

CapGuard™ – cUAS

All in One System: Radar EG, Optical, Jammer



CapGuard™ platform

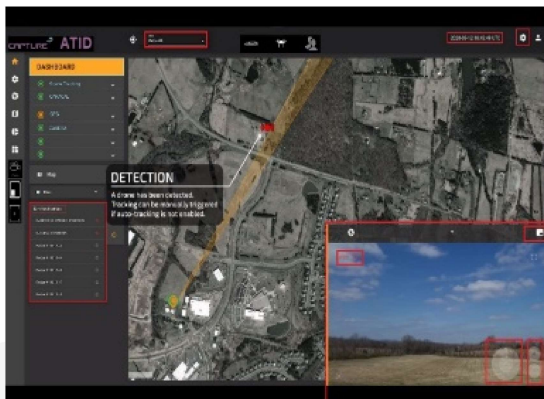
A Micro-Doppler radar, mounted on a lightweight 360° tracking system, capable of detecting various types of Small Unmanned Aerial Vehicle Drones (SUAVDs) within a range of up to 2 kilometers.



Key Features

- cUAS All-in-One System
- Micro-Doppler detection and differentiation of both drones & birds.
- Operating in K band
- UAV Detection < 2 km
- Multi classification capability in Realtime
- Optical tracking: Day/Night and Thermal
- Jamming: 9 channels 0.43Ghz-5.8Ghz
- Dimension – Approx. 60 x 60 x 60 cm
- 360° tracking system
- Weight: Approx. 30kg

Equipped with a built-in C2 graphical user interface, and powered by AI analytics



- Picture in picture video
- Automatic object tracking
- Moving map software

| System parameters

Pan / Tilt Range	Pan: 360° / 360° xN ; Tilt: -45° to +45°
Pan / Tilt Speed	Configurable, pan: 0.01° ~ 40°/s
Waterproof	IP66
System Power	24V-28V up to 10A
Dimensions (L*W*H)	Approx. 60 x 60 x 60 cm
Control mode	Speed, position
Ethernet	TCP/IP
Tracking Video (Nvidia)	AI – classification mode – Car / Man / Drone

| Camera parameters

		ATID-300-1EG-1C	ATID-300-1EG-1C1T150	ATID-300-1EG-1CU1T150	ATID-300-1EG-1CU-1T150HD	ATID-300-1EG-1CU-1T225	ATID-300-1EG-1C52-1T225
DAY / STARLIGHT	Image Sensor	1/1.8” Sony Starvis progressive scan CMOS					1/1.8” Sony Exmor Global Shutter CMOS
	Focal Length	6.8mm~300mm, 42x Optical Zoom		11.3mm~1000mm, 88x Optical Zoom			15mm~775mm, 52x Optical Zoom
	DORI Distance (Human)	Det':2,900m ; Obs':1,160m; Rec': 586m ; Ide':293m		Det':16,000m; Obs':6,300m; Rec': 3,200m; Ide':1,600m			Det': 9,026m; Obs':3,582m ; Rec':1,805m; Ide':903m
	Day / Night	Electrical, ICR (Auto/Manual)					
	Video output	RTSP					
THERMAL	Image Sensor	-	Uncooled VOx microbolometer				
	Resolution	-	Sensor- 640 x 512; 50Hz: 25fps		Sensor- 1280 x 1024; 25fps	Sensor- 640 x 512 ; 25fps	
	Focal Length	-	30mm~150mm, 5x Optical/ 8x digital Zoom		30mm~150mm 5x Optical / 4x digital Zoom	25~225m, 9x Optical/ 8x digital Zoom	
	Video output	-	RTSP, HTTPS				
	Pixel size	-	12 μm				
	Spectral Range	-	8-14 μm				



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| Radar parameters EG

RF Transmit Power	3.2 Watts CW (35 dBm)
UAS Tracking Ranges	Minimum 25 meters, effective cUAS 1500m, Maximum 5000 m
Operation center frequency	24.05 - 24.25 GHz
Frequency Accuracy	± 10ppm (± 250kHz) including temperature and aging 8 years
Waveforms	FMCW 32 chirp CPI with 45MHz swept BW over 200uSec SAWTOOTH (default) with power blanking.
Polarization	Linear, Horizontal
Field of View	Azimuth ± 120° / Elevation ± 90°
Realized Gain at broadside	21 dBi typ. (safety absolute maximum gain of 22 dBi)
Max Tracks	20 simultaneous tracks dynamically allocated via i-SCAN
Track updates	5-10 updates /sec (for each track) depending upon Operation Mode

| Jammer parameters

Frequency Band (*)	433 MHz; 868 MHz; 900 MHz; GNSS 1.2 & 1.5 GHz; 2.4 GHz; 5.2 GHz; 5.8 GHz
Coverage	2 km effective range
Power	Power output 10 W

* Additional frequencies can be added and customized based on customer requirements.



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