PHASE | VISLINK:
Central Receivers

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The Vislink L2194 Receiver is a high-performing, feature-rich SD/HD diversity receiver able to support 1080P/60 decoding for high value wireless camera and central receive applications. Utilizing Vislink’s core technologies, the receiver combines leading-edge MaxRC digital signal processing, with highly configurable FPGA circuitry, providing an abundance of user selectable features, all in one streamlined half width 1 RU rack-mount chassis.

The L2194 incorporates the latest decoding developments giving exceptional performance over a wide range of SD and HD formats. Fully license upgradeable the L2194 will adapt to whatever the requirement

With 1080P 60 / 50 as well as 1080i & 720P decoding along with Vislink’s proprietary LMS-T and Deep-Interleaving demodulation options that will further enhance the already superior operating performance.

Key Features

- Direct conversion RF architecture for exceptional adjacent channel performance and excellent sensitivity
- DVB-T: QPSK, 16QAM & 64QAM; 6, 7, & 8MHz
- LMS-T: QPSK & 16QAM; 10 & 20MHz
- Variable bandwidth LMS-T: 3, 4, 5, 6, 7, 8, 10, 12, 14, 16, 20 & 24MHz
- Diversity chaining ASI input for packet diversity
- Deep interleaving for DVB-T & LMS-T to give exceptional dropout tolerance (*)
- MPEG-2 4:2:0 & 4:2:2 SD & HD generic
- MPEG-4 AVC (H.264) Main Profile, High-profile and High 4:2:2 profile, SD & HD decoding
- ASI input and output
- Web browser and SNMP control
- Dual SDI / HD-SDI / CVBS outputs
- Field upgradeable

(*) with LINK Transmitters
**Demodulator**
- DVB-T: QPSK, 16QAM & 64QAM; 6, 7, & 8MHz
- LMS-T: QPSK & 16QAM; 10 & 20MHz
- LMS-T: Variable Bandwidth: 2, 3, 4, 5, 6, 7, 8, 10, 12, 14, 16, 20, & 24MHz
- Deep interleaving support
-ASI Packet Switching

**Inputs**
- 4 x UHF inputs, 70-860MHz, switchable LNBF power.
- ASI input (ISO/IEC 13818-2 188 bytes)
- Frame Lock input (black/burst or HD tri-level)
- Camera Control / Mpeg data channel interface on 6-pin Lemo
- 10/100 Ethernet connection for Video-over-IP connections
- 10/100 Ethernet connection for IP-based unit control
- USB connector for code updates and profile transfers

**Descrambling**
- BISS-1 & E

**Outputs**
- 2 x Video outputs: configured (HD)SDI and down-converted confidence quality composite
- Up to 4 embedded audio outputs
- ASI output (ISO/IEC 13818-2 188 bytes)
- Audio output on two 3-pin XLRs (channel 1) and 5-pin Lemo (channel 2)

**Physical**
- 1U Height, half rack width
- 210mm [8.3’’] x 350mm [13.8’’]
- Deep (excluding connectors)
- Weight: 1.2kg/2.6 lbs. (approximate)

**Power**
- 100 to 240V; 75W (approximate, depending on configuration)

**Environmental**
- Temperature (operating) 0˚ to 50˚C [32˚ to 122˚F]
- Humidity (non-condensing) 95%

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**OPTIONS – BASE UNIT**

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L2174
Multi-Format Receiver & Decoder

The L2174 is a 1 RU rack mount chassis demodulator decoder specifically targeted at compact wireless camera & microwave link use. Its multiple inputs, 4 UHF input RF with Max Ratio Combining and proprietary LMST, ASI (with packet switching) and IP make this a versatile receiver option. The multifunction decoder supports the low delay transmitters and offers generic decoding in both H.264 and MPEG-2.

Key Features
- One box compact and lightweight solution
- Up to 4 UHF input RF with Max Ratio Combining
- SD and HD available at 720p and 1080i
- Capability to support MPEG 2 and MPEG4/H.264 decoding
- Available for DVB-T COFDM or LMS-T

Typical Applications
- Event Coverage
- News gathering
- Sports Coverage
### RF Parameters

- **Frequency bands**
  - 70 Mhz - 8.36 Ghz
- **Frequency selection**
  - Up to 16 pre-set channels, or tuning in 1MHz steps via front panel control

### Demodulation
- **Modes**
  - QPSK, 16QAM, 64QAM
  - FEC: 1/2, 2/3, 3/4, 5/6, 7/8
  - Guard interval: 1/32, 1/16, 1/8, 1/4
  - LMS-T

### Bandwidth
- **DVB-T**
  - 6, 7, 8MHz
- **LMS-T**
  - 2.3, 4, 5, 6, 7, 8, 10, 12, 14, 16, 20 & 24 MHz

### Noise figure and receiver threshold
- **Noise figure**: 3dB typical, 4dB max.
- **Receiver threshold**: -92dBm to BER 10^-5 (nom. QPSK)

### Video and Audio Parameters

#### Decoding
- 4.2.0 and 4.2.2 broadcast quality video
- MPEG2
- H.264/MPEG4 and MPEG2, with automatic selection.

#### Video Formats
- 1080i: 1920 x 1080, 25 and 29.97Hz
- 720p: 1280 x 720, 50 and 59.94Hz
- 576i (PAL): 720 x 576

#### Latency
- Automatic selection down to sub 1 frame (20ms), transmitter
- Encoding profile dependant

#### Decryption
- BISS modes 1 and E (factory option)
- AES

#### Frameclock
- Genlock input, CVBS black/burst or tri-level sync

#### Audio outputs
- Digital: 2 stereo SDI embedded or AES/EBU
- Analogue: 4 x mono / 2 x stereo

#### Other Outputs
- Camera Control interface and alarm output on 6 pin Lemo
- Remote Control and MPEG data channel on 6-pin Lemo
- 10/100/1000 Ethernet connections for Video over IP connections
- 10/100 Ethernet connection for IP-based unit control.
- USB connector for code updates and profile transfers

#### Inputs
- Up to 4x UHF input RF with Max Ratio Combining
- ASI Input

### Flexibility and Power Supply

#### Monitoring
- Video picture monitoring on Full Colour TFT front panel display
- Comprehensive control and monitoring menu via front panel control
- Demodulator parameters

#### RF Received signal level (dBm and bar graph)
- C/N, MER, BER (dB and bar graph)
- Summary front panel alarm/comprehensive internal lock alarms

#### Remote control
- Comprehensive remote control and monitoring via Ethernet port / web browser interface.

#### Power Supply
- 100 - 240Vac, 75W (approximate, depending on configuration)

### Physical & Environment

#### Size and Weight
- 1U Height Half Rack width
- 210mm x 350mm Deep
- 1.2kg

#### Environmental
- Safe use: 0° to +50°C
- Humidity: 95% long term
MDR-Series
Portable Diversity Receive System

The MDR is Vislink’s latest Diversity Receive system, capable of receiving multiple RF/Video channels. Each receiver operates using two or four way maximum ratio combining diversity reception in addition to ASI packet switching, for optimum performance. The MDR is available with the choice of COFDM DVB-T or ISDB-T demodulation (with Time Interleaving FEC). Designed for receiving multiple wireless cameras or links on TV OB sites, multi-car car “on-board” or city centre central receive ENG applications, the MDR is Vislink most advanced receiver in its range.

Key Features

■ Equipped for 1 to 14 receivers according to customers requirements, with plug and play upgrade.
■ Capability to support MPEG 2 and MPEG4/H.264 decoding with auto selection
■ Available with the choice of COFDM DVB-T or ISDB-T demodulation (with Time Interleaving FEC).
■ The multi-channel system only occupies 3U rack space.
■ Comprehensive control and signal monitoring is provided by PC GUI via TCP/IP interface.

Typical Solutions

■ Event Coverage
■ Newsgathering
■ Sports Coverage
■ Airborne Operations
■ Maritime Reconnaissance
RF PARAMETERS
Frequency Bands
- 1.3 - 7GHz band
(Other frequency bands available on special order)
Tuning Range
- 400MHz standard bandwidth
Frequency Selection
- Via IP PC based remote control
Receiver Noise Factor
- 3dB (nom.)
Receive Antenna
- Compatible with all Vislink antennas including integral LNB
Demodulation
- COFDM DVB-T 2k, or
- ISDB-T with Time Interleaving (option)

Demodulation modes
- QPSK, 16QAM, 64QAM
- FEC: 1/2, 2/3, 3/4, 5/6, 7/8
- Guard interval: 1/32, 1/16, 1/8 and 1/4
Bandwidth
- 6, 7, 8MHz
(NOT available for ISDB-T)

Noise Figure and Receiver Threshold
- 92dBm to BER 10-5 (nom, QPSK)
Data Rate
- 4.98 to 31.7Mbit/s

VIDEO AND AUDIO PARAMETERS
Decoding (Factory options)
- SDI/HD MPEG2
- MPEG4/H.264
Video Outputs
- SDI SD SMPTE-259M (272M)
- SDI HD SMPTE-292M (299M)
- (option)
- Analogue CVBS
AS1 Output
- DVB ASI transport stream
Video Formats
- 1080p: 1920 x 1080 50
- 1080i: 1920 x 1080, 25 and 29.5Hz
- 720p: 1280 x 720, 50 and 59Hz
- 480i (NTSC): 720 x 480
- 576i (PAL): 720 x 576
Audio Output
- Digital: AES/EBU, plus SDI embedded
- Analogue: 4 x mono outputs
Data Output
- Auxiliary user data serial
- Optional TCP/IP multiplexing available
IF Frequencies
- 1st IF in the range
- 450-850 DVB-T
- 470-850 ISDB-T
Latency
- Dependant on associated TX encoding configuration

FLEXIBILITY
Monitoring (Rx Control) Windows PC
- Vista, 7 and 8
- Comprehensive remote control and monitoring via TCP/IP interface
- COFDM demodulator / MPEG 2 decoder parameters RF
- Received signal level, C/N, MER, BER, PER
- C/N, MER, BER (dB and bar graph)
Antenna to RX Separation
- Up to 50m UHF coax cable, or with Fibre Optic interfaces for extended distances.

POWER SUPPLY
- Universal supply accepts 95 - 130VAC and 190 - 260VAC

PHYSICAL & ENVIRONMENT
Size
- Multi channel unit: 3RU rack mount
Weight
- Multi channel unit: 9kg nominal depending on module count
Environmental
- To specification: -10°C to +45°C
- Altitude: 4500m
- Humidity: 95% long term

www.vislink.com • sales@vislink.com
MVL-HD series
2 or 4 way HD/SD diversity unit

The Vislink SD/HD Diversity unit offers the convenience of triax remoting, and is the perfect addition to any Vislink digital wireless camera, central receive or helicopter downlink system. Using “Maximum Ratio Combining” (MRC) the unit accepts signals from up to 4 antenna combinations to significantly enhance the demodulated performance. Video decoding may be MPEG2 and MPEG4/H264 with automatic detection (option).

Key Features
- The dual RF head unit, provides 2 way diversity reception using a single triax cable, (or 2 Dual RF heads provide 4 way reception).
- Available for COFDM DVB-T or ISDB-T (with time interleaving)
- Improved capacity for any given level of ruggedness through higher-order modulation (e.g. QPSK to 16QAM to 64QAM)
- Allows coverage from different zones of activity with seamless changeover
- Video picture monitoring capability using sunlight readable front panel colour TFT display screen.

Typical Applications
- Event Coverage
- Newsgathering
- Sports Coverage
- Airborne Operations
- Maritime Reconnaissance
RF Parameters

Frequency Bands
- 1.3 to 13GHz
(Other frequency bands available on special order)

Tuning Range
- Up to 700MHz
Depending on frequency band

Frequency Selection
- Up to 16 preset channels, or tuning in 1MHz steps via front panel control

Demodulation
- COFDM DVB-T 2k
- ISDB-T 8k with time interleaving (option)

Demodulation modes
- QPSK, 16QAM, 64QAM
- FEC: 1/2, 2/3, 3/4, 5/6, 7/8
- Guard interval: 1/32, 1/16, 1/8, 1/4

Bandwidth
- 6, 7, 8MHz
(6-7 only for ISDB-T)

Noise Figure and Receiver Threshold
- Noise figure: 3dB typical, 4dB max.
- Receiver threshold: -92dBm to BER 10E-5 (nom. QPSK)

Data Rate
- 4.98 to 31.7Mbit/s

Video and Audio Parameters

Decoding (Factory options)
- SD/HD MPEG2
- Automatic selection, SD/HD MPEG4/H.264, SD/HD MPEG2

Video Outputs
- SDI HD SMPTE-292M (299M)
- SDI SD SMPTE-259M (272M)
- 3G SDI SMPTE-424M (299M)
- HDMI Q/P
- Analogue Composite (CVBS)
- HD down-converted to SD
- CVBS monitor

ASI Outputs
- 2 x DVB ASI,
- 188/204 outputstotal Bitrate

Video Formats
- 1080p 23/24/25/29/50/59
- 1080i: 1920 x 1080, 25 and 29.97Hz
- 720p: 1280 x 720, 50 and 59Hz
- 480i (NTSC): 720 x 480
- 576l (PAL): 720 x 576

Latency
- Automatic selection down to 1/2 frame (20ms), transmitter encoding profile dependant

Audio Outputs
- Digital: 2 stereo AES3 or SDI embedded
- Digital: Dolby E and Dolby D pass-through
- Analogue: 2 x stereo / 4 x mono

User Data Output
- Selectable in the range 1200 to 230400 baud

FLEXIBILITY

Remote Control
- Comprehensive remote control and monitoring via Ethernet port / Web browser interface.

Software Upgrade
- USB upgrade port

Monitoring
- Video picture monitoring on Full Colour TFT front panel display
- Comprehensive control and monitoring menu via front panel control
- Demodulator parameters
- RF Received signal level (dBm and bar graph)
- C/N, MER, BER (dB and bar graph)
- Summary front panel alarm/comprehensive internal lock alarms

Power Supply

Universal supply accepts 95 130VAC and 190 – 260V
- AC (auto sensing) plus 1 - 36V DC. Bias ensures no
- DC consumption when AC is present
L2174
Multi-Format Receiver & Decoder

The L2174 is a 1 RU rack mount chassis demodulator decoder specifically targeted at compact wireless camera & microwave link use. Its multiple inputs, 4 UHF input RF with Max Ratio Combining and proprietary LMST, ASI (with packet switching) and IP make this a versatile receiver option. The multifunction decoder supports the low delay transmitters and offers generic decoding in both H.264 and MPEG-2.

Key Features
- One box compact and lightweight solution
- Up to 4 UHF input RF with Max Ratio Combining
- SD and HD available at 720p and 1080i
- Capability to support MPEG 2 and MPEG4/H.264 decoding
- Available for DVB-T COFDM or LMS-T

Typical Applications
- Event Coverage
- News gathering
- Sports Coverage
## RF PARAMETERS

**Frequency bands**
- 70 Mhz - 8.36 Ghz

**Frequency selection**
- Up to 16 pre-set channels, or tuning in 1MHz steps via front panel control

**Demodulation**
- DVB-T 2k
- LMS-T

**Demodulation Modes**
- QPSK, 16QAM, 64QAM
- FEC: 1/2, 2/3, 3/4, 5/6, 7/8
- Guard interval: 1/32, 1/16, 1/8, 1/4

**Bandwidth**
- DVB-T: 6, 7, 8MHz
- LMS-T: 2.3, 4, 5, 6, 7, 8, 10, 12, 14, 16, 20 & 24 MHz

**Noise figure and receiver threshold**
- Noise figure: 3dB typical, 4dB max.
- Receiver threshold: -92dBm to BER 10^-5 (nom. QPSK)

**LMS-T only available for QPSK and 16 QAM**

## VIDEO AND AUDIO PARAMETERS

**Decoding**
- 4.2.0 and 4.2.2 broadcast quality video
- MPEG2
- H.264/MPEG4 and MPEG2, with automatic selection.

**Video outputs**
- SDI HD SMPTE-292M (299M)
- SDI SD SMPTE-259M (272M)
- Analogue Composite (CVBS), HD down-converted to SD CVBS monitor

**ASI outputs**
- 2 x DVB ASI, 188/204 outputs.

**Video Formats**
- 1080i: 1920 x 1080, 25 and 29.5Hz
- 720p: 1280 x 720, 50 and 59Hz
- 480i (NTSC): 720 x 480
- 576i (PAL): 720 x 576

**Latency**
- Automatic selection down to sub 1 frame (20ms), transmitter
- Encoding profile dependant

**Video over IP connections**
- 10/100/1000 Ethernet connection for Video over IP connections
- 10/100 Ethernet connection for IP-based unit control.
- USB connector for code updates and profile transfers

**Remote control**
- Comprehensive remote control and monitoring via Ethernet port / web browser interface.

**Power Supply**
- 100 - 240Vac; 75W (approximate, depending on configuration)

**Inputs**
- Up to 4x UHF input RF with Max Ratio Combining
- ASI Input

## FLEXIBILITY AND POWER SUPPLY

**Monitoring**
- Video picture monitoring on Full Colour TFT front panel display
- Comprehensive control and monitoring menu via front panel control
- Demodulator parameters
- RF Received signal level (dBm and bar graph)
- C/N, MER, BER (dB and bar graph)
- Summary front panel alarm/ comprehensive internal lock alarms

**Remote control**
- Comprehensive remote control and monitoring via Ethernet port / web browser interface.

## PHYSICAL & ENVIRONMENT

**Size and weight**
- 1U Height Half Rack width
- 210mm x 350mm Deep
- 1.2kg

**Environmental**
- Safe use: 0° to +50°C
- Humidity: 95% long term
MDR-Series
Portable Diversity Receive System

The MDR is Vislink’s latest Diversity Receive system, capable of receiving multiple RF/Video channels. Each receiver operates using two or four way maximum ratio combining diversity reception in addition to ASI packet switching, for optimum performance. The MDR is available with the choice of COFDM DVB-T or ISDB-T demodulation (with Time Interleaving FEC). Designed for receiving multiple wireless cameras or links on TV OB sites, multi-car car "on-board" or city centre central receive ENG applications, the MDR is Vislink most advanced receiver in its range.

Key Features
- Equipped for 1 to 14 receivers according to customers requirements, with plug and play upgrade.
- Capability to support MPEG 2 and MPEG4/H.264 decoding with auto selection
- Available with the choice of COFDM DVB-T or ISDB-T demodulation (with Time Interleaving FEC).
- The multi-channel system only occupies 3U rack space.
- Comprehensive control and signal monitoring is provided by PC GUI via TCP/IP interface.

Typical Solutions
- Event Coverage
- Newsgathering
- Sports Coverage
- Airborne Operations
- Maritime Reconnaissance
### SPECIFICATIONS

**RF PARAMETERS**

- **Frequency Bands**
  - 1.3 - 7GHz band

- **Tuning Range**
  - 400MHz standard bandwidth

- **Frequency Selection**
  - Via IP PC based remote control

- **Receiver Noise Factor**
  - 3dB (nom.)

- **Receive Antenna**
  - Compatible with all Vislink antennas including integral LNB

- **Demodulation**
  - COFDM DVB-T 2k, or ISDB-T with Time Interleaving (option)

- **Demodulation modes**
  - QPSK, 16QAM, 64QAM
  - FEC: 1/2, 2/3, 3/4, 5/6, 7/8
  - Guard interval: 1/32, 1/16, 1/8 and 1/4

- **Bandwidth**
  - 6, 7, 8MHz

- **Noise Figure and Receiver Threshold**
  - -92dBm to BER 10-5 (nom, QPSK)

- **Data Rate**
  - 4.98 to 31.7Mbit/s

**VIDEO AND AUDIO PARAMETERS**

- **Decoding (Factory options)**
  - SD/HD MPEG2
  - MPEG4/H.264

- **Video Outputs**
  - SDI SD SMPTE-259M (272M)
  - SDI HD SMPTE-292M (299M) (option)
  - Analogue CVBS

- **Video Formats**
  - 1080p: 1920 x 1080 50
  - 1080i: 1920 x 1080, 25 and 29.5Hz
  - 720p: 1280 x 720, 50 and 59Hz
  - 480i (NTSC): 720 x 480
  - 576i (PAL): 720 x 576

- **Audio Output**
  - Digital: AES/EBU, plus SDI embedded
  - Analogue: 4 x mono outputs

- **Audio Output**
  - Optional TCP/IP multiplexing available

- **Data Output**
  - Auxiliary user data serial

- **Demodulation modes**
  - QPSK, 16QAM, 64QAM

- **FEC**
  - 1/2, 2/3, 3/4, 5/6, 7/8

- **Guard interval**
  - 1/32, 1/16, 1/8 and 1/4

- **Bandwidth**
  - 6, 7, 8MHz

- **Noise Figure and Receiver Threshold**
  - -92dBm to BER 10-5 (nom, QPSK)

- **Data Rate**
  - 4.98 to 31.7Mbit/s

**VIDEO AND AUDIO PARAMETERS**

- **Video Formats**
  - 1080p: 1920 x 1080 50
  - 1080i: 1920 x 1080, 25 and 29.5Hz
  - 720p: 1280 x 720, 50 and 59Hz
  - 480i (NTSC): 720 x 480
  - 576i (PAL): 720 x 576

**FLEXIBILITY**

- **Monitoring (Rx Control)**
  - Windows PC Vista, 7 and 8
  - Comprehensive remote control and monitoring via TCP/IP interface
  - COFDM demodulator / MPEG
  - 2 decoder parameters RF
  - Received signal level, C/N, MER, BER, PER
  - C/N, MER, BER (dB and bar graph)

- **Antenna to RX Separation**
  - Up to 50m UHF coax cable, or with Fibre Optic interfaces for extended distances.

**POWER SUPPLY**

- **Universal supply accepts 95 - 130VAC and 190 - 260VAC**

**PHYSICAL & ENVIRONMENT**

- **Size**
  - Multi channel unit: 3RU rack mount

- **Weight**
  - Multi channel unit: 9kg nominal depending on module count

- **Environmental**
  - To spec: -10° to +45°C
  - Altitude: 4500m
  - Humidity: 95% long term

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![Diagram](https://via.placeholder.com/150)
ADVENT

AFD120 & AFD150
FlyDrive
Motorised Flyaway Antenna

High performance solution for rapid response

Overview

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 +/- 200° azimuth, elevation 6° to 92° and polarisation adjustment +/- 95°. 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.

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 acquisition & 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
- Option for integral BUC with antenna for single thread operation enabling HPA FSK control via TX L-Band
Specifications

Configuration
Offset fed

Mount
Elevation over azimuth

Meets The Requirements of
ITU-R S.580-6
ITU-R S.465-5
INTELSAT IESS-61
EUROTEL EESS-502
MIL STD 188-164A
STANAG 4484
(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
...(-4° to 140°F)
Transport ....... -40°C to +70°C
...(-40°F to 158°F)

Humidity:
0 to 100% RH

Options
• GPS based auto-acquire upgrade package

AFD120 FLYDRIVE

Frequency
<table>
<thead>
<tr>
<th>Frequency</th>
<th>X Ku DBS</th>
<th>X Ku DBS</th>
<th>X Ku DBS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tx Gain</td>
<td>38.4 dBi</td>
<td>43.3 dBi</td>
<td>45.2 dBi</td>
</tr>
<tr>
<td>Rx Gain</td>
<td>34.0 dBi</td>
<td>42.5 dBi</td>
<td>17.85 dBi</td>
</tr>
</tbody>
</table>

G/T
<table>
<thead>
<tr>
<th>Frequency</th>
<th>X Ku DBS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tx Gain</td>
<td>7.40 GHz</td>
</tr>
<tr>
<td>Ki.</td>
<td>11.2 GHz</td>
</tr>
</tbody>
</table>

Cross Polarisation Isolation
X Band Circular
30 dBi 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)
Ku: ... Tx / Rx 40 dB (110 dB incl filter)
DBS:... Tx / Rx 40 dB (110 dB incl filter)
X: ... Tx / Rx 35 dB (110 dB incl filter)
Ka: ... Tx / Rx 35 dB (110 dB incl filter)

AFD150 FLYDRIVE

Frequency
<table>
<thead>
<tr>
<th>Frequency</th>
<th>C Ku DBS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tx Gain</td>
<td>5.85 to 6.65 GHz</td>
</tr>
<tr>
<td>Rx Gain</td>
<td>3.4 to 4.2 GHz</td>
</tr>
</tbody>
</table>

G/T
<table>
<thead>
<tr>
<th>Frequency</th>
<th>C Ku DBS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tx Gain</td>
<td>7.9 to 8.4 GHz</td>
</tr>
<tr>
<td>Ki.</td>
<td>13.75 to 14.5 GHz</td>
</tr>
</tbody>
</table>

Cross Polarisation Isolation
C Band Linear
-30 dB Tx / Rx
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)
Ku: ... Tx / Rx 40 dB (110 dB incl filter)
DBS:... Tx / Rx 40 dB (110 dB incl filter)
X: ... Tx / Rx 35 dB (110 dB incl filter)
Ka: ... Tx / Rx 35 dB (110 dB incl filter)

WEIGHTS / DIMENSIONS / WIND SPEED

Dimensions / Weights
FlyDrive 120
Case 1:
944 x 540 x 358 mm 31.5 Kg
(37 x 21.2 x 14 inches 69.4lbs)
Case 2:
990 x 580 x 400 mm 31.5 Kg
(39 x 22.8 x 15.7 inches 69.4lbs)
FlyDrive 150
Case 1:
944 x 540 x 358 mm 31.5 Kg
(37 x 21.2 x 14 inches 69.4lbs)
Case 2:
990 x 580 x 400 mm 31.5 Kg
(39 x 22.8 x 15.7 inches 69.4lbs)
Non IATA 2 Case Configuration is available

Windspeeds
Operational........ 20 m/s (45 mph)
Degraded roofrack... 25 m/s (56 mph)
Degraded flyaway... 30 m/s (67 mph)
Survival........ 50 m/s (112 mph)

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4/1/2010
NewSwift CF Motorised Antenna

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 (ACUS216) 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)

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 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

PORT TO PORT ISOLATION
X:  
- Port to Port Isolation 0 dB incl filter
 Ku:  
- Port to Port Isolation 0 dB incl filter
 DBS:  
- Port to Port Isolation 0 dB incl filter
 Ka:  
- Port to Port Isolation 0 dB incl filter

CROSS POLARISATION ISOLATION
X Band Circular:  
- 30 dB Tx/Rx  
- 30 dB Tx/Rx
 Ku and DBS Band Linear:  
- 35 dB
 Ka Band:  
- Consult factory (all relative to co-polar gain within 1 dB contour)

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

1.5M 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 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

WEIGHTS
  
Antenna:  
- 95Kg (209lbs)

TEMPERATURE
Operational:  
- 30°C to +60°C (–22°C to 140°F)
 Transport:  
- –30°C to +40°C (–22° to 104°F)

WINDSPEED
Operational:  
- 20 m/s (45 mph)  
- Degraded 28 m/s (63 mph)
 Survival:  
- 50 m/s (112 mph)

HUMIDITY
- 0 to 100% RH

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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
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

DSS:  Tx 17.3 to 18.1 GHz (option from 18.4 GHz)  
      Rx 10.70 to 12.75 GHz

GAIN
C:  38 dBi typ @ 6.25 GHz  
    34 dBi typ @ 3.95 GHz

X:  40.3 dBi typ @ 8.15 GHz  
    39.5 dBi typ @ 7.4 GHz

Ku:  45.2 dBi typ @ 14.25 GHz  
     43.1 dBi typ @ 11.2 GHz

Ku:  51.3 dBi typ @ 28.75 GHz  
     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)
DSS:  11.20 GHz = 21.4 dBk (assumes LNB 60 dB Gain 0.7 dB NF)
Ku:  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 Rx (axial ratio 1.07)  
                        -20 dB Rx (axial ratio 1.22)
Ku and DSS Band Linear:  -35 dB
Ku 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
DSS:  Tx / Rx 40 dB (110 dB incl filter)  
      Rx / Tx 30 dB
Ku:  Tx / Rx 35 dB (110 dB incl filter)  
     Rx / Tx 35 dB

WINDSPEED
Operational:  21 m/s (47 mph)  
              28 m/s (63 mph)  
              50 m/s (112 mph)
Degraded:  -20°C to +60°C [-4°F to 140°F]

TEMPERATURE
Operational:  -20°C to +60°C [-4°F to 140°F]
Degraded:  -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
Ku:  Tx 7.25 to 7.75 GHz
Ku:  13.75 to 14.5 GHz (option from 12.75 GHz)
Ku:  10.70 to 12.75 GHz
DSS:  17.3 to 18.1 GHz (option from 18.4 GHz)
Ku:  27.5 to 30.0 GHz
Ku:  18.2 to 20.2 GHz (option Tx 30 to 31 GHz, Rx 20.2 to 21.2 GHz)

GAIN
C:  39.6 dBi typ @ 6.25 GHz  
    35.6 dBi typ @ 3.95 GHz
X:  41.9 dBi typ @ 8.15 GHz  
    41.1 dBi typ @ 7.4 GHz
Ku:  46.8 dBi typ @ 14.25 GHz  
     44.7 dBi typ @ 11.2 GHz
Ku:  48.7 dBi typ @ 17.85 GHz  
     44.7 dBi typ @ 11.2 GHz
Ku:  52.9 dBi typ @ 28.75 GHz  
     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)
DSS:  11.20 GHz = 23.0 dBk (assumes LNB 60 dB Gain 0.7 dB NF)
Ku:  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
C and X Band Circular:  -30 dB Tx (axial ratio 1.07)  
                        -20 dB Rx (axial ratio 1.22)
Ku and DSS Band Linear:  -35 dB
Ku Band:  Consult factory (all relative to co-polar gain within 1 dB contour)
NewSwift LT
120 Ku Band Motorised Antenna

OVERVIEW
The NewSwift LT antenna is a highly compact integrated satellite terminal with a Carbon Fibre reflector designed for rapid deployment.

The NewSwift LT design allows for two HPAs, 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
• Available with 1.2 meter Carbon Fibre reflector
• Full 3 axis control includes 360° azimuth range
• GPS based auto satellite acquisition packages available
• 800 City database controller
• Tracking option with beacon receiver
• Full remote control
• 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) with integral ASI Demod and for Eutelsat approved Auto-Point capability
• Available in custom colour schemes

High performance, cost effective, compact integrated solution
SPECIFICATIONS

GENERAL
Meets The Requirements of
• ITU-R S.580-6
• ITU-R 5.465-5
• 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
Azimuth Adjustment
• 360°
Elevation Adjustment
• 6° to 91°
Polarisation Adjustment
• +/- 90°

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
• Numerous install kits for 3rd party BUCs / HPAs
• Simultaneous H / V reception (3-Port)

FREQUENCY
(Reflector diameter 120cm)

Ku:
• Tx: 13.75 to 14.5 GHz
  (option from 12.75 GHz)
• Rx: 10.70 to 12.75 GHz

GAIN
Ku:
• Tx: 43.3 dBi typ @ 14.25 GHz
• Rx: 41.2 dBi typ @ 11.2 GHz

G/T
Ku:
• 11.20 GHz = 19.4 dBk
  (assumes LNB 60dB gain 0.7dB NF)

CROSS POLARISATION ISOLATION
Bore sight:
>35 dB
Within 1dB contour
>32 dB

PORT TO PORT ISOLATION
Ku:
• Tx/Rx 40dB (110 dB incl filter)
• Rx / Tx 30 dB

WEIGHTS
Antenna
98 Kg (215 lbs)

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

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06/14
RD001518 Rev 1
NewSwift HD 2.4m Motorised Antenna

The Advent NewSwift HD 2.4m antenna is the latest addition to the present NewSwift range. The light weight roof mounted drive away antenna is designed to meet the highest standards of reliability and functionality for today’s broadcast and military market. The carbon fibre reflector is available as a three piece reflector with the ability to be mounted on a wide range of SNG and military mobile hub vehicles. All three motorised axis work simultaneously to allow rapid on air time of less than five minutes.

Power amplifiers and electronics are protected in the removable weatherproof housing mounted close to the feed to minimise waveguide loss.

**BENEFITS**
- Reflector available in a 3 piece motorised configuration
- Tracking option with beacon receiver
- Designed to work with the ACU5000 series antenna controller
- Available in any colour scheme

**Key Features**
- Less than 5 minutes to deploy
- Interchangeable C, X, Ka, and Ku Band feed cartridge
- Full 3 axis simultaneous motorisation
- Eutelsat, Intelsat and Arabsat compliant
- GPS based auto satellite acquisition option

**Typical Applications**
- News Gathering
- Event Coverage
- Sports Coverage
- Secure SATCOM
SPECIFICATIONS

COMMON

POWER REQUIREMENT
- 90 - 264V AC
  (supplied with external half rack width PSU)

ENVIRONMENTAL
- Operating Temperature: -30°C to +60°C
- Transport Temperature: -40°C to +70°C
- Humidity: 0 - 100%
- Operating Wind Speed: 75Kmph
- Degraded Wind Speed: 100Kmph
- Deployed Survival Wind Speed: 115Kmph
- Stowed Survival Wind Speed: 180Kmph

PHYSICAL
- Elevation Adjustment: 6° to 95°
- Azimuth Adjustment: +/- 180°
- Polarisation Adjustment: linear +/- 90°, circular none
- Platform Mount: Elevation over Azimuth
- Configuration: Prime Focus
- Feed Type: Offset
- Stowed Dimension: Length: 3150mm Width: 1675mm Height: 660mm
- Weight: 220kg
- ITAR Status: ITAR Free

C-BAND

FREQUENCY
- Tx Frequency Band (CP) 5.85-6.425 GHz
- Rx Frequency Band (CP) 3.625-4.2 GHz
- Tx Frequency Band (LP) 5.85-6.65 GHz
- Rx Frequency Band (LP) 3.4-4.2 GHz

GAIN
- TX Gain 42.1 dBi

G/T
- 7.5GHz 22.5 dB/K

POLARISATION
- Polarisation Tx – RHCP or LHCP configurable
- Rx – Orthogonal to Tx
- Axial Ratio (CP) <1.3dB (Tx)
- Cross Polar isolation <27 dB

STANDARDS
- MIL-STD-188-164A
- EUTELSAT EESS-02
- ITU-R S.465.5 and S.580-6
- FCC 25.209

X-BAND

FREQUENCY
- Tx Frequency Band 7.9-8.4 GHz
- Rx Frequency Band 7.25-7.75 GHz

GAIN
- TX Gain 43.6 dBi

G/T
- 7.5GHz 22.5 dB/K

POLARISATION
- Polarisation Tx – RHCP or LHCP configurable
- Rx – Orthogonal to Tx
- Axial Ratio <2dB (Tx), <1.21dB (Rx)

STANDARDS
- MIL-STD-188-164A

KU-BAND

FREQUENCY
- Tx Frequency Band 13.75 – 14.5 GHz
- Rx Frequency Bands (GHz) 10.7-12.75

GAIN
- TX Gain 48.8 dBi

G/T
- 11.7GHz 26.0 dB/K

POLARISATION
- Polarisation Linear H/V Tx orthogonal to Rx
- Cross polar isolation 35dB

STANDARDS
- ITU-R S.465-5 and S.580-6
- FCC 25.209 with 25.212
- INTELSAT IESS-601
- EUTELSAT EESS-502, ETSI EN 301.358

KA-BAND

FREQUENCY
- Tx Frequency Band 29.5-31 GHz (Option 27-29.5GHz)
- Rx Frequency Band 20.2-21.2 GHz (Option 18.2GHz – 20.2GHz)

GAIN
- TX Gain 55.5 dBi

G/T
- 20.7GHz 28.8 dB/K

POLARISATION
- Polarisation Tx – RHCP or LHCP configurable
- Rx – Orthogonal to Tx
- Linear (Option)
- Axial Ratio <1.0dB (Tx), 1.5dB (Rx)dB

STANDARDS
- MIL-STD-188-164A
- EUTELSAT EESS-02
- ITU-R S.465.5 and S.580-6
- FCC 25.209
ACU5000 Antenna Control Unit

Features
- The ACU5000 is an antenna control unit designed to operate with VISLINK’s range of motorised antenna systems.
- The unit provides user friendly 3 speed motor control of azimuth, elevation and polarisation axis as well as automatic stow and deploy functions.
- The ACU5000 comes with the option of interfacing with a GPS receiver and/or fluxgate compass.
- Integrated beacon receiver option provides facilities for automatic satellite acquisition and tracking.
- The ACU provides an 800 city updateable database to enable satellite pointing without the need for GPS.
- Optional DVB-S/S2 demodulation capability to provide ASI output.
- Satellite identification capability.
- External reference signal for LNB.

5000 Series Overview
Advent’s established lightweight, compact, 1U half rack electronics packages are ideally suited for flyaway or vehicle mounted solutions, where weight and space are at a premium. The 5000 series of electronics can be packaged in different lightweight, ruggedised canvas flight cases, depending on units selected and system configuration.

- Compact 1/2 width 19” x 1U rack mountable units.
- 1/4 of the size and 1/6th of the weight of competitors equivalent products.
- Designed for contribution flyaway and DSNG vehicle applications where space and weight are critical.
- Full range of units available;
  - SD and HD Digital Video Exciter
  - IP Modem
  - Multiplexer Router
  - BUCS
  - Antenna and Drive Control units
  - System IRD / Redundancy controllers
  - Protection Switches
  - L Band over fibre modems
- All units field upgradeable.
- All units have integral web browser facility (where applicable) for RC&M applications.
- A comprehensive range of flight case solutions for 1/2 rack and 19” rack units to suit system configuration, i.e. 3U, 4U, 5U.
- All units can also be fixed together and mounted in a standard 19” flight case or rack within a vehicle.

Compact, lightweight 1/2 width rack units
## AUC5000

### FREQUENCY RANGE
- **Ku Band AUC5813 / 14**
  - 12.75 to 13.25 GHz
  - 13.75 to 14.5 GHz
  - 14.0 to 14.5 GHz
- **Ka Band AUC5827 / 28 / 29 / 30**
  - 27.5 to 31.0 GHz
  - (Specify 700 MHz Max Tx sub-band)
- **others**
  - Any 800 MHz to order
  - SHF 50 Ω N female (Ka band 2.9mm connector)
  - L Band 50 Ω N female

### FREQUENCY REFERENCE
- **Internal Frequency Accuracy**
  - +/- 100 Hz from nominal at 25°C
  - (+/- 80 Hz typically)
- **Internal Frequency Stability**
  - 2 x 10^-8 Rack
- **External Reference (Internal link selectable)**
  - User supplied via L Band cable
  - 10 MHz @ 0 dBm +/- 3 dB

### GAIN
- **Input Power Level**
  - -10 dBm nominal, 0 dBm max
  - -5 dBm min at 1 dB compression point (+10 dBm to +35 dB with high gain option)
- **Output Power Level**
  - 2 x 10^-8 Rack
  - +/-. 1.5 dB over 800 MHz
  - +/- 0.25 dB over 24 hours @ constant temperature
  - +/- 0.25 ns in any 4 MHz

### SPURIOUS
- **Modulated**
  - -60 dBc
  - -65 dBm
- **Unmodulated**
  - -30 dBc
  - -65 dBm
- **Harmonics**
  - -20 dBc
  - -65 dBm
  - -20 dBc

### HPA CONTROLLER
- Pass-through and protocol transfer of HPA control data from L Band input to RS485 HPA control output - Xicom, CPI, e2V, Paradise supported, others to order

### ENVIRONMENTAL & PHYSICAL
- **Operational Temperature**
  - 0°C to +50°C (32°F to 122°F)
  - 20°C to +70°C (-4°F to 158°F)
- **Storage Temperature**
  - 0°C to +50°C (32°F to 122°F)
  - 20°C to +70°C (-4°F to 158°F)

### APS5000

### SWITCH DRIVES
- Internal coaxial switch
- Two switch drives for external switches

### REMOTE CONTROL
- RS485 9600 baud

### RF
- **Input / output frequency range:**
  - 4-18GHz
- **Input loss...**
  - 4 dB + 0.3 dB nominal
- **Input level...**
  - +30 dBm max
- **Input/output return loss...**
  - 16 dB at 50 Ω

### CONNECTIONS
- **RF Inputs**
  - Female N-type 50 Ω
  - Switch drives
- **RS485 comms**
  - Status inputs

### POWER
- **18Vdc from AUC5800 or via external 12-18 Vdc**

### SUPPLY

### ENVIRONMENTAL & PHYSICAL
- **Operational Temperature:**
  - 0°C to +50°C (32°F to 122°F)
  - 20°C to +70°C (-4°F to 158°F)
- **Storage Temperature:**
  - 0°C to +50°C (32°F to 122°F)
  - 20°C to +70°C (-4°F to 158°F)
- **Size**
  - 210mm wide x 350mm deep
  - (8.27 inches wide x 13.78 inches deep)
  - 1U half rack width
  - 2.1 Kg (4.6lbs)
- **Weight**
  - 1.2 Kg (2.6lbs)
  - 47 to 63 Hz @ <50W
  - Operating Voltage
  - 100 - 240 Vac +/- 10%
Specifications

The ACU5000 series antenna control units are designed to operate with the complete range of Advent motorised antenna systems, using the 3000, 4000 and 5000 series Drive Control Units (DCU).

The ACU5000 provides a user friendly interface enabling the control of azimuth, elevation and polarisation for the deployment and operation of the motorised antenna system.

The ACU has embedded software to be able to calculate the position of a satellite from the current location and orientation of the uplink system. The location and orientation can also be entered manually. If the beacon receiver option is included, the ACU can search, peak and track the satellite beacon signal.

Tracking is maintained using a differential slope track algorithm. From the detailed characteristics of the beam pattern stored within the controller the ACU can optimise the antenna pointing with the minimum of movement during the tracking process.

Satellites containing commercial traffic can be positively identified by their ‘Satellite ID’, in addition to comparison of the beacon frequency. This ensures the correct satellite has been acquired without the need for a spectrum analyser or receiver. An optional ASI output is available to feed an external decoder.

The ACU5000 provides the ability to recall one of up to 100 stored satellite presets and additional software providing up to 800 city information database enabling the controller to find the satellite without the need of GPS.

FRONT PANEL INDICATIONS
• Clear LCD shows information on the current status of the antenna, beacon receiver and DVB parameters

FRONT PANEL CONTROLS
Start
• Starts an antenna system activity
Stop
• Stops any current antenna system activity
Rate
• Changes the current movement rate
Pol \( \leftarrow \rightarrow \)
• Controls the polarisation axis movement
\( \uparrow \downarrow \leftrightarrow \rightarrow \)
• Controls the azimuth and elevation axis movement functions. In the menu mode, used to navigate and select options
Menu
• Steps through key menu options
Enter, Escape
• Used to select menu options and escape from current selections

POSITIONAL DISPLAY ACCURACY
• Azimuth, elevation and polarisation +/- 0.05

ANGULAR CONTROL RATES
• Fast up to 5°/s (antenna type dependent)
• Medium 0.5°/s
• Slow 0.1°/s

ANGULAR CONTROL STEPS
All antenna types
• Fast 1.0°
• Medium 0.5°
• Slow 0.1°

RF INPUT
• 950 - 2150 MHz
• Beacon level -90 dB min
• DVB input -20 to -65 dBm
• LNB power switchable 18v/13v @ 1A
• LNB reference 10 MHz
• RF Monitor loop-thru'

REMOTE CONTROL
• RJ45 10/100 base-T
• RS232/485 4800-115200 baud
• Ethernet / Web Interface / SNMP

WEB BROWSER
• Supporting Internet Explorer 7 & 8, Firefox, Safari and Opera

MODEL NOS
ACU5012
• Antenna control unit with manual motor control
ACU5214
• Antenna control unit with auto-point capability.
• Includes compass and GPS antenna
ACU5216
• Antenna control unit with auto-acquire capability.
• Utilises internal Beacon Receiver and includes compass and GPS antenna
ACU5xxxD
• D suffix indicates enabling of the integral DVB-S/S2 demodulator

ENVIRONMENTAL & PHYSICAL
Temperature
Operational: ..................  0°C to +50°C (32°F to 122°F)
Storage: ..................  –20°C to +80°C (4°F to 176°F)
Size
• 210mm wide x 350mm deep
• (8.27 inches wide x 13.78 inches deep)
1U half rack width
Weight
• 2 Kg (4.4lbs)

POWER
Operating Voltage
• 100 - 240 Vac
Power Consumption
• <100 VA

Half rack flight case, housing three 5000 series units. Flight cases are available in a variety of options to suit the application
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