

LinkStar: Bandwidth-On-Demand Broadband VSAT System

LinkStar™ is a two-way, bandwidth-on-demand broadband VSAT system for service providers, ISPs, and corporate networking that brings you more efficiency and higher data rates than other TDMA systems. The forward channel provides a total capacity of 60 Mbps, and return channels to the hub can operate at speeds up to 1.15 Mbps. LinkStar combines broadband access and a high-speed return channel to satisfy bandwidth-intensive applications using IP data over existing C- and Ku-band FSS satellites.

How does LinkStar provide these benefits? Comsat Laboratories Technology Innovation for Satellite Communications.

Dynamic Bandwidth Allocation combined with guaranteed Quality of Service (QoS) and TCP acceleration features make LinkStar more efficient and faster than other TDMA systems. The combination automatically increases the speed of your return channel to give you the throughput you need. With the highest return channel data rate in the industry there is plenty of room to send even large multimedia files fast.

Near DVB-RCS + Turbo Coding enables you to use your satellite bandwidth more efficiently and further increases return channel throughput.

DVB-based Architecture. As a DVB-based platform, LinkStar enables service providers and satellite operators worldwide to build standards-based networks for IP data, Internet access, video streaming, telemedicine, voice over IP, or distance learning.

Simple Web-based Network Management connects from a standard browser to configure, control, and manage your VSAT network. The Regional Network Control Center (RNCC) also provides traffic statistics, call detail records, and an SNMP interface. Operators can download software to remote terminals without site visits. The system can scale to 10,000 sites per RNCC and up to 100,000 network nodes using multiple hubs.

LinkStar is your way to reach more of the world with multimedia broadband.

**LinkStar At-a-glance**

- Multimedia, broadband connections
- IP router with RIP, IGMP, CRTP, UDP, TCP
- Up to 60 Mbps download via DVB-MPE outlink
- Up to 1.15 Mbps DVB RCS-like return
- Automatic bandwidth allocation
- Programmable Quality of Service
- Up to 10,000 remotes per hub
- Web-based network management
- Ka-band capable
- Available today

SATELLITE IP TERMINAL

RETURN CHANNEL

Format: MF-TDMA

Symbol Rates: 156, 312, 625 Ksps, 1.25 Msps

Transmit IF Frequency: 950 to 1450 MHz

Turbo Coding: DVB-RCS compliant

Modulation: QPSK, BPSK

OUTBOUND CHANNEL (FROM HUB)

Format: DVB/MPEG-2 transport stream (ISO/IEC 13818)

DVB-MPE (Multi-protocol Encapsulation) for IP data PCR insertion

Symbol Rates: 5 to 42.5 Msps

FEC: DVB-compliant R/S [204, 188] and convolution [R=1/2, 2/3, 3/4, 5/6, 7/8]

BER: Quasi-error free per DVB standard

Modulation: QPSK or BPSK(future)

Receive IF Frequency: 950 to 2150 MHz

PHYSICAL INTERFACES

L-band Transmit and Receive: 2 Type-F, 75 ohm

Network: (1) 10/100BaseT Ethernet (RJ-45)

RF

Antenna Diameters: 0.96, 1.2, 1.8, 2.4 M

ODU Power: 1, 2, 4, 5 watt

ODU Operating Temperature: -40°C to 55°C

IDU MECHANICAL/ENVIRONMENTAL

Dimensions: 1U high, 13" W, 8" D

Power: 110/220 VAC, auto-sensing, auto-ranging

Temperature: 0° to 40°C operating; -20° to 70°C storage

Humidity: 95% relative humidity non-condensing at 0° to 40°C operating; 90% relative humidity non-condensing at 65°C storage

NETWORK MANAGEMENT AND CONTROL

Network Management System (NMS):

Java Web-based, standard PC

Network Control Center (NCC):

Redundant SUN Solaris Workstation; SNMP agent

SYSTEM

PERFORMANCE

TCP Acceleration: 10 Mbps throughput

Scalability: 10,000 nodes with single Hub/NCC; 100,000 nodes with multiple Hub/NCC

Protocols: TCP/IP, UDP/IP, IGMP, RIP 1&2, IP QoS support

COMPLIANCE

Safety: UL/cUL 60950; CE [EN60950]

EMI/EMC: FCC part 15 Class B; VCCI Class B;

AS/NZS3548 Class B; BSM; CE [EN 301 489-12,

EN 55022, EN 55024, EN 61000-3-2, EN 61000-3-3

RF Spectrum: CE [EN 301 428, EN 301 443]

*Specifications subject to change without notice.