

MEOS™ Antenna EOS DB



KONGSBERG

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MEOS™ Antenna for EOS DB applications comes with a 3.7m reflector and a dual band feed with simultaneous L- and X-Band reception. The antenna sensitivity gives sufficient margin for data reception from remote sensing satellites in LEO orbits.

Designed for optimal reliability, the MEOS™ Antenna utilizes the most modern industrial components available. It includes a mature remote-control interface which provides seamless integration into ground networks.

The X/Y positioner allows strong wind operation without a radome. The X/Y geometry supports overhead tracking with no signal drop. With Auto track on all receive bands and polarizations, excellent G/T and sidelobe performance, the overall link budget is ideal for fast connectivity operations.

The antenna is equipped with a custom filter to reject out of band signals. For example, L-band filtering provides more than 80dB rejection of the mobile 1.8GHz downlink band.

When integrated with a MEOS™ receiver and processing system, the complete solution works as a high-performance data reception and processing terminal for EOS Direct Broadcast satellite missions.

HIGH RELIABILITY

- Robust ACU and servo units with low failure probability
- Dehydrator to supply dry air to the positioner, Electronics cabinet and feed to avoid internal condensation
- Heating of motors and the gears reduces wear
- Drive chain replacement possible with reflector and positioner installed

RF SYSTEM

- L-Band
 - Downlink 1682 – 1710 MHz RHCP/LHCP selectable polarization
 - G/T spec 12.5 dB/K, typical and mid band
 - L-band Block Downconverter to 720 MHz (28 MHz BW) output
- X-Band
 - 7750 -8500 MHz RHCP/LHCP selectable or dual polarization
 - X-band G/T Spec 27.5 dB/K, typical and mid band
 - IF Frequency: 800 – 1550 MHz

Please contact KONGSBERG for other options.



FEATURES

- X/Y design for elimination of overhead keyhole
- ACU with Program Track and Auto Track
- Easy installation with use of Auto Alignment
- Web based monitor and control
- Remote monitoring and control over fibre optic cable
- GNSS time server in ACU
- External interfaces for integration by customer
- High torque motors for heavy wind operation
- Virtually no preventive maintenance needed

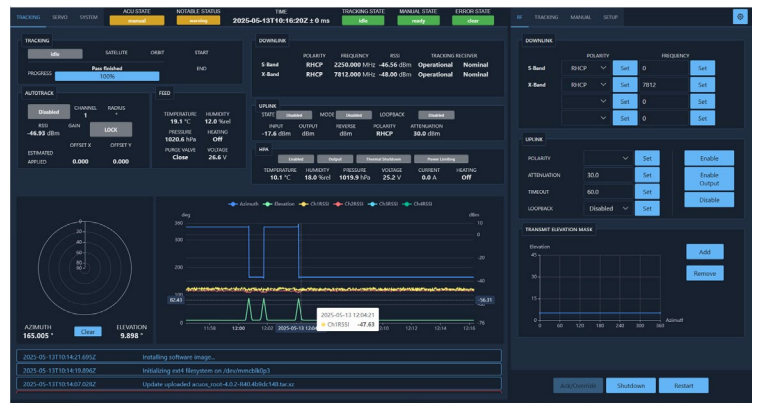


Environment

- Temperature
 - Operational: -40° C to 60° C *
 - Storage: -50° C to 60° C *
- Relative humidity: 0-100 % including condensing
- Power requirements: 110 - 264 V AC, 50 – 60 Hz
- Nominal 230 V @ 25 A or 2 x 230V @ 16 A
- Weight: approx. 1000 kg
- The antenna is fully CE tested

Options

- Radome
- MEOS™ Polar for acquisition, demodulation, and processing of meteorological data from EOS DB satellite missions



* Can be optionally extended upon request

3.7 m L/X-band Performance

L Band G/T (1700 MHz)	12.5 dB/K*
X Band G/T (8200 MHz)	27.5 dB/K*
Pointing error	0.09° rms**
Pointing resolution	0.005° on both axis
Max Axis Travel Speed	6°/s
Wind speed operational	27 m/s
Wind speed survival	56 m/s
Tracking	Tracking from 0° elevation
Travel	Mechanical ±91°, Tracking from 0° elevation

* Radome losses not included

** Based on CFD (Computational fluid dynamics) and FEDEM (Finite Element Dynamics in Elastic Mechanisms) analysis for a 3.7 m reflector with 27 m/s wind



MEOS
MULTI-MISSION EARTH OBSERVATION SYSTEM