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# NEWSWIFT
## Motorised Antenna

Available in:
C, X, Ku, DBS & Ka Band

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

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# Advent NewSwift
# HIGH PERFORMANCE COMPACT INTEGRATED SOLUTION

**KEY FEATURES**

- Available with 0.9m, 1.2m, 1.5m or 1.8m reflector
- Bands available:
  - 0.9m - X, Ku, DBS & Ka
  - 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
- GPS based auto satellite acquisition package avaliable
- 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 majority of Satellite Providers
- Type - offset fed
- Configuration - prime focus
- Mount - elevation over azimuth
- Software upgradeable to auto-aquire (ACU5216) and integral ASI Demod
- Option for multi-band capability by cartridge exchange
- Available in any custom colour scheme

The NewSwift 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.

## GENERAL NEWSWIFT SPECIFICATION

**Meets 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 (ACU5000 Series)**
- 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 satellite acquisition package
- Rotary joint for azimuth axis
- Co-polar receive facility for Ku band

## SPECIFICATION 0.9M 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 10.7 to 12.75 GHz
DBS: Tx 17.3 to 18.1 GHz
(option to 18.4 GHz)
Rx 10.7 to 12.75 GHz
Ka: Tx 27.5 to 30 GHz
Rx 18.2 to 20.2 GHz
(option Tx 30 to 31 GHz,
Rx 20.2 to 21.2 GHz)

**Gain**

X: Tx 35.9 dBi typ. @ 8.15 GHz
Rx 35.1 dbi typ. @ 7.4 GHz
Ku: Tx 40.8 dBi typ. @ 14.25 GHz
Rx 38.7 dBi typ. @ 11.2 GHz
DBS: Tx 42.7 dBi typ. @ 17.85 GHz
Rx 38.7 dBi typ. @ 11.2 GHz
Ka: Tx 46.9 dBi typ. @ 28.75 GHz
Rx 43.6 dBi typ. @ 19.7 GHz

**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)

**G/T**

X: 7.40 GHz = 12.8 dBK
(assumes LNB 60 dB Gain 0.8 dB NF)
Ku: 11.20 GHz = 17.1 dBK
(assumes LNB 60 dB Gain 0.7 dB NF)
DBS: 11.20 GHz = 17.1 dBK
(assumes LNB 60 dB Gain 0.7 dB NF)
Ka: 19.70 GHz = 19.5 dBK
(assumes LNB 55 dB Gain 1.6 dB NF)

**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 and Wind Loads**

Antenna 85 Kg

**Temperature**

Operational -20˚C to +60˚C
Transport -40˚C to +70˚C

**Windspeed**

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

**Humidity** 0 to 100% RH


## SPECIFICATION 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 10.7 to 12.75 GHz
DBS: Tx 17.3 to 18.1 GHz
(option to 18.4 GHz)
Rx 10.7 GHz to 12.75 GHz
Ka: Tx 27.5 to 30 GHz
Rx 18.2 to 20.2 GHz
(option Tx 30 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

**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)

**G/T**

X: 7.40 GHz = 15.3dBK
(assumes LNA 50 dB Gain 0.8 dB NF)
Ku: 11.20 GHz = 19.4dBK
(assumes LNB 60 dB Gain 0.7 dB NF)
DBS: 11.20 GHz = 19.4dBK
(assumes LNB 60 dB Gain 0.7 dB NF)
Ka: 19.70 GHz = 22.0dBK
(assumes LNB 55 dB Gain 1.6 dB NF)

**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 and Wind Loads**

Antenna 90 Kg

**Temperature**

Operational -20˚C to +60˚C
Transport -40˚C to +70˚C

**Windspeed**

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

**Humidity** 0 to 100% RH

## SPECIFICATION 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 10.7 to 12.75 GHz

DBS: Tx 17.3 to 18.1 GHz
(option to 18.4 GHz)
Rx 10.7 to 12.75 GHz

Ka: Tx 27.5 to 30 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

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

**Cross Polarisation**

**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)

**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)

**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 and Wind Loads**

Antenna 100 Kg

**Temperature**

Operational -20˚C to +60˚C
Transport -40˚C to +70˚C

**Windspeed**

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

**Humidity** 0 to 100% RH

## SPECFICATION 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 10.7 to 12.75 GHz

DBS: Tx 17.3 to 18.1 GHz
(option to 18.4 GHz)
Rx 10.7 to 12.75 GHz)

Ka: Tx 27.5 to 30 GHz
Rx 18.2 to 20.2 GHz
(option Tx 30 to 31 GHz, Rx 20.2
to 21.2 GHz)

**Gain**

C: Tx 39.6 dBi typ. @ 6.25GHz
Rx 35.6 dBi typ. @ 3.95GHz

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

**Cross Polarisation**

**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)

**G/T**

C: 3.95GHz = 15.0dBK
(assumes LNB 60 dB Gain 0.5 dB NF)

X: 7.40GHz = 18.8dBK
(assumes LNA 50 dB Gain 0.8 dB NF)

Ku: 11.20GHz = 23.0dBK
(assumes LNB 60 dB Gain 0.7 dB NF)

DBS: 11.20GHz = 23.0dBK
(assumes LNB 60 db Gain 0.7 dB NF)

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

**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 and Wind Loads**

Antenna 105 Kg

**Temperature**

Operational -20˚C to +60˚C
Transport -40˚C to +70˚C

**Windspeed**

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

**Humidity** 0 to100% RH

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