ADVENT
COMMUNICATIONS

ADVENT FLYDRIVE
Motorised Flyaway Antenna

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

The FlyDrive antenna is a compact lightweight, motorised satellite terminal designed for rapid deployment. The antenna can be used either as a traditional flyaway or as a semi-permanent vehicle mounted terminal that can be fitted to most roof racks using standard fittings.

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Advent FlyDrive
HIGH PERFORMANCE SOLUTION FOR RAPID RESPONSE

KEY FEATURES

- Available with 1.2m or 1.5m reflector
- Bands available:
  - 1.2m - X, Ku, DBS & Ka
  - 1.5m - C, X, Ku, DBS & Ka
- IATA weight compliant:
  - 1.2m - two cases
  - 1.5m - three cases
- Satellite auto acquistion & tracking packages available
- Easily deployed by a single user
- Can be used as a flyaway or semi-permanent vehicle mounted antenna system
- Drive control housed within main antenna case
- Combines with half rack 5000 series system electronics
- Software upgradeable for Auto-Acquire (ACU5216) and integral ASI Demod
- Option for multi-band capability by feed cartridge exchange

The Advent FlyDrive Antenna is the newest in the range of antenna solutions on offer. The FlyDrive is designed to function as a traditional flyaway as well as a semi-permanent vehicle mounted system. The FlyDrive draws on technology and design innovations of the well known and field proven Mantis Flyaway and NewSwift antennas.

Advent has made its FlyDrive as easy as possible to operate. It offers full 3-axis motorised control with manual backup, satellite auto acquisition and tracking, with GPS if required. The FlyDrive can be fitted easily to most vehicle roof racks using standard fittings.

The FlyDrive is easily transported in IATA weight compliant flight cases so that it can be taken on a commercial airline, for quick deployment by a single user anywhere in the world.

Advent's FlyDrive is fully adjustable, to 360º azimuth, elevation 6º to 95º and polarisation adjustment +/- 95º. The drive control unit (DCU5000) is housed within the main antenna case, which makes this antenna very compact for operation in the field. The electronics for Advent FlyDrive's are available in single thread, power combined or 1:1 redundant configurations. Advent's 5000 range of electronics package compliments the FlyDrive perfectly. The 5000 series are half the width of a standard 19" rack mounted unit, a major advantage where space and weight are critical. For further information on the 5000 series of electronics please see separate datasheet.

GENERAL FLYDRIVE SPECIFICATION

Configuration
Offset fed

Mount
Elevation over azimuth

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
SIMON BOLIVARSAT
(as applicable)

Antenna Position Control
Full 3 axis motor control with manual override mechanism

Azimuth Adjustment
+/- 200˚

Elevation Adjustment
6˚ to 92˚

Polarisation Adjustment
+/- 95˚

Antenna Control Unit
• Serial remote interface

• 'One touch' stow & deploy

• Fast / med / slow motor drive system

• Simultaneous positional feedback of Azimuth / Elevation / Polarisation axis with true elevation reading from calibrated inclinometer

• GPS based auto satellite acquisition package

Temperature

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

Humidty
0 to 100% RH

Options
• GPS based auto-acquire upgrade package

SPECIFICATION FLYDRIVE 120

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 (option 30.0 to 31.0 GHz) Rx 18.2 to 21.2 GHz

Tx Gain

X:	Tx 38.4 dBi typ. @ 8.15 GHz
Ku:	Tx 43.3 dbi typ. @ 14.25GHz
DBS:	Tx 45.2 dBi typ. @ 17.85GHz
Ka:	Tx 49.4 dBi typ. @ 28.75GHz

G/T

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

SPECIFICATION FLYDRIVE 150

Frequency

C:	Tx 5.85 to 6.65 GHz Rx 3.4 to 4.2GHz
or	Tx 6.725 to 7.025GHz Rx 4.5 to 4.8GHz
X:	Tx 7.9 to 8.4GHz 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 (option 30.0 to 31.0 GHz) Rx 18.2 to 21.2 GHz

Tx Gain

C:	Tx 38.0 dBi typ. @ 6.25 GHz
X:	Tx 40.3 dBi typ. @ 8.15 GHz
Ku:	Tx 45.2 dbi typ. @ 14.25GHz
DBS:	Tx 47.2 dBi typ. @ 17.85 GHz
Ka:	Tx 51.3 dBi typ. @ 28.75 GHz

G/T

C:	3.95 GHz = 13.5 dBK (assumes LNA 50 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 LNA 60 dB Gain 0.7 dB NF)
DBS:	11.20 GHz = 21.4 dBK (assumes LNA 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

WEIGHTS / DIMENSIONS / WIND SPEEDS

Dimensions / Weights
FlyDrive 120

Case 1: 944 x 540 x 358 mm	31.5 Kg
Case 2: 990 x 580 x 400 mm	31.5 Kg

FlyDrive 150

Case 1: 944 x 540 x 358 mm	31.5 Kg
Case 2: 990 x 580 x 400 mm	26 Kg
Case 3: 990 x 580 x 250 mm	29.5 Kg

Windspeeds

Operational	20 m/s (45 mph)
Degraded Roofrack	25 m/s (56 mph)
Degraded Flyaway	30 m/s (67 mph)
Survivial	50 m/s (112 mph)

Head Office:
Nashleigh Hill, Chesham, Buckinghamshire HP5 3HE, UK Telephone: +44 1494 774400 Facsimile: +44 1494 791127 sales@adventcomms.com

Asia Office:
6 Changi North Street 1, Spanners Building, Singapore 498825 Telephone: +65 65465178 Facsimile: +65 65429068 sales@adventcomms.com

Middle East Office:
L180205, Second Floor, Tower 18, JAFZA Views, PO Box 262574, Jebel Ali Free Zone, Dubai, UAE Telephone: +971 4 886 5226 Facsimile: +971 4 886 5227 sales@adventcomms.com

CML Projects Office:
Edificio Belveder, Suite 42B, Piso 4, Avenida San Juan Bosco, Altamira, Caracas 1060, Venezuela Telephone: +58 414 115 0422 Facsimile: +58 212 265 0414 sales@cml-projects.co.uk

USA Broadcast Sales:
101 Billerica Avenue, Building #6, North Billerica, MA 10862-1256, USA Telephone: +1 978 671 5700 Facsimile: +1 978 671 5800 sales@mrcbroadcast.com

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These specifications are accurate at the time of issue but may be subject to change and will not form part of any contract.