CREOMAGIC

CREOLAND
Broadband MANET Radio System for Vehicles & Robotics

The Backbone of High Throughput On The Move Connectivity

CreoLand broadband software defined radio (SDR) enables defense vehicles, command posts and robotics, to share voice, data, and high-resolution video across dozens of platforms in the toughest environments, such as cities, forests, mountains and subterrain.

Utilizing high-speed MANET technology, CreoLand constructs decentralized self forming self healing networks with no single point of failure. Operating independently of any infrastructure, CreoLand offers the best-in-category throughput of up to 100Mbps for video streams, and almost twice for non-video compressed data.

Integrating with Creomagic's range of personal, marine and airborne radios, or as an extension of

LTE/5G networks, CreoLand offers versatile and reliable on-the-move connectivity.

With its unique dynamic spectrum access technology, together with frequency hopping and embedded AES256 encryption, CreoLand effectively overcomes EW-affected environments, whether it is hostile jamming or blue force interference.

CreoLand is offered in two primary configurations: a light radio suitable for public safety and small robotics, and a high-power radio designed for command centers, long-range tactical links, artillery, and special forces. Both configurations are optionally equipped with LTE/5G modems bridging between private and cellular networks.

Features and Advantages

Performance

- Throughput: up to 100Mbps for streaming video; higher throughput for compressed data
- Operation in tough environments: urban, forest, mountains, subterrain
- MANET/MESH networks that support dozens of devices on-the-move
- Configurations: light 1W radio, high-power 10W radio and hybrid (SDR+LTE/5G)

Special Radio Features

- Decentralized network with no single point of failure
- Adaptive power and modulations optimizing efficiency, availability and power
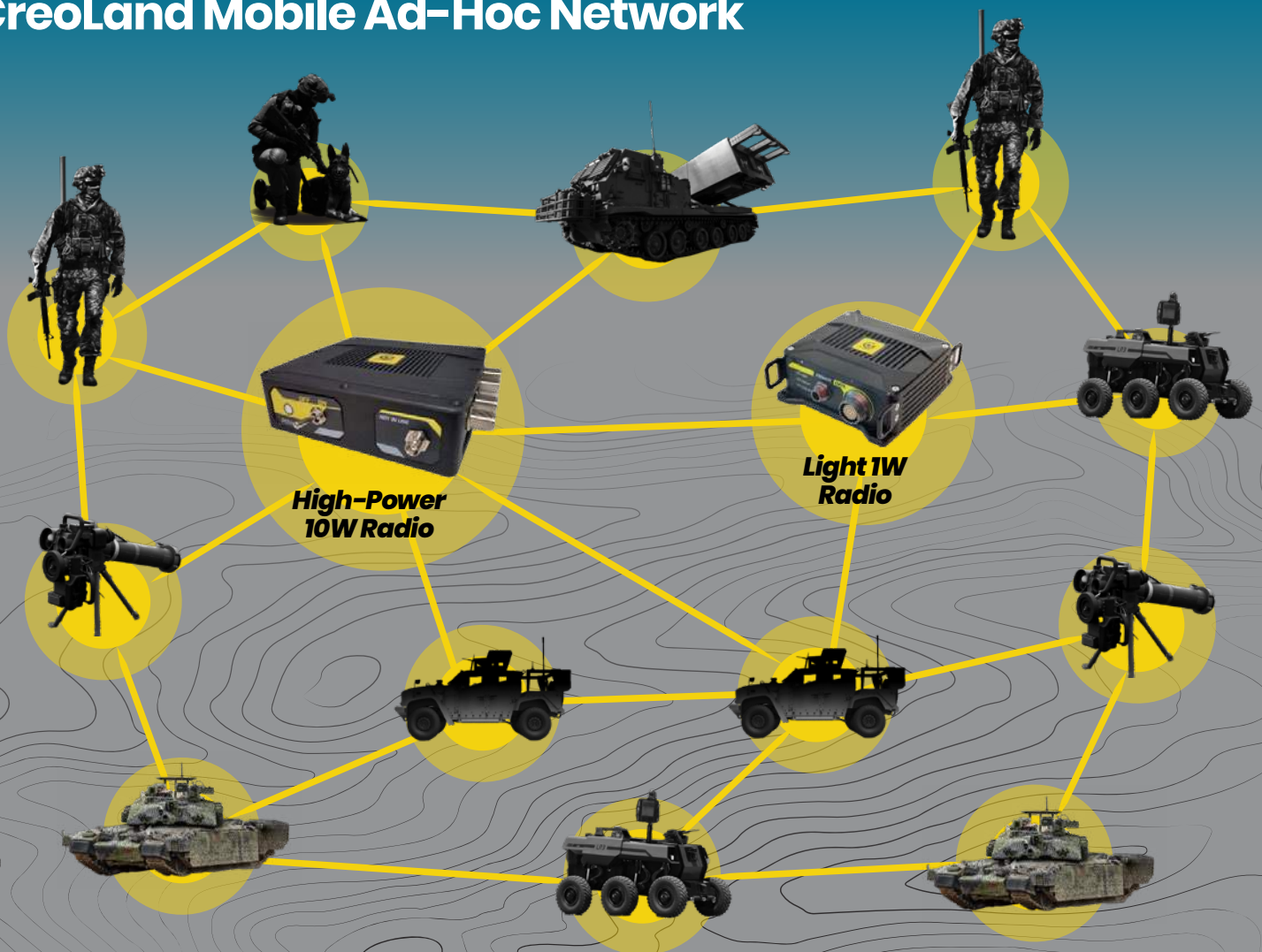- Synchronization with no external sources, and operation in GPS-denied areas

Communication Security

- Dynamic spectrum access: self recognition of environments; jamming and interference avoidance
- Encryption: AES-256
- Frequency hopping

Mobile Command Centers

- Communication protocols: ETHERNET, RS-232, USB 2/3, Digital Video (HD/SDI)
- Embedded video compression (H264/H265) and video recording (256GB storage)
- Smooth integration of voice and data communication with legacy equipment
- Command center equipment: omni-directional and directional antennas, recording and storage systems, etc.

CreoLand Mobile Ad-Hoc Network

High-Power 10W Radio

Light 1W Radio

Applications

Connectivity On-The-Move

Multi-domain tactical clouds (team/company/battalion/brigade), robotics and MuM-T, long-range special operations, VIP convoys, ECM immune communication, and more.

Tactical Communication Backbone

BMobile command centers (SDR and cellular), long-range tactical links, borderline and perimeter clouds, extensions/backhauls of LTE/5G arrays, and more.

Specifications

		CreoLand light 1W	CreoLand HP 10W
Picture			
Transmission	Power	Up to 1W adaptive	Up to 10W adaptive
	Throughput	Up to 20Mbps	Up to 100 Mbps (MIMO)
	Frequency Bands	UHF / L-Band / S-Band / C-Band / Optional: Dual band feature	
	Modulation	BPSK / QPSK / QAM16 / QAM64	
	Bandwidth	2/4/8 MHz	2/4/8/16 MHz
	Antennas configuration	SIMO (2Rx/1Tx channels)	MIMO (2Rx/2Tx Channels)
	EMC	MIL-STD-461E	
COMSEC	Encryption	AES256	
	Immunity	Frequency Hopping, Interference Avoidance (dynamic spectrum access)	
Power	Input power	9-36VDC; up to 10W	9-36VDC; up to 50W
Mechanical, Environmental	Weight	750gr	1,200gr
	Dimensions (L,W,H)	133mm, 112mm, 43mm	200mm, 200mm, 56mm
	Material and color	Aluminum, black	Aluminum, black
	Temperature range	-40ºC to +60ºC	-40ºC to +60ºC
	Standards	MIL-STD-810G	
	Ingress Protection	IP68	IP68

About Creomagic

Creomagic develops and manufactures cognitive software-defined broadband radio products that form Mobile Ad-Hoc Networks (MANET). Our technology, CreoNet, utilizes world leading capabilities, that enable business-critical and mission-critical users to implement reliable, secure, high throughput communication, anytime, anywhere.
We are always happy to communicate.

www.creomagic.com

Photos: US DoD, UK MoD, IAI

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