



NewSwift HD

Motorized 1.5m & 1.8m Antenna

The NewSwift HD design allows for up to two 750 watt HPAs in a redundant configuration. Allows for integration of two 5000 series upconverters and APS5000 (Protection Switch) within the NewSwift HD aerodynamic enclosure. The HPAs are as close as possible to the feed, thereby minimizing the waveguide loss and maximizing 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.
- C, X, Ku DBS, Ka and inverted Ka bands available via feed cartridge exchange.
- Tracking option with beacon receiver.
- Eutelsat, Intelsat and Arabsat compliant.
- All models fully comply with the requirements of the majority of Satellite Operators.
- Type - offset fed.
- Configuration - prime focus.
- Mount - elevation over azimuth.
- Software upgradable to auto-acquire (ACU5216) and integral ASI Demod for satellite configuration.
- Option for multi-band capability by cartridge exchange.
- Available in any custom colour scheme.

Key Features

- Full 3-axis control includes +/-185° azimuth range
- GPS-based auto satellite acquisition packages available
- Integral Satellite Database which automatically provides Antenna Pointing Data
- Full remote control

Typical Applications

- Event Coverage
- Sports Coverage
- Newsgathering
- Secure SATCOM



General:

- Meets The Requirements of:
 - ITU-R S.580-6
 - ITU-R S.465-5
 - EUTELSAT EESS-502
 - INTELSAT IESS-601
 - MIL STD 188-164B
 - STANAG 4484
 - (as applicable)

Antenna Position Control:

- Linear Polarization: Full 3 axis motor control with manual override mechanism

1.5M NEWSWIFT

Frequency

- C:**
- Tx 5.85 to 6.65 GHz
 - Rx 3.4 to 4.2 GHz
 - (Optional 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

Inverted Ka:

- Tx 18.1 to 18.4 GHz
- Rx 21.4 to 21.7 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

DBS:

- Tx 48.7 dBi typ @ 17.85 GHz
- Rx 44.7 dBi typ @ 11.2 GHz

Ka:

- Tx 51.3 dBi typ @ 28.75 GHz
- Rx 48 dBi typ @ 19.7 GHz

Inverted Ka:

- Tx 47.2 dBi typ @ 18.25 GHz
- Rx 48.7 dBi typ @ 21.55 GHz

G/T

- C:**
- 3.95 GHz = 13.5 dBK Ref: 2 port Feed (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)

Azimuth Adjustment:

- +/- 185°

Elevation Adjustment:

- 6° to 91°

Polarization Adjustment:

- Linear: +/- 90°
- Circular: None

- Circular Polarization: Full 2 axis motor control with manual override mechanism

Ka:

- 19.70 GHz = 24.0 dBK (assumes LNB 55 dB Gain 1.6 dB NF)

Inverted Ka:

- 21.55 GHz = 25.1 dBK (assumes LNB 55 dB Gain 1.5 dB NF)

Cross Polarization 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)

Inverted Ka (Linear):

- -30dB

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

Inverted Ka:

- Tx / Rx 30 dB (110 dB incl filter)
- Rx / Tx 30 dB

Wind Speed

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 [82.7" x 59" x 22"]

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

Temperature

Operational:

- -20°C to +60°C [-4°F to 140°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

Inverted Ka:

- Tx 18.1 to 18.4 GHz
- Rx 21.4 to 21.7 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

Inverted Ka:

- Tx 48.8 dBi typ @ 18.25 GHz
- Rx 50.2 dBi typ @ 21.55 GHz

G/T

- C:**
- 3.95 GHz = 15.0 dBK Ref: 2 port Feed (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)

Options:

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

Humidity:

- 0 to 100% RH

Transport:

- -40°C to +70°C [-40°F to 158°F]

Ka:

- 19.70 GHz = 25.6 dBK (assumes LNB 55 dB Gain 1.6 dB NF)

Inverted Ka:

- 21.55 GHz = 26.6 dBK (assumes LNB 55 dB Gain 1.5 dB NF)

Cross Polarization 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)

Inverted Ka (Linear):

- -30dB

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

Inverted Ka:

- Tx / Rx 30 dB (110 dB incl filter)
- Rx / Tx 30 dB

Wind Speed

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"]