

# **MODEL 828 & 838 Avion**

## **80 cm Manual & Motorized Flyaway Antennas**



- ***Ships in 1 Ruggedized All Weather IATA Compliant Case***
- ***Intelsat and Eutelsat Compliant***
- ***Multi-Band Configurations***
- ***6 Segment Carbon Fiber Precision Reflector***
- ***Compact Pedestal featuring easy point and peak control***
- ***High Gain / Low Cross Pol Design***
- ***Motorized Compact Controller using DVB Receiver or Modem for Automatic Acquisition***

The Sat-Lite Technologies Model 828 and 838 Avion manual and motorized flyaway antennas are highly portable and designed to meet IATA weight and dimension requirements for checked baggage. The antennas feature a 6 piece segmented carbon fiber composite reflector. Assembly time is less than 15 minutes. The elevation-over-azimuth pedestal provides excellent stiffness characteristics and convenience for the user when pointing and peaking on a satellite. The antennas are designed to meet international performance specifications for multiple applications. X, Ku, and Ka Band feed and packaging configurations are available.



| <i>Electrical Specifications</i> | <b>2 Port X Band Circular</b> |             | <b>2 Port Cross Pol Ku Band Linear</b> |               | <b>2 Port Cross Pol Ka Band Circular Polarization</b> |             |             |
|----------------------------------|-------------------------------|-------------|--|---------------|---|-------------|-------------|
|                                  | <b>Rx</b>                     | <b>Tx</b>   | <b>Rx</b>                              | <b>Tx</b>     | <b>Rx</b>   | <b>Tx</b>   |             |
|                                  | Frequency (GHz)               | 7.25 - 7.75 | 7.9 - 8.4                              | 10.95 - 12.75 | 13.75 - 14.5  | 19.2 - 21.2 | 29.0 - 31.0 |
| Gain (Midband, dBi) (80 cm)      | 33.5                          | 34.3        | 37.7                                   | 39.2          | 42.0  | 45.2        |             |
| Typ. Noise Temperature (°K)      |                               |             |  |               |   |             |             |
|                                  | 10 deg El                     | 80          |  | 79            |   | 155         |             |
|                                  | 20 deg El                     | 72          |  | 70            |   | 120         |             |
| Axial Ratio                      | 1.21 dB                       | 2.0 dB      |  |               | 1.5 dB  | 1.0 dB      |             |
| Cross Pol (std)                  |                               |             |  |               |   |             |             |
|                                  | On Axis                       | -23 dB      | -18.7 dB                               | -35 dB        | -35 dB  | -21.3 dB    | -24.8 dB    |
|                                  | in 1 dB BW                    | -23 dB      | -18.7 dB                               | -35 dB        | -35 dB  | -21.3 dB    | -24.8 dB    |
| Sidelobe Compliances             | 188-164A                      |             | ITU 580-6                              |               | 188-164A  |             |             |
| VSWR                             | 1.30:1                        | 1.30:1      | 1.30:1                                 | 1.30:1        | 1.30:1  | 1.30:1      |             |
| Isolation                        |                               |             |  |               |   |             |             |
| Tx/Rx                            | -110 dB                       | 0 dBm input | -85 dB                                 | 0 dBm input   | -85 dB  | 0 dBm input |             |
| Rx/Tx                            | 0 dBm input                   | -110 dB     | 0 dBm input                            | -35 dB        | 0 dBm input   | -70 dB      |             |

| <i>Mechanical / Environmental Specifications</i> |   |
|--|---|
| Reflector  | 80 cm Carbon Fiber                          |
| Reflector Configuration                          | 80 cm - 6 Piece                             |
| Antenna Travel                                   |   |
| Azimuth  | +/-180° continuous with fine adjust         |
| Elevation  | 5 - 90° of reflector bore sight             |
| Polarization                                     | ± 90°                                       |
| Packaging (Pelican Air 1637)                     | 26.6"x 20.6"x 14.9" (67.6 x 52.5 x 37.8 cm) |
| Weight (less BUC and Satfinder)                  |   |
| Models 828 - 80 cm                               | 36 lbs (16.4 kg)                            |
| Models 838 - 80 cm (with controller)             | 47 lbs (21.4 kg)                            |
| Backpack option                                  | available                                   |
| Autolocate Controller                            | 24 VDC Input Power (100 W)                  |
|  | Locates on DVB or interfaces to CFE Modem   |
|  | Includes built in GPS and Compass           |
| Temperature                                      |   |
| Operational                                      | -30 to 60°C (-22 - 140°F)                   |
| Survival   | -40 to 70°C (-40 - 158°F)                   |
| Winds  |   |
| Operational (anchored)                           | 30 mph Gusting to 40 mph ( 48 kph G 64 kph) |
| Survival (anchored, petals removed)              | 75 mph                                      |