



MEOS™ Antenna

2.4 m to 4.2 m L/S/X-Band

MEOS™ Antenna comes with dish sizes up to 4.2 m. This gives sufficient margin for data reception from direct readout and remote sensing satellites. Designed for optimal maintainability and reliability, the MEOS™ Antenna utilizes the most modern industrial components available. 25 years of satellite ground system experience is built into the design.

When integrated with a MEOS™ receiver and processing system, the total unit is a high performance data reception and processing terminal.

High reliability

- Positioner internals and electronics operate in dehydrated environment
- X/Y geometry for lower stress to drive chain
- TCP-IP on fibre cable between pedestal and indoor unit
- Low mean time to repair, < 2 hours
- Drive chain replacement possible with reflector and positioner installed
- Stable antenna control unit running Linux, supporting 24/7 operations without operator intervention.
- Resumes operation automatically after a power break
- Self test and remote diagnostics
- Robust computers and servo units. No routine maintenance, low failure probability

Key features

- Pedestal connected to indoor unit by optical fibre
- Cable length > 1 km
- Single, dual or triple band configuration available
- Designed for L-, S-, and X-band missions
- 2.4 m to 4.2 m dish size
- X/Y pedestal for elimination of overhead keyhole
- Extensive monitoring and control capabilities
- In-field diagnostics and alignment tools
- Remote and local monitoring and control available
- Real time and historic status available
- Java based graphical user interface
- MEOS™ Connect ready for integration in a ground station network
- Easy installation



Performance

Reflector Size				
	2.4 m	3.0 m	3.8 m	4.2 m
L Band G/T (1700)	8 dB/K	10 dB/K	12 dB/K	13 dB/K
S Band G/T (2400)	11 dB/K	13 dB/K	15 dB/K	16 dB
X Band G/T (8200)	24 dB/K	25 dB/K	27 dB/K	28 dB/K
Pointing error	0.09° rms*			
Pointing resolution	0.005 ° on both axis			
Velocity	6 deg/s			
Wind speed operational	30 m/s	30 m/s	27 m/s	Radome recommended
Wind speed survival	56 m/s	56 m/s	56 m/s	Radome recommended
Travel	X-axis: Mechanical ±90 deg, Tracking ±87 deg Y-axis: Mechanical ±90 deg, Tracking ±87 deg			
<ul style="list-style-type: none"> Based on CFD (Computational fluid dynamics) and FEDEM (Finite Element Dynamics in Elastic Mechanisms) analysis for a 3.8m dish with 27 m/s wind 				

RF system

- L-Band
 - RF input: 1693-1710 MHz
 - IF out: 137.5 ± 10 MHz
- X-Band
 - RF input: 7.5 – 8.4 GHz
 - IF out: 720 MHz
- S-Band
 - Consult factory

Standard features

- WEB based monitor and control
- Local control via PC browser
- Program track
- Automatic ephemeris download from Internet
- External interface (MEOS™ Connect ready)
- Graphical User Interface

Options

- Autotrack¹
- Radome
- Data Capture system - MEOS™ Capture (1-500Mbit/s)
- Monitor and Control of external units e.g. demodulators, modulators, (see MEOS™ Control Product data sheet)

Related products

(Separate datasheets)

- MEOS™ Capture; HRR, HRD, HRDFEP, HRFEP, HRTG
- MEOS™ Connect
- MEOS™ Control

¹Maximum signal level tracking by helical scanning

Note:

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Physical

Antenna

- Temperature:
 - Operational: -40° C to 70° C
 - Storage: -40° C to 70° C
- Relative humidity:
 - 0-100 % including condensing
- Power:
 - 200 - 264 V AC, 50 – 60 Hz
 - Maximum consumption: 3600 W
- Weight: approx. 700 kg (reflector not included)

Indoor unit

- Rack mountable chassis
- Weight: approx. 20 kg
- Power:
 - 90-132 volts / 180-264 volts, 47 – 63 Hz
 - Dual power supplies
 - Maximum consumption: 500 W
- Temperature:
 - Operational: 10° C to 35° C
 - Storage: -30° C to 60° C
- Relative humidity (non condensing):
 - Operational: 10 % to 95 %
 - Storage: 5 % to 95 %
- Separate keyboard and monitor unit (optional)

Optional items can be made available upon request.



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