



Compact, lightweight 1/2 width rack units

## 5000 Series Overview

Advent's established lightweight, compact, 1U half rack electronics packages are ideally suited for flyaway or vehicle mounted solutions, where weight and space are at a premium. The 5000 series of electronics can be packaged in different lightweight, ruggedised canvas flight cases, depending on units selected and system configuration.

- Compact 1/2 width 19" x 1U rack mountable units
- 1/4 of the size and 1/6th of the weight of competitors equivalent products
- Designed for contribution flyaway and DSNG vehicle applications where space and weight are critical
- Full range of units available;
  - SD and HD Digital Video Exciter
  - IP Modem
  - Multiplexer Router
  - BUCS
  - Antenna and Drive Control units
  - System IRD / Redundancy controllers
  - Protection Switches
  - L Band over fibre modems
- All units field upgradeable
- All units have integral web browser facility (where applicable) for RC&M applications
- A comprehensive range of flight case solutions for 1/2 rack and 19" rack units to suit system configuration, i.e. 3U, 4U, 5U
- All units can also be fixed together and mounted in a standard 19" flight case or rack within a vehicle

## Features

- The ACU5000 is an antenna control unit designed to operate with VISLINK's range of motorised antenna systems
- The unit provides user friendly 3 speed motor control of azimuth, elevation and polarisation axis as well as automatic stow and deploy functions
- The ACU5000 comes with the option of interfacing with a GPS receiver and/or fluxgate compass
- Integrated beacon receiver option provides facilities for automatic satellite acquisition and tracking
- The ACU provides an 800 city updateable database to enable satellite pointing without the need for GPS
- Optional DVB-S/S2 demodulation capability to provide ASI output
- Satellite identification capability
- External reference signal for LNB

# Specifications

The ACU5000 series antenna control units are designed to operate with the complete range of Advent motorised antenna systems, using the 3000, 4000 and 5000 series Drive Control Units (DCU).

The ACU5000 provides a user friendly interface enabling the control of azimuth, elevation and polarisation for the deployment and operation of the motorised antenna system.

The ACU has embedded software to be able to calculate the position of a satellite from the current location and orientation of the uplink system. The location and orientation can also be entered manually. If the beacon receiver option is included, the ACU can search, peak and track the satellite beacon signal.

Tracking is maintained using a differential slope track algorithm. From the detailed characteristics of the beam pattern stored within the controller the ACU can optimise the antenna pointing with the minimum of movement during the tracking process.

Satellites containing commercial traffic can be positively identified by their 'Satellite ID', in addition to comparison of the beacon frequency. This ensures the correct satellite has been acquired without the need for a spectrum analyser or receiver. An optional ASI output is available to feed an external decoder.

The ACU5000 provides the ability to recall one of up to 100 stored satellite presets and additional software providing up to 800 city information database enabling the controller to find the satellite without the need of GPS.

## FRONT PANEL INDICATIONS

- Clear LCD shows information on the current status of the antenna, beacon receiver and DVB parameters

## FRONT PANEL CONTROLS

### Start

- Starts an antenna system activity

### Stop

- Stops any current antenna system activity

### Rate

- Changes the current movement rate

Pol ← Pol →

- Controls the polarisation axis movement

↑, ↓, ←, →

- Controls the azimuth and elevation axis movement functions. In the menu mode, used to navigate and select options

### Menu

- Steps through key menu options

### Enter, Escape

- Used to select menu options and escape from current selections

## POSITIONAL DISPLAY ACCURACY

- Azimuth, elevation and polarisation +/- 0.05

## ANGULAR CONTROL RATES

- Fast up to 5°/s (antenna type dependent)
- Medium 0.5°/s
- Slow 0.1°/s

## ANGULAR CONTROL STEPS

### All antenna types

- Fast 1.0°
- Medium 0.5°
- Slow 0.1°

## RF INPUT

- 950 - 2150 MHz
- Beacon level -90 dB min
- DVB Input -20 to -65 dBm
- LNB power switchable 18v/13v @ 1A
- LNB reference 10 MHz
- RF Monitor loop-thru'

## REMOTE CONTROL

- RJ45 10/100 base-T
- RS232/485 4800-115200 baud
- Ethernet / Web Interface / SNMP

## WEB BROWSER

- Supporting Internet Explorer 7 & 8, Firefox, Safari and Opera

## MODEL NOS

### ACU5012

- Antenna control unit with manual motor control

### ACU5214

- Antenna control unit with auto-point capability. Includes compass and GPS antenna

### ACU5216

- Antenna control unit with auto-acquire capability. Utilises internal Beacon Receiver and includes compass and GPS antenna

### ACU5xxxD

- D suffix indicates enabling of the integral DVB-S/S2 demodulator

## ENVIRONMENTAL & PHYSICAL

### Temperature

Operational: ..... 0°C to +50C  
(32°F to 122°F)  
Storage: ..... -20°C to +80°C  
(4°F to 176°F)

### Size

- 210mm wide x 350mm deep
- (8.27 inches wide x 13.78 inches deep)
- 1U half rack width

### Weight

- 2 Kg (4.4lbs)

## POWER

### Operating Voltage

- 100 - 240 Vac

### Power Consumption

- <100 VA



Half rack flight case, housing three 5000 series units. Flight cases are available in a variety of options to suit the application