



# RD

TECH  
GROUP

## APPLICATION AREAS:

FIXED WING UAV, UNMANNED BOAT, LAND ROBOTICS, SWAT VEHICLE



## RDTECH Broadband Airborne Datalink

The core of aerial operations.  
Connecting all, everywhere.

Advanced communication solutions that enable businesses across various industries to expand their capabilities and optimize their workflow.



# RDTECH Broadband Airborne Datalink

An advanced broadband networking line-of-sight (LOS) datalink system designed for aerial platforms of various configurations and architecture, that operate within both short and extended ranges, up to 200 km.

Adding advanced MANET technology to the scene, RDTEch can now offer its users a throughput of up to 100Mbps, establishing connections for numerous data sources and exerting control over multiple platforms. RDTEch offers streamlined integration of aerial platforms into diverse multi-domain and tactical communication networks, showcasing its versatile and dynamic nature.

Using unique dynamic-spectrum-access technology, RDTEch avoids potential interference and jamming threats, ensuring uninterrupted uplink and downlink. With additional COMSEC features like AES-256 encryption and frequency hopping, alongside RSSI RF-based positioning that facilitates navigation in GPS-challenged environments, RDTEch emerges as the optimal solution for demanding scenarios.

Diverse product line offers three primary configurations: RDL-2, tailored for lightweight short-range platforms; RDL-3, optimized for extensive high-throughput missions; and the RDTEch hybrid radio configuration, enabling simultaneous communication across LOS channels and cellular networks.



## TECHNICAL SPECIFICATIONS

		SHORT RANGE	MEDIUM RANGE	LONG RANGE	EXTRA LONG RANGE
<b>General</b>	Application	Micro UAS Multi-rotors	Micro UAS Multi-rotors	Tactical UAS ISR Helicopters Multi sensors	MALE UAS ISR aircrafts Multi sensors
	Max Range	10km 30km 70km / 100km 200km			
	Throughput	Up to 20 Mbps (with 100 Mbps optional)			
	Transceiver	RDL-2 - 1W / RDL-3 - 10W			RDL-3 - 10W
	Antennas Configuration	SIMO (2Rx/1Tx channels) / MIMO (2Rx/2Tx Channels)			
	Frequency	S-Band/C-Band			
	Immunity	Frequency Hopping 250hps, Interference Avoidance (dynamic spectrum access)			
	Standards	MIL-STD-810H / MIL-STD-461F / IP66 (ground segment only)			
	Modulation	CE-BPSK (High Sensitivity) BPSK / QPSK / QAM16			
	Encryption	AES-128 / AES-256 (optional)			
	Operational Temperature	-40° to +60°C			
<b>Ground segment</b>	Tracking System	n/a	single axis	dual axis	
	Weight	6 kg	12 kg	40 kg	50 kg
<b>Airborne segment</b>	Dimensions	starting at 72*52*25mm		starting at 110*70*25mm	
	Weight	starting at 105g		starting at 220g	



## FEATURES AND CAPABILITIES

### PERFORMANCE

- ✓ Rapid data transfer speeds reaching 100Mbps
- ✓ Range: 5km to 200km (LOS)
- ✓ Operations across single or multiple platforms

### SPECIAL RADIO CAPABILITIES

- ✓ Flexible power and modulations enhancing efficiency, availability, and energy utilization
- ✓ Self-contained synchronization and RF-based positioning for functioning in GPS-denied zones

### HYBRID CELLULAR TRANSCEIVER (OPTIONAL)

- ✓ Operates concurrently on LOS link and cellular networks (LTE/5G)
- ✓ Expands operational reach and enhances redundancy
- ✓ Facilitates backhauling capabilities

### COMMUNICATION SECURITY

- ✓ Enhances performance in interfered and jammed spectrums through Machine Learning-aided Dynamic Spectrum Access
- ✓ AES-256 Encryption
- ✓ Frequency hopping 250hps
- ✓ Lost data recovery

### PLATFORMS AND NETWORKS INTEGRATION

- ✓ Supported communication protocols: ETHERNET, RS-232, USB 2/3, Digital Video (HD/SDI), Analog Video (PAL/NTSC)
- ✓ Embedded video compression (H264/H265)
- ✓ Optimized Compression for Non-video Applications, Enhancing Throughput Significantly
- ✓ Effortless Integration with Tactical and Marine Networks for Seamless Operation



## SOLUTIONS

Discover RD Tech's software-defined communication products, packed with essential technologies including MESH, MIMO, FHSS, AES256, Spectrum Scan, and RSSI Tracking. Boost efficiency, enhance security, and cut costs with our dependable designs, offering high-bandwidth Ethernet and Serial data. Leverage this for accurate remote video, telemetry, robotics, and wireless control spanning vast distances. Our diverse product range ensures tailored solutions for your unique applications and requirements. Contact us to transform your operations.

## ABOUT US

Empowering with wireless solutions. Our global impact stems from a passionate team of hardware engineers and software experts. We pioneer affordable, secure, and robust communication networks across all terrains and conditions. Connecting all, everywhere.

# CONTACT US

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