

MODEL 2200 / 2300™

# ANTENNA CONTROL SYSTEM



## The Next Generation in Antenna Control

**Performance** – Flexible tracking modes, intuitive menu layouts and a compact parameter set keep your antenna applications on point.

**Availability** – We understand the need for quick delivery. Lean manufacturing methods allow us to ship most systems within 30 days of an accepted order!

**World-Class Support** – You are never on your own with a Radeus Labs product. The experts at Radeus Labs are standing by if you need help.



# Modular Configurable Compatible

This antenna control system meets the requirements of retrofits and new installations. The 2200/2300 Antenna Control System provides a flexible approach for the higher speed, full motion antenna systems normally used in LEO/MEO applications. The 2200 with the SMC 2048, gives more of an OEM option with smart motors and a power source provided by the OEM or end customer. The 2300/2350 ACS offers a more traditional drive cabinet approach for use with DC or AC motors on full motion antenna systems.

## Features

- Touchscreen controls for all operations
- Efficient, intuitive graphical user interface
- Hardware jog buttons with LED indicators
- Data and parameters secured in nonvolatile storage
- Innovative setup wizard eases installation
- Secure TeamViewer integration for remote and shared ACU operation
- Motion warning output



## Modes of Operation

- Manual** — Front-panel buttons for two-speed, manual jog control.
- Move to Longitude** — Position to AZ and EL angles determined from the longitudinal orbital slot.
- Move to Look Angles** — Position to user-provided AZ, EL, and POL angles.
- Step Track** — Periodic algorithm to perform an AZ-EL scan pattern to peak up signal strength.
- Predictive Track** — Point the satellite dish using an orbital model created from previous peak AZ and EL step-track data points.
- TLE (Two-Line Element)** — Track automated positioning based on NORAD two-line element sets.
- TLE with Steptrack** — Steptrack incorporated with TLE to provide closed loop correction and superior pointing accuracy.
- Intelsat-11** — Automated tracking to AZ and EL coordinate sets derived from Intelsat 11 parameters.
- Intelsat-11 with Steptrack** — Steptrack incorporated with Intelsat-11 to provide closed loop correction and superior pointing accuracy.

## Optional Modes

- Computer Track** — Automated positioning using commanded angles supplied from an external computer.
- Sun and Moon Track** — Automated positioning to AZ and EL locations of the sun and the moon.
- Star Track** — Automated positioning to AZ and EL locations of radio stars.



## Drive Cabinet Model 2350

The Radeus Labs 2350 Drive Cabinet provides flexible motor support, reduces IFL cost and supports I/O for interlocks and stow pins.



Optional PMCU



SMC 2048



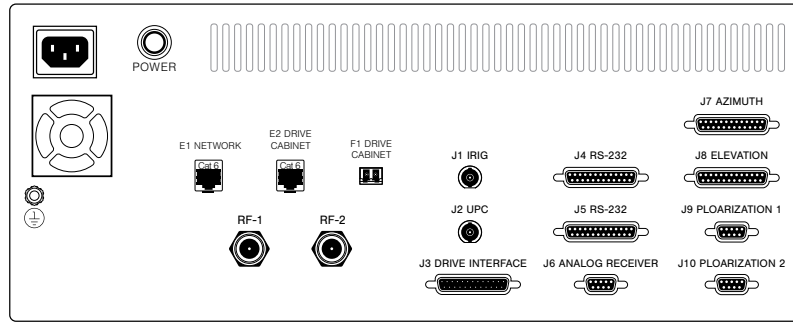
Model 2350



## Features

- Remote system control over Ethernet via SNMP.
- A single cable (Ethernet or fiber optic) links the drive cabinet and ACU.
- Remote system control via a secure TeamViewer connection to the ACU.
- Dedicated jog button-indicators — like those on the ACU — show when motors are engaged, whether from drive cabinet or ACU.
- Options enable users to monitor and control brakes, interlocks, feed status, and provide flexible maintenance control with the PMCU.

## Rear Panel



## Tracking Accuracy

**Better than 10% receive 3dB beamwidth RMS in step track.**  
**Nominally, 5% receive 3dB beamwidth RMS with predictive track.**

*Specifications may be subject to change. Please contact our sales staff for details.*

## Environment

### ACU:

Temperature: 0 to 50°C  
 Humidity: 95% non-condensing

### SMC 2048:

Temperature: 0 to 50°C  
 Humidity: 95% non-condensing

### Drive Cabinet:

Temperature: -10°C to +50°C standard, -55°C to +50°C with low temp option  
 Humidity: 100% condensing

## Power

### ACU:

100–240 VAC, 47–63 Hz; 100 W typical

### SMC 2048:

5 VDC @ 20 Watts

### Drive Cabinet:

200 and 400 Volt Class, 50-60 Hz, 5-wire WYE  
 Current requirements are determined by motor horsepower.

## Mechanical

### ACU:

7"H x 19"W x 19"D (4-rack units)  
 Weight: 20 lbs.

### SMC 2048:

4"H x 8"W x 16"L  
 Weight: 5 lbs.

### Drive Cabinet:

36"H x 30"W x 10"D (legs: 18"H)  
 Weight: 100 lbs.

## Interfaces

**Remote:** Ethernet, SNMP, Serial

**Serial:** USB, RS-232 (x2 each)

**Alarm:** Summary output

### Receiver:

- Optional integrated receiver

- 0-10V Analog Receiver Input (2)

- 0-10V Analog UPC Output  
*(When integrated tracking receiver option is selected.)*

### Drive Cabinet:

- Standard drive interface, or

- Ethernet or fiber interface

## Position Feedback



This EnDAT encoder provides position feedback for azimuth, elevation, and polarization. At 25 bits of resolution, this allows a display resolution of 0.001°.

**Accuracy:**  $\pm 20''$  or  $\pm 0.005^\circ$

## Warranty

Three-year warranty, parts and labor.

## Contact Us

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