# X-Band Phased Array Three Coordinate Radar Specifications

| No. | Item | Specification |
|---|---|---|
| 1 | Radar System | Pulse- Doppler |
| 2 | Scanning Mode | Azimuth & Elevation Phased Beam Scanning |
| 3 | Operating Frequency Band | X- band |
| 4 | Transmit Power | ≥180 W (Linear Frequency Modulation) |
| 5 | Display Range | 0.15 km ~ 12.0 km |
| 6 | Azimuth Angle | Electronic Scan Mode: Four- face array 0~360°, single face ±45°<br>Mechanical Scan Mode: 0~360°, RMP5 |
| 7 | Elevation Angle | Single face ±45° (mechanical fixed tilt) |
| 8 | Measurement Dimensions | Range / Azimuth / Elevation / Radial Velocity |
| 9 | Radar Range (Pd=0.80, Pf=$10^{-6}$) | Mechanical Scan Mode: (DJI Phantom 4 UAV, RCS=0.01) ≥5.0 km<br>Electronic Scan Mode: (DJI Phantom 4 UAV, RCS=0.01) ≥7.0 km |
| 10 | Height | 0 m ~ 3000 m |
| 11 | Velocity | 2.5 m/s ~ 150 m/s |
| 12 | Accuracy | Range: ≤7.5 m<br>Azimuth: ≤0.4° (boresight)<br>Elevation: ≤0.3° (boresight) |
| 13 | Tracking Mode | TWS/TAS |
| 14 | Number of Tracked Targets | TWS ≤300 / TAS ≤5 (per array face) |
| 15 | Dimensions | 380 mm (L) × 220 mm (W) × 520 mm (H) |
| 16 | Weight | ≤30 kg (single face) |
| 17 | Electrical Interfaces | Power supply, network port (serial port) |
| 18 | Total Power Consumption | DC24V, 550W (single face) |
| 19 | Continuous Operating Time | 7×24h continuous operation |
| 20 | Operating Environment | Operating temperature: -40℃ ~ +55℃<br>Storage temperature: -45℃ ~ +65℃<br>Humidity: 95±3% @30℃<br>Ingress Protection: IP66, water- jet resistant, dust- tight<br>Wind resistance: ≤100 knots (fixed station) |