

# Wave Radios – Tactical Radio Solutions for Unmanned Systems

**Lekha Wireless Wave Series** product line addresses High Capacity UAV and UGV compact Radio for PTP, PTMP and Mesh Network scenarios. Highly scalable Network solution with multi-channel and carrier aggregation concepts. Military qualified secure radio with custom form factors aligning to UAV class to enhance the ranges and capacity.

## Applications

1. SWARM autonomous vehicles (Drones and UGVs)
2. Long Range UAV Networks with Relay connectivity
3. Secure Multisite Radar Network Communication
4. PTMP Network with Device to Device Mesh connectivity for Private Industry Mining and Utility Networks



*WaveDyut*



*WaveSwarm*



*WaveBeam*

Parameter	WaveDyut	WaveSwarm	WaveBeam
Model No.	WD-S-AB-S WD-M-AB-S	WS-S-AB-LS WS-M-AB-LS	WB-M-AB-C WB-M-VH-C
	Product Family (AB): WaveDyut (WD) or WaveSwarm (WS) or WaveBeam (WB)		
	Form Factor/RF Power (X): S -23 dBm, M- 30 to 33 dBm, L > 33 dBm		
	Platform (MN): AB-Airborne, VH- Vehicle Mount, SM-Surface Mount, RK-Rack Mount, ID-Indoor, HH-Handheld		
	Freq Band (PQ): H-HF band, V-VHF band, U-UHF band, L-L band, S-S band, LS-L and S band, C-C band		

## System Specifications

Parameter	WaveDyut	WaveSwarm	WaveBeam	Additional Notes
Network Topology	Point to Point	Mesh, Point to Multipoint	Point to Point with Relay	
Waveform	COFDM with QPSK, QAM16 and QAM64	COFDM and SC-FDE with QPSK, QAM16 and QAM64	DSSS, SOQPSK and SC-FDE	
Operating Frequency (MHz)	2200 to 2400 400 to 500	1600 to 2600	4400 to 5000	Customizable for Specific Military License Bands
RF Power	23 dBm 30 dBm		33 dBm	Customizable for Specific Deployment Scenario
Data Rates	2 Mbps to 10 Mbps	2 Mbps to 10 Mbps per Node with Aggregated 100 Mbps	8 Mbps Max	Customizable for Specific Deployment Scenario
Channel Coding	CC Rate 1/2, 3/4 and 5/6		CTC and LDPC with Rate 1/2, 3/4, 5/6 and 7/8	
No of Nodes	2 (Central and Remote)	>64 Mesh Nodes	4 (GCS, ADT, ADR and RVT)	Scalable Design
Range	>10 Km	> 25 Km	> 100 Km	Depends on the Terrain and Use Case
Applications	IP Data and Serial			
ECCM	Frequency Hopping			
Data Security	AES128	AES128/256		
Interfaces	Ethernet and RS232	Ethernet, RS232 and RS422		
Power	12V	28V		
GPS	External	Inbuilt (GPS, GLONASS and IRNSS/NavIC)		
Dimensions and Weight	150 x 75 x 35 mm < 350 grams	156 x 100 x 62 mm < 600 grams	200 x 150 x 92 mm < 1500 grams	Indicative and Customizable for Specific Deployment
Antenna	Omni and Directional Antenna		Omni, Switch Beam Antenna and Directional Antenna Antenna Tracker	
User Interface	Android and PC based GUI App			
Environmental	MIL STD 810 G Compliance for Vibration, Shock, Thermal and Stress			

For further information or a demonstration, please send a request to [business@lekhawireless.com](mailto:business@lekhawireless.com).  
For details on other products please visit [www.lekhawireless.com](http://www.lekhawireless.com).