

HMAM - Hiltron Motorized Antenna Mount

High Speed Three Axis Antenna Mount

High precision satellite antenna positioner for ***use in professional satellite communication systems.***

It ***combines affordability*** with the ***reliability*** and ***precision*** expected of ***professional-grade communications equipment.***



FEATURES

- All kinds of reflectors with a diameter between 1.2 and 4.9 meters can be attached.
- Three axis motorized system with >180 degrees of continuous azimuth adjustment.
- 90 degrees of elevation adjustment range
- Fully adjustable polarization.
- Positioning accuracy is up to $\pm 0.02^\circ$ (depending on temperature and wind load).
- IP-based control from a PC running a graphical user interface compatible with standard web browsers.
- Integrated database for potentially accessible satellites.
- Ethernet interface and control via SNMP for M&C.
- The ACU and the associated motor control electronics are contained in a weatherproof outdoor housing.

OPTIONS

- Software upgrade to satellite tracking system with analog and digital beacon receiver interface.
- Inclined orbit tracking.
- Integration of parabolic reflectors according to customer preference.
- Integration of de-ice system.
- Choice of standard steel mounts or non penetrating mounts.
- Handheld control unit for manual pointing.
- Extended temperature range.
- Increased accuracy by using 21 to 24 bits optical encoders.
- Increased hardness against salt water environment.

The HMAM motorized satellite antenna mount is designed for Tx/Rx Antennas up to 4.9m diameter. It includes high-grade drives for azimuth and elevation plus a high-accuracy polarization drive and is based on our standard HACU antenna positioning system. A combined head and drive are incorporated, forming a three-axis motorized system with 240 degrees of azimuth adjustment, 90 degrees of elevation adjustment range and fully adjustable polarization. Details on positioning accuracy and position display resolution can be found in the specification.

Supplied with the HMAM is an individual support frame allowing the attachment of most major brand reflectors. The rotating pedestal mount is made of corrosion-resistant hot-dip galvanized steel. The azimuth and elevation drive motors are operating each through a reduction gear.

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The azimuth movement is accomplished via an axle bearing with a drive motor and allows the entire satellite arc to be covered from any position on the planet. The elevation movement is via a jackscrew with a further drive motor.

The design and the use of 17 to 24bit SSI encoders provide highly reliable and extremely accurate positioning.

The very high rigidity of the construction ensures essentially zero backlash. The HMAM can operate in winds of up to 125 km/h and survive up to 200 km/h.

The entire system is built to withstand standard atmospheric pollutants and to operate from zero to 95 per cent humidity over a temperature range of 35°C (option 55°C) down to -25°C. As an option the entire system can be built to withstand pollutants such as salt encountered in coastal and industrial areas.

Options for the Hiltron HMAM motorized antenna mount include a satellite tracking system, inclined orbit tracking, integration of parabolic reflectors according to customer preference, a handheld control unit, de-ice systems, and a choice of standard steel mounts or non-penetrating mounts.

The antenna control unit and associated motor-control electronics are contained in a weatherproofed outdoor housing with a hinged front access port secured by dual key screws. An emergency cut-off switch is accessible from the outside of this housing. The figure below shows the interior of the antenna control unit.



The antenna control unit is designed for IP-based control from a PC running a graphic user interface compatible with standard web browsers. The control GUI displays all the information required to set and maintain azimuth, elevation and polarization, including current position and target position plus a database of potential accessible satellites.

Once a satellite is selected, precise access parameters can be calculated at the press of a single button. Azimuth and elevation can be adjusted at up to three different speeds.