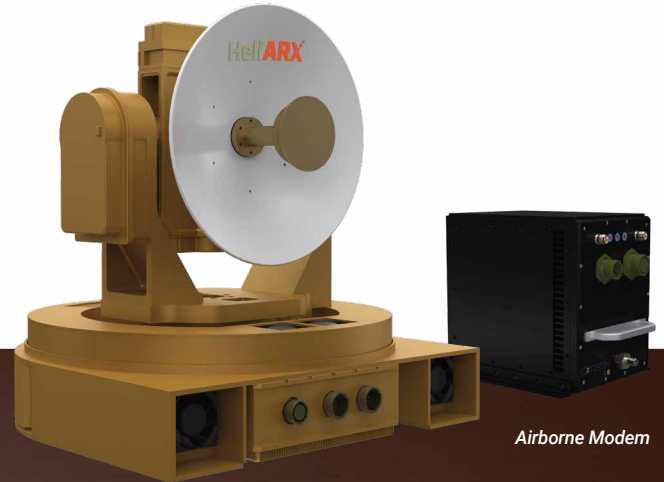


# HeliARX

Ku 12



SATCOM On The Move Antenna

Airborne Modem

## BROADBAND SATCOM-ON-THE-MOVE

### OVERVIEW

Helicopters are critical for operations in search and rescue, disaster response, military operations, troop and equipment transport, border security, intelligence, surveillance, and reconnaissance (ISR) missions. These operations require broadband, seamless, resilient, real-time communication every time and everywhere to make mission-critical decisions.

The rotor of helicopters typically reflects radio waves. CTech has revolutionized broadband communication in helicopters with its technology, allowing broadband communication to pass through the rotor blades. This breakthrough technology is at the heart of our HeliARX system, which consists of a modem (that prevents the jamming effect of the rotor), a 12-inch antenna, and a ground control unit.

HeliARX SATCOM antennas, designed specifically for helicopters, stand out with their advanced technology and innovative design features, ensuring high-speed and dependable communication even in the most challenging environments with four-axis Antenna System.

SATCOM (Satellite Communication) technology offers revolutionary advancements in the aviation sector, meeting the unique connectivity needs of helicopter operators worldwide.

## Antenna Technical Specification

## Definition

Ku-Band RF Input / Output Frequency	RX: 10.95 - 12.75 GHz TX: 13.75 - 14.5 GHz
Communication Protocol	OpenAMIP, Ethernet (UDP)
BUC	50W
EIRP	43.4 dBW@14 GHz
G/T	6.3 dB/K@11.7 GHz
Polarization	Linear (Vertical + Horizontal)
Power Consumption (W)	554 W (Nominal)
Peak Power Consumption (W) @28VDC	625W
Operating Voltage	Nominal 28VDC 18 - 32 VDC 50 ms Hold-up
SOTM Antenna Total Weight	46.7 kg
Operational Temperature	-40°C / +85°C
Storage Temperature	-40°C / +85°C
Azimuth	360° (Continuous)
Elevation	0° to 90°
Polarization	+/-135°
Cross-Elevation	+/-13°
Azimuth Velocity / Acceleration	150° /sec - 200° sec <sup>2</sup>
Elevation Velocity / Acceleration	150° /sec - 200° sec <sup>2</sup>
Polarization Velocity / Acceleration	150° /sec - 200° sec <sup>2</sup>
Cross-Elevation Velocity / Acceleration	150° /sec - 200° sec <sup>2</sup>
Dimensions	480 x 480 x 570.6 (mm)
Standards	MIL-STD810H, MIL-STD704F, DAL-D, MIL-STD461E, ITU-R S-728-1, DO-160G

## Modem Technical Specification

## Definition

L-Band TX Output Frequency	950 - 2150 MHz
L-Band RX Input Frequency	950 - 2150 MHz
Communication Waveform	Shading Resistant CTech Waveform
Communication Protocol	OpenAMIP
Data Rate	Up to 40 Mbps
Data Encryption / Decryption	AES-256 (Configurable)
RF Interfaces	L-Band RF TX – TNC, 50 Ω L-Band RF RX – TNC, 50 Ω
Control/User Data Interface	MIL-STD-38999 Ethernet – M&C / MIL-STD-38999 Ethernet – Layer 2 Traffic Interface
Power Consumption @Operating Voltage	Nominal: 100W @28VDC
Operating Voltage	Nominal 28VDC 18 - 32VDC, MIL-STD-704F
Instantaneous Power Failure Hold-up Time	<50ms
Chasis Dimensions	1/2 ATR Enclosure
Weight	4.9 kg +/- 5% gram
Operating Temperature Range	-40°C / +70° C
Storage Temperature Range	-40°C / +85° C
Features	ACM, QoS, Audio Input for Push-to-Talk, EMCON
Mechanical Protection	IP66
Internal Reference / DC Voltage	10 MHz internal reference in RX and TX line 22 KHz tone, 13/18V DC in RX line
ModCods	BPSK to 8PSK
Standards	MIL-STD810H, MIL-STD704F, DAL-D, MIL-STD461E, DO-160G