

ADVENT NewSwift HD Motorised Antenna



High Performance Compact Integrated Solution

Overview

The NewSwift HD design allows for up to two 400 watt phase combined HPA's or two 750 watt HPA's in a redundant configuration. Allows for integration of two 5000 series upconverters and APS5000 (Protection Switch) within the NewSwift HD new aero-dynamic enclosure. The HPA's are as close as possible to the feed, thereby minimising the waveguide loss and maximising the available EIRP.

The fully weatherproof RF equipment is further protected from the weather by a removable cover thus ensuring reliable operation whatever the environmental conditions.

The entire aero-dynamic enclosure housing the RF equipment rotates with the azimuth axis eliminating the need for an expensive and lossy waveguide rotary joint.

Features

- Available with 1.5m or 1.8m reflector
- Bands available via feed cartridge exchange
 - 1.5m - C, X, Ku, DBS & Ka
 - 1.8m - C, X, Ku, DBS & Ka
- Full 3 axis control includes 360° azimuth range
- GPS based auto satellite acquisition package available
- Integral Satellite Database which automatically provides Antenna Pointing Data
- Tracking option with beacon receiver
- Full remote control
- Eutelsat, Intelsat and Arabsat compliant
- All models are approved for use with the majority of Satellite Providers
- Type - offset fed
- Configuration - prime focus
- Mount - elevation over azimuth
- Software upgradeable to auto-acquire (ACU5216) and integral ASI Demod
- Option for multi-band capability by cartridge exchange
- Available in any custom colour scheme

Specifications

Meets The Requirements of

ITU-R S.580-6
ITU-R S.465-5
INTELSAT IEES-601
EUTELSAT EESS-502
MIL STD 188-164A
STANAG 4484
(as applicable)

Antenna Position Control

Linear Polarisation: Full 3 axis motor control with manual override mechanism

Circular Polarisation: Full 2 axis motor control with manual override mechanism

Azimuth Adjustment

360°

Elevation Adjustment

6° to 91°

Polarisation Adjustment

Linear: +/- 90°
Circular: None

Antenna Control Unit

- Compact half width rack unit
- Serial remote interface
- 'One touch' stow & deploy
- Fast / med / slow motor drive system
- Simultaneous positional feedback of Az / El / Pol axis with true elevation reading from calibrated inclinometer



Options

- GPS based auto-acquire upgrade package
- Rotary joint for azimuth axis
- Co-polar receive facility for Ku Band

Humidity

0 to 100% RH

1.5M NEWSWIFT

Frequency

C: Tx 5.85 to 6.65 GHz
..... Rx 3.4 to 4.2 GHz
..... (option Tx 6.725 to 7.025 GHz,
..... Rx 4.5 to 4.8 GHz)
X: Tx 7.9 to 8.4 GHz
..... Rx 7.25 to 7.75 GHz
Ku: Tx 13.75 to 14.5 GHz
..... (option from 12.75 GHz)
..... Rx 10.70 to 12.75 GHz
DBS: Tx 17.3 to 18.1 GHz
..... (option to 18.4 GHz)
..... Rx 10.70 to 12.75 GHz
Ka: Tx 27.5 to 30.0 GHz
..... Rx 18.2 to 20.2 GHz
..... (option Tx 30 to 31 GHz,
..... Rx 20.2 to 21.2 GHz)

Gain

C: Tx 38 dBi typ @ 6.25 GHz
..... Rx 34 dBi typ @ 3.95 GHz
X: Tx 40.3 dBi typ @ 8.15 GHz
..... Rx 39.5 dBi typ @ 7.4 GHz
Ku: Tx 45.2 dBi typ @ 14.25 GHz
..... Rx 43.1 dBi typ @ 11.2 GHz
Ka: Tx 51.3 dBi typ @ 28.75 GHz
..... Rx 48 dBi typ @ 19.7 GHz

G/T

C: 3.95 GHz = 13.5 dBk
..... (assumes LNB 60 dB Gain 0.5 dB NF)
X: 7.40 GHz = 17.3 dBk
..... (assumes LNA 50 dB Gain 0.8 dB NF)
Ku: 11.20 GHz = 21.4 dBk
..... (assumes LNB 60 dB gain 0.7 dB NF)
DBS: 11.20 GHz = 21.4 dBk
..... (assumes LNB 60 dB Gain 0.7 dB NF)
Ka: 19.70 GHz = 24.0 dBk
..... (assumes LNB 55 dB Gain 1.6 dB NF)

Cross Polarisation Isolation

C Band Linear -30 dB Tx/Rx
C and X Band Circular
..... -30 dB Tx (axial ratio 1.07)
..... 20 dB Rx (axial ratio 1.22)
Ku and DBS Band Linear -35 dB
Ka Band Consult factory
..... (all relative to co-polar gain within 1 dB
..... contour)

Port to Port Isolation

C: Tx / Rx 40 dB (110 dB incl filter)
..... Rx / Tx 30 dB
X: Tx / Rx 20 dB (100 dB incl filter)
..... Rx / Tx 20 dB
Ku: Tx / Rx 40 dB (110 dB incl filter)
..... Rx / Tx 30 dB
DBS: Tx / Rx 40 dB (110 dB incl filter)
..... Rx / Tx 30 dB
Ka: Tx / Rx 35 dB (110 dB incl filter)
..... Rx / Tx 35 dB

Windspeed

Operational: 21 m/s (47 mph)
Degraded: 28 m/s (63 mph)
Survival: 50 m/s (112 mph)

Stowed Dimensions

Length: 2100mm (82.7 inches)
Width: 1500mm (59 inches)
Height: 560mm (22 inches)

Temperature

Operational: -20°C to +60°C
..... (-4°F to 140°F)
Transport: -40°C to +70°C
..... (-40°F to 158°F)

1.8M NEWSWIFT

Frequency

C: Tx 5.85 to 6.65 GHz
..... Rx 3.4 to 4.2 GHz
..... (option Tx 6.725 to 7.025 GHz,
..... Rx 4.5 to 4.8 GHz)
X: Tx 7.9 to 8.4 GHz
..... Rx 7.25 to 7.75 GHz
Ku: Tx 13.75 to 14.5 GHz
..... (option from 12.75 GHz)
..... Rx 10.70 to 12.75 GHz
DBS: Tx 17.3 to 18.1 GHz
..... (option to 18.4 GHz)
..... Rx 10.70 to 12.75 GHz
Ka: Tx 27.5 to 30.0 GHz
..... Rx 18.2 to 20.2 GHz
..... (option Tx 30.0 to 31.0 GHz,
..... Rx 20.2 to 21.2 GHz)

Gain

C: Tx 39.6 dBi typ @ 6.25 GHz
..... Rx 35.6 dBi typ @ 3.95 GHz
X: Tx 41.9 dBi typ @ 8.15 GHz
..... Rx 41.1 dBi typ @ 7.4 GHz
Ku: Tx 46.8 dBi typ @ 14.25 GHz
..... Rx 44.7 dBi typ @ 11.2 GHz
DBS: Tx 48.7 dBi typ @ 17.85 GHz
..... Rx 44.7 dBi typ @ 11.2 GHz
Ka: Tx 52.9 dBi typ @ 28.75 GHz
..... Rx 49.6 dBi typ @ 19.7 GHz

G/T

C: 3.95 GHz = 15.0 dBk
..... (assumes LNB 60 dB gain 0.5 dB NF)
X: 7.40 GHz = 18.8 dBk
..... (assumes LNA 50 dB Gain 0.8 dB NF)
Ku: 11.20 GHz = 23.0 dBk
..... (assumes LNB 60 dB gain 0.7 dB NF)
DBS: 11.20 GHz = 23.0 dBk
..... (assumes LNB 60 dB Gain 0.7 dB NF)
Ka: 19.70 GHz = 25.6 dBk
..... (assumes LNB 55 dB Gain 1.6 dB NF)

Cross Polarisation Isolation

C Band Linear -30 dB Tx / Rx
C and X Band Circular
..... -30 dB Tx (axial ratio 1.07)
..... 20 dB Rx (axial ratio 1.22)
Ku and DBS Band Linear -35 dB
Ka Band Consult factory
..... (all relative to co-polar gain within 1 dB
..... contour)

Port to Port Isolation

C: Tx / Rx 40 dB (110 dB incl filter)
..... Rx / Tx 30 dB
X: Tx / Rx 20 dB (100 dB incl filter)
..... Rx / Tx 20 dB
Ku: Tx / Rx 40 dB (110 dB incl filter)
..... Rx / Tx 30 dB
DBS: Tx / Rx 40 dB (110 dB incl filter)
..... Rx / Tx 30 dB
Ka: Tx / Rx 35 dB (110 dB incl filter)
..... Rx / Tx 35 dB

Windspeed

Operational: 17 m/s (38 mph)
Degraded: 23 m/s (52 mph)
Survival: 40 m/s (90 mph)

Stowed Dimensions

Length: 2400mm (94.5 inches)
Width: 1800mm (70.9 inches)
Height: 610mm (24 inches)

Temperature

Operational: -20°C to +60°C
..... (-4°F to 140°F)
Transport: -40°C to +70°C
..... (-40°F to 158°F)

Shown with 5000 Series Electronics Configured for I:I Redundancy



VISLINK

www.vislink.com