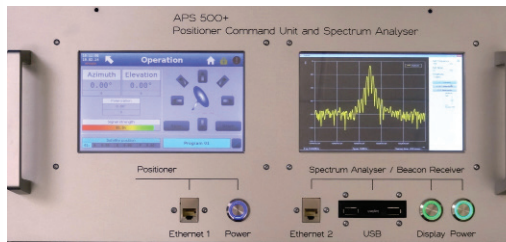


# SKY122MT: 1.2m Ka-Band Tracking Antenna



## Key Features

- Precision lightweight molded reflector.
- Car, trailer or fixed mounting.
- Tracking and Auto-Acquiring system for medium and large VSAT Ka terminals (adaptable for all other frequencies).
- Ultra wide movement range - 360° Azimuth, 180° Elevation 360° Polarization.
- Ultra-precise motorization, Zero backlash.
- Pointing accuracy better than 0.01°
- Motorized Feed
- Tracking for inclined orbit satellites. Time tracking, programmed, or history tracking.
- Web access, web visualization, remote control via internet. Can be integrated in a M&C system (SNMP) via MOD-BUS/TCP protocol.
- Integrated GPS (optional).
- Integrated altitude and heading reference system (AHRS) (optional).
- Meets or exceeds Intelsat, FCC, ITU and Eutelsat requirements.



## THE CONTROL AND COMMAND SYSTEM

The APS 500 and APS 500+ can be configured as a multi-functional device with web access, monitor, spectrum analyzer and tracking system.



This single-cable antenna positioning system uses an antenna motorization controller incorporating a touchscreen Antenna Control Unit (ACU) connected to a Motor Control Unit (MCU) by a single cable. This is possible due to use of the CANopen protocol which allows simultaneous control of up to 9 axes on a single cable.

The smart MCU ensures high-speed positioning of the antenna with a soft start and stop.

The basic ACU can store up to 99 satellite positions and display each position as an angle or a number of counts based on a pre-set point of origin.



- ISO 9001:2008 Certificate of Registration



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•PRODUCT SPECIFICATIONS

**RF Performance**

Operating Frequency  
 TX ..... 29.50-30.00GHz  
 RX ..... 19.20-20.20GHz

Polarization  
 TX ..... Circular, RH or LH  
 RX ..... Circular, RH or LH

Gain<sup>1</sup> (min)  
 TX ..... 49.3 dBi @ 30.0GHz  
 RX ..... 46.0 dBi @ 20.2GHz

3 dB Beamwidth  
 TX ..... 0.6° @ 30GHz  
 RX ..... 0.9° @ 20GHz

Sidelobe Envelope (Tx, Co-Pol dBi)  
 100 λ/D < θ < 20° ..... 29-25 log θ dBi  
 20° < θ < 26.3° ..... -3.5 dBi  
 26.3° < θ < 48° ..... 32-25 log θ dBi  
 48° < θ < 180° ..... -10 dBi (Typical)

Antenna Cross-Polarization (within 1dB B/W)  
 TX ..... 25dB  
 RX ..... 22dB

Antenna Noise Temperature <sup>1</sup>  
 ..... @ 30° EL 57°K Max

VSWR ..... 1.2:1 Max

Isolation  
 TX ..... 90dB  
 RX ..... 75dB

Feed Interface  
 TX ..... WR28 Flat Flange  
 RX ..... WR42 Flat Flange

<sup>1</sup> Gain and Noise Temperature at Feed Horn Flange  
 (All specifications typical)

**Mechanical Performance**

Reflector Material ..... Light Weight Composite  
 Antenna Optics ..... One-Piece Offset Feed Prime Focus

**Environmental Performance**

Windloading  
 Operational ..... 75km/h (45 mph)  
 Functional Survival ..... 128km/h (80 mph)  
 Ultimate Survival ..... 200km/h (125 mph)  
 Survival Temperature ..... -50°C to +80°C  
 Operational Temperature ..... -40°C to +55°C  
 Humidity ..... 0 to 100% (Condensing)  
 Atmosphere ..... Standard Hardware meets 500 Hrs  
 SST Requirements (ASTM B-117)  
 Solar Radiation ..... 360 BTU/h/ft<sup>2</sup>  
 Shock and Vibration ..... As Encountered during  
 Shipping and Handling

**Controller**

**Accessibility**

- Integrated touch panel, 7" wide-screen display 256k colors LED back-lit.
- Maximum cable length 6.7 Km (Controller to terminal)
- Web access.

**Positioning**

- Up to 5 rotational axes and 2 polarization switches, with simultaneous movement of all axes.
- Store up to 99 satellite positions on all axes.

**Power**

- 24V DC, 220V AC or 380V AC.



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