



SKYEDGE II-C GEMINI-4

Integrated 4-Port VSAT



ENABLING HIGH-SPEED BROADBAND SERVICES

SkyEdge II-c Gemini-4 is a high-throughput VSAT designed to enable high-speed enterprise broadband Internet services. The Gemini-4 VSAT enables fast web browsing, video streaming, IPTV, VoIP, and other bandwidth-intensive services. This solution is ideal for markets such as retail, banking, ATMs, SCADA, M2M and lotteries, as well as USO/USF and government-funded programs aimed to expand broadband connectivity to underserved regions.

Gemini-4 includes a full-featured IP router, eliminating the need for an external router through its support of enhanced IP routing features such as DHCP, NAT/PAT, VLANs, routing protocols, IPSEC client and IGMP. Advanced QoS guarantees the performance of real-time applications such as VoIP and video streaming while simultaneously enabling additional data applications. Gemini-4 also supports next-generation IPv6 networking.

To ensure fast web browsing and a high-quality user experience, Gemini-4 contains a full set of protocol optimization and application acceleration features, including TCP and HTTP protocol acceleration and compression.

Gemini-4 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.

ADVANCED VSAT PLATFORM FOR ENTERPRISE

Based on the latest-generation ARM technology, Gemini-4 enables high-speed services while employing full link encryption, TCP and HTTP acceleration. The high speed exhibited by this VSAT platform is ideal for demanding, high-bandwidth enterprise applications and corporate networking.

The terminal includes an intuitive, web-based Graphical User Interface to assist the user during the installation and service activation process.

INDIVIDUALLY MANAGED PORTS

The four-port Gb Ethernet LAN eliminates the need for an external switch. Each port can be individually managed, including assigning VLANs, monitoring, and configuring Ethernet link parameters.

BENEFITS

- **Integrated, managed 4-port GbE LAN switch**
- **Includes advanced QoS, VLANs and routing protocols supporting enterprise services**
- **Fast web browsing with web acceleration and compression**
- **Enables high-quality VoIP and video**
- **Simple installation and service activation**
- **Forward and return channel adaptive transmission technologies**
- **Central monitoring and service management**
- **Supports C, Ku and Ka bands**



ENHANCED CENTRAL SERVICE MANAGEMENT INTERFACE FOR VNOS

Gemini-4 is part of a complete VSAT ground system that includes an advanced Network Management System (NMS) and facilitates service management available to VNOs via an electronic B2B interface.

SkyEdge II-c Service Management enables VNOs 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 VNOs 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-4's advanced adaptive transmission technologies maximize performance and improve service availability. Gemini-4 is based on Gilat'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 (TDMA)

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
- RFout frequency-950-2300MHz
- DISEqC

Data Interfaces:

- 4 x Ethernet 10/100/1000BaseT
- RJ-45, 802.1q VLAN
- 1 x Serial Interface RJ-45

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, VLANs, RIPv2, Static Routes

QoS:

Per VSAT and per Managed Group, CIR, MIR, CBR, DiffServ and priority-based queuing, application-based priority

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:

201 x 185 x 34mm (WxDxH)

Operating Voltage:

- 100V-240V AC Auto Range
- 11V - 60V DC Auto Range

Operating Temperature:

0°C to +50°C

Certifications: CE, FCC, EMC

OUTDOOR UNIT (ODU)

Frequency Bands: C, Ku, Ka**Transmit Power:**

Via IDU 24V or 48V DC insertion[^]

Antenna Size: 0.76m and higher**Operating Temperature:**

-40°C to +60°C

[^] Requires selection of appropriate IDU power supply