

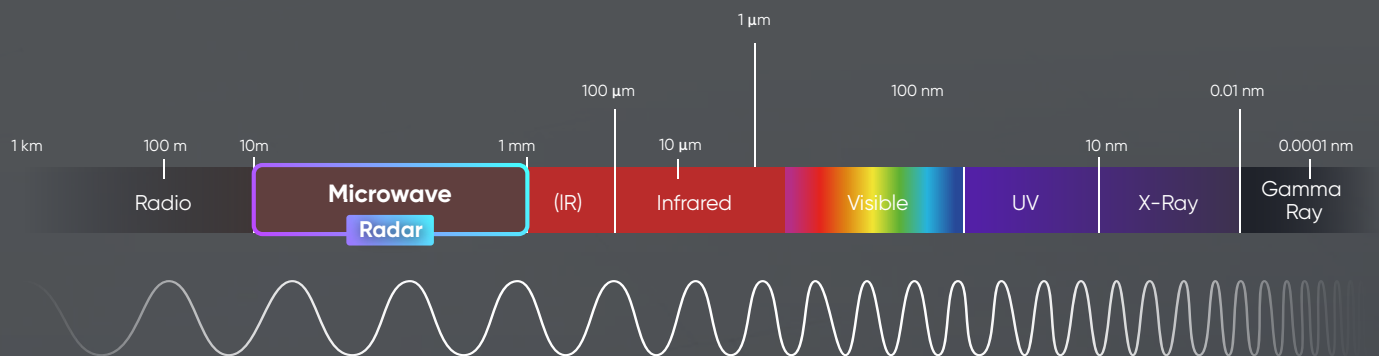
Hikvision **Security Radar**

Large Perimeter, Choose Radar



HIKVISION®

Radar Technology



Hikvision's security radar uses phased-array radar technology. It emits electromagnetic waves, receives echoes, and processes data to get distance, speed, and azimuth of moving targets. Unaffected by light, rain, snow, fog, dust, or high temperature, it offers good long-term stability and environmental anti-interference.

Introduction of Hikvision's Radar R&D Team



Established in 2015, Hikvision's radar R&D team has end-to-end system design capabilities from algorithms to high-frequency hardware and software, and masters core mass-production process technologies.



The team has developed multiple high-performance radar product series for security monitoring, autonomous driving, intelligent transportation, industrial applications, and smart parking.



These products cover 9.5GHz, 24GHz, 60GHz, 77GHz, and 79GHz frequency bands and adopt advanced radar technologies like phased array, DBF, MIMO, sparse array, and super resolution.

Advantages of Radar

Why Choose Hikvision Radar Products?

Wide-view, long-range, multi-target 3D detection

Utilizes electromagnetic wave technology

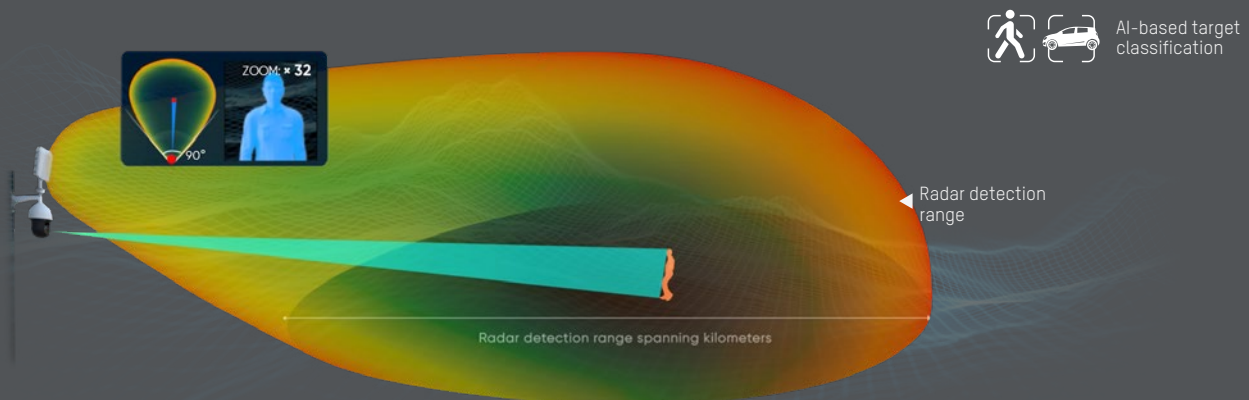
Detects at kilometer level, surpassing optical/infrared limitations

Phased array electronic scanning offers over 100° coverage for large-scale area monitoring



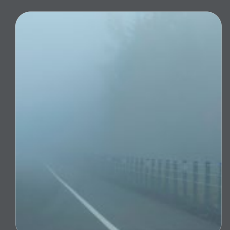
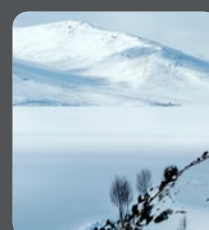
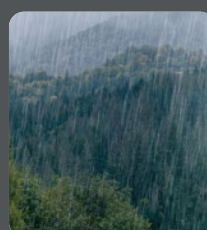
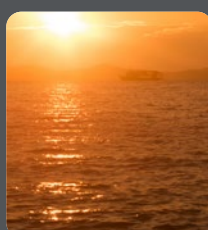
Integration with PTZ cameras for AI-enabled target ID & classification

Seamlessly integrated with PTZ cameras, it enables real-time tracking and AI-based target classification for precise intrusion detection



Strong environmental adaptability

Microwave radar offers stable, all-weather performance, highly resistant to light, rain, snow, and fog



Short-range Radar (K-Band)

Faster intrusion detection

- Up to 12 detections per second
- Integrates with PTZ camera to track humans and vehicles smoothly

Accurate target tracking and classification

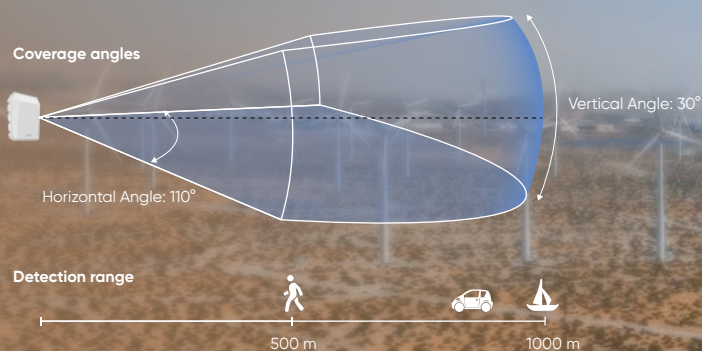
- Supports real-time detection of humans and vehicles
- Equipped with in-built AI video fusion algorithm for target recognition and classification

All-weather and all-time safety protection

- Microwave radar offers strong resistance to interference, ensuring stable detection in complex conditions



DS-TDSB06-FK/500m



Mid-range Radar (K/C-Band)

Efficient coverage with fewer devices

- Wide-view, lightweight and deploy-friendly, detecting humans and vehicles up to 2000 m

High-precision target detection

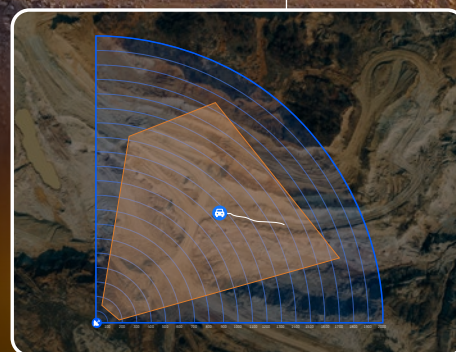
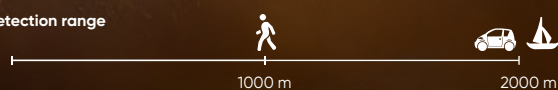
- Built-in GPS and north-finding, with automatic target tracking and classification
- Dynamically displays target positions on an electronic map



Coverage angles



Detection range



Long-range Radar (X-Band)

Wide-view, long-range 3D detection

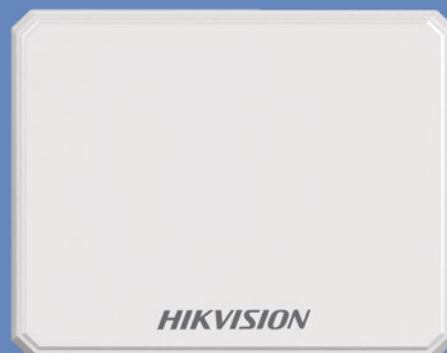
- 100° azimuth angle
- Detection range: 150 m – 12 km for humans, vehicles, and ships

High-resolution target detection

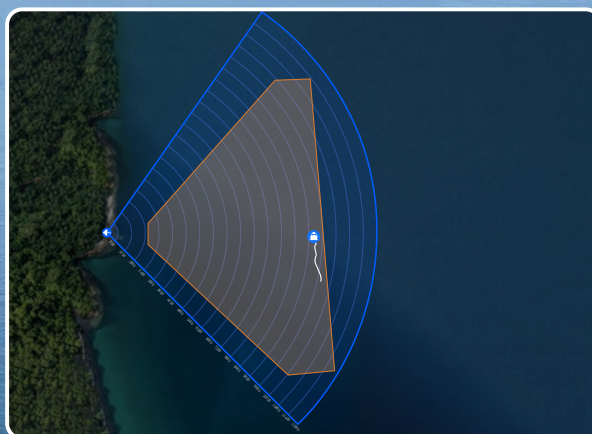
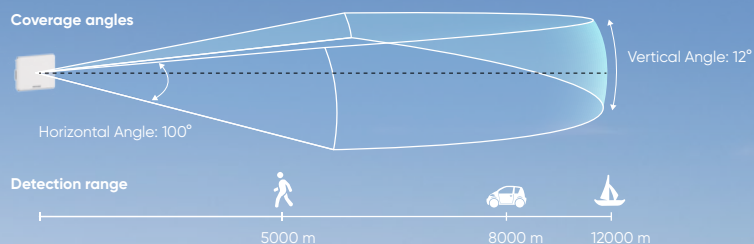
- Azimuth resolution $\leq 3.2^\circ$
- Azimuth accuracy $\leq 0.3^\circ$

High-performance multi-target detection

- Built-in GPS and north-finding, with automatic target tracking and classification
- Simultaneously detects and positions over 500 targets and accurately shows each target's location



STS-BG24X-L3/P
STS-BG32X-L5/P
STS-BW32X-L12/P



Radar-Video Fusion PTZ Camera

High-precision perimeter detection

- Integrates radar and video
- Deep-learning algorithm detects multiple moving objects with low false alarm rates

Easy installation

- One Radar-PTZ camera can replace multiple regular cameras, saving on pole erection, construction, and cable costs



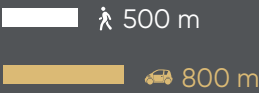
DS-2SR8C44015XG-LFW/SP/R15/18

Range Coverage



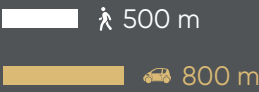
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K-band
24~24.25 GHz



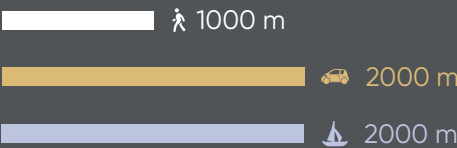
DS-TDSB0G-FK/500m

K-band
24~24.25 GHz



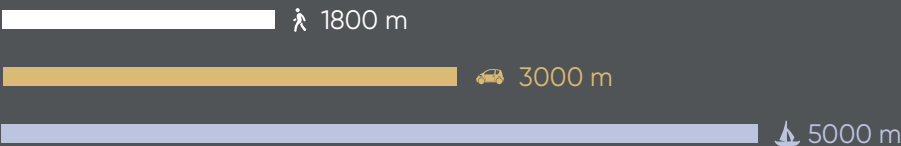
DS-TDSB0G-FK/1km
DS-TDSB0W-FK/2km

K-band
24~24.25 GHz



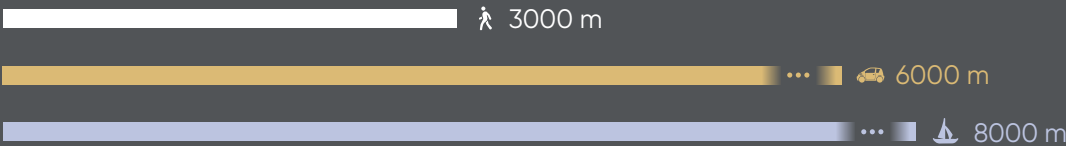
DS-TDSB0G-FC/2km
DS-TDSB0W-FC/5km

C-band
5.4~5.6 GHz



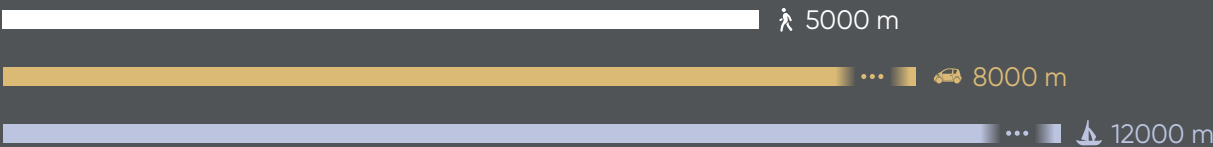
STS-BG24X-L3/P

X-band
9.3~9.5GHz



STS-BG32X-L5/P
STS-BW32X-L12/P

X-band
9.3~9.5GHz



Application Scenarios

Strong environmental adaptability

Unaffected by light, fog, rain, snow, dust, etc.



Photovoltaic farm



Railway



Mine



Port



Airport



Park perimeter



Oil field



Nature reserve

Radar + Thermal Positioning System Solution

The Radar + Thermal Positioning System Solution is designed for intrusion detection in large, open areas. It withstands harsh conditions, performs long-range scanning, locates multiple targets, and uses thermal imaging for tracking and verification. This system provides all-weather visual detection and early warning.



Beyond-visual-range detection: Kilometer-scale target identification

- Active electromagnetic waves break the limits of human eyes and optical devices for long-range target detection
- Up to 5 km person detection



Wide-area scanning: Total situational awareness

- Monitor large areas without dead zones in minimal time
- Single-device horizontal detection up to 100°



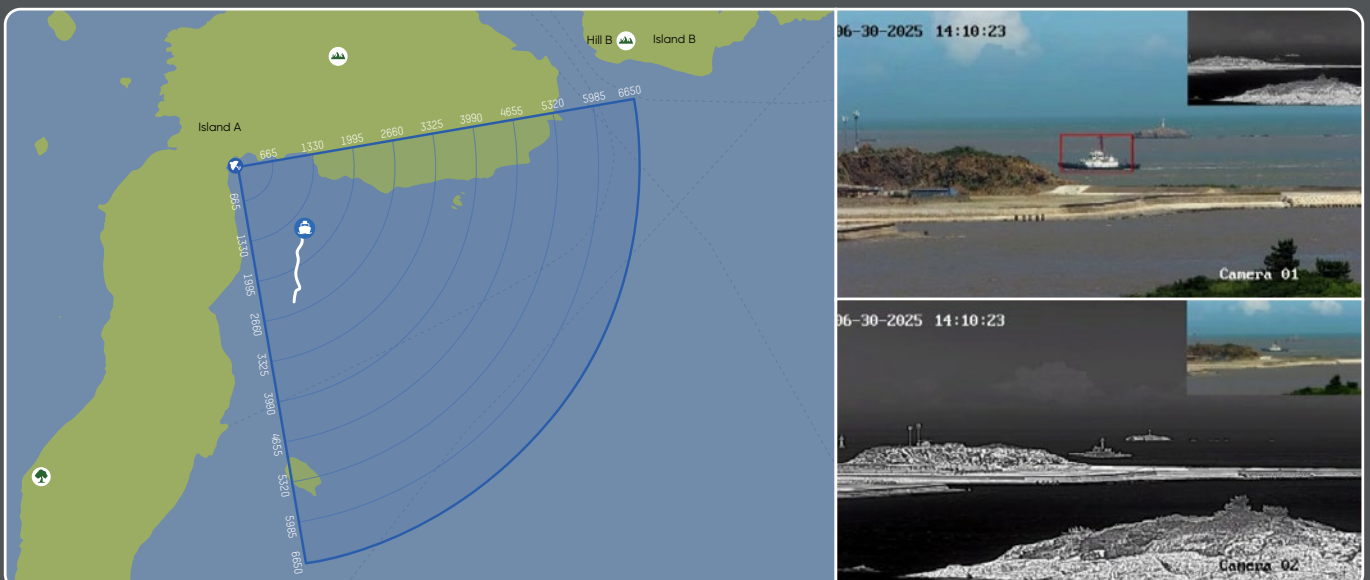
Multi-target positioning: Effective response in complex scenarios

- Advanced signal processing algorithms analyze electromagnetic wave data to detect and locate up to 500 simultaneous targets with precision



Radar-thermal linkage: 24/7 visual monitoring

- All-weather/lighting, long-range target detection and tracking



Key Products

1 km



Short-range Radar (K-Band)

DS-TDSB06-FK/500m
DS-TDSB06-FK/1km



Thermal PTZ Camera

HM-TD6368-100C4L/60/T2Y

2 km



Mid-range Radar (K/C-Band)

DS-TDSB06-FC/2km
DS-TDSB0W-FK/2km



Thermal PTZ Camera

HM-TD8168-150ZE4F/60/T2

3 km – 5 km or more



Long-range Radar (X-Band)

STS-BG32X-L3
STS-BG32X-L5
STS-BG32X-L12



Thermal PTZ Camera

HM-TD95C8-300ZK4FL/W

Topology



HikCentral Professional

OpenAPI

ARC

Centralized management



Devices

Security Radar



Target detection

Thermal Cameras



Video verification

PTZ Search Light



Remote light alarms

NVR



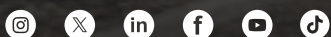
Intelligent search

Hikvision Security Radar

Large Perimeter, Choose Radar



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