

# SKYEDGE II-C GEMINI-i S2X

## Consumer Broadband VSAT



### ENABLING HIGH-SPEED BROADBAND SERVICES

SkyEdge II-c Gemini-i S2X 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 realtime 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, and the highest level of transmission security, to protect all user traffic.

### SIMPLE, DO-IT-YOURSELF INSTALLATION AND SERVICE ACTIVATION

Gemini-i S2X 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 interface to assist the user during the final installation and service activation process.

### 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.

### BENEFITS

- Fast web browsing with web acceleration and compression
- Enable 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



## 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 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**Modulation:**

QPSK, 8PSK, 16APSK, 32APSK, 64APSK, 256APSK

**Coding:** LDPC, BCH**FEC:** DVB-S2X FECs

### RETURN CHANNEL

**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  $\Omega$

- RF in frequency - 950-2150MHz

- RF out frequency - 950-2400MHz

- DISEqC

**Data Interfaces:**

Ethernet 10/100/1000BaseT

RJ-45, 802.1Q VLAN

**Management Interface:**

- Web-based local management

- Remote software upgrades over the air

- SNMP

### ENHANCED FEATURES

**IP Features:**

IPv4/IPv6, TCP, UDP, ICMP, DHCP,

NAT/PAT, DNS Caching,

cRTP, VLANs, SIP, DiffServ

**QoS:**

Per VSAT and per Managed Group, CIR, MIR, CBR, DiffServ

and priority-based queuing,

application-based priority

**Security:**

- AES-256 bit encryption

- 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:**

0°C to +50°C

**Certifications:** CE, FCC, EMC

### OUTDOOR UNIT (ODU)

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

Via IDU DC insertion up to 4W

BUC

**Antenna Size:** 0.7m and higher**Operating Temperature:**

-40°C to +60°C

## 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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