



Product Brochure

SkyEdge II-c Taurus Pro

Ultra-High-Performance Mobility VSAT

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SkyEdge II-c Taurus Pro is an ultra-high-performance rack mounted satellite VSAT for mobility connectivity. The router is particularly suited for first-responder vehicles equipped with the VSAT to provide communication in times of emergency. Taurus Pro meets the satellite communication needs for both HTS, VHTS (Very High Throughput Satellites) and wide-beam satellites on a global network. Taurus Pro manages the mobility SATCOM system, including Internet, Wi-Fi, VoIP and cellular backhauling, and provides connectivity for mobile systems in the air, land and sea.

Taurus Pro delivers acceleration and packet-per-second performance that supports hundreds of users per VSAT, 400Mbps throughput, 3G and LTE patented cellular data acceleration and is 5G-ready.

Complete Feature Set

Taurus Pro is a full featured IP router supporting advanced application based QoS, VLANs and IPv6 networking.

To ensure fast running of applications, web browsing and a high-quality user experience, Taurus Pro contains a full set of protocol optimization and application acceleration features, including TCP, HTTP, GTP, VoIP compression and acceleration.

Taurus Pro 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.

Mobility Services and Seamless Connectivity

SkyEdge IV Taurus provides the full feature set for aeronautical services, incorporating advanced mobility features such as high-speed Doppler compensation, transmit power control with link adaptation, and antenna skew compensation with dynamic spread spectrum. Taurus also incorporates smart beam switchover, ensuring optimized continuity of passenger service. The unique distributed Elastix-Architecture makes SkyEdge IV the only platform that can offer transparent switchover between beams, satellites and gateways, while maintaining user application sessions, resulting in 100% uninterrupted service.

Benefits

- Core component of Gilat's Ku/Ka Mobility SATCOM solution
- Embedded performance acceleration (TCP / HTTP / Cellular data)
- Embedded performance acceleration (TCP Cellular Data)
- High availability: supporting transmission regulations via adaptive transmission technologies (MF-TDMA dynamic spread spectrum)
- Maintaining application continuity with automatic beam / gateway / satellite switchover



SkyEdge II-c Taurus Pro

Enhanced Quality of Service for Global Service Providers

Taurus Pro routers are part of a complete VSAT ground system that includes TotalNMS – Gilat's advanced Network Management System. Using an electronic M2M interface, it facilitates the service management available to multiple VNOs or service providers.

SkyEdge II-c TotalNMS enables mobility global service providers to manage their services independent of the satellite network operator and provides a complete management suite. This includes real-time viewing of the location and status of all terminals, as well as bitrate capacity, events, alarms and statistics, plus historical/trend analysis of the service over longer periods.

The system also offers service providers an automated and easy-to-use interface for simple creation, activation and operation of end-to-end services, with high level visibility and flexibility.

Maximum Spectral Efficiency

Gilat's innovative transmission technologies deliver exceptional availability, performance and space segment efficiencies, optimizing bits per Hz. Wideband DVBS2X carriers in the forward direction and 5 dimensional adaptive transmission in the return direction, enables high on-the-move service availability and maximum bandwidth efficiency at any condition – at beam peak, beam edge, at fade and at different traffic demands. 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 (3.5Gbps)

Modulation:

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

Coding: LDPC, BCH**FEC:**

All FECs supported by standard

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, 4/5, 6/7

Spread Spectrum:

Factor 2-12; BPSK 1/4, 1/3, 2/5, 1/2

Modem Interfaces

RF Input / Output:

- RF in frequency – 950-2150MHz

- RF out frequency – 950-2400MHz

Tx port:

N-type, 50Ω

Rx port:

TNC

DISEqC**Data Interfaces:**

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

1 x Serial Interface: RS485

Management Interface:

- Web-based local management
Full FCAPS management, SNMP
- M2M interface for VNO operations

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 encryption

- IPSEC Client

- ACL Firewall

- X.509 Terminal Authentication

Application Acceleration and Protocol Optimization

- TCP acceleration

- HTTP web pre-fetch

acceleration and compression

- GTP cellular data acceleration

Mobility – Antenna Interface:

OpenAMIP (IP)

Environmental and Mechanical

Compliance:

ETSI EN 300 019-1-5

Operating Voltage:

40V-60V DC

Power Consumption:

23W

Operating Temperature:

0°C to +55°C