SKYEDGE II-C GEMINI-I

Consumer Broadband Internet VSAT

ENABLING HIGH-SPEED BROADBAND SERVICES

SkyEdge II-c Gemini-i is a high-throughput VSAT, designed to enable high-speed consumer broadband Internet services while meeting cost efficiencies required by residential customers. Gemini-i facilitates fast web browsing, video streaming, IPTV, VoIP, and other bandwidth-intensive services.

By acting as a home router, Gemini-i also supports multiple devices through its integrated DHCP server, NAT/PAT and IGMP. Advanced QoS guarantees the performance of real-time applications such as VoIP and video streaming while simultaneously enabling additional data applications. Gemini-i also supports next-generation IPv6 networking.

To ensure fast web browsing and a high-quality user experience, Gemini-i contains a full set of protocol optimization and application acceleration features, including TCP and HTTP protocol acceleration and payload compression.

Gemini-i provides the highest level of transmission security, supporting X.509 terminal authentication and AES-256 bit link layer encryption with dynamic key rotation to protect all user traffic.

SIMPLE, DO-IT-YOURSELF INSTALLATION AND SERVICE ACTIVATION

Gemini-i is designed to enable quick and reliable installation and automatic service activation. The process requires no prior VSAT installation skills or technical support.

The outdoor electronics and antenna are designed to simplify the assembly and mounting while shortening the antenna-pointing procedure. The outdoor unit includes an audio device to guide and provide feedback during the antenna-pointing process. The terminal includes an intuitive, web-based Graphical User Interface to assist the user during the final installation and service activation process.

BENEFITS

- **Fast web browsing with web acceleration and compression**

- **Enables high-quality VoIP and video**

- **Simple installation and service activation**

- **Forward and return adaptive transmission technologies**

- **Central monitoring and service management**

- **Supports C, Ku and Ka bands**

ENHANCED CENTRAL SERVICE MANAGEMENT INTERFACE FOR ISPS

Gemini-i is part of a complete VSAT ground system that includes an advanced Network Management System (NMS) and facilitates service management available to ISPs via an electronic B2B interface.

SkyEdge II-c Service Management enables ISPs to manage their services totally independent of the satellite network operator, providing a complete management suite. This includes real-time viewing of the service status, events, alarms and statistics, as well as historic/trend analysis of the service over longer periods.

This system also provides ISPs with an automated and easy-to-use interface for simple creation, activation and management of end-to-end services with a high level of flexibility.

SUPERIOR VSAT TECHNOLOGY

Designed to support the latest standard and high throughput satellites, Gemini-i's advanced adaptive transmission technologies maximize performance and improve service availability. Gemini-i is based on Wavestream's VSAT technologies, which power over a million terminals worldwide.

TECHNICAL SPECIFICATIONS

FORWARD CHANNEL

Standard:
DVB-S2 Adaptive Coding and Modulation (ACM)

Carrier Rate:
1.5Msps-67Msps (235Mbps)

Modulation:
QPSK, 8PSK, 16APSK, 32APSK

Coding: LDPC, BCH

FEC:
1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10

RETURN CHANNEL

Access Scheme:
MF-TDMA, Dynamic Channels

Inbound Rates:
Symbol rate - 128Ksps-6Msps

Modulation:
BPSK, QPSK, 8PSK, 16QAM

Coding: TPC

FEC: 1/3, 2/5, 1/2, 2/3, 3/4, 4/5, 6/7

MODEM INTERFACES

RF Input / Output:
- Two female F connectors, 75 Ω
- RF in frequency - 950-2300MHz
- RF out frequency - 950-2300MHz

Data Interfaces:
Ethernet 10/100/1000BaseT
RJ-45, 802.1Q VLAN

Management Interface:
- Web-based local management
- Full FCAPS management
- Remote software upgrades
  over the air
- SNMP

ENHANCED FEATURES

IP Features:
IPv4/IPv6, TCP, UDP, ICMP, DHCP, NAT/PAT, DNS Caching, cRTP, IGMPv2, SIP, DiffServ

Security:
- AES-256 bit link encryption
- IPSEC Client
- ACL Firewall
- X.509 Terminal Authentication

Application Acceleration and Protocol Optimization
- TCP acceleration
- HTTP web pre-fetch acceleration
  and compression

ENVIRONMENTAL AND MECHANICAL

Dimensions:
153x140x35 mm (WxDxH)

Operating Voltage:
100V-240V AC Auto Range

Operating Temperature:
0ºC to +50ºC

Certifications: CE, FCC, EMC

OUTDOOR UNIT (ODU)

Frequency Bands: C, Ku, Ka

Transmit Power:
Via IDU DC insertion up to 4W BUC

Antenna Size: 0.76m and higher

Operating Temperature:
-40ºC to +60ºC

ABOUT WAVESTREAM

Wavestream sets the standard in the design and manufacture of next generation high power solid state amplifiers. Wavestream's Family of Ka, Ku and X-band Solid State Power Amplifiers (SSPAs), Block Upconverters (BUCs) and transceivers provide systems integrators with field-proven, high performance solutions designed for ground mobile and fixed, gateway and airborne satellite communication systems worldwide.

These items are subject to the Export Administration Regulations (EAR), 15 C.F.R. Parts 730-774, and may not be exported or transferred to any non-U.S. person, except as authorized by the U. S. Department of Commerce.

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WAVESTREAM