

NewSwift CF

Motorised Antenna

VISLINK

OVERVIEW

The NewSwift CF antenna is a highly compact integrated satellite terminal designed for rapid deployment.

The NewSwift CF design allows for two HPAs, variable power combiner, redundancy switching and two upconverters to be integrated into the antenna assembly close 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.

FEATURES

- 1.2m, 1.5m or 1.8m reflector
- Bands available:
 - 1.2m - X, Ku, DBS & Ka
 - 1.5m - C, X, Ku, DBS & Ka
 - 1.8m - C, X, Ku, DBS & Ka
- Full 3 axis control includes 360° azimuth range
- Elevation Adjustment - 6° to 91°
- GPS based auto satellite acquisition packages available
- 800 City database controller
- Tracking option with beacon receiver
- Full remote control
- Many models are Eutelsat and/or Intelsat type approved
- 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

QUALIFIED REQUIREMENTS

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



High Performance
Compact Integrated
Solution

OPTIONS

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

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
- 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



Two HPAs located within
the antenna assembly

SPECIFICATIONS

1.2M NEWSWIFT

FREQUENCY

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 20 to 31 GHz)
- Rx 20.2 to 21.2 GHz

GAIN

X:

- Tx 38.4 dBi typ @ 8.15 GHz
- Rx 37.6 dBi typ @ 7.4 GHz

Ku:

- Tx 43.3 dBi typ @ 14.25 GHz
- Rx 41.2 dBi typ @ 11.2 GHz

DBS:

- Tx 45.2 dBi typ @ 17.85 GHz
- Rx 41.2 dBi typ @ 11.2 GHz

Ka:

- Tx 49.4 dBi typ @ 28.75 GHz
- Rx 46.1 dBi typ @ 19.7 GHz

G/T

X:

- 7.40 GHz = 15.3 dBK (Assumes LNA 50 dB Gain 0.8 dB NF)

Ku:

- 11.20 GHz = 19.4 dBK (Assumes LNB 60 dB gain 0.7 dB NF)

DBS:

- 11.20 GHz = 19.4 dBK (LNB 60 dB Gain 0.7 dB NF)

Ka:

- 19.70 GHz = 22.0 dBK (Assumes LNB 55 dB Gain 1.6 dB NF)

CROSS POLARISATION ISOLATION

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

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

WEIGHTS

Antenna

- 95Kg (209lbs)

TEMPERATURE

Operational:

- -20°C to +60°C (-4°F to 140°F)

Transport:

- -40°C to +70°C (-40°F to 158°F)

WINDSPEED

Operational:

- 21 m/s (47 mph)
- Degraded 28 m/s (63 mph)

Survival:

- 50 m/s (112 mph)

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)

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 20 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

DBS:

- Tx 47.2 dBi typ @ 17.85 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 LNB 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 dBK (Assumes LNB 55 dB Gain 1.6 dB NF)

CROSS POLARISATION ISOLATION

C Band Linear

- -30 dB Tx/Rx

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

WEIGHTS

Antenna

- 105Kg (231lbs)

TEMPERATURE

Operational:

- -20°C to +60°C (-4°F to 140°F)

Transport:

- -40°C to +70°C (-40°F to 158°F)

WINDSPEED

Operational:

- 21 m/s (47 mph)

Degraded

- 28 m/s (63 mph)

Survival:

- 50 m/s (112 mph)

Humidity

- 0 to 100% RH

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)

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 20 to 31 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 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

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

WEIGHTS

- Antenna 115Kg (253lbs)

TEMPERATURE

Operational:

- -20°C to +60°C (-4°F to 140°F)

Transport:

- -40°C to +70°C (-40°F to 158°F)

WINDSPEED

Operational:

- 17 m/s (38 mph)

Degraded

- 23 m/s (52 mph)

Survival:

- 40 m/s (90 mph)

HUMIDITY

- 0 to 100% RH