MODEL 8200™

ANTENNA CONTROL SYSTEM

The Next Generation in Antenna Control

Performance – Flexible tracking modes, intuitive menu layouts and a compact parameter set keep your limited motion 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.

Sales, Installation & Integration

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RADEUS LABS, INC.

Modular Configurable Compatible

This antenna control system meets the requirements of retrofits and new installations. As a retrofit option, the 8200 ACU is compatible with industry standard drive-cabinet interfaces and legacy position-feedback devices such as absolute rotary optical encoders, standard single-speed brushless size 11 resolvers, and two-speed brushless size 20 resolvers.

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
- Field-proven in critical applications

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.

Intelsat 11 — Automated tracking to AZ and EL coordinate sets derived from Intelsat 11 parameters.

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 8250

The Radeus Labs 8250 drive cabinet reduces IFL costs. It also requires fewer connections between the control center and the antenna.
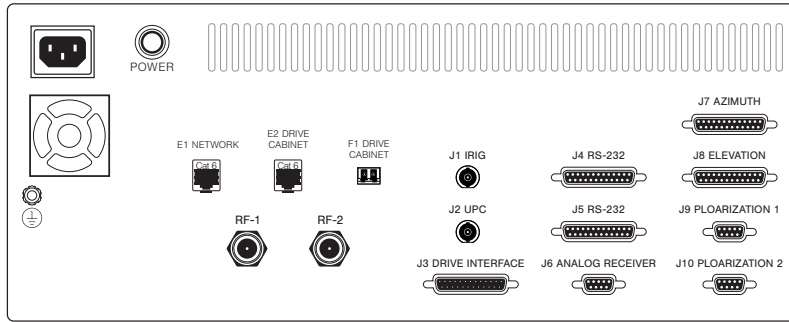
Model 8250

Model 8250D

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, and feed status, as well as various position-feedback resolution and accuracy options.

Rear Panel

POWER

J7 AZIMUTH

E1 NETWORK E2 DRIVE CABINET F1 DRIVE CABINET J1 IRIG J4 RS-232 J8 ELEVATION

Cat 6 Cat 6

RF-1 RF-2 J2 UPC J5 RS-232 J9 PLOARIZATION 1

J3 DRIVE INTERFACE J6 ANALOG RECEIVER J10 PLOARIZATION 2

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

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

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.

Drive Cabinet
36"H x 30"W x 10"D (legs: 18"H)
Weight: 100 lbs.
Motor size: 1–5 HP standard. Larger sizes available.

Interfaces

Remote: Ethernet, SNMP , Serial
Serial: USB, RS-232 (x2 each)
Alarm: Summary output

Receiver:
▪ Built-in tracking receiver
▪ Optional serial DTR

ADU:
▪ 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 $\pm 0.005°$

Warranty

Three-year warranty, parts and labor.