

MENOS FNG FLY-AWAY LIGHT

ACFLY-Ku-MENOS-V3



MENOS
Certified Product

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The ACFLY-Ku-MENOS-V3 is comprised of an ODU (1.2m Ku-Band light antenna, RF chain with 10W BUC and LNB) and a communications and video case (with integrated M1 modem, compact MPEG4 AVC encoder appliance, VoIP phone, Industrial Switch and a rugged laptop dedicated to the MMX MENOS scheduler).

The integrated FNG terminal can be used within the MENOS satellite network environment, intended for the user to contribute Fast News Gathering (FNG) content in a fast, reliable and efficient way. It also provides high-speed Internet, VPN and VOIP services independently of the availability of terrestrial links.

The system integrates the MENOS Multimedia Exchange software (MMX), which manages the live FNG quality video signals. The MMX exchanges FNG video content with the MMX of the MENOS HUB, which then distributes it to the appropriate receivers. The ACFLY-Ku-MENOS-V3 is connected to the MENOS HUB via a MF-TDMS broadband subsystem for data, voice communication and FNG video.

The ACFLY-Ku-MENOS-V3 is a compact, light, quick assembly and cost-effective solution. The 1.2 meter flyaway antenna is packaged in robust portable weatherproof cases. The system is designed for Road/Air/Sea transportation, ready to work under wind loading conditions and on a wide temperature range.

APPLICATIONS

- Fast news gathering video contributions
- IP Access Services
- VoIP collaboration channels

SUPPORTED SERVICES

- Sat3Play MF-TDMA IP Broadband Access, providing high-speed IP connection with built in acceleration
- Support for 1 video FNG contribution
- Integrated MMX GUI and MMX SIT software providing booking and management of FNG sessions
- Fully integrated VoIP services
- Integrated Quality of Service (QoS), prioritizing VoIP and video streaming over best effort IP traffic

TECHNICAL SPECIFICATIONS

ODU specifications

ODU content:

- 1.2m Ku Band Fly-Away Antenna
- 10W Ku Band BUC
- Ku Band LNB
- The antenna is enhanced with electronic compass, GPS receiver and inclinometer, together with an aided pointing GUI for assistance during antenna pointing operation.

Antenna and RF Specifications:

Reflector	1.2 Meter, 6 segments, Carbon Fibre
Polarization	Linear
Transmit Frequency	13.75GHz – 14.5 GHz
Receive Frequency.....	10.7GHz – 12.75 GHz
Antenna Gain.....	RX: 41.5 dBi; TX: 42.7 dBi
Beam width (-3dBm).....	RX: 0.95°; TX: 0.82°
Isolation Tx – Rx	≥85 dB
Cross Polarization Isolation (on axis)	≥35 dB
Cross Polarization Isolation (-1dB)	≥30 dB

Sidelobe performance:

1.5°≤θ<20°.....	29-25 log θ
20°≤θ<26.3°	-3.5
26.3°≤θ<48°	32-25 log θ
48°≤θ<180°	-10 dB (typ.)

EIRP (System with 10W P1dB SSPA)	53.5 dBW (typ.)
G/T	20.3 dB/°K (@ 12.75 GHz and 30° Elevation)

LNB Options:

Option	Frequency band	LO frequency
Low	10.7 – 11.8 GHz	9.75 GHz
High	11.7 – 12.75 GHz	10.6 GHz

Mechanical specifications:

Material.....	Carbon Fiber (6 segments)
Mount Geometry	Elevation over Azimuth
Polarization	Rotation of Feed
Azimuth travel	360°
Elevation travel	25° to 80°
Polarization travel	±60° Continuous
Drive Move	Manual (Sat3Play Point & Play assistance) *

*Optional pointing aid including software and GPS receiver

Comms & Video case specifications

Comms & Video case content:

ACFLY-Ku-Comms, comprised of:	M1 Modem Industrial Switch Compact AVC encoder appliance VoIP phone Rugged laptop, with integrated MMX MENOS scheduler
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Encoding Specifications:

• Video:

Video Encoding Profile.....	ISO/IEC 144-10-(MPEG 4 Part 10 or AVC) Progressive Base Line Profile L3 Interlaced Main Profile L3 (no B frames or CABAC in Main) CBR/VBR Quarter-Pel Motion Estimation – (4x4 mode) Deblocking Filter
Video Encoding Bit Rates	300 Kbps – 5Mbs

• Audio:

Audio Encoding Profiles	AAC-Low Complexity
Audio Sampling	32, 44.4 and 48 kHz
Audio Bitrates.....	8-384 AAC-LC

- Transport:
 - Multiplexing Formats.....ISO/IEC 13818-1 MPEG 2 Transport Stream
 - Streaming Format.....ETSI TS 102034
 - Ethernet Protocols.....Telnet, FTP, UDP, RTP/UDP, SDP and SAP support

Laptop Specifications:

Processor	Intel® Core™ i5-3230M (2,60 GHz, 3 MB)
Wireless connectivity	Dell Wireless 1504 (802.11 b/g/n 1x1)
Hard disk	128GB Mobility Solid State Drive
Ram	4GB (1x4GB) 1600MHz DDR3 memory
Camera	Integrated
Battery.....	6 Cell 60Whr LI-ION Primary Battery
Temperature	-30°C* to 40°C Operating
Environmental	MIL-STD 810G shock, vibration, temperature, altitude, and humidity; IEC60529 IP5X for dust

Terminal Interfaces:

- 1 digital SDI input (digital video + embedded audio)
- 1 analog CVBS input (PAL/NTSC)
- 4 power connectors (AC IN, BUC supply, Laptop supply and 5VDC)
- 2 XLR female audio inputs
- 3 RJ45 Ethernet interface for VoIP, CPE LAN and Managing

▼ POWER SUPPLY

AC input voltage 110/220 VAC (47-63 Hz) (DC as option)

▼ PACKING*

Case 1 (weight, dimensions, content) 1 Case; Weight 22.7 Kg; LHW < 157 cm (ACFLY-Ku-IDU and Laptop)

Case 2 and 3 (weight, dimensions, content)..... 2 Cases; Weight < 25 Kg (each); LHW < 157cm (each) (Antenna, Feed, BUC, LNB, cables and phone)

** Packing can be modified if required*

▼ ENVIRONMENTAL SPECIFICATIONS

Operational Winds32 Km/h

Survival Winds.....75 Km/h

Ambient Temperature0°C to +50°C

Non-condensing storage-40°C to +70°C up to 95% condensing

▼ OPTIONAL

Additional SW (video edition, etc) can be integrated upon user request.