# Low-Altitude Surveillance Radar



## PRODUCT OVERVIEW

RX-R414A X-band Medium-range Phased Array Radar adopts an all-solid-state, fully coherent pulse Doppler system. Based on machine learning and AI intelligent recognition technology, it is capable of detecting, tracking and identifying low-altitude, small and slow-speed targets under all-weather conditions. The radar features a two-dimensional phased scanning system. It adapts to the requirements of diverse application scenarios through flexible combinations of single-face array, azimuth mechanical scanning plus elevation phased scanning, and multi-face array configurations.

## TECHNICAL INDEX

| Parameters | Specifications |
|---|---|
| Frequency Band | X-band |
| Installation Method | Single-face array |
| Detection Range | ≥5Km (RCS：0.01㎡) |
| Blind Zone | ≤200m |
| Angular Coverage Range | Azimuth: ±45°， Elevation: 0°～80° (configurable in elevation) |
| Tracking Function | Phased Scanning TAS Function |
| Tracked Target Quantity | TAS：≥6 |
| Velocity Measurement Range | 1m/s～100m/s |
| Accuracy | Range: ＜10 m， Azimuth: ＜0.5°， Elevation: ＜0.4° |
| Track Update Rate | Search Time: ≤ 3s TAS：≤0.5S |
| Interface | Ethernet Port |
| Weight | ≤13Kg |
| Power Supply | DC24V/AC220V |
| Power Consumption | ≤400W |
| Equipment Dimensions | ≤335X315X135(mm) |
| Operating Temperature | -40℃～+60℃ |

# Low-Altitude Surveillance Radar



## PRODUCT OVERVIEW

RX-R414B X-band Medium-range Phased Array Radar adopts an all-solid-state and fully coherent pulse Doppler system. Based on machine learning and AI intelligent recognition technologies, it can detect, track and identify low-altitude, small and slow targets all-weather. The radar adopts a two-dimensional phase scanning system. It meets the requirements of different application scenarios through various combinations including single-sided array, azimuth mechanical scanning plus elevation phase scanning, and multi-panel array configurations.

## TECHNICAL INDEX

| Parameters | Specifications |
|---|---|
| Frequency Band | X-band |
| Installation Method | Single-sided array with turntable |
| Detection Range | ≥5km(RCS:0.01m²) |
| Blind Zone | ≤200m |
| Angular Coverage Range | Azimuth: 360°, Elevation: 0~80° (configurable in elevation) |
| Tracking Function | Mechanically Scanned Tracking/Phased Scanning TAS Function |
| Tracked Target Quantity | TAS：≥6 |
| Velocity Measurement Range | 1m/s～100m/s |
| Accuracy | Range: <10 m, Azimuth: <0.5°, Elevation: <0.5° |
| Track Update Rate | Search Time: ≤ 3.2s TAS:≤0.5S |
| Interface | Ethernet Port |
| Weight | ≤23kg |
| Power Supply | DC24V/AC220V |
| Power Consumptior | ≤450W |
| Equipment Dimensions | ≤575X315X220(mm) |
| Operating Temperature | -40℃～+60℃ |

# Low-Altitude Surveillance Radar



## PRODUCT OVERVIEW

RX-R415A X-band Medium-range Phased Array Radar adopts an all-solid-state and fully coherent pulse Doppler system. Supported by machine learning and AI intelligent recognition technologies, it can detect, track and identify low-altitude, small and slow-speed targets all day and night under all weather conditions.

The radar adopts a two-dimensional phased scanning architecture. It can meet the requirements of various application scenarios through combined configurations of single-panel array, azimuth mechanical scanning combined with elevation phased scanning, and multi-panel array.

## TECHNICAL INDEX

| Parameters | Specifications |
|---|---|
| Frequency band | X-band |
| Installation Method | Single-sided array |
| Detection Range | ≥8Km (RCS：0.01㎡) |
| Blind zone | ⩽200m |
| Angular Coverage | Azimuth: ±45°， Elevation: 0° ~ 80° (Elevation configurable) |
| Tracking Function | Phased Scan TAS Function |
| Tracking Targets | TAS：≥6 |
| Velocity Measurement Range | 1m/s～100m/s |
| Accuracy | Distance: ＜10 m， Azimuth: ＜0.5°， Elevation: ＜0.5° |
| Target Update Rate | Search Time: ≤ 3.5 s TAS：≤0.5s |
| Interface | Ethernet port |
| Weight | ≤15Kg |
| Power supply | DC24V/AC220V |
| Power consumption | ≤750W |
| Equipment dimensions | ŋ113V1/3V/2.&k k' |
| Operating Temperature | -40℃～+60℃ |

# Low-Altitude Surveillance Radar



## PRODUCT OVERVIEW

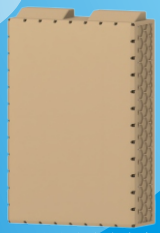
RX-R415B X-band medium-range phased array radar adopts an all-solid-state, fully coherent pulse Doppler system. Based on machine learning and AI intelligent recognition technologies, it is capable of all-weather detection, tracking and identification of low-altitude, small and slow-speed targets.

The radar adopts a two-dimensional phase scanning system. Different application scenario requirements can be satisfied by combined configurations of single-panel array, azimuth mechanical scanning plus elevation phase scanning, and multi-panel array.

## TECHNICAL INDEX

| Parameters | Specifications |
|---|---|
| Frequency Band | X-band |
| Installation Method | Single-sided array with turntable |
| Detection Range | ≥8km(RCS:0.01m²) |
| Blind Zone | ≤200m |
| Angular Coverage Range | Azimuth: 360°, Elevation: 0~80° (configurable in elevation) |
| Tracking Function | Mechanically Scanned Tracking/Phased Scanning TAS Function |
| Tracked Target Quantity | TAS：≥6 |
| Velocity Measurement Rang | 1m/s～100m/s |
| Accuracy | Range: <10 m, Azimuth: <0.5°, Elevation: <0.5° |
| Track Update Rate | Search Time: ≤ 3.8s  TAS:≤0.5S |
| Interface | Ethernet Port |
| Weight | ≤25kg |
| Power Supply | DC24V/AC220V |
| Power Consumption | ≤800W |
| Equipment Dimensions | ≤575X315X220(mm) |
| Operating Temperature | -40℃～+60℃ |

# Low-Altitude Surveillance Radar



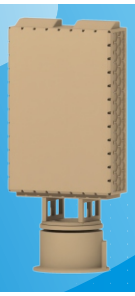
## PRODUCT OVERVIEW

RX-R417A X-band Long-range Phased Array Radar adopts an all-solid-state, fully coherent pulse Doppler system. Based on machine learning and AI intelligent recognition technologies, it can detect, track and identify low-altitude, small and slow-speed (LSS) targets under all-weather conditions. The radar features a two-dimensional phased scanning system. It adopts different combinations including single-face array, azimuth mechanical scanning plus elevation phase scanning, and multi-face array to meet the requirements of various application scenarios.

## TECHNICAL INDEX

| Parameters | Specifications |
|---|---|
| Frequency Band | X-band |
| Installation Method | Single-face array |
| Detection Range | ≥10Km (RCS:0.01m$^2$) |
| Blind Zone | ≤200m |
| Angular Coverage | Azimuth: ±45°,Elevation Coverage: 0°～60°(elevation angle configurable) |
| Target Tracking Functior | Phased Scanning TAS Function |
| Tracked Target Quantity | TAS：≥6 |
| Velocity Measurement Range | 1m/s～100m/s |
| Accuracy | Range: ＜10 m, Azimuth: ＜0.4°, Elevation: ＜0.4° |
| Track Update Rate | Search Time: ≤ 3.5 s ,TAS:≤0.5s |
| Interface | Ethernet Port |
| Weight | ≤21Kg |
| Power Supply | AC220V/28V |
| Power Consumption | ≤1250W |
| Equipment Dimensions | ≤535X330X125(mm) |
| Operating Temperature | -40℃～+60℃ |

# Low-Altitude Surveillance Radar



## PRODUCT OVERVIEW

RX-R417B X-band long-range phased array radar adopts an all-solid-state, fully coherent pulse-Doppler system. Based on machine learning and AI intelligent recognition technology, it can detect, track and identify low, small and slow (LSS) targets all-weather and round-the-clock.

The radar employs a two-dimensional phase scanning system. It adopts flexible combinations of single-panel array, azimuth mechanical scanning plus elevation phase scanning, and multi-panel array configurations to meet the application requirements of diverse operational scenarios.

## TECHNICAL INDEX

| Parameters | Specifications |
|---|---|
| Frequency band | X-band |
| Installation Method | Single-panel array with turntable |
| Detection Range | ≥10Km (RCS:0.01m$^2$) |
| Blind Zone | ≤200m |
| Angular Coverage | Azimuth coverage: 360°; Elevation coverage: 0° to 60° (elevation angle configurable) |
| Tracking Capability | Mechanical scanning tracking / Phase scanning TAS (Track And Scan) function |
| Tracked Target Number | TAS：≥6 |
| Speed Range | 1m/s～100m/s |
| Accuracy | Range: ＜10 m，Azimuth: ＜0.4°，Elevation: ＜0.4° |
| Track Update Rate | Search frame period: ≤4 s, TAS frame period: ≤0.5 s |
| Interface | Ethernet Port |
| Weight | ≤31Kg |
| Power Supply | AC220V/28V |
| Power Consumption | ≤1300W |
| Overall Dimensions | ≤770X330X220(mm) |
| Operating Temperature | -40℃～+60℃ |