



# AUC5800 Series Block Upconverter & APS5000 Protection Switch



## Block Upconverter and Protection Switch

### 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 - AUC5800

- The AUC5800 is a high performance block upconverter with the input at L Band and output versions for C, X, Ku, DBS and Ka Bands
- Internal / External reference
- High / Low gain options
- High stability
- Optional second SHF output for redundancy
- HPA control data pass-through
- 19" 1U HD SHF solution available with DVE5000 series and ADM5000
- Weather resistant for outdoor use

### Features - APS5000

- Provides hot-standby switching of a pair of SHF output signals from AUC5800, or other Block Upconverters
- Integral Phase Shifter for Phase-Combined applications
- Forward power monitor
- Status inputs from BUCs and HPAs
- M&C link to ASC5000

# Specifications

## AUC5800

### FREQUENCY RANGE

- Input Frequency Range
- 950 to 1750 MHz

### Output Frequency Range

- C Band AUC5806
- 5.85 to 6.65 GHz
- 5.925 to 7.129 GHz

### X Band AUC5808

- 7.9 to 8.4 GHz

### Ku Band AUC5813 / 14

- 12.75 to 13.25 GHz
- 13.75 to 14.5 GHz
- 14.0 to 14.5 GHz

### DBS Band AUC5817 / 18

- 17.3 to 18.1 GHz
- 17.6 to 18.4 GHz

### Ka Band AUC5827 / 28 / 29 / 30

- 27.5 to 31.0
- (Specify 700 MHz Max Tx sub-band)

### Others

- Any 800 MHz to order

### FREQUENCY REFERENCE

#### Internal Frequency Accuracy

- +/- 100 Hz from nominal at 25C
- (+/- 80 Hz typically)

#### Internal Frequency Stability

- 2 x 10-8 Rack

#### External Reference (Internal link selectable)

- User supplied via L Band cable
- 10 MHz @ 0 dBm +/- 3 dB

### GAIN

#### Input Power Level

- -10 dBm nominal, 0 dBm max

#### Output Power Level

- -5 dBm min at 1 dB compression point (+10 dBm to +35 dB with high gain option)

### Gain

- -5 dBm to +20 dB nominal internally adjustable
- (+10 dBm to +35 dB with high gain option)

### Gain Variation

- +/- 0.25 dB any 36 MHz
- +/- 1.5 dB over 800 MHz
- +/- 0.25 dB over 24 hours @ constant temperature

### Group Delay Variation

- +/- 0.25 ns in any 4 MHz

### SSB Phase Noise

- Better than 6 dB below IESS308

### VSWR

- Input Return Loss
- 12 dB @ 50 Ω

### Output Return Loss

- 18 dB @ 50 Ω

### SPURIOUS

#### Modulated

- -60 dBc

#### Unmodulated

- -65 dBm

### Harmonics

- -20 dBc

### HPA Controller

- Pass-through and protocol transfer of HPA control data from L Band input to RS485 HPA control output - Xicom, CPI, e2V, Paradise supported, others to order

### ENVIRONMENTAL & PHYSICAL

#### Temperature

Operational: ..... -20°C to +60°C  
(4°F to 140°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

- Phantom from L Band or 18V DC / 1A

### Connectors

- SHF 50 Ω N female (Ka band 2.9mm connector)
- L Band 50 Ω N female

### HPA Control / Status / DC Input

- Weatherproof multi-pin



AUC5800 Rear Panel

## APS5000

### Switch Drives

- Internal coaxial switch
- Two switch drives for external switches

### Remote Control

- RS485 9600 baud

### RF

Input / output frequency range: 4-18GHz  
 Input loss ..... 4 dB + 0.3 dB nominal  
 Input level ..... +30 dBm max  
 Input/output return loss ..... 16 dB at 50 Ω

### Connections

RF Inputs ..... Female N-type 50 Ω  
 RS485 comms ..... screw terminal  
 Switch drives ..... screw terminal  
 Status inputs ..... screw terminal

### Power

- 18Vdc from AUC5800 or via external 12-18 Vdc supply

### Environmental & Physical

#### Temperature

Operational: ..... 0°C to +50°C  
(32°F to 122°F)  
 Storage: ..... -20°C to +70°C  
(-4°F to 158°F)

#### Size

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

#### Weight

- 1.2 Kg (2.6lbs)

### Power

Frequency ..... 47 to 63 Hz @ <50V  
 Operating Voltage ..... 100 - 240 Vac +/- 10%



APS5000 Front Panel



APS5000 Rear Panel



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