X-Band Phased Array Two Coordinate Radar Specifications

No.	Item	Specification
1	Radar System	Pulse-Doppler
2	Scanning Mode	Azimuth phased-beam scanning
3	Operating Frequency Band	X-band (16 operating frequency points)
4	Transmit Power	≥25 W (linear frequency modulation)
5	Radar Range (Pd=0.80, Pf=10^{-6})	Speedboat (RCS=5.0): ≥22.5 kmSpeedboat (RCS=10.0): ≥30.0 kmMedium-sized ship (RCS=100.0): ≥45.0 kmNatural person (RCS=0.5): ≥10 kmArmed personnel (RCS=1.0): ≥12 kmMedium-sized vehicle (RCS=5.0): ≥18.0 km
6	Resolution	Range: ≤15 mAzimuth: ≤2.5° (boresight)
7	Accuracy	Range: ≤7.5 mAzimuth: ≤0.15° (boresight)
8	Tracking Mode	TWS/TAS
9	Number of Tracked Targets	TWS ≤500 / TAS ≤5 (per array face)
10	Coverage	Four-face array: 0-360°; Single array face: ±45°Elevation: 0-15° (mechanical fixed tilt)
11	Dimensions	1000 mm (L) × 200 mm (W) × 300 mm (H) (with handrail)
12	Weight	≤30 kg (single face)
13	Power Supply	AC 220 V, 50 Hz; Total power consumption ＜150 W
14	Continuous Operating Time	7×24-hour continuous operation
15	Operating Environment	Outdoor operating temperature: -40 ℃ ~ +55 ℃Storage temperature: -45 ℃ ~ +65 ℃Humidity: 95±3 % @30 ℃Ingress Protection: IP66 (water-jet resistant, dust-tight)Wind resistance: ≤100 knots (fixed station)
16	Software Optional Accessories	AIS data fusion (optional)Networked radar situation display (optional)Electronic chart display (optional)