

SRP100

2D Phased Array Radar & Electro-Optic Infrared Detection Solution

SRP100 is a low-altitude counter-drone system that integrates a 360° phased-array radar with an EO/IR optical identification and tracking module, offering an all-in-one capability of detection, guidance, identification and tracking. The system enables long-range, omnidirectional target detection without relying on radio signals, and automatically directs the optical module for precise identification and continuous tracking.

SRP100 supports visual threat confirmation and rapid verification of countermeasure effectiveness, enabling seamless integration with various counter-drone systems to execute engagement tasks efficiently. With its lightweight design and rapid deployment, it is well-suited for low-altitude protection in critical areas such as airports, prisons, and energy facilities, delivering all-weather, hemispherical situational awareness.



KEY FEATURES



PRODUCT FEATURES

- **Over-the-Horizon Detection:**
Covers all types of low-altitude UAVs, including FPV drones, loitering munitions, and fiber-optic guided drones.
Detection range: 650m for small FPV drones, 2.2km for large multirotor drones.
- **Rapid Target Lock-On:**
Automatically locks onto incoming UAV threats within 4 seconds of detection
- **AI-Powered Identification:**
Integrates deep learning algorithms with a UAV recognition accuracy of $\geq 98\%$.
- **Visualized Situational Awareness:**
Fully integrated with the C2 system, providing real-time visual display of target information, alert status, and trajectory tracking.



All-Weather Hemispherical Monitoring

Combines radar and EO/IR optical detection technologies with complementary strengths, enabling 360° azimuth and 0°–90° elevation coverage for all-weather hemispherical surveillance.



Intelligent Threat Level Assessment

Based on an AI-powered database, the system evaluates threat levels by integrating alert severity, warning zones, and target attributes, providing reliable support for terminal decision-making.



High-Precision Countermeasure Guidance

The radar enables full-directional target detection and early warning, guiding the optical module to lock onto targets with angular positioning accuracy better than $< 0.03^\circ$, supporting real-time tracking and countermeasure guidance.



Lightweight & Rapid Deployment

With a total system weight of approximately 30kg, SRP100 supports fast UAV-based self-calibration and can be deployed and operational within 30 minutes, meeting the needs of fast-paced multi-scenario defense operations.



SPECIFICATIONS

Radar & EO / IR Specifications

Radar Detection Range	Small FPV drone: 650m Mini quadcopter: 1.1km Large multirotor: 1.8km Large fixed-wing UAV: 3km Commercial airliner: 5km (full range) Human: 2.2km Vehicle: 4km	EO/IR Detection & Recognition Range	Small FPV drone: EO 2km, IR 800m Mini quadcopter: EO 2.5km, IR 800m Large multirotor: EO 4km, IR 1.5km Large fixed-wing UAV: EO 4km, IR 1.5km Commercial airliner: EO 8km, IR 6km Human: EO 4km, IR 2km Vehicle: EO 6km, IR 4km
Recognizable Targets	Drones, commercial aircraft, birds, humans, vehicles	Weight	<30kg
FOV	Horizontal: 360°, Elevation: 0°–90°	Dimensions	920*920*440mm
Speed Range	0~60m/s	Power Consumption	<1000W
Distance Accuracy	2m	Input Voltage	AC 220V
Angular Accuracy	0.03°	Operating Temperature	-40°C~+60°C
Target Lock-On Time	< 4s	IP Rating	IP66
AI Target Recognition Accuracy (UAVs)	> 98%		

Radar Specifications

Operating Frequency	K-Band, 24.05~24.25GHz	FOV	Azimuth 100°, Elevation 45°
Scanning Method	Active Electronically Scanned Array	Target Capacity	Detection: 200 targets, Tracking: 5–10 targets
Waveform Type	Frequency Modulated Continuous Wave		
Effective Signal Bandwidth	60MHz	Accuracy	Distance: 2m, Speed: 0.6m/s Azimuth: 1°, Elevation: 2°
Max Antenna Power	7W		
Blind Zone	≤20m	Airspace Scan Time	2s
		Target Update Rate	200ms

PTZ Specifications

DayLight Camera	Sensor	1/2.8"	Lens Focal length	F6.5mm-312mm
	Image resolution	1920*1080	Sensitivity	0.002Lux (Color), 0.0005Lux (B/W)
	Field of view	43.5°*26.2°--0.85°*0.57°	Continuous Optical Zoom	48X
Thermal Imaging	Detector Type	Uncooled LWIR	Lens Focal Length	F75mm
	Image Resolution	640*512	NETD	≥40mK
	FOV	8.2°*6.6°		

TACEDGE-I

AI performance	275 TOPS	Operating System	UBUNTU
CPU	Arm Cortex-A78AE	Ethernet Interface	3*RJ45
GPU	2048-core NVIDIA Ampere GPU with 64 Tensor Cores	Weight	12.5kg
Memory	64GB 256-bit DDRS	IP Rating	IP67
Supported Devices	4* Tracker SDH100, 1* Tracker Eye SRP100 1* Hunter F SFL100, 1* Spoofer Pro SSH130	Power Supply	220V AC