

# AEROEDGE 6000 TERMINAL

Dual-band Ku/Ka high performance  
airborne terminal



## REVOLUTIONIZING IN-FLIGHT SATELLITE COMMUNICATIONS

AeroEdge 6000 is Wavestream's innovative airborne high-capacity satellite terminal. The integrated AeroEdge 6000 terminal includes a dual-band Ku/Ka antenna system, KANDU, a Ku/Ka KRFU, and a high performance MODMAN delivering aggregate rates of 400Mbps. This enables aeronautical real-time broadband satellite communications for Internet and multimedia applications.

## INNOVATIVE DUAL-BAND DESIGN

The ER6000-A antenna has been uniquely designed as a dual-band Ku/Ka antenna system. Ideal for seamless transition between regional (Ka) and transatlantic (Ku) coverage, the system allows easy and quick electronic switching between frequency bands, without requiring any disassembly or component replacement. The antenna utilizes the best available satellite resources to provide a cost efficient superior antenna system performance.

## PERFORMANCE & SPECTRAL EFFICIENCY

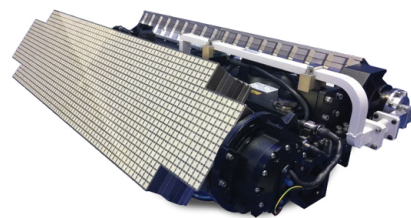
The SkyEdge II-c Taurus MODMAN optimizes the performance and efficiency of IFC services. To ensure fast web browsing, and ultimate high-quality passenger experience, Taurus contains a full set of embedded protocol optimization and application acceleration features. Highest spectral efficiency is delivered via wideband DVB-S2X carriers in the forward direction and fast adaptive and spread-spectrum LDPC transmission in the return direction.

## OPEN ARCHITECTURE

Wavestream's flexible technology and satellite-agnostic architecture enables service providers to optimize satellite bandwidth costs. The open architecture permits our antennas and modems to operate with equipment from different vendors.

## BENEFITS

- Fully integrated high performance Ku/Ka aero terminal including antenna, MODMAN, KRFU and KANDU
- Superior antenna system transmission/ reception performance and efficiency
- Maintaining application continuity with automatic beam / gateway / satellite switchover
- Designed to assure continuous gate-to-gate operation
- Open architecture enables easy third-party integration
- Compliant with ARINC-791 and RTCA/DO-160G



ER6000-A Ku/Ka Antenna



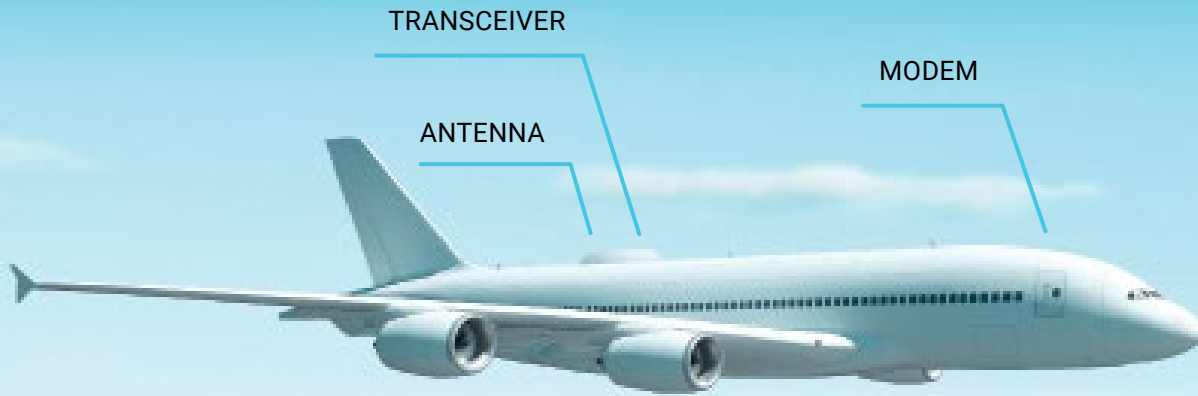
Taurus MODMAN



KANDU



Wavestream  
AeroStream®  
Ku/Ka KRFU



Wavestream integrated airborne Ku/Ka terminal - AeroEdge 6000

## TECHNICAL SPECIFICATIONS: AEROEDGE 6000 TERMINAL

### ANTENNA

#### Receive Frequency:

**Ku-Band:** 10.70 – 12.75 GHz

**Ka-Band:** 17.80 – 20.20 GHz

#### Transmit Frequency:

**Ku-Band:** 13.75 – 14.50 GHz

**Ka-Band:** 29.25 – 30.00 GHz

#### Polarization Rx/Tx Selectable via

##### A791 AMIP:

**Ku-Band:** Linear VP/HP

**Ka-Band:** Circular LHCP/RHCP

#### Receive G/T (at 30° elevation)\*:

##### Ku-Band:

12.4 dB/K @ 12.75 GHz  
(cruise level)

##### Ka-Band:

15.4 dB/K @ 20.2 GHz  
(cruise level)

#### Transmit EIRP [dBW]\*:

**Ku-Band:** 45.8 dBW @ 14.5 GHz

**Ka-Band:** 48.7 dBW @ 30 GHz

#### Transmit Antenna Patterns:

**Ku-Band:** FCC 25.209

**Ka-Band:** FCC 25.209

#### EIRP Spectral Density:

##### Ku-Band:

FCC part 25.222 and 25.227

ETSI EN 302 186

##### Ka-Band:

FCC Part 25.138,

ETSI EN 303 978

#### Cross Polarization

##### Discrimination:

**Ku-Band:** >25 dB

**Ka-Band:** >21 dB

##### IF Input (Tx):

950-1700 MHz, TNC 50Ω

##### IF Input (Rx):

950-2150 MHz, TNC 50Ω

#### Antenna to Modman Interface for configuration, control and monitoring:

Ethernet 10/100BaseT supporting

ARINC A791 OPEN-AMIP

#### Antenna to Inertial Reference

##### Unit (IRU):

Supporting ARINC A429

#### Azimuth (Az) Range:

360° continuous

#### Elevation (El) Range:

0° to 90°

(up to 80° with full performance)

#### Az/El Velocity; Acceleration:

>30°/sec; >50°/Sec<sup>2</sup>

#### Tracking Accuracy: <0.2°

### ELECTRICAL INTERFACES

#### Power:

115 VAC (360 Hz to 800 Hz)

### ENVIRONMENTAL

#### Operating Temperature:

-55°C to +70°C external

#### Altitude:

16,800 meters (55,000 Feet)

#### Environmental Compatibility:

RTCA/DO-160G

### TERMINAL PERFORMANCE

#### Acceleration Technology:

Embedded performance  
acceleration (TCP / HTTP /  
Cellular data)

#### Forward Channel:

DVB-S2X 1.5Msp/s-500Msp/s;  
Dual Receiver support

#### Return Channel:

MF-TDMA Dynamic Channels  
128Ksp/s-10Msp/s;  
SCPC 1.5Msp/s-40Msp/s

## 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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