CREOMAGIC

CREO-AIR

High Data Rate Airborne Network

Advanced Datalinks for Airborne Platforms

Empowering Aerial Operations

In the demanding world of aerial communications, reliable data exchange is crucial. This is particularly essential for unmanned applications where airborne platforms require robust control from ground stations or seamless interactions with other aerial vehicles. Such scenarios often occur in environments susceptible to interference and spectrum scarcity.

CreoAir offers a resilient communication solution tailored to these challenges. Its product line features a high-performance datalink with superior data rates, designed for a range of aerial applications and supporting missions up to 250 km, thus setting new standards for connectivity performance.

Cutting-Edge Technology for Enhanced Performance

Our data link solutions leverage CreoNet, an innovative waveform that incorporates Software-Defined Radio (SDR) and Mobile Ad-Hoc Network (MANET) technologies. This combination enables unparalleled data rates of up to 80 Mbps, ensuring seamless integration with different interfaces, adaptive video encoding, and support for various data sources simultaneously. It also allows for the control of multiple platforms, enhancing operational efficiency and reliability.

Security and Reliability

CreoNet's unique technology guarantees secure communication, effectively countering electronic warfare (EW) threats, including hostile jamming. Enhanced Communication Security (COMSEC) features, including AES-256 encryption, frequency hopping, and automatic interference avoidance, alongside RF-based positioning for GPS-denied navigation, establish CreoAir as the premier choice for operating in adverse conditions. CreoAir is the backbone of next-generation aerial operations, enabling secure, efficient, and uninterrupted communication across the skies.

Tailored Communication Solutions for Every Mission

CreoAir's product line offers a variety of configurations, from low Size, Weight, Power, and Cost (SWaP-C), to advanced units that are fully certified to military standards (MIL-STD). We offer a range of ground stations suitable for short-range missions up to complex dual-tracking systems for medium and long-range operations. This ensures that CreoAir solutions can meet the needs of all mission types, from the most basic to the most advanced operational scenarios.

ANY MISSION. ANYTIME. ANYWHERE.

Key Features and Performance

Performance

- Handles up to 80Mbps data rates
- Offers long-range capabilities, up to 250km Line of Sight (LOS)
- Capable of both single and multi-platform operations
- Engineered for consistent reliability in variable operational conditions
- Operationally proven

Seamless integration

- Supports a wide range of communication protocols and interfaces
- Embedded video compression (H.264/H.265)
- Superior compression for none-video applications to achieve greater throughput
- Enables seamless integration with other Creomagic solutions to create multi-domain networks
- One-stop solution, including airborne transceivers and ground stations

Immunity & Security

- Utilizes advanced frequency hopping
- Excels in immunity to interference
- Employs dynamic spectrum access
- Features low probability of interception and detection (LPI/LPD)
- Incorporates AES256 encryption

Applications

- Unmanned aerial systems
- Mission-critical airborne applications
- Designed for multi-domain, scalable applications, enabling versatile deployment scenarios
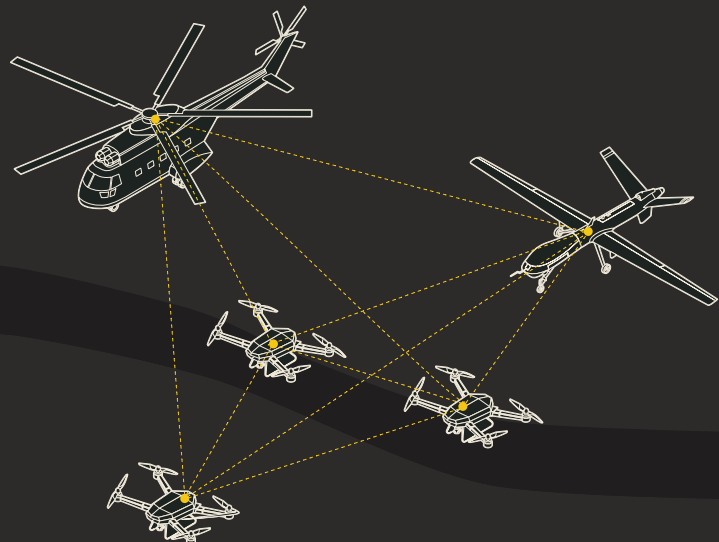
Airborne Network Connectivity

LONG-RANGE   MEDIUM-RANGE   SHORT-RANGE
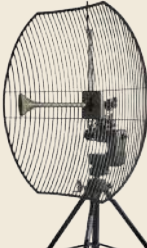
ANY MISSION. ANYTIME. ANYWHERE.

Specifications

CreoAir Airborne Units	CreoAir M2	CreoAir M3	CreoAir HP
Transceiver Type	Low-Power OEM	High-Power OEM	Mil-Std High Power
Applications	Mini UAS, Multirotor	UAS, VTOL, Large Drones	Tactical UAS, ISR Helicopters
Frequency Range	UHF / L-Band / S-Band / C-Band / Optional: Dual Band		
Data Rates	Up to 20MBps	Adaptive, Up to 80 Mbps	
Power (per request)	Up to 1W	Adaptive, Up to 10W	
Modulations	BPSK/QPSK/QAM16	Adaptive BPSK/QPSK/QAM16/QAM64	
Duplex Technology	TDMA		
Antenna Techniques	SIMO(MRC Diversity)	SIMO/MIMO	
Bandwidth	2/4/8MHZ	2/4/8/16MHz	
Immunity	Interference Avoidance	LPI/LPD (Cognitive Radio)	
Security	AES128/AES256		
Interfaces	Ethernet, RS232	Ethernet*2, RS232/TTL, Video(SD,HD)	Ethernet*2, RS232/TTL, Video(SD,HD)
Weight	From 100gr	From 220gr	From 600gr

CreoAir Ground Stations	SHORT-RANGE	MEDIUM-RANGE	LONG-RANGE
The ground stations are available in various configurations to suit specific operational needs, accommodating different ranges and data rates. The selected configuration is tailored to the mission's requirements, ensuring optimal performance from short-range onmi-directional setups to long-distance tracking systems for maximum efficiency and effectiveness.			
	Omni-directional antennas	One-axis tracking systems	Dual-axis advanced tracking systems

About Creomagic

Creomagic develops and manufactures innovative communication solutions that form intelligent Mobile Ad-Hoc Networks (MANET), specifically designed for mission-critical and tactical operations. Our radio technology provides users with reliable, secure, and resilient connectivity for any mission.

At the core of our solutions is CreoNet, a software-defined radio (SDR) technology developed by Creomagic that leverages world-leading capabilities, including advanced waveforms, machine learning, and networking technologies. Our solutions are engineered and fine-tuned by a highly experienced team, committed to the highest standards of innovation across our products and services.
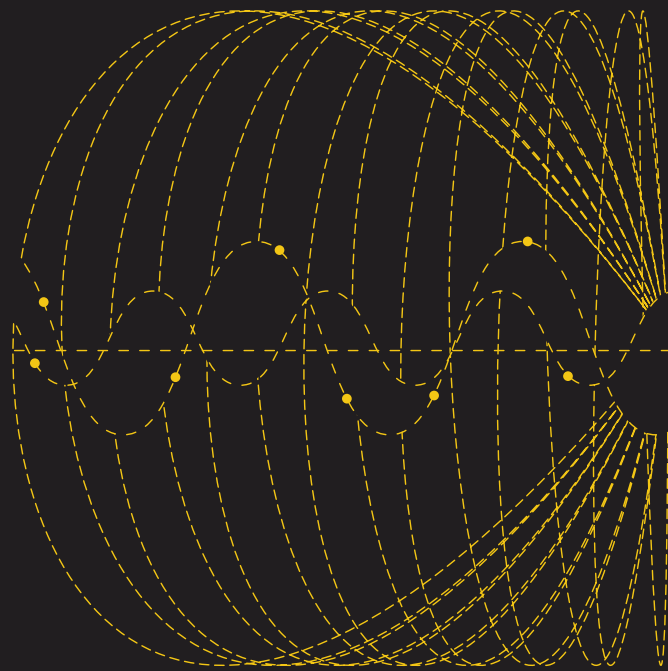
BEYOND SIGNALS
CRAFTING TOMORROW'S CONNECTIONS

CREO·AIR

High-performance communication for airborne applications

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