Ryderoo Ltd.

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Phone: 01182090024 Web: www.ryderoo.com E-mail: info@ryderoo.com RYDEROO : SD360LR Drone Detector with Direction Finder

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A pioneer in Radio Frequency Machine Learning (RFML), Ryderoo uses RFML to enable signal detection, estimation, and classification. RFMLbased systems outperform conventional signalprocessing methods in signal detection and classification. Ryderoo develops innovative products using RFML such as drone detectors, mobile phone(4G,5G) detectors, and systems for RF fingerprinting & spectrum anomaly detection.







SD360LR offers Long Range Detection of Drones approaching sensitive areas such as Airports, Refineries, and other Critical Infrastructure Facilities. SD360LR is based on Software Defined Radio (SDR) architecture which makes the system "Future Proof" by enabling easy upgrade of drone signatures in future

SD360LR

Features

- 4000m-500m detection radius
- Azimuth location of 32 sectors or more
- Provides real-time tracking of drones
- Simultaneous detection of multiple drones
- Easy integration with Radar, Camera & Jammer
- 70 MHz– 6000 MHz detection frequency range
- SDR based architecture for easy upgrade in future
- AI based detection algorithm for very low false alarm
- Low power consumption, AC/DC supply for 24/7 operation
- Multiple drone detection & accurate direction finding
- Rugged IP65 dust and rain proof casing



GIS Enabled Detection & DF

- The GUI of the detector is GIS enabled with the map of the location
- There are 32 sectors to indicate the direction of arrival.
- If there are multiple drones, the sectors will be color coded to distinguish between various drones



Multiple Drone Detection

- The detection window shows the important parameters such as center frequency, bandwidth and the direction of arrival of the detected drones
- All the detected drones will be color coded for identification
- The RF spectrum will be shown for visual identification and confirmation of the presence of drone



GUI Display for Drone RF signal (RF signal analysis)

Detector								
Spectrum Table								
Number of Drones TextLabel								
Drone	Sector	Fc	Bandwidth	HitCount	Magnitude	32 1 2		
1	0	0	0	0	84			
2	0	0	0	0	0			
3	0	0	0	0	0			
4	0	0	0	0	0			
5	26	5745	20	7747	2177			
6	0	0	0	0	0			
7	0	0	0	0	0			
8	0	0	0	0	0			
						8		
						8		
						/s		
						$\sum_{i=1}^{n} \frac{1}{i} $		
						æ		
						67 97 54		
_						21 91		
1						Sectors of Interest		

GUI Drone Tracking Display (Drone tracking & Multi-drone detection)

Technical Specifications

Parameter	Specifications				
Frequency Bands	70 MHz– 6000 MHz				
Detection Range	4000m-5000m (range may vary depending upon the ambient noise level at the side)				
Antennas	High Gain Multi Band Sectoral Antennas (customisation is available)				
Power Supply	DC 12V/AC Mains				
Detection Method	Passive RF Detection				
Network Interference	RG 45, IP based interface with fixed IP number for the detector board				
Casing & Environmental	Rain and Dust proof, IP65 casing Temperature: -00C to 65C				
Other features	 Audio visual alarm upon drone detection Able to interface easily with Jammer. Jammer will follow the DF by detector Supports stand alone & networked mode of operation Suited for outdoor fixed site operation Rugged laptop for software and GUI Customizable GUI and alarm Al based signal identification for low false alarm rate 				
Warranty & Technical Sup- port	2 years Comprehensive				
Training	 1 day training for installation and operation 1 day operators training				