUCs in conjunction with operation on a wide array of operating frequencies.

As part of the next-generation JUPITER System, each HT1400 terminal operates under a comprehensive Network Management System (NMS) to facilitate terminal configuration, service provisioning, status monitoring, and network diagnostics. Additionally, the terminal incorporates an easy-to-use embedded Web Graphics User Interface (GUI), which provides a local interface for installation, status monitoring, troubleshooting, and diagnostics.



Key Features

- High user data throughput
- Wideband Forward Channel with ACM
- Return Channel – LDPC TDMA/FDMA featuring Adaptive Inroute Selection (AIS) for strong rain fade mitigation
- Integrated HTTP/TCP Web acceleration client
- Native IPv6 with dual stack IPv4/IPv6 support
- Secure network transmission with bidirectional 256 AES encryption (optional; subject to local government approval) implemented in hardware
- Terminal managed by JUPITER NMS, including software updates, configuration, and status monitoring
- Routing protocols RIPV2, RIPNG, BGP
- VLAN tagging
- Private IP (overlapping)/Static IP address
- Guaranteed capacity forward/return channel
- Differentiated services
- Traffic weighting
- DHCP server or relay
- DNS caching
- NAT/PAT
- User-friendly Web GUI and LED interface for status, troubleshooting, and diagnostics
- Variety of BUC sizes available

High Availability Features

- Closed loop control between hub and remote
- Dynamic outbound coding and modulation changes based on received signal
- Dynamic inbound coding and modulation changes based on received signal
- Dynamic remote uplink control

Performance

- UDP throughput: 100 Mbps
- TCP throughput: 50 Mbps

Technical Specifications

Indoor Unit (IDU)

Forward Channel

- Frequency: C-band, Ku-band, X-band, and Ka-band
- Modulation: QPSK, 8PSK, 16APSK, 32APSK
- Code blocks: Normal and short frames
- Encapsulation: GSE
- Symbol rates: 1 to 60 Msps (optional 60 to 225 Msps)
- Adaptive coding and modulation

Return Channel

- ETSI/IPoS TDMA/FDMA
- LDPC FEC with efficient variable block/burst sizes
- Inroute Selection (AIS) for strong rain fade mitigation;
 - Adaptive coding burst by burst
 - Uplink power control
 - Dynamic symbol rate
 - Dynamic modulation
- OQPSK or 8PSK modulation
- Symbol rate from 256 ksps to 8 Msps

Network Interface

- Two 10/100/1000 BaseT Ethernet LAN ports

Local Router Features

- Integrated Performance Enhancement Proxy (PEP) for TCP/IP
- Integrated Hughes Web Acceleration software to accelerate HTTP traffic for fast browser access
- 256 AES bidirectional encryption over the satellite (optional; subject to local government approval) (hardware implemented)
- Static and dynamic addressing

Power Supply

- Internal with detachable cord
- 90-260 VAC; 50-60 Hz, optional -48VDC or +24VDC

Physical Indoor Unit

- Weight: 9.4 lbs (4.3 kg)
- Dimensions: 1.72" H x 18.37" W x 15.8" D
(4.36cm H x 46.65cm W x 40.13cm D)

Environmental

- Indoor Unit
 - Operating temperature: 0° C to +50° C
 - Relative humidity: 77% (noncondensing)

Regulatory

- Safety: UL/CSA/EN 60950
- EMC: FCC Part 15 class B, ICES-003, CE
- RoHS compliant

Outdoor Unit (ODU) options

- Available in C-band, Ku-band, X-band, or Ka-band
- Variety of BUC power sizes available