

NewSwift HD

Motorised Antenna



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 upgradable to auto-acquire (ACU5216) and integral ASI Demod
- Option for multi-band capability by cartridge exchange
- Available in any custom colour scheme



High performance compact integrated solution

SPECIFICATIONS

GENERAL

Meets The Requirements of

- ITU-R S.580-6
- ITU-R S.465-5
- INTELSAT IESS-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

- 210cm l x 150cm w x 56cm h [82.7" x 59" x 22"]

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)
- 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)

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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

- 240cm l x 180cm w x 61cm h [94.5" x 70.9" x 24"]

TEMPERATURE

Operational:

- -20°C to +60°C [-4°F to 140°F]

Transport:

- -40°C to +70°C [-40°F to 158°F]