# AUC5000 & APS5000

## Block Upconverter & Protection Switch

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.
The APS5000 is a compact ½ rack width 1RU SHF Protection Switch covering C through to DBS TX Bands. The APS5000 is typically, but not exclusively, used with a pair of AUC58xx Advent BUCs to provide 1:1 protection. This is normally under control from a ASC5000 System Controller although the APS can function "stand-alone".


## Key Features AUC5000

- The AUC5800 is a high performance BUC 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

## Key Features APS5000

- Provides hot-standby switching of a pair of SHF output signals from AUC5800, or other BUC
- Integral Phase Shifter for Phase-Combined applications
- Forward power monitor
- Status inputs from BUCs and HPAs

# AUC5000

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

## HPA Control / Status / DC Input
- Weatherproof multi-pin

## 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

## 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 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

## 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

## 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)

# 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
  - Switch drives
  - Status inputs

## Power
- 18Vdc from AUC5800 or via external 12-18 VDC

## 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)

### Frequency
- 47 to 63 Hz @ <50W

### Operating Voltage
- 100 - 240 Vac +/- 10%