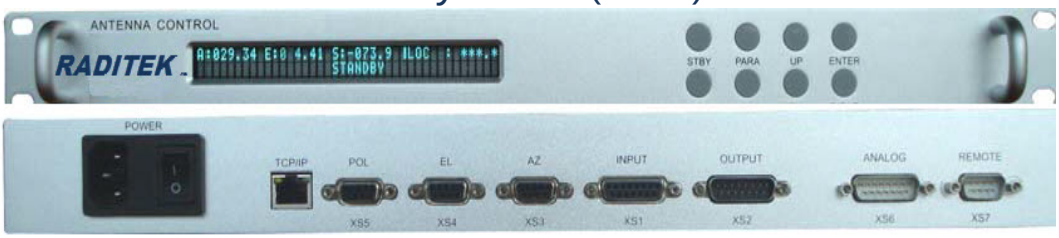
RADITEK

SATCOM
Antenna Controler

RoHS COMPLIANT

Antenna Control System (ACU)



1. General Description

Our Antenna Control System is an antenna pointing control system; it can manually or automatically control antenna position pointing to the peak value of the received signal from a synchronous communication satellite. It is designed with the latest digital processing technology, the most precise antenna pointing, high Reliability and maximum flexible system configuration. The system has a storage capacity for multiple satellites, has practical inclined orbit tracking capability, with input of RS-232, RS422 or RS-485

Remote control communication interface and Ethernet interface. In addition, a lightning protection is designed as well to ensure system stability and operating reliably. It works with antennas less than 10 meters diameter. The port connecting to the tracking signal is a serial port, any DC voltage of-10~+10V (Including the satellite receiver AGC output, MODEL DC output etc.

2. Configuration

a) Antenna control unit (ACU)
b) Antenna Driver unit (ADU)
c) Cable with 45 meters length (cable with max 90M length is optional)
d) ACU AC power with international standard cable and D-type plug.

2) The antenna control unit (ACU) consists of:

The central processing board (Including coding, A/D conversion, etc.), power amplifier (two-axis or three-axis), DC power, VFD display, keyboard and Chassis, etc.

3) Antenna Driver (ADU) consists of:

* Limit Switch
* Logical Drive control panel
* Air switch
* Emergency stop
* Az variable-frequency inverter
* El variable-frequency inverter
* 24V DC power
* Lighting protection
* Polarization control circuit (three axis/four axis system, optional)
* Antenna position sensor brushless single, (two-speed revolver, photoelectrical encoder as options)

Position sensor can be single speed, two speeds, and two speeds can be selected as required from 1:16 to 1:128.Photoelectric Encoder can be selected from 14 bit to 20. All these can be selected according to control requirements/user needs.

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Antenna Control System

3. Operation:

Antenna control unit (ACU) allows users to store up to 99 synchronous satellite positions; it can work as the following mode:

*Standby
*Manual (High/low speed control)
*Step tracking
* Learning optimization tracking (it can tracking the synchronous satellites with inclined angle □ 5º) (Optional)
*Command mode (Optional)
*Program tracking mode (Optional)
*Scanning mode (Optional)

4. System tracking accuracy:

10%θHP in step tracking mode
7%θHP in optimization tracking mode (Optional)

5. Power:

ACU: Single-phase: AC 220V±10% , 50Hz±5% (See Fig on page 1)
ADU: 3 Phase: AC 380V, 1 neutral, 1 ground (See Fig below)
Note: different power supply shall be notified when ordering.

ADU

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