



# SKYEDGE II-C TAURUS PRO

Ultra-High-performance  
Mobility VSAT



## ULTRA-HIGH-PERFORMANCE MOBILITY VSAT

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

Taurus Pro provides the full feature set for mobility 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 Pro also incorporates true seamless beam switchover, ensuring service continuity. The unique distributed X-Architecture makes SkyEdge II-c an ideal platform for switchover between beams, satellites and gateways, while maintaining user application sessions.

## BENEFITS

- **Core component of Wavestream's Ku/Ka Mobility SATCOM solution**
- **Embedded performance acceleration (TCP / HTTP / 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**



## ENHANCED QUALITY OF SERVICE FOR GLOBAL SERVICE PROVIDERS

Taurus Pro routers are part of a complete VSAT ground system that includes TotalNMS - Wavestream'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

Wavestream'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