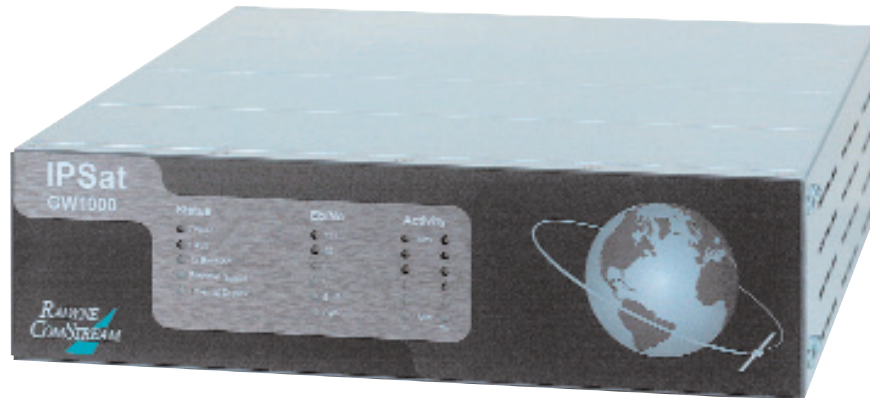




IPSat™ GW1000

Internet Satellite Terminal



OVERVIEW

The Radyne ComStream IPSat™ GW1000 is a one-box *Internet Anywhere* solution that leverages Radyne ComStream's expertise in satellite modem technology with embedded, speed-optimized IP packet processing to provide the highest throughput and the greatest level of integration in the industry. The IPSat GW1000 can offer the most flexible, cost-efficient performance for high-speed satellite IP connections.

IPSAT GW1000 SYSTEM ARCHITECTURE

The IPSat GW1000 provides full two-way connectivity to a hub via satellite for your LAN through a standard 100Base-T interface.

The hub system broadcasts a DVB-compliant signal from 1 to 72.5 Mbps. Each IPSat GW1000 uses PID and MAC address filtering when receiving traffic from the hub to block packets destined for other remote sites. The IPSat GW1000 then routes the packet to its destination based on the IP address.

The IPSat GW1000 receives packets from the LAN and transmits them back to the hub over a dedicated carrier up to 2 Mbps. Any combination of Internet Protocol data streams, both TCP and UDP, unicast and multicast, may be carried between the hub and remote stations.

TYPICAL APPLICATIONS

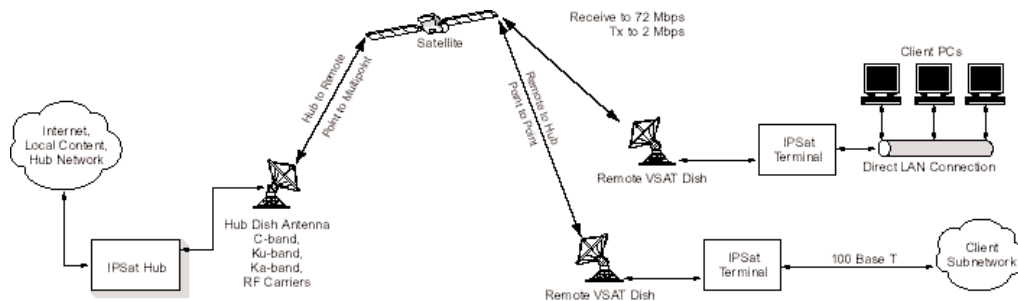
- ▶ Voice Over IP (VoIP)
- ▶ Video Conferencing Over IP
- ▶ Enterprise Networks
- ▶ ISP
- ▶ Cyber Café
- ▶ Natural Resource Companies
- ▶ Civil Works
- ▶ Distance Learning

HIGHLIGHTS

- ▶ Transmit Rate 9.6 Kbps to 2.0 Mbps SCPC
- ▶ Receive Rate up to 72.5 Mbps DVB
- ▶ QPSK/BPSK
- ▶ Turbo Coding (Optional)
- ▶ L-Band Interface to ODU Equipment
- ▶ DC Power and Reference Clock for ODU
- ▶ LAN Interface: 10/100 Base-T Ethernet

SYSTEM ENGINEERING

Radyne ComStream can provide a complete turnkey solution for all of your IP over-satellite needs. Our experienced satellite networking engineers can design and build an IPSat hub tailored to your needs as well as perform remote site installations.



IPSat GW1000 Internet Satellite Terminal



SPECIFICATIONS

TRANSMIT

Modulation: QPSK and BPSK
Turbo Coding (Optional)
Satellite Data Rate: 9.6 Kbps to 2.0 Mbps
FEC: Sequential Rate: 1/2, 3/4
Viterbi Rate: 1/2, 3/4, 7/8
DVB: 1/2, 2/3, 3/4, 5/6, 7/8
Frequency: 950 to 1750 MHz Standard
Reference
Frequency Signal: 10 MHz
Reference Stability: 1×10^{-8}
Frequency
Resolution: 1 kHz
Output Level: 0 to -35 dBm
Data
Encapsulation: HDLC
ODU Power: 24 V @ 4.5A from Internal Supply
(Up To 5 Watt BUC)
Interface for Optional External Power Supply
Power Supplied on Tx IFL Cable

10 MHz
Reference Levels: +3 dBm, ± 3 dB
Connector: Mini UHF (L-Band)

RECEIVE

Demodulation: QPSK
Satellite Data Rate: 1 to 72.5 Mbps
Terrestrial
Data Rate: 1 to 70 Mbps (Including TCP/IP Overhead)
Symbol Rates: 1.0 Msps to 45 Msps
FEC: Concatenated Reed-Solomon and Viterbi
Viterbi Rates: 1/2, 2/3, 3/4, 5/6, 7/8
Reed-Solomon Rates: 188/204 (DVB)
Input Frequency: 950 to 2150 MHz
Input Signal
Dynamic Range: -65 to -20 dBm
Connector: Type-F

MPEG PROCESSING

Transport Stream: IEC 13818-1
Filtering: 32 MPEG PID Filters
IP Decapsulation: DVB MPE Per EN 301 192

PACKET PROCESSOR

Physical Interface: 10/100Base-T Per IEEE 802.3u on RJ-45 Connector
Ethernet Modes: Auto-Negotiate, 10/Half, 10/Full, 100/Half, 100/Full
IP Forwarding: Unicast and Multicast
IP Addressing: User-Programmable Static Routes

MONITOR AND CONTROL

Console access via the RS-232 DB-9 connector.
Front panel LEDs provide immediate feedback for Eb/No, network activity, and fault conditions.
Network Management System (NMS) available.

POWER

Input Voltage: 90 to 265 VAC, Autosensing
Frequency: 47 to 63 Hz
Consumption: 50 Watts (Typical, Excluding ODU)

ENVIRONMENTAL

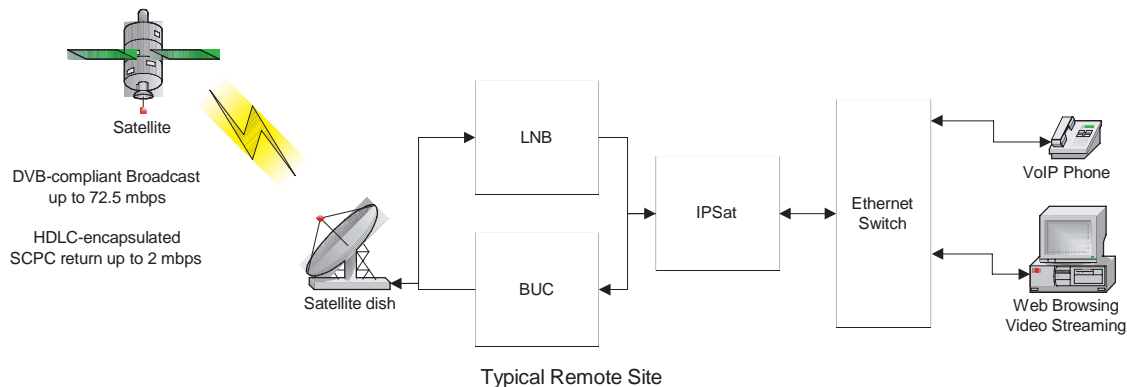
Temperature: 0°C to 50°C Operating; -20°C to 75°C Nonoperating
Humidity: 5% to 95% Noncondensing, Operating;
0% to 99% Noncondensing, Nonoperating

OUTDOOR EQUIPMENT

Radyne ComStream C- and Ku-Band Block Upconverters and Low Noise Block (Downconverters are required to guarantee the specifications on this data sheet).

Ask your Radyne ComStream representative for more information on ODUs and antenna specifications for optimum performance.

A variety of outdoor RF units and antenna sizes are available.



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