

T.RADAR ER

4D AESA RADAR

T.Radar ER is an advanced software-defined 4D AESA pulse-Doppler radar engineered to military specifications, achieving detection ranges up to 6km for commercial drones like the DJI Mavic 3. Its Element-Level Digital Adaptive Beamforming and GaN amplifiers enable precise tracking of low-RCS targets (down to 0.01 m²), while Kinematic Tracking algorithms identify multi-rotor drones through flight pattern analysis.

Designed for fixed installations like border security and critical infrastructure protection, the system features adjustable tripod mounts for optimal coverage across varied terrain. This all-digital system delivers reliable long-range surveillance capability for sustained operations.



Detection Range

6KM

Azimuth Coverage

120°

Specifications

Dimensions	100 cm x 52.9 cm x 15.9 cm (handle excluded) 100 cm x 52.9 cm x 22 cm (handle included)	Threat Target Recognition	Yes (Optional)
		Min. Target RCS	0.01 square meter (sm)
Weight	38 kg	Max. Detection Range	6 km
Ingress Protection (IP)	IP66	Min. Detection Range	100 m
Operating Temperature	-32°C ~ +50°C	Max. Azimuth Coverage	120° (-60° ~ 60°)
Network Interface	1 Gbps Ethernet	Max. Elevation Coverage	75° (-15° ~ 60°)
Power Input	AC 100 - 240 V	Max. Target Speed	30 m/s, Programmable
Array Type	Fully Digital (Element-Level) Transceiver	Target Info	3D Position, 3D Velocity, and RCS
Operating Frequency	2.9 GHz - 3.1 GHz (S-band)	One-Round Scan Interval	1 sec, Programmable
Polarization	Horizontally Linear	Scanning Volume	Configurable via GUI/API
Peak Power per Transmitter	10 Watt	Scanning Type	Horizontally-Narrow Scanning with Vertically-Wide Fan-Beam
Peak Radiation Power	160 Watt		
Max. Power Consumption	220 Watt	Range Resolution	15 m, Programmable
RF Front-end Circuit	Digital CMOS Transceiver and Digital IQ Phase Shifter	Velocity Resolution	1 m/s, Programmable
Positioning	GPS	Transmit Beamwidth	7°
Multi-Radar Integration	Yes	Azimuth Tracking Accuracy	< 2°
Mode	Track-While-Scan (TWS) (Default)	Elevation Tracking Accuracy	< 5°