SkyEdge II-c Gemini-4 S2X

Integrated 4-Port VSAT

Enabling High-Speed Broadband Services

SkyEdge II-c Gemini-4 S2X 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 supports next-generation IPv6 networking and can also be configured to support layer-2 services.

To ensure fast web browsing and a high-quality user experience, Gemini-4 contains a full set of protocol optimization and application acceleration features, and the highest level of transmission security to protect all user traffic.

Individually Managed Ports

The four-port 1GbE Ethernet LAN eliminates the need for an external switch. Each port can be individually managed, including assigning VLANs, monitoring, and configuring Ethernet link parameters.

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

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.

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
- Central monitoring and service management
- Supports C, Ku and Ka bands

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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.

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.

Maximum Spectral Efficiency

Gilat's innovative transmission technologies deliver exceptional performance and space segment efficiencies. Wideband DVB-S2X carriers in the forward direction and adaptive transmission in the return direction enables maximum service availability and highest bandwidth efficiency at any transmission condition. This is achieved by adaptive power control, changes to the carrier symbol rate, ModCod and spread-spectrum factor per VSAT on a per time-slot basis.

Technical Specifications

Forward Channel

Standard:
DVB-S2X Adaptive Coding and Modulation (ACM)
Carrier Rate:
1.5Msps–500Msps
Roll-off: 0.05, 0.1, 0.2
Modulation:
QPSK, 8PSK, 16APSK, 32APSK, 64APSK, 256APSK
Coding: LDPC, BCH
FEC:
DVB-S2X FECs

Return Channel (TDMA)

Access Scheme:
MF-TDMA, Dynamic Channels
Inbound Rates:
Symbol rate – 128Ksps — 12Msps
Modulation: BPSK, QPSK, 16QAM
Coding: LDPC
FEC:
1/4, 1/3, 2/5, 1/2, 2/3, 3/4, 5/6, 8/9

Modem Interfaces

RF Input / Output:
– Two female F connectors, 75 Ω
– RF in frequency – 950–2150MHz
– RF out frequency – 950 2400MHz
– 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
– Remote software upgrades over the air
– NMS remote management
– SNMP

Enhanced Features

IP Features:
IPv4/IPv6, TCP, UDP, ICMP, DHCP, NAT/PAT, DNS Caching, cRTP, IGMPv2, SIP, DiffServ, VLANs, RIPv2, Static Routes

Layer-2:
Ethernet frame forwarding
802.1p QoS
802.1ad,
VLAN Re-tagging
Point to Point,
Point to Multi-Point
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
Mobility – Antenna Interface:
– OpenAMIP (IP)

Environmental and Mechanical

Dimensions:
201 x 176.5 x 36mm (WxDxH)
Operating Voltage:
– 100V–240V AC Auto Range
– 11V – 60V DC
Power Consumption: 15W
Operating Temperature:
0ºC to +50ºC
Certifications: CE, FCC, EMC

Outdoor Unit (ODU)

Frequency Bands: C, Ku, Ka
Transmit Power:
Via IDU 24V or 48V DC insertion up to 12W BUC*
Antenna Size: 0.7m and higher
Operating Temperature:
–40ºC to +60ºC

* Requires selection of appropriate IDU power supply