

Accurate Measure Intelligent Sense



FOR BETTER
SENSING

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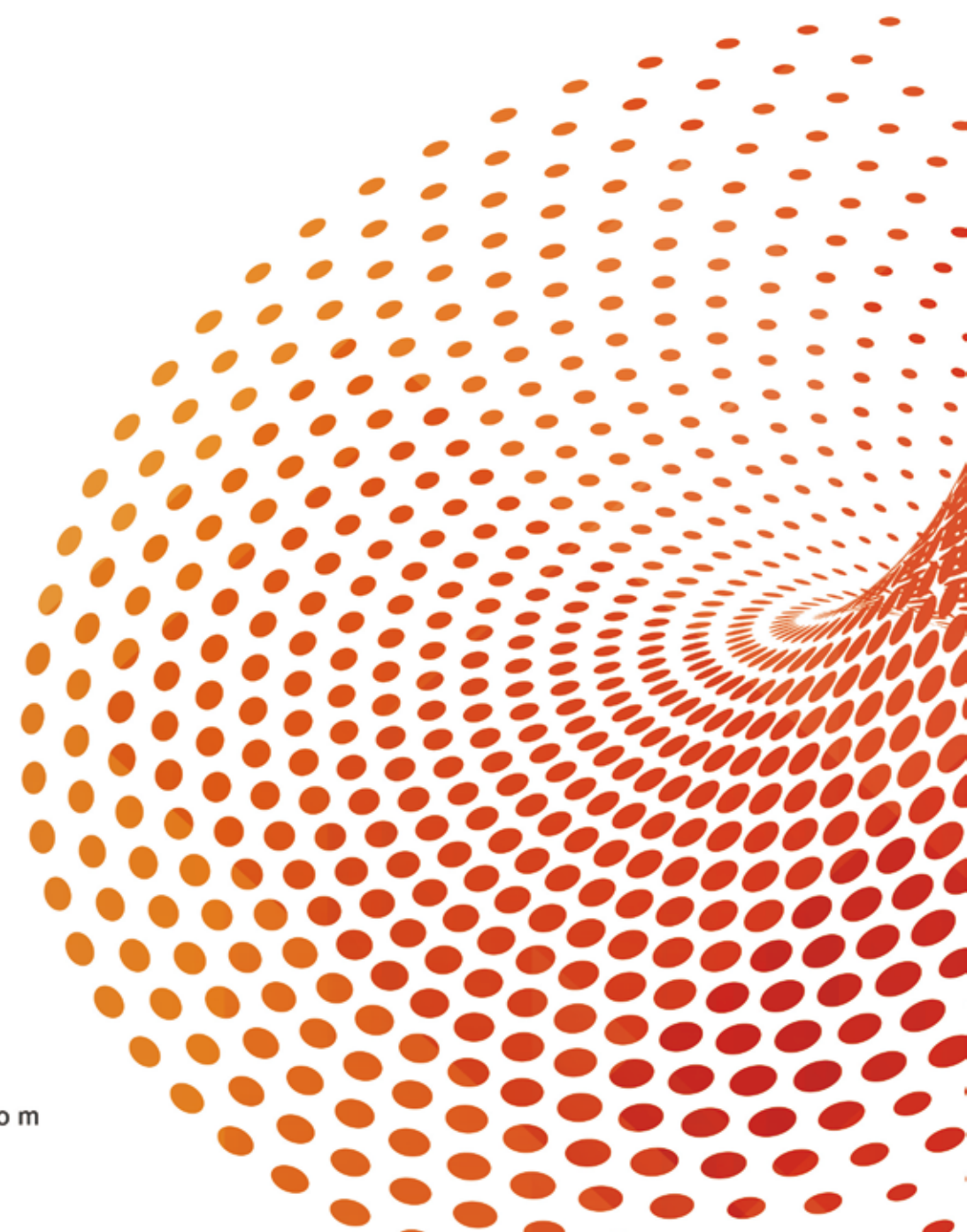
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Information is for reference only.

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CORPORATE SOLUTION

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COMPANY PROFILE

2012

Company establishment time

20.7 Million

Company registered capital

1000+

Cumulative service customers

61

Total number of patent applications

Nanoradar founded in 2012 and headquartered in Changsha, China, is committed to advancing radar technology. Guided by the philosophy of “Precise Detection, Intelligent Sensing,” the company focuses on the in-depth development of millimeter-wave radar technologies and products, empowering intelligent and autonomous systems with critical sensing capabilities.

By emphasizing high cost-effectiveness, reliability, and ease of use, Nanoradar delivers millimeter-wave radar sensing solutions for low-altitude drones, intelligent transportation, security surveillance, ADAS, and industrial applications driven by MIMO technology.

Nanoradar now serves 1,000+ customers across more than 40 countries and regions, covering 4 major industries and 50+ application scenarios. Its products seamlessly integration with nearly 10 open platforms, including APM, PX4, ROS 2.0, and Milestone, and have obtained multiple international certifications such as FCC, CE, and RoHS.

Looking ahead, Nanoradar will continue to embrace AI and industry innovation, work closely with global partners to shape the future of intelligent sensing.

Corporate Vision

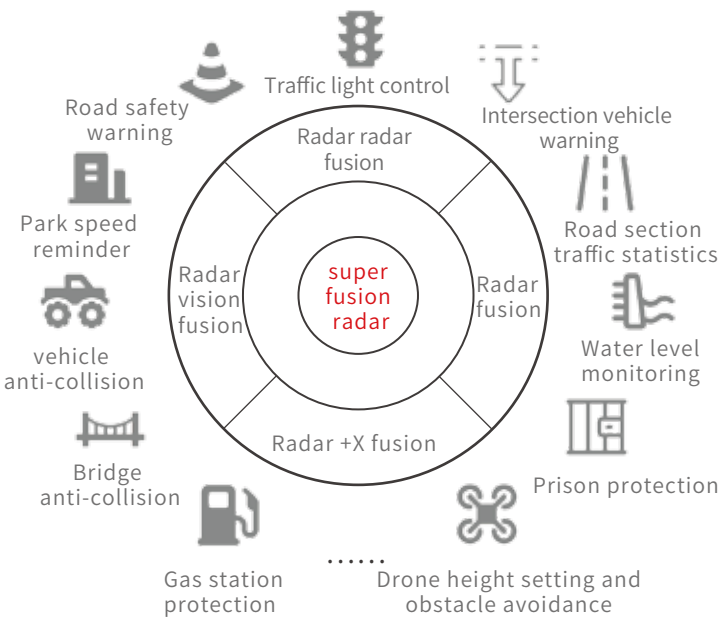
Let the whole world use cost-effective radar.

Corporate Mission

Committed to continuously promoting the advancement of radar technology.

Corporate Strategy

Focus on hyper-fusion radar.



CERTIFICATION



DEVELOPMENT COURSE

- **2025** / INNOVATION-DRIVEN
Invited to become the official partner of PX4 open source flight control platform to develop the MilestonevMS security platform plugin, Drone 3000m, 1000m altimeter radar, transmission line anti-external break radar release
- **2024** / INDUSTRY BENCHMARK
Recognized as a Key Enterprise in the National Advanced Manufacturing Cluster, Approved as a Changsha Municipal Enterprise Technology Center, Orbis is defined as "the top player in the drone radar field"
- **2023** / TECHNOLOGY LEADERSHIP
Approved as a Provincial Enterprise Technology Center in Hunan Province .
4D imaging radar breakthrough.
The SR71 wide-angle radar and WTC261-3000 water area radar were released.
- **2020** / TRANSFORMATION
Technology leadership, deep partnerships
- **2018** / Bulk DELIVERY
Product development, mass production and certification preparation
- **2015** / PRODUCT VALIDATION
Team expansion , accumulated core technologies
- **2012** / COMPANY ESTABLISHMENT
Founded in Changsha High-Tech Zone, established R&D center

PRODUCT LINE UAV Radar



UAV Obstacle Avoidance Radar MR72

NanoRadar 77GHz obstacle avoidance radar is suitable in automatic obstacle avoidance for UAV autonomous flight and fixed-point cruise in all-weather, all-time and all-terrain. It supports simultaneous output of distance, speed and angle information of up to 64 target. Featured with low-cost, high accuracy small & light and low power consumption, MR72 is applicable in agriculture, power, industry, Scenario.



 Far Detection Range

Detection range up to 80m

 High Range Accuracy

Distance accuracy up to ±0.1m

 Dual Beam Detection

Dual beams (short and medium range) operate simultaneously

 Rich Interfaces

Universal CAN/UART interface

 Multi-Target Detection

Detection of up to 64 moving objects

 All-Weather Operation

Free from external interference such as light,dust,rain and snow



Application: For drones used in plant protection, power line inspection, industrial exploration, etc.

Modulating waveform	FMCW	Typical voltage	12V DC
Beam width	112°×14° (SR) 15.6°×30° (MR)	Power consumption	≤3W
Range	0.2~40m (SR)	Operating temperature	-40℃~+70℃
	0.2~80m (MR)	Output interface	CAN/UART
Range accuracy	±0.1m	Weight	90g
Speed range	-100~+100km/h	Overall dimensions	100×57×16.5mm
Angular accuracy	±2°	Protection rating	IP66

Note: 1. Protection rating is not a permanent standard, and the protection capability may decrease due to product wear.
2. In some countries or regions, this millimeter wave radar may not be available for purchase. Please refer to local laws and regulations for details.

UAV Obstacle Avoidance Radar MR82

NanoRadar 80GHz obstacle avoidance radar is suitable in automatic obstacle avoidance for UAV autonomous flight and fixed-point cruise in all-weather, all-time and all-terrain. It supports simultaneous output of distance, speed and angle information of up to 64 target. Featured with low-cost, high accuracy, small&light and low power consumption, MR82-UAV is applicable in agriculture, power, industry, Scenario.



 Far Detection Range

Detection range up to 80m

 High Range Accuracy

Distance accuracy up to ±0.1m

 Dual Beam Detection

Dual beams (short and medium range) operate simultaneously

 Rich Interfaces

Universal CAN/UART interface

 Multi-Target Detection

Detection of up to 64 moving objects

 All-Weather Operation

Free from external interference such as light,dust,rain and snow



Application: For drones used in plant protection, power line inspection, industrial exploration, etc.

Modulating waveform	FMCW	Typical voltage	12V DC
Beam width	112°×13° (SR) 32°×14 (MR)	Power consumption	≤3W
Range	0.2~40m (SR)	Operating temperature	-40℃~+70℃
	0.2~80m (MR)	Output interface	CAN/UART
Range accuracy	±0.1m	Weight	92g
Speed range	-100~+100km/h	Overall dimensions	97×57×16.5mm
Angular accuracy	±2°	Protection rating	IP66

Note: 1. Protection rating is not a permanent standard, and the protection capability may decrease due to product wear.
2. In some countries or regions, this millimeter wave radar may not be available for purchase. Please refer to local laws and regulations for details.

UAV Altimeter Radar NRA15

NRA15 is a compact K-band altimeter radar developed by Nanoradar with maximum $\pm 0.1\text{ m}$ measurement accuracy, compact size, high sensitivity, lightweight, easy integration, stable performance, meeting the application requirements of unmanned aerial platforms (UAV/UAS), helicopters, small airships, etc., the product performance has been recognized by many partners.



 Far Detection Range

Detection range up to 100m

 High Range Accuracy

Distance accuracy up to $\pm 0.1\text{m}$

 Strong Anti-Interference

High integraton,strong anti-interference ability and good stability

 Rich Interfaces

Universal CAN/UART interface

 Easy to Use

Easy to install and integrate
RoHS compliant

 All-Weather Operation

Free from external interference
such as light,dust,rain and snow



Application: widely used in drone safety ranging and collision avoidance.

Certification	RoHS	Typical voltage	12V DC
Beam width	41°x37°	Power consumption	1.1W
Range	0.1~100m	Operating temperature	-40°C~+85°C
Range accuracy	$\pm 0.1\text{m}$ (0.1~30m)	Output interface	CAN/UART
	$\pm 1\text{m}$ (30~100m)	Weight	81g
Resolution of ranging	0.75m (0.1~30m)	Overall dimensions	102x56x16.5mm
	1.5m (30~100m)	Protection rating	IP66

Note: 1. Protection rating is not a permanent standard, and the protection capability may decrease due to product wear.
2. In some countries or regions, millimeter wave radar may not be turned on or may only be partially functional. Please refer to local laws and regulations for details.

UAV Altimeter Radar NRA24

NanoRadar altimeter radar is characterized by its lightweight, compact size, high sensitivity, anti-interference capability,and ease of integration. It offers a maximum accuracy of $\pm 0.02\text{m}$ and a maximum detection range of 200m,capable of penetrating fog, smoke,and dust. This enables all-weather, all-day, and all- terrain applications,making it widely used in UAV/UAS, helicopters, and airships.



 Far Detection Range

Detection range up to 200m

 High Range Accuracy

Distance accuracy up to $\pm 0.02\text{m}$

 Strong Anti-Interference

High integration, strong anti- interference ability and good stability

 Rich Interfaces

Universal interface CAN/UART

 Easy to Use

Easy to install and integrate
It is suitable for various plant protection environments

 All-Weather Operation

IP66, Free from external interference
such as light,dust,rain and snow



Application: widely used in drone safety ranging and collision avoidance.

Certification	RoHS/CE/FCC	Output interface	CAN/UART
Beam width	28°x18°	Typical voltage	12V DC
Range	0.1~200m	Power consumption	1.5W
Range accuracy	$\pm 0.1\text{m}$ (0.1~30m)	Operating temperature	-40°C~+85°C
	$\pm 1\text{m}$ (30~100m)	Weight	95g
	$\pm 2\text{m}$ (100~200m)	Overall dimensions	130x70x14.5mm

Note: 1. Protection rating is not a permanent standard, and the protection capability may decrease due to product wear.
2. In some countries or regions, millimeter wave radar may not be turned on or may only be partially functional. Please refer to local laws and regulations for details.

UAV Altimeter Radar NRA24Pro

NRA24Pro is an upgraded terrain-tracking radar for UAVs and other aerial platforms. With FMCW technology, it achieves a 500-meter range and $\pm 0.02\text{m}$ precision, and is lightweight for easy integration. It penetrates fog, smoke, and dust, works stably in harsh weather, and ensures all-weather operation. Built-in self-checking mechanisms ensure data accuracy and flight safety, supporting precise altitude sensing in complex environments for UAVs, helicopters, and more.



Far Detection Range
Detection range up to 500m

High Range Accuracy
Distance accuracy up to 0.02m

Hardware and software self-diagnostics
<1s hardware and software self-check

Return to open source flight control seamlessly
Open source flight control platform APM&PX4 seamless docking

Easy to Use
Lightweight (148g) Low power consumption (1.5W)

All-Weather Operation
IP67; High protection rating; Free from external interference such as light,dust,rain and snow



Application: widely used in drone safety ranging and collision avoidance.

Modulating waveform	FMCW	Typical voltage	12V DC
Beam width	28°×18°	Power consumption	1.5W
Range	0.2~500m	Operating temperature	-40°C~+70°C
Range accuracy	$\pm 0.02\text{m}$	Storage temperature	-40°C~+85°C
Speed range	-40~+40m/s	Weight	148g
Refresh rate	40Hz	Overall dimensions	132.4×73.2×17.5mm
Output interface	UART (TTL) /CAN/RS232/RS422/RS485	Protection rating	IP67

Note: 1. Protection rating is not a permanent standard, and the protection capability may decrease due to product wear.
2. In some countries or regions, millimeter wave radar may not be turned on or may only be partially functional. Please refer to local laws and regulations for details.

UAV Altimeter Radar UAM231

UAM231 is a long-range UAV altimeter radar, which operates all-day and all-weather. It featured high stability, a strong ability to imitate the ground, high accuracy. The altitude data output by UAM231 has ground simulation information, which can effectively display the undulation characteristics of the ground and is not limited by the terrain. This kind of millimeter wave radar is basically not affected by bad weather such as wind, rain and fog.



Far Detection Range
Detection range up to 1000m

High Range Accuracy
Distance accuracy up to 0.02m

high speed vertical velocity measurement
-40m/s ~ +40m/s high speed vertical velocity measurement

Seamless support to opensource flight controller
Open source flight control platform APM&PX4 seamless docking

self checking of hardware and software
<1s hardware and software self-check

All-Weather Operation
IP67 High protection rating; Free from external interference such as light,dust,rain and snow



Application: widely used in drone safety ranging and collision avoidance.

Certification	RoHS/CE	Typical voltage	12V DC
Beam width	28°×18°	Working current	140mA
Range	0.2~800m	Power consumption	2W
Range accuracy	$\pm 0.02\text{m}$	Operating temperature	-40°C~+70°C
Speed range	-60~+60m/s	Storage temperature	-40°C~+85°C
Refresh rate	40Hz	Protection rating	IP67
Output interface	UART (TTL) /CAN/RS232/RS422/RS485	Overall dimensions	132.4×73.2×17.5mm

Note: 1. Protection rating is not a permanent standard, and the protection capability may decrease due to product wear.
2. In some countries or regions, millimeter wave radar may not be turned on or may only be partially functional. Please refer to local laws and regulations for details.

UAV Altimeter Radar UAM285

UAM285 is a mid-to-high-end millimeter wave radar altimeter for drones, operating in the 24GHz-ISM band. It is widely used in aircraft, eVTOLs, and applications like landing and vertical guidance. It provides terrain-following data, unaffected by ground variations or harsh weather (wind, rain, fog), ensuring all-weather operation. Integrated self-checking enhances data reliability and safety.



 Far Detection Range

Detection range up to 3000m

 High Range Accuracy

Distance accuracy up to 0.03m

 high speed vertical velocity measurement

-60m/s ~ +60m/s high speed vertical velocity measurement

 Return to open source flight control seamlessly

Open source flight control platform APM&PX4 seamless docking

 self checking of hardware and software

<1s hardware and software self-check

 All-Weather Operation

IP67 High protection rating; Free from external interference such as light, dust, rain and snow

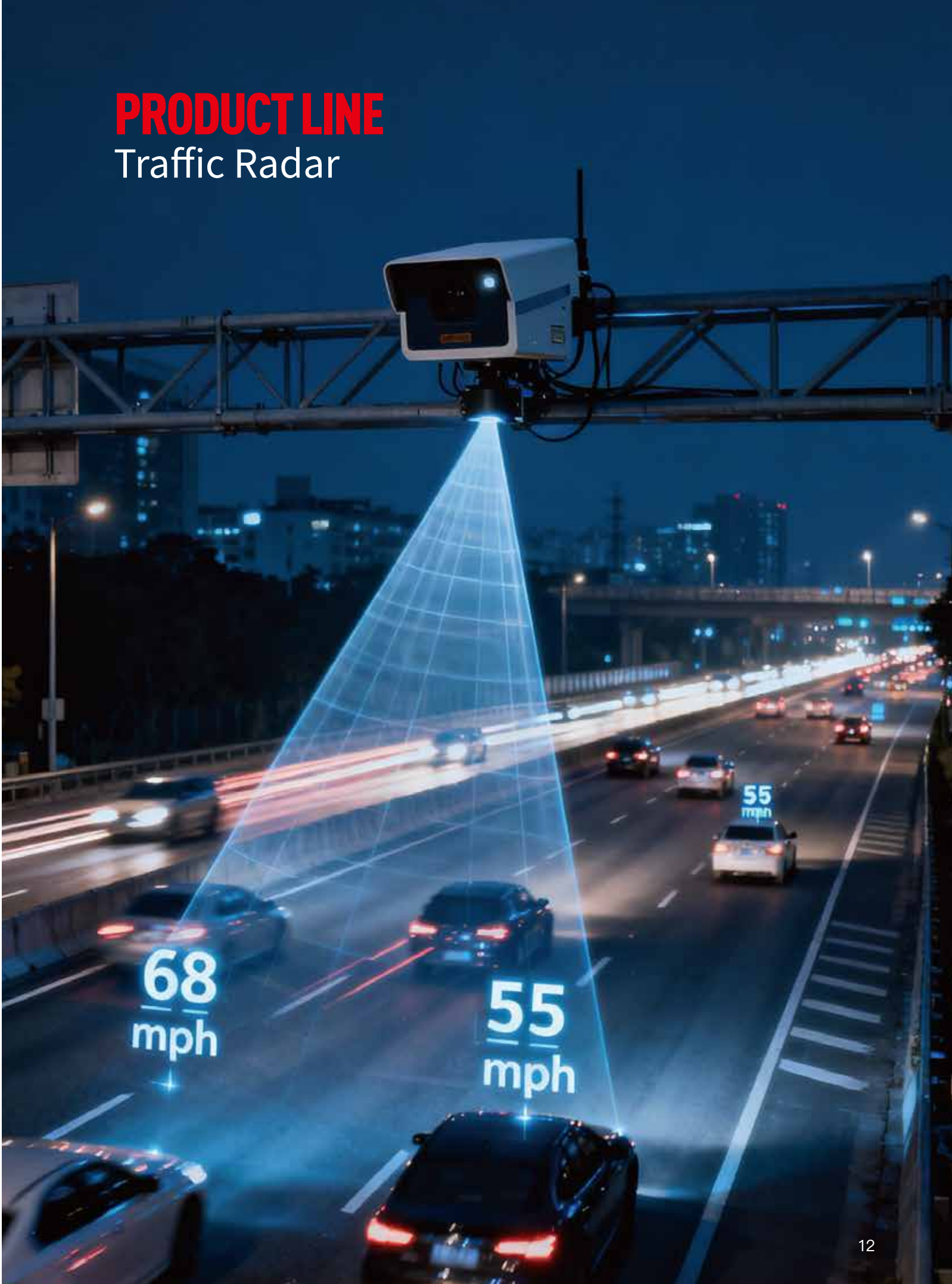


Application: widely used in drone safety ranging and collision avoidance.

Modulating waveform	FMCW	Typical voltage	12V DC
Beam width	21°x17°	Working current	370mA
Range	0.2~3000m	Power consumption	4.5W
Range accuracy	±0.1m	Operating temperature	-40°C~+70°C
Speed range	-60~+60m/s	Storage temperature	-40°C~+85°C
Refresh rate	40Hz	Protection rating	IP67
Output interface	UART (TTL) /CAN/RS232/RS422/RS485	Overall dimensions	174x88x21.5mm

Note: 1. Protection rating is not a permanent standard, and the protection capability may decrease due to product wear.
2. In some countries or regions, millimeter wave radar may not be turned on or may only be partially functional. Please refer to local laws and regulations for details.

PRODUCT LINE
Traffic Radar



Single Lane Speed Radar TSR10

TSR10 is a 24GHz traffic distance and speed measurement radar.It can accurately measure target distance, speed and other information. TSR10 uses narrow beam to cover only a single lane, avoiding interference of adjacent lanes. It can meet the application requirements of single-lane speed measurement and flow monitoring of gate system.



Dual-Mode Engine

Spectrum refinement technology for simultaneous range and velocity Measurement

Precise Positioning

Vehicle capture position within ±0.5m,with a consistency rate greater than 99%

Strong Anti-Interference

Narrow beam design to avoid interference from adjacent lanes

Integrated Design

Equipped with a level meter and angular scale for easy installation and maintenance

Rich Interfaces

Supports RS485, RS232 and WiFi

Vehicle Direction Recognition

Coming/going direction can be distinguish



Application: Checkpoint systems,distance and peed measurement and traffic flow monitoring.

Certification	RoHS	Typical voltage	12V DC
Beam width	7°x7.5°	Working current	0.17A@12V DC
Speed range	5~250km/h	Power consumption	<2W
Transmission frequency error	±45MHz	Operating temperature	-40°C~+85°C
Installation height	5~10m (adjustable)	Trigger consistency	±0.5m
Capture distance	15~30m (adjustable)	Overall dimensions	198×169×42mm
Output interface	RS485/RS232/L(H)level/Wi-Fi	Protection rating	IP66

Note: 1. Protection rating is not a permanent standard, and the protection capability may decrease due to product wear.
2. In some countries or regions, millimeter wave radar may not be turned on or may only be partially functional. Please refer to local laws and regulations for details.

Multi-Lane Speed Radar TSR18/TSR20

The TSR18/TSR20 is a 24GHz high-performance traffic speed radar with a microstrip array antenna design, ensuring precise speed measurement. It distinguishes between incoming and outgoing vehicles and monitors speeds across 1 to 4 lanes, ideal for applications like speed capture and feedback systems.Widely deployed in highways,urban roads, intersections, school zones and residential areas, it accurately detects and displays vehicle speeds, alerting drivers to reduce speeding and prevent accidents.



Multi-Lane Coverage

Support 1 to 4 lanes

Precise Positioning

The accuracy is better than 1km/h

Long Detection Range

The maximum detection is 180/300m

Speed range

Speed range 5~255km/h

Easy to Use

Easy installation, easy integration

All-Weather Operation

Free from external interference such as light,dust,rain and snow



Application: Oncoming vehicle alerts, side-mounted traffic speed detection and speed feedback systems.

Certification	CE (TSR20)	Installation height	1.5~4m
Beam width	10°x50°/9.3°x37° (TSR18/TSR20)	Typical voltage	12V DC
Speed range	5~255km/h	Power consumption	1/1.6W (TSR18/TSR20)
Range	1~180/1~300m (TSR18/TSR20)	Operating temperature	-40°C~+85°C
Output interface	RS485/RS232/Switching	Protection rating	IP66
Antenna	1T1R	Overall dimensions	137×117×35mm

Note: 1. Protection rating is not a permanent standard, and the protection capability may decrease due to product wear.
2. In some countries or regions, millimeter wave radar may not be turned on or may only be partially functional. Please refer to local laws and regulations for details.

Multi-Lane Speed Radar TSC224

TSC224 is a high-performance multi-lane speed radar with completely independent intellectual property rights owned by Nanoradar. It adopts “MIMO+DBF” technology, and can detect the speed of vehicles in up to four lanes, cooperate with the camera to complete the capture of speeding vehicles and the capture rate is as high as 99%.



Multi-Lane Coverage

Support 1 to 4 lanes

Precise Positioning

Vehicle snapshot positioning accuracy±0.5m

Multi-Target Monitoring

Capable of monitoring up to 32 targets simultaneously

Vehicle Direction Recognition

Support three capture modes of coming,going and two-way

Easy to Use

Integrated with a lane sight,level meter,and gyroscope to assist in calibrating radar installation

All-Weather Operation

Free from external interference such as light,dust,rain and snow



Certification	RoHS/CE	Capture Rate	≥95%
Beam width	64°×16°	Typical voltage	12V DC
Speed range	5~250km/h	Operating humidity	5%RH~95%RH
Range	1~50m	Protection rating	IP67
Response time	50ms	Operating temperature	-40℃~+85℃
Lane Coverage	4 lanes	Overall dimensions	150×150×48mm
Output interface	RS485/Wi-Fi/Network port	Installation method	Horizonta/Side installation

Note: 1. Protection rating is not a permanent standard, and the protection capability may decrease due to product wear.
2. In some countries or regions, millimeter wave radar may not be turned on or may only be partially functional. Please refer to local laws and regulations for details.

Traffic Flow Radar MR76S

The MR76S traffic flow radar utilizes 80GHz MIMO technology to detect all targets within its range.It incorporates advanced technologies such as DBF digital beamforming,MIMO virtual aperture,and near-far beam shaping,achieving a measurement range of 1.2~300m and supporting the detection of 128 targets.Compact,highly sensitive,stable,lightweight, and easy to integrate.



Multi-Lane Coverage

Support 6 to 8 lanes

Far Detection Range

Detection range up to 300m

Multi-Target Monitoring

Capable of monitoring up to 128 targets simultaneously

Vehicle Direction Recognition

Support two capture modes of coming and going

Easy to Use

Small size, light weight, easy installation

All-Weather Operation

Free from external interference such as light,dust,rain and snow



Certification	RoHS	Typical voltage	12V DC
Beam width	LRR:22°×14°/ SRR:90°×14°	Storage temperature	-40℃~+85℃
Speed range	-200~250km/h	Operating temperature	-40℃~+70℃
Range	LRR:1.2~300m@0° / SRR:1.2~50m@±45°	Power consumption	2.5W@12V DC
Refresh rate	12.5Hz	Protection rating	IP67
Output interface	CAN/UART	Overall dimensions	84×58×7.7mm

Note: 1. Protection rating is not a permanent standard, and the protection capability may decrease due to product wear.
2. In some countries or regions, this millimeter wave radar may not be available for purchase. Please refer to local laws and regulations for details.

Traffic Flow Radar TCR300

The TCR300 traffic flow radar employs 80GHz MIMO technology to detect all targets within its range, filtering out static objects and false alarms caused by clutter. It enhances multi-target detection, accurately measuring speed, distance and angle of moving targets. With high precision, easy calibration and excellent stability, it can monitor 4-6 lanes and 128 targets simultaneously with a maximum detection range of 350 meters. Ideal for traffic monitoring and vehicle detection.



Multi-Lane Coverage
Support 4 to 6 lanes

High Precision
Accurate speed measurement
The accuracy is better than 1km/h

Multi-Target Monitoring
Capable of monitoring up to 128 targets simultaneously

Detection Range
Detection range up to 350m

Easy to Use
Easy installation,easy integration

All-Weather Operation
IP66, Free from external interference such as light,dust,rain and snow



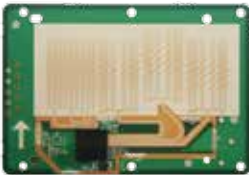
Application: Statistics of current traffic flow, speed, vehicle queue length, traffic flow,etc. for traffic light switching

Beam width	90°x13°	Modulating waveform	FMCW
Speed range	0~320km/h	Typical voltage	12V DC
Range	1.2~350m	Operating temperature	-40°C~+70°C
Lane section flow	94% (Urban congestion)	Power consumption	≤4W@12V DC
Lane section flow	96% (Urban patency)	Output interface	RJ45/RS485
Lane section flow	97% (Highway)	Overall dimensions	149.5x126x45mm

Note: 1. Protection rating is not a permanent standard, and the protection capability may decrease due to product wear.
2. In some countries or regions, millimeter wave radar may not be turned on or may only be partially functional. Please refer to local laws and regulations for details.

Traffic Flow RadarTCM811

The TCM811 is a compact 80GHz radar using MIMO+DBF technology for 1.2-150m range and 6-lane detection.It tracks 128 targets,supports lane division,parking queue detection,frequency switching,and angle compensation.Ideal for monitoring large/small vehicles and electric bikes, it's small,powerful,and easy to integrate.



Multi-Lane Coverage
Support 6 lanes

Multi-Target Monitoring
Capable of monitoring up to 128 targets simultaneously

Detection Range
The maximum detection distance is 150m

Vehicle Direction Recognition
Support two capture modes of coming and going

Easy to Use
Easy installation,easy integration

All-Weather Operation
Free from external interference such as light,dust,rain and snow



Application: Traffic flow monitoring and intersection congestion detection.

Certification	RoHS	Installation height	3~6m (adjustable)
Refresh rate	12.5Hz	Typical voltage	12V DC
Beam width	90°x13°	Output interface	TTL serial port
Azimuth	±45°	Power consumption	<2.5W
Speed range	-250~+250km/h	Operating temperature	-40°C~+70°C
Range	1.2~150m	Overall dimensions(module)	84x58mm

Note: 1. Protection rating is not a permanent standard, and the protection capability may decrease due to product wear.
2. In some countries or regions, this millimeter wave radar may not be available for purchase. Please refer to local laws and regulations for details.

Traffic Flow Radar TCM863

The TCM863 is an 80GHz traffic flow radar with dual-beam design, offering a stable detection range of 500m. It identifies large, medium, and small vehicles, non-motorized vehicles and pedestrians, supporting 512 targets with real-time data on distance, speed, azimuth, and status. Compact, highly sensitive, stable, lightweight and easy to integrate.



Multi-Lane Coverage

Support 8 lanes

Multi-Target Monitoring

Capable of monitoring up to 128 targets simultaneously

Detection Range

Stable detection 350m

Wide Speed range

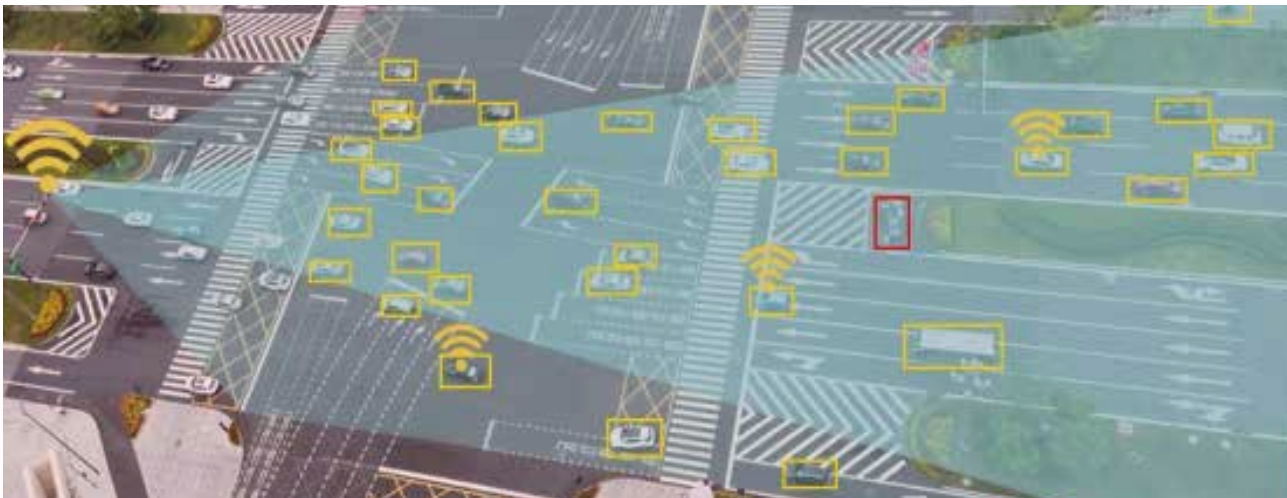
Speed range-300~+300km/h

Easy to Use

Support customized communication protocol, radar parameter configuration

All-Weather Operation

Free from external interference such as light,dust,rain and snow



Application: Traffic intersection,road section,highway,tunnel,park,holographic intersection flow monitoring, intersection monitoring,road side illegal stop detection

Cycle period	80ms	Certification	RoHS
Beam width	120°x26° (SRR) ; 28°x9° (LRR)	Typical voltage	12V DC
Multi-Target Detection	128个	Output interface	RS485/Network port
Speed range	-300~+300km/h	Power consumption	≤4.2W
Range	350m	Operating temperature	-40℃~+70℃
Range accuracy	±0.3m @Wide beam; ±0.8m @Narrow beam	Overall dimensions	185x176x44.9mm

Note: 1. Protection rating is not a permanent standard, and the protection capability may decrease due to product wear.
2. In some countries or regions, this millimeter wave radar may not be available for purchase. Please refer to local laws and regulations for details.

Traffic Flow Radar TCM873

The TCM873 is an 80GHz traffic flow radar with dual-beam design, offering a stable detection range of 500m. It identifies large, medium, and small vehicles, non-motorized vehicles and pedestrians, supporting 512 targets with real-time data on distance, speed, azimuth and status. Compact, highly sensitive, stable, lightweight and easy to integrate.



Multi-Lane Coverage

Support 10 lanes

Multi-Target Monitoring

Capable of monitoring up to 512 targets

Long Detection Range

Stable detection 500m

Wide Speed range

Speed range-300~+300km/h

Easy to Use

Support customized communication protocol, radar parameter configuration

All-Weather Operation

Free from external interference such as light,dust,rain and snow



Application: Traffic intersections, road sections, highways, tunnels, campuses and holographic intersections for flow monitoring, intersection surveillance and roadside illegal parking.

Certification	CE	Direction recognition	Coming, going and two-way
Beam width	80°x26° (SRR), 30°x11° (LRR)	Power consumption	≤12W
Speed range	-300~+300km/h	Operating temperature	-40℃~+70℃
Range accuracy	0.5m	Refresh rate	12.5Hz
Range	500m	Output interface	RS485/Network port
Cycle period	80ms	Overall dimensions	185x176x44.9mm

Note: 1. Protection rating is not a permanent standard, and the protection capability may decrease due to product wear.
2. In some countries or regions, this millimeter wave radar may not be available for purchase. Please refer to local laws and regulations for details.

Traffic Flow Radar TCM961

TCM961 is a high-performance roadside millimeter-wave radar, employing dual-beam sector detection and FMCW modulation technology, capable of accurately detecting the distance, speed, angle and direction information of moving targets within a range of 300 meters. Lightweight design(single board ≤200g), power consumption below 10W, protection rating up to IP66, harsh environments. Provides network port and TTL interface, It is easy to integrate quickly.



Multi-Lane Coverage

Support 6 lanes

Multi-Target Monitoring

Capable of monitoring up to 128 targets

Detection Range

The maximum detection distance is 300m

Wide Speed Range

Speed range -200~+250km/h

Easy to Use

Support customized communication protocol, radar parameter configuration

All-Weather Operation

Free from external interference such as light,dust,rain and snow



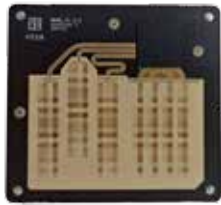
Application: Traffic flow statistics, intersection warning, illegal parking monitoring and other traffic scenarios.

Modulating waveform	FMCW	Direction recognition	Coming、going and two-way
Beam width	88°×13 (SRR) ; 20°×13° (LRR)	Power consumption	≤10W
Speed range	-200~+250km/h	Operating temperature	-40℃~+70℃
Speed measurement range	0.1m/s	Cycle period	Adjustable to12.5 frames per second
Range	300m	Output interface	TTL/Network port
Range accuracy	0.6m	Overall dimensions	185×176×44.9mm

Note: 1. Protection rating is not a permanent standard, and the protection capability may decrease due to product wear.
2. In some countries or regions, millimeter wave radar may not be turned on or may only be partially functional. Please refer to local laws and regulations for details.

Multi-Lane Speed Radar MR62

The MR62 is Nanoradar’s latest multi-lane speed radar, using 60GHz ISM band, FMCW and multi-antenna technology. It measures speed across 1-4 lanes for 32 targets up to 120 meters, supporting lane division, speed, distance, angle and energy output. It distinguishes direction, compensates for lane installation,and meets national speed measurement standards.



Multi-Lane Coverage

Support 1 to 4 lanes

Multi-Target Monitoring

Capable of monitoring up to 32 targets

Detection Range

The maximum detection distance is 120m

Wide Speed Range

Speed range5~200km/h

Easy to Use

Support customized communication protocol, radar parameter configuration

All-Weather Operation

Free from external interference such as light,dust,rain and snow



Application: Multi-lane speed measurement, roadside illegal parking.

		Installation height	1.5~6m (adjustable)
Certification	RoHS	Typical voltage	12V DC
Capture rate	≥99%, >95% (traffic jam)	Output interface	TTL serial port
Beam width	56°×17°	Power consumption	≤2.5W
Multi-Target Detection	32	Operating temperature	-40℃~+70℃
Speed range	5~200km/h	Overall dimensions	48×58mm
Range	2~120m		

Note: 1. Protection rating is not a permanent standard, and the protection capability may decrease due to product wear.
2. In some countries or regions, this millimeter wave radar may not be available for purchase. Please refer to local laws and regulations for details.

Pedestrian Detection Radar TPD60C

TPD60C pedestrian detection radar uses MIMO technology to detect moving targets in the scene, which can completely eliminate false alarms caused by various stationary objects. At the same time, it uses advanced signal processing technology to improve multi-target detection capability,with high detection accuracy.It can accurately measure pedestrian speed,azimuth and crowd density information.



Precise Range

Accurately measure pedestrian speed, direction, and crowd density



low false alarm rate

Using advanced signal processing technology, the false alarm rate is low



Superior Performance

FMCW technology offers superior performance



Easy to Use

Compact in size, lightweight, and easy to debug



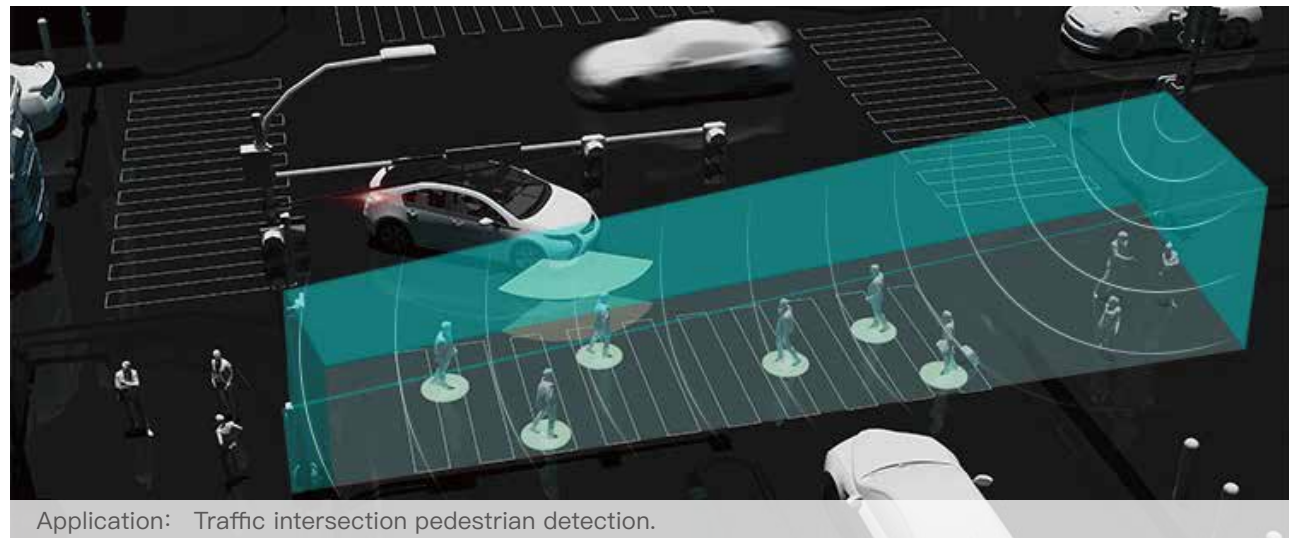
Accurately Distinguish Targets

Accurately distinguish targets within ±0.1m



All-Weather Operation

Free from external interference such as light,dust,rain and snow



Application: Traffic intersection pedestrian detection.

Modulating waveform	FMCW	Direction recognition	Coming, going
Beam width	120°x21°	Power consumption	<3W
Speed range	-7~+7m/s	Operating temperature	-40℃~+75℃
Speed Accuracy	0.11m/s	Protection rating	IP66
Range	0~26m	Output interface	RJ45/RS485//Switching Quantity
Range resolution	0.1m	Overall dimensions	149.4x125.5x41.2mm

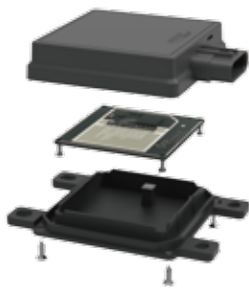
Note: 1. Protection rating is not a permanent standard, and the protection capability may decrease due to product wear.
2. In some countries or regions, millimeter wave radar may not be turned on or may only be partially functional. Please refer to local laws and regulations for details.

PRODUCT LINE
Vehicle Radar



4D High-Resolution Imaging Radar SR75

The SR75 is a compact 77GHz 4D high-resolution imaging radar designed for obstacle avoidance. It emits a conical electromagnetic wave to detect reflections, identifying obstacles and providing precise data on relative distance (length, width, height), angle, and speed. Ideal for low-speed vehicles, it ensures accurate obstacle alerts during forward or reverse motion.



Wide Angle 120°

120° detection angle
0.4° angular accuracy

Software-Defined Radar

3D zone setting, multi-scene switching, sensitivity adjustment

Innovative VAR Technology

1200 point clouds/frame identifies target height information

Strong Anti-Interference

3-level frequency hopping, adaptive agility, CDMA spread spectrum

Adaptive waveform Adjustment

Adaptive waveform adjustment, 3-5x performance improvement

All-Weather Operation

IP67, Free from external interference such as light, dust, rain and snow



Application: Focused on autonomous vehicles at 0-60km/h.

Modulating waveform	FMCW	Refresh rate	10Hz (Point cloud Mode) ; 25Hz (Object Mode)
Beam width	120°x30°	Typical voltage	12V DC
Speed range	-18~+18m/s	Power consumption	2.5W
Range	0.1~40m	Operating temperature	-40°C~+85°C
Angular range	120°	Output interface	CANFD (Point cloud Mode) /CAN (Object Mode)
Angle measurement accuracy	±0.4°	Overall dimensions	105.2x72x19.5mm
Maximum target number	1200 point clouds/frame(Point cloud Mode)		128/frame (Object Mode)

Radar and Camera All-in-one RVF721

RVF721 deeply integrates 40m millimeter wave radar and 1080P high-definition camera. Through data-level/feature-level fusion technology, false positives and false negatives of a single sensor are effectively reduced. The product adopts an integrated design, does not require additional calibration, is small in size, and is ready to be installed and used. Supports independent or synchronous output of video and radar data, and can be easily debugged through the APP.



Compact size, Easy to integrate

125*75*50mm small size, easy to assemble, easy to install, no calibration required

Deeply Integrated

Supporting raw data level/feature level fusion of radar and vision

Dual Wide Angle 120°

The maximum detection distance is 40m and the pitch detection angle is 120°

Easy to Use

APP debugging, supports debugging and target setting of devices through mobile phone or tablet APP, easy to operate

Application Scenarios

Supports a variety of application scenarios, R158/R159, vehicle height limit and other applications

All-Weather Operation

IP67, Free from external interference such as light, dust, rain and snow



Application: Vehicle front and rear obstacle avoidance, R158/R159 regulatory scenarios, height restrictions, drone obstacle avoidance, etc.

Modulating waveform	FMCW	Refresh rate	25Hz
Beam width	120°x120°	Typical voltage	12V DC
Maximum target number	64	Power consumption	≤10W
Speed range	-60~+60km/h	Operating temperature	-40°C~+85°C
Range	0.15~40m	Protection rating	IP67
Output interface	CAN-FD/AHD/Network port/WiFi	Overall dimensions	129x101x61mm (Includes stand)
Camera resolution	1080P	Camera angle	100°

Note: 1. Protection rating is not a permanent standard, and the protection capability may decrease due to product wear.
2. In some countries or regions, millimeter wave radar may not be turned on or may only be partially functional. Please refer to local laws and regulations for details.

Note: 1. Protection rating is not a permanent standard, and the protection capability may decrease due to product wear.
2. In some countries or regions, millimeter wave radar may not be turned on or may only be partially functional. Please refer to local laws and regulations for details.

LOW-speed obstacle Avoidance Radar SR71

The SR71 is a compact 77GHz short-range radar designed for low-to-medium-speed obstacle avoidance. It emits a conical electromagnetic wave to detect reflections, identifying obstacles and providing precise data on relative distance, angle, and speed. During forward or reverse motion, it delivers accurate obstacle alerts, enhancing driver safety.





77GHz Band
77GHz operating band worldwide



Dualwide-Angle Detection
120° horizontal and 120° vertical detection angles



Multi-Target Detection
Supports up to 64 targets /frame detection and output



Precise Distance & Speed Measurement
Accurately detects motion direction, distance, speed, and angle



Easy to Use
Easy installation, easy integration



All-Weather Operation
Free from external interference such as light, dust, rain and snow



Certification	RoHS	Typical voltage	12V DC
Beam width	120°×120°	Power consumption	2.5W
Speed range	-60~+60km/h	Operating temperature	-40℃~+85℃
Range	0.15~20m	Output interface	CAN、UART
Cycle Period	40ms	Overall dimensions	77.5×52.5×18mm
Angle accuracy	±1°	Weight	67g
Maximum target number	64	Protection rating	IP67

Note: 1. Protection rating is not a permanent standard, and the protection capability may decrease due to product wear.
2. In some countries or regions, millimeter wave radar may not be turned on or may only be partially functional. Please refer to local laws and regulations for details.

Mini Dual wide-Angle Radar AFM711

The AFM711 is a compact short-range obstacle avoidance radar developed by Nanoradar. In the 77GHz band. By emitting conical electromagnetic waves forward, the AFM711 radar detects reflected signals to identify obstacles ahead, providing feedback on relative distance, angles, and speed. It accurately alerts drivers to obstacles during low-speed forward or reverse driving.





77GHz Band
77GHz operating band worldwide



Dual Wide Angle Detection
120° horizontal and 120° vertical detection angles



Multi-Target Detection
Supports up to 64 targets /frame detection and output



Precise Distance & Speed Measurement
Accurately detects motion direction, distance, speed, and angle



Mini size
40*40*25mm super small size, beautiful installation, does not take up space



All-Weather Operation
Free from external interference such as light, dust, rain and snow



Modulating waveform	FMCW	Typical voltage	12V DC
Beam width	120°×120°	Power consumption	2.5W
Speed range	-60~+60km/h	Operating temperature	-40℃~+85℃
Range	0.15~20m	Output interface	CAN、UART、RS485
Cycle period	40ms	Overall dimensions	40×40×24.5mm
Angle accuracy	±1°	Weight	60g
Maximum target number	64	Protection rating	IP67

Note: 1. Protection rating is not a permanent standard, and the protection capability may decrease due to product wear.
2. In some countries or regions, millimeter wave radar may not be turned on or may only be partially functional. Please refer to local laws and regulations for details.

LOW-speed obstacle Avoidance Radar SR73F

The SR73F is a 77GHz short-range anti-collision radar featuring a multi-transmit and multi-receive antenna design. It accurately measures target distance, speed, and angle, offering compact size, wide detection angle, strong anti-interference, high stability, and easy integration. Ideal for low-speed forward collision prevention, it meets the growing safety needs of low-speed special vehicles, robots and more.



77GHz Band
77GHz operating band worldwide

wide-Angle 112°
Detection distance 40m
Detection angle 112°

Multi-Target Detection
Detection of up to 64 moving objects

Precise Distance & Speed Measurement
Accurately detects motion direction, distance, speed, and angle

Easy to Use
Easy installation, easy integration

All-Weather Operation
Free from external interference such as light, dust, rain and snow



Application: widely used in low-speed special vehicles, agricultural machinery, robots, and driving school vehicles.

Certification	RoHS/CE/SRRC	Refresh rate	30Hz
Beam width	112°x14°	Typical voltage	12V DC
Maximum target number	64	Power consumption	2.5W
Speed range	-18~+18m/s	Operating temperature	-40℃~+70℃
Range	0.2~40m	Protection rating	IP67
Output interface	CAN	Overall dimensions	96×58×24mm

Note: 1. Protection rating is not a permanent standard, and the protection capability may decrease due to product wear.

LOW-speed obstacle Avoidance Radar MR76

The MR76 is a compact 77GHz forward radar that detects obstacles by emitting a fan-shaped microwave beam. It measures relative distances (0.2-170m) with high accuracy, providing real-time alerts for commercial vehicles. Featuring dual-mode (near/far-range) detection, it offers stable performance, performance, high sensitivity, and lightweight design for easy integration.



77GHz Band
77GHz operating band worldwide

Long/Medium-Range Dual Beam
Detection distance 170m
±0.1° angular accuracy

Multi-Target Detection
Detection of up to 64 moving objects

Precise Distance & Speed Measurement
Accurately detects motion direction, distance, speed, and angle

Easy to Use
Easy installation, low Power consumption, easy integration

All-Weather Operation
Free from external interference such as light, dust, rain and snow



Application: Forward collision warning for commercial/passenger/special vehicles.

Modulating waveform	FMCW	Typical voltage	12V DC
Beam width	90°x14°	Power consumption	2.5W
Speed range	-200~+300km/h	Operating temperature	-40℃~+70℃
Range	0.20~170m@±4°, 0.20~120m@±9° (LRR)	Output interface	CAN
	0.20~70m@±9°, 0.20~40m@45° (SRR)	Overall dimensions	136×66×31mm
Angle accuracy	±0.1°	Weight	124g
Refresh rate	17Hz	Protection rating	IP67

Note: 1. Protection rating is not a permanent standard, and the protection capability may decrease due to product wear.
2. In some countries or regions, millimeter wave radar may not be turned on or may only be partially functional. Please refer to local laws and regulations for details.

PRODUCT LINE

Security Radar



Transmission Line Anti-breakage 4D Radar SPC865

SPC865 is an intelligent perimeter security radar designed specifically to prevent external damage to transmission lines. Using four transmitting and four receiving antennas, it can detect and track targets within a range of 800 meters in real time. It has the characteristics of high sensitivity, accurate detection, convenient integration, and strong environmental adaptability, and provides all-weather reliable protection for power facilities.



Multi-Target Monitoring

Supports up to 128 targets for simultaneous tracking, quickly outputting precise positions

Triple Beam Scan

Long range 14°, medium range 30°, short range 50°, beam coordination

4D Detection

Covers 10~800 meters along the line, horizontal>80m, pitch>40m, output 4D height information

Target Trajectory Tracking

Accurately detect target orientation, distance, and speed

Easy Installation

Easy to install, visual installation assistant, supports RS485/Bluetooth communication

All-Weather Operation

IP67 Free from external interference such as light, dust, rain and snow



Application: For transmission line anti-external breakage.

Modulating waveform	FMCW	Output interface	RS485/Bluetooth (option)
Beam width	14°x14° (LRR)	Typical voltage	12V DC
Speed range	0.5~20m/s	Operating temperature	-40°C~+70°C
Speed range	0.2m/s	Power consumption	≤210mW
Range	10~800m	Protection rating	IP67
Range accuracy	±0.85m	Overall dimensions	300x230x60mm

Note: 1. Protection rating is not a permanent standard, and the protection capability may decrease due to product wear.
2. In some countries or regions, millimeter wave radar may not be turned on or may only be partially functional. Please refer to local laws and regulations for details.

Perimeter Radar NSR120

The NSR120 is an 80GHz millimeter-wave radar designed for perimeter security. With high sensitivity and environmental resilience, it detects intruders while distinguishing humans/vehicles from animals (birds/insects) via advanced algorithms. Features stable performance, easy integration, and cost-effective deployment. Ideal for 24/7 intrusion monitoring.



**Multi-Target Tracking**
Up to 32 moving objects

**Long Detection Range**
120m detection range

**Target Classification**
Distinguishes humans, animals, and vegetation

**Trajectory Tracking**
Accurately detects motion direction, distance, speed, and angle

**Easy Operation**
GPS mapping, real-time alerts, playback & zone configuration

**All-Weather Operation**
Free from external interference such as light, dust, rain and snow



Application: Prisons, military bases, public squares, airports, seaports, oil fields, and fuel storage facilities – crucial perimeter security areas

Modulating waveform	FMCW	Typical voltage	12V DC/PoE power supply
Beam width	LRR:22°×13°/ SRR:90°×13°	Storage temperature	−40℃~+85℃
Speed range	−30~+30m/s	Operating temperature	−40℃~+75℃
Range	LRR:1.2~120m@0° / SRR:1.2~50m@±45°	Power consumption	4.5W@12V DC
Refresh rate	12.5Hz	Protection rating	IP66
Output interface	RJ45/RS485/Relay/Level I/O/Digital signal	Overall dimensions	149.5×125.5×49.2mm
Web-based management	Track viewing, zone mapping, IP/I/O config, auto-algorithm, frequency shift, OTA updates, time sync, logs & maintenance		

Note: 1. The protection level is not a permanent standard, and the protective capability may decrease due to product wear.
2. In some countries or regions, this millimeter-wave radar may not be available for purchase. For details, please refer to local laws and regulations.

Perimeter Radar NSR200

The NSR200 is a high-performance K-band radar designed for perimeter security, offering 300m radial detection and 200m cross-range detection for intruders. It accurately tracks slow-moving targets, filters false alarms (e.g., trees, foliage), and supports 32 simultaneous targets.



**Multi-Target Tracking**
Up to 32 moving objects

**Long Detection Range**
200m cross-range
300m radial-range

**Target Classification**
Distinguishes humans, animals, and vegetation

**Trajectory Tracking**
Accurately detects motion direction, distance, speed, and angle

**Strong Anti-Interference**
Adaptive frequency hopping & clutter filtering

**All-Weather Operation**
Free from external interference such as light, dust, rain and snow



Application: Power stations, oil/gas facilities, prisons, warehouses, military zones, and other security perimeters

Output interface	RJ45/10 output*2/0 input *1/relay*2/ LED/RS485		
Beam width	21°×13° (−6dB)	Typical voltage	12V DC/PoE power supply
Speed range	0.03~30m/s	Operating temperature	−40℃~+75℃
Range	1~300m (radial)	Power consumption	8W@12V DC
	1~150m (crawling/squatting crossing)	Protection rating	IP66
	1~200m (walking/running crossing)	Overall dimensions	235×175×54mm
Web-based management	Track viewing, zone mapping, IP/I/O config, auto-algorithm, frequency shift, OTA updates, time sync, logs & maintenance		

Note: 1. The protection level is not a permanent standard, and the protective capability may decrease due to product wear.
2. In some countries or regions, millimeter-wave radar may not be enabled or only partially functional. For details, please refer to local laws and regulations.

Ground Surveillance Radar NSR60W

The NSR60W is a compact 60GHz ISM–band millimeter–wave radar specifically designed for area surveillance. With its wide detection angle and high sensitivity, this radar delivers reliable performance in various environments while remaining easy to integrate. It accurately identifies human and vehicle targets while effectively filtering out interference from small animals such as insects and birds.



 Precise target detection

Advanced DBF technology enables precise detection of target azimuth, elevation, and distance

 Wide Detection Range

60m detection range
FOV:120°

 Target Classification

Distinguishes humans, animals, and vegetation

 Trajectory Tracking

Single–radar multi–camera coordination tracks moving target

 Strong Anti–Interference

Capable of filtering out interference from vegetation (trees, grass, etc.)

 All–Weather Operation

Free from external interference such as light, dust, rain and snow



Application: Ports, oil refineries, power plants, oil fields, substations, residential compounds, prisons, and checkpoints –essential security monitoring locations

Output interface	RJ45/RS485/Relay/Level I/O/Digital signal		
Beam width	120°×22° (–6dB)	Storage temperature	–40°C~+85°C
Speed range	0.5~30m/s	Operating temperature	–40°C~+75°C
Range	1~60m (radial)	Power consumption	4.5W@12V DC
Refresh rate	10Hz	Protection rating	IP66
Typical voltage	12V DC/PoE power supply	Overall dimensions	149.5x125.5x45.2mm
Web–based management	Track viewing, zone mapping, IP/I/O config, auto–algorithm, frequency shift, OTA updates, time sync, logs & maintenance		

Note: 1. The protection level is not a permanent standard, and the protective capability may decrease due to product wear.
2. In some countries or regions, this millimeter–wave radar may not be available for purchase. For details, please refer to local laws and regulations.

Ground Surveillance Radar NSR100W

The NSR100W intelligent wide–angle security radar provides 150m range with 90° coverage. It locates targets via distance/angle/speed measurements and supports video verification. Using FMCW modulation and DBF technology, it delivers high accuracy and anti–interference while distinguishing humans/vehicles from animals and clutter.



 Multi–Target Tracking

Up to 32 moving objects

 Wide Detection Range

150m detection range
FOV:90°

 Target Classification

Distinguishes humans, animals, and vegetation

 Trajectory Tracking

Accurately detects motion direction, distance, speed, and angle

 Flexible Development

Supports protocols/SDKs/web APIs

 All–Weather Operation

Free from external interference such as light, dust, rain and snow



Application: Critical infrastructures (power/water/industrial plants), secured facilities (military/prisons), and sensitive sites (airports/heritage)

Output interface	RJ45/10 Output*2/O Input*1/Relay*2 LED/RS485		
Beam width	100°×13° (–6dB)	Storage temperature	–40°C~+85°C
Speed range	0.5~30m/s	Operating temperature	–40°C~+75°C
Range	1~150m (walkers) / 1~180m (passenger vehicles)	Power consumption	9W@12V DC
Refresh rate	8Hz	Protection rating	IP66
ypical voltage	12VDC/POE power supply	Overall dimensions	194x158x49mm
Web–based management	Track viewing, zone mapping, IP/I/O config, auto–algorithm, frequency shift, OTA updates, time sync, logs & maintenance		

Note: 1. The protection level is not a permanent standard, and the protective capability may decrease due to product wear.
2. In some countries or regions, millimeter–wave radar may not be enabled or only partially functional. For details, please refer to local laws and regulations.

Ground Surveillance Radar NSR300W

The NSR300W wide-angle radar delivers 450m detection range with 90°coverage, accurately tracking targets via distance/angle/speed data for video integration. Its FMCW modulation and DBF technology ensure high precision and anti-interference while effectively classifying humans/vehicles and filtering environmental noise.



 Precise Target Detection

Advanced DBF technology enables precise detection of target azimuth, elevation, and distance

 Trajectory Tracking

The radar actively searches for targets and guides PTZ cameras for positioning and continuous tracking

 Wide Detection Range

450m detecton range
FOV:90°

 Strong Anti-Interference

Capable of filtering out interference from vegetation (trees, grass, etc.)

 Target Classification

Distinguishes humans, animals, and vegetation

 All-Weather Operation

Free from external interference such as light, dust, rain and snow



Application: Critical infrastructures (power/water/industrial plants), secured facilities(military/prisons), and sensitive sites(airports/heritage)

Modulating waveform	FMCW	Typical voltage	12V DC/PoE+ power supply
Beam width	100°x13° (-6dB)	Storage temperature	-40°C~+85°C
Speed range	0.5~30m/s	Operating temperature	-40°C~+65°C
Range	1.5~450m (walkers) /1~600m (vehicles)	Power consumption	17W@12V DC
Refresh rate	8Hz	Protection rating	IP66
Output interface	RJ45/I/O Output*1	Overall dimensions	235x175x54mm
Web-based management	Track viewing, zone mapping, IP/I/O config, auto-algorithm, frequency shift, OTA updates, time sync, logs & maintenance		

Note: 1. The protection level is not a permanent standard, and the protective capability may decrease due to product wear.
2. In some countries or regions, millimeter-wave radar may not be enabled or only partially functional. For details, please refer to local laws and regulations.

Ground Surveillance Radar SAC263

The SAC263 radar offers 1200m range with 90°coverage, tracking targets via distance/angle/speed data. It supports video verification with PTZ camera alignment. Using FMCW and DBF technologies, it achieves 0.5m accuracy and strong anti-jamming while classifying humans/vehicles and reducing false alarms.



 Precise Target Detection

Advanced DBF technology enables precise detection of target azimuth, elevation, and distance

 Trajectory Tracking

The radar actively searches for targets and guides PTZ cameras for positioning and continuous tracking

 Wide Detection Range

Walker detection: 1200m
Vehicle detection: 1500m
FOV: 90°

 Strong Anti-Interference

Effectively filters environmental interference like trees and windblown sand to reduce false alarms.

 Target Classification

AI radar technology identifies and classifies human/vehicle targets through contour perception

 All-Weather Operation

Free from external interference such as light, dust, rain and snow



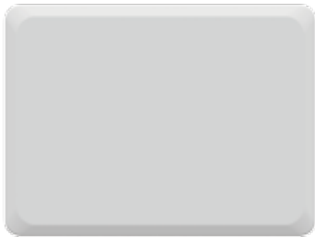
Application: Border/coastal defense, energy facilities, petrochemical sites, airports and military installations.

Modulating waveform	FMCW	Typical voltage	12V DC/PoE+ power supply
Beam width	90°x13° (-6dB)	Storage temperature	-40°C~+85°C
Speed range	0.5~30m/s	Operating temperature	-40°C~+65°C
Range	1200m (walkers) /1500m (vehicles)	Power consumption	36W@12V DC
Refresh rate	8Hz	Protection rating	IP66
Output interface	RJ45/RS485	Overall dimensions	234x292x49.3mm
Web-based management	Track viewing, zone mapping, IP/I/O config, auto-algorithm, frequency shift, OTA updates, time sync, logs & maintenance		

Note: 1. The protection level is not a permanent standard, and the protective capability may decrease due to product wear.
2. In some countries or regions, millimeter-wave radar may not be enabled or only partially functional. For details, please refer to local laws and regulations.

Waterside Aerial Survey Radar WTR1500W

The WTR1500W is a wide-beam radar with a 1500m range for waterway monitoring. Using FMCW, MIMO, TBD and micro-Doppler sensing, it precisely detects distance and angle of moving targets. With neural network-based environmental cognition, it filters out birds and water splashes. Highly sensitive and cost-effective, it's ideal for ship collision prevention, waterway traffic monitoring, and vessel docking surveillance.



Target Classification

Detects large and small vessels in waterways

Continuous Target Tracking

Actively searches targets, guides camera positioning, and triggers audio-visual alarms

Wide Detection Range

The wide Angle detection is 90°

Flexible Development

Supports radar communication protocols, SDK, and Web API

Long Detection Range

The maximum detection distance is 1500m

Interference Rejection

Filters out birds, water splashes and resists light, dust, rain and snow interference



Application: Bridge collision prevention, waterway traffic monitoring, vessel docking surveillance.

Modulating waveform	FMCW	Working voltage	12V DC/PoE+ power supply
Beam width	90°×13°	Power consumption	17W (@12V DC 25°C)
Range	800m (small boat) / 1500m (large boat)	Operating temperature	-40°C~+65°C
Ranging accuracy	±3m	Protection rating	IP66
Output interface	RJ45/IO output*1	Overall dimensions	235x175x54mm
Web-based management	Track viewing, zone mapping, IP/I/O config, auto-algorithm, frequency shift, OTA updates, time sync, logs & maintenance		

Note: 1. The protection level is not a permanent standard, and the protective capability may decrease due to product wear.
2. In some countries or regions, millimeter-wave radar may not be enabled or only partially functional. For details, please refer to local laws and regulations.

Waterside Aerial Survey Radar WTC261-3000

The WTC261-3000 is a 24GHz surface surveillance radar with a 3000m range, 90° coverage, and 128-target detection. Using FMCW, MIMO, and micro-Doppler sensing, it accurately detects distance and angle, filters out false targets, and identifies ship sizes. Highly sensitive, stable, and cost-effective, it's ideal for bridge collision prevention, port monitoring, and waterway surveillance.



Target Classification

Detects large and small vessels in waterways

Continuous Target Tracking

Actively searches targets, guides camera positioning, and triggers audio-visual alarms

Wide Detection Range

The wide Angle detection is 90°

Various Interfaces

Physical output interface :
RJ45, RS485, GPS, etc
Alarm signal output interface:
Relay, IO, etc

Long Detection Range

The maximum detection distance is 3000m

Interference Rejection

Filters out birds, water splashes and resists light, dust, rain and snow interference



Application: Bridge collision prevention, ports and docks, waterway checkpoints, offshore platforms, and inland river fishing bans.

Modulating waveform	FMCW	Refresh rate	10Hz
Beam width	90°×13°	Typical voltage	12V DC
Range	3000m	Operating current	≥2.2A@12V DC 25°C
Speed range	-120~+120km/h	Operating temperature	-40°C~+70°C
Output interface	RJ45、RS485、GSP/BDS、Relay_Out、IO_Out、IO_In	Protection rating	IP66
Web-based management	Track viewing, zone mapping, IP/I/O config, auto-algorithm, frequency shift, OTA updates, time sync, logs & maintenance		

Note: 1. The protection level is not a permanent standard, and the protective capability may decrease due to product wear.
2. In some countries or regions, millimeter-wave radar may not be enabled or only partially functional. For details, please refer to local laws and regulations.

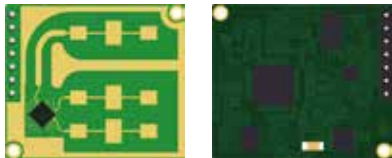
PRODUCT LINE

Industrial Radar



Intelligent Wide Angle Industrial Radar SP15

SP15 is a K-band millimeter-wave radar sensor system employing a sophisticated FMCW modulation mode, capable of detecting the distance and velocity of moving targets with high precision. Featuring a single-transmitter dual-receiver antenna design with separated transceiver antennas, the radar achieves excellent isolation in its transmission chain. The coplanar arrangement of the RF MMIC and antenna minimizes RF link losses.



Wide Application

Applicable to safety ranging, collision prevention, and inductive automatic control



Various Interfaces

UART (default) 、I2C、RS485、CAN、TTL



High Precision Detection

Detection range: 20m



Easy Operation

Low power consumption, compact size, and high integration



Strong Anti-Interference

Low sidelobe synthesis of antenna pattern by Taylor algorithm



All-Weather Operation

Free from external interference such as light, dust, rain and snow



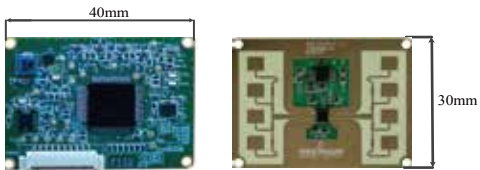
Application: Intelligent home and other safety distance measurement and anti-collision, induction automatic control.

Modulating waveform	FMCW	Refresh rate	5Hz
Beam width	97°×44°	Typical voltage	5V DC
Range	3~20m	Power consumption	1W
Range accuracy	±1.1m	Operating temperature	-40℃~+75℃
Speed range	0.5~6m/s	Weight (module)	4.5g
Maximum target number	5	Overall dimensions (module)	35×30×1.2mm
Output interface (optional)	I2C/RS485/CAN/UART/TTL	Protection rating	/

Note: 1. The protection level is not a permanent standard, and the protective capability may decrease due to product wear.
2. In some countries or regions, millimeter-wave radar may not be enabled or only partially functional. For details, please refer to local laws and regulations.

Intelligent Wide Angle Industrial Radar SP25

The SP25 is a K-band millimeter-wave radar sensor system employing a sophisticated FMCW modulation mode, capable of detecting the distance and velocity of moving targets with high precision. Featuring a dual-antenna design (one transmit and one receive) with isolated transceiver links, the system ensures robust isolation between components. The coplanar arrangement of RF MMIC and antennas minimizes RF link losses.



Wide Coverage

Detection angle 100°
Detection range: 30 m

Various Interfaces

Universal CAN/UART Interface

High-Accuracy Survey

Ranging accuracy ±0.1m

Simple and easy to use

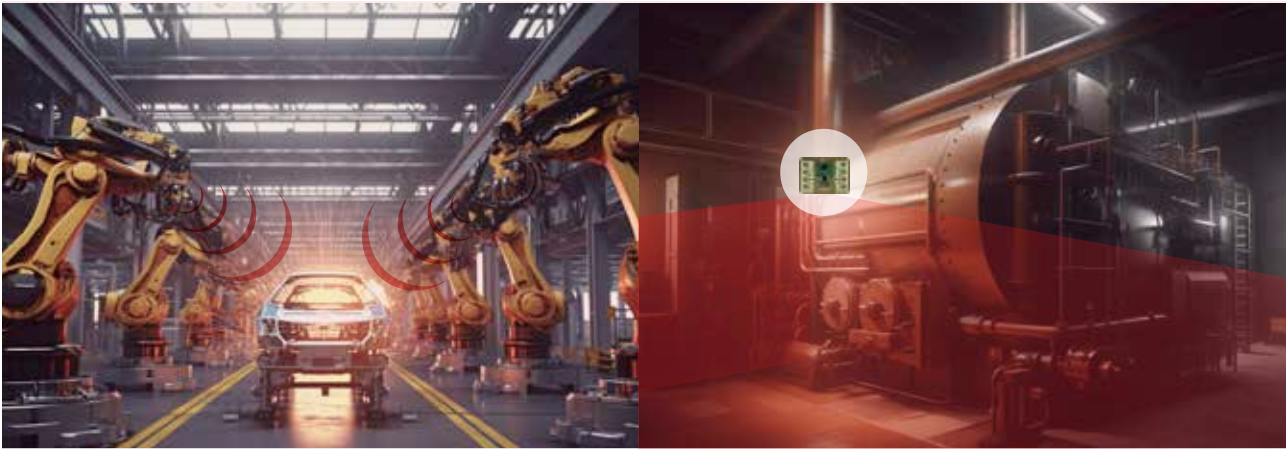
Easy to install and integrate
Suitable for various plant protection environments such as grass-land

Ultra-low power consumption

Low power consumption0.5W

All-Weather Operation

Free from external disturbances such as light, dust, rain, and snow



Application: Safety distance measurement and anti-collision, induction automatic control.

Modulating waveform	FMCW	Output interface	CAN/UART
Beam width	100°x38°	Typical voltage	12V DC
Range	0.1~15m (person) 0.1~30m (building)	Power consumption	0.5W
Ranging accuracy	±0.1m	Operating temperature	-40°C~+85°C
Speed range	-70~+70m/s	Overall dimensions	48x48x14mm
		Overall dimensions (Module)	40x31x6mm

Note: 1. The protection level is not a permanent standard, and the protective capability may decrease due to product wear.
2. In some countries or regions, millimeter-wave radar may not be enabled or only partially functional. For details, please refer to local laws and regulations.

Intelligent Wide Angle Industrial Radar SR60

SR60 is short-range perimeter security radar sensor, utilizing wireless electromagnetic waves to precisely measure target distance, angle, and speed. Featuring a compact design, high sensitivity, lightweight construction, easy integration, and stable performance, it offers a detection range of up to 60 meters. Within its detection area, the sensor automatically detects and tracks intruders.



Multi-Target Tracking

Capable of monitoring 16 moving targets

Trajectory Tracking

Accurately detect the azimuth, pitch angle, and distance of the target.

Wide Detection Range

Detection range: 60 m
Detection angle: 120°

Easy Operation

Set up protection zones, view, record, and replay in real time

Strong Anti-Interference

Distinguish between human and vehicle targets, and effectively filter out animal interference

All-Weather Operation

Free from external interference such as light, dust,rain and snow



Application: Security of the family yard, the security of the railway platform, the protection of the power tower, the monitoring of the railway gate, the demonstration and teachin.

Modulating waveform	FMCW	Refresh rate	10Hz
Beam width	120°x22°	Typical voltage	12V DC
Range	60m	Power consumption	2.5W
Ranging accuracy	±0.2m (0.5~30m)	Operating temperature	-40°C~+70°C
Speed range	-26~+26m/s	Weight	95g
Maximum target number	16	Overall dimensions	102x56x16.5mm
Output interface	UART	Protection rating	IP66

Note: 1. The protection level is not a permanent standard, and the protective capability may decrease due to product wear.
2. In some countries or regions, millimeter-wave radar may not be enabled or only partially functional. For details, please refer to local laws and regulations.

Water Level Radar WTR10

WTR10 Water Level Radar is utilizing FMCW technology with a measurement range of 0.1–30 meters and 3mm precision. Featuring a lens antenna design with a 6°x6° beam angle, it boasts low power consumption, compact size, lightweight design, and high measurement accuracy, remaining unaffected by temperature, atmospheric pressure, sediment, dust, river pollutants, water surface debris, or air conditions, demonstrating excellent reliability.

 long detection range

Detection range 30 meters

 Various Interfaces

RS485 interface, compatible with various IoT platforms

 High Measurement Accuracy

6°x6° measurement beam angle, enabling stable monitoring

 Simple and easy to use

Low-power design, solarpowered, and easy to install

 Strong Anti-Interference

High integration, strong anti-interference capability, and excellent stability

 All-Weather Operation

Not affected by environmental factors such as temperature, sediment, dust, river pollutants, or floating debris on water surfaces.



Application: It is widely used in smart water, smart city, fire fighting Internet of things.

Antenna type	Lens	Output interface	RS485
Modulating waveform	FMCW	Typical voltage	12V DC
Beam width	6°x6°	Power consumption	≤2W (Low Power Mode)
Range	0.1~30m	Operating temperature	−40°C~+70°C
Ranging accuracy	±3mm (within 10m)	Protection rating	IP67
Transmitting power	12dBm (RFout) +27dBm (ANTgain)	Overall dimensions	42x62x62mm (module)

Radar Flowmeter ISC852

ISC852 radar flowmeter, independently developed by Nare Technology, is a non-contact flow measurement device based on the Doppler radar effect. With a beam angle of 6°x6°, it effectively filters out noise interference in the application environment, ensuring more accurate and stable measurement results.



 Non-contact Measurement

Non-contact measurement method, unaffected by sewage corrosion and sediment

 Easy Debugging

Includes Bluetooth and mini-program parameter adjustment for easier onsite debugging

 One Against Two

Supporting both flow measurement and water level measurement

 Simple and easy to use

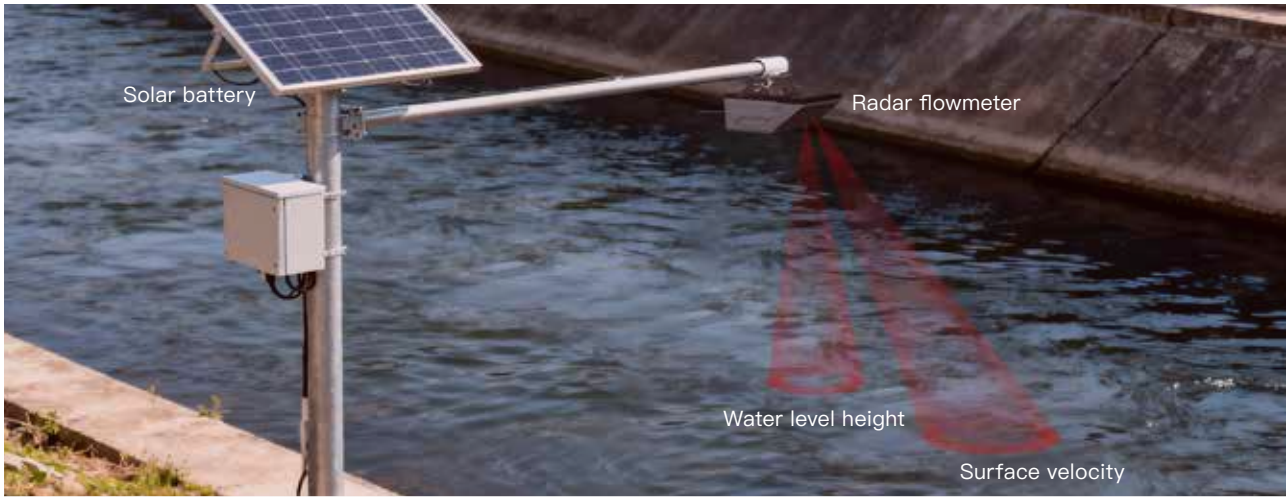
Compact design, easy installation, and simple maintenance

 Low Power Consumption

Supports low-power mode (power consumption <3W), which can be met by standard solar power supply.

 All-Weather Operation

Lightning Protection Design and Applicability to Various Outdoor Complex Environments



Application: It is widely used in smart water, smart city, fire fighting Internet of things.

Antenna type	Lens	Output interface	RS485
Modulating waveform	FMCW	Typical voltage	12V DC
Beam width	6°x6°	Power consumption	≤3W (Low Power Mode)
Range	0.1~30m	Operating temperature	−40°C~+70°C
Ranging accuracy	±3mm (within 10m)	Protection rating	IP67
Transmitting power	12dBm (RFout) +27dBm (ANTgain)	Overall dimensions	95x77x14.5mm (module)

Note: 1. The protection level is not a permanent standard, and the protective capability may decrease due to product wear.
2. In some countries or regions, millimeter-wave radar may not be enabled or only partially functional. For details, please refer to local laws and regulations.

RVSM (Real-Time Vision System)

The RVSM (Radar-Video Surveillance) Fusion Platform integrates radar, high-speed dome cameras, and intelligent fusion algorithms, supporting multi-target and multi-camera operations. When an object enters the protected area, the radar detects and alerts, while simultaneously determining its precise location based on distance, angle, and speed. The system then coordinates with the dome cameras to capture and track intruders swiftly, accurately, and seamlessly, generating both alarm signals and video feeds. This achieves comprehensive, proactive, and multi-dimensional surveillance and early warning across the entire perimeter.



Key Characteristics

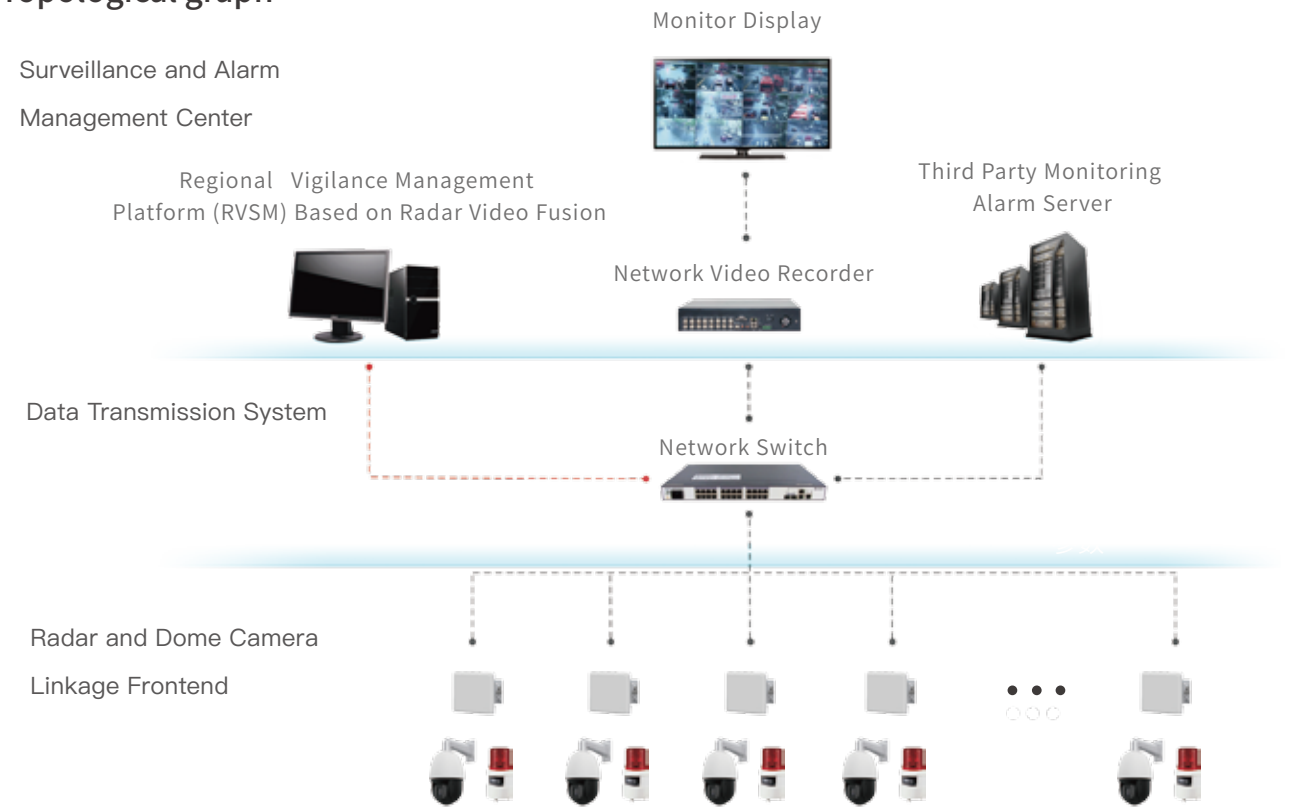
- Adopting B/S architecture: zero client deployment and maintenance.
- Technical advantages: cross-platform support, cloud native support, containerization support, microservices support, Linux and domestic system support.
- Scalability: The VMS plugin enables rapid integration with mainstream overseas VMS platforms through lightweight integration, offering high flexibility. It supports Avigilon system integration and can be easily modified to support MileStone and other platforms.
- Friendly interface: intuitive operation interface, multi-screen display and remote access.
- Open source: Open source platform with standard RESTFul API, convenient third-party access, integration and secondary development.
- Big screen display: Data is displayed in the form of echart.
- Communication management: Use RabbitMQ for radar target access, alarm message protocol interaction, subscription, information distribution, push, etc.
- Internationalization: Implement multilingual support through i18n library and build complete international applications.

Platform Integration

The RVSM (Real-Time Video Surveillance) fusion platform seamlessly integrates with management platforms, backend storage systems, and DVRs from mainstream video surveillance vendors. It also supports alarm signal output via relays and I/O interfaces. In special cases, the platform provides system protocols and SDKs for third-party integration and development.

- Video storage and NVR interface protocols: GB/T28181, ONVIF, RTSP
- Video management interface platform protocols: GB/T28181, ONVIF, RTSP
- Alarm signal outputs: RJ45, RS485, Relay_out*2, IO_out*2, IO_in, LED lights

Topological graph

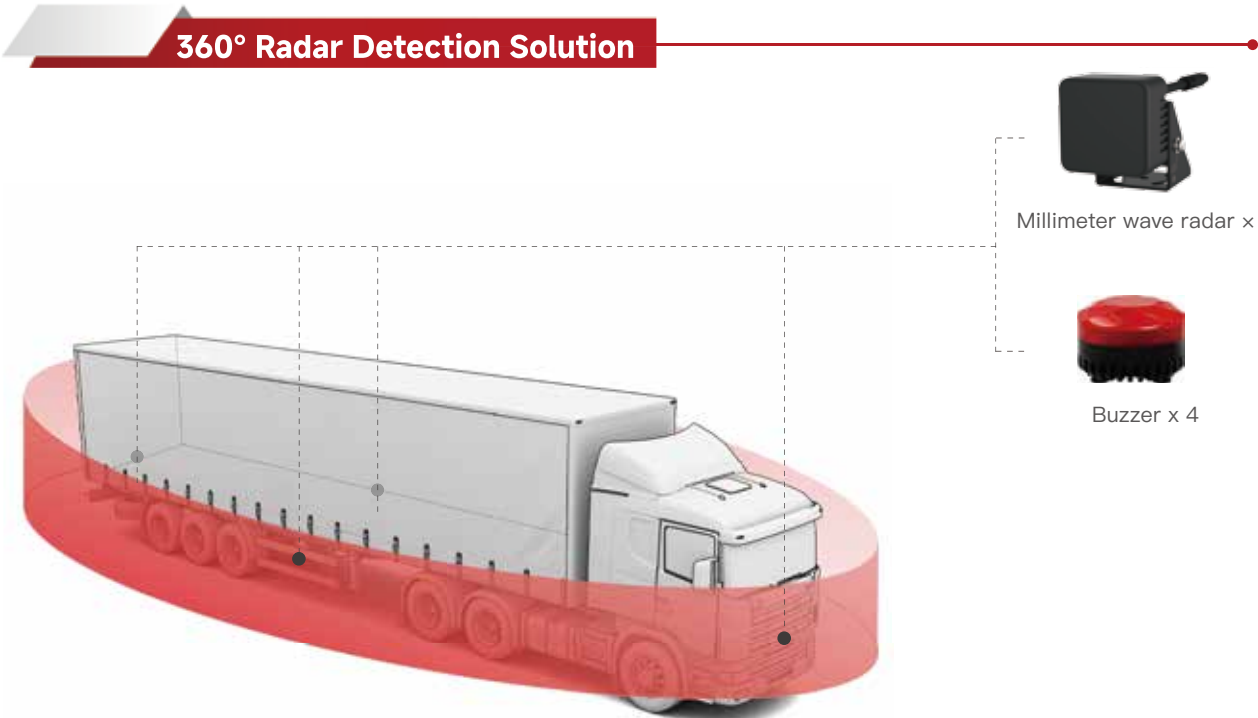


Common Application

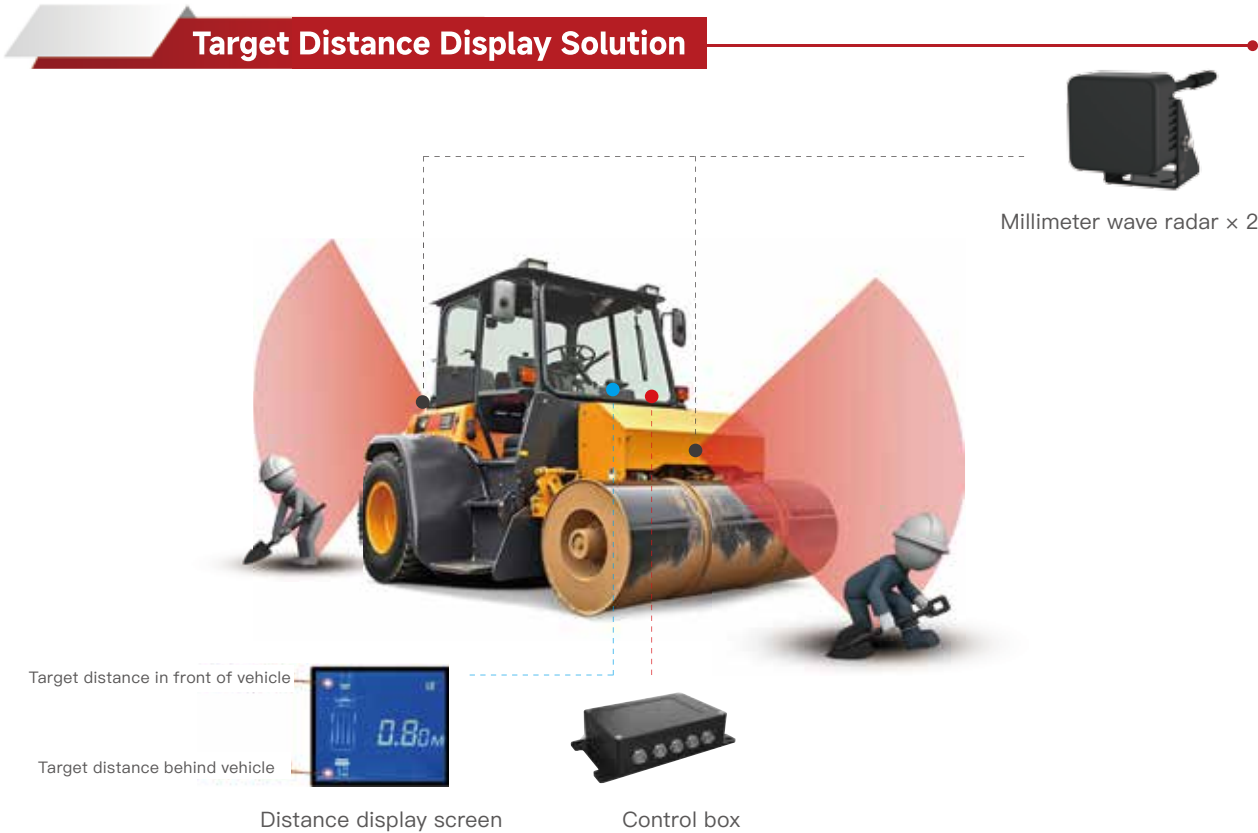
The RVSM (Real-Time Video Surveillance) fusion platform is widely deployed in high-security environments including substations, power plants, water treatment facilities, industrial complexes, mining operations, warehouses, educational institutions, airports, aquaculture and livestock facilities, protected heritage sites, military installations, prisons, and detention centers.



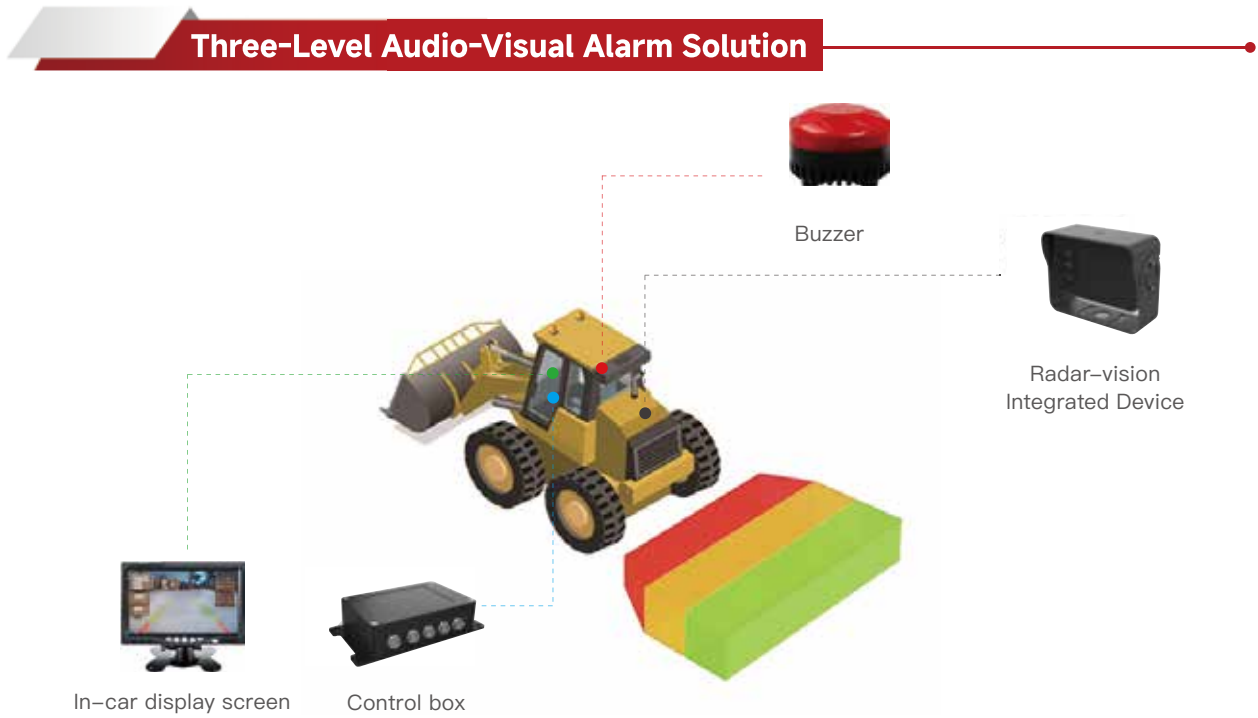
Automobile Radar Solutions



Four radars are installed around the vehicle to achieve 360° full coverage. The system can automatically trigger an alarm no matter which direction the target appears.



Radars installed on the front and rear of the vehicle transmit detected target distance data to the display, enabling real-time visualization of front and rear target distances.



Radar + Vision, provides a three-level audio-visual alarm: as targets approach, the audio frequency increases to a continuous tone, while the display overlays red, yellow, and green warning layers.

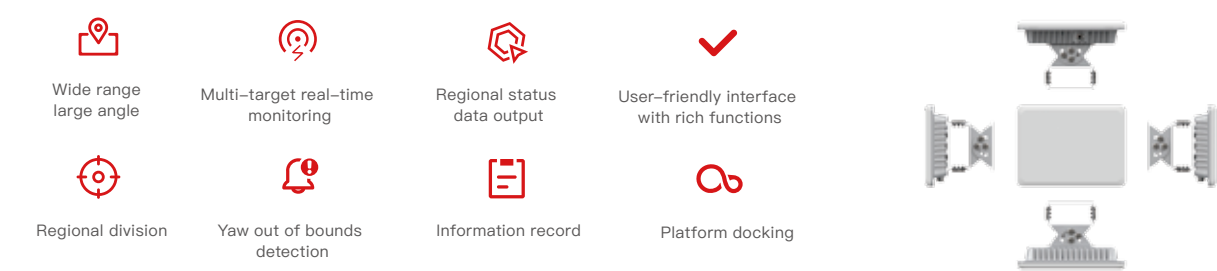


Radar + Laser Outline Lights: When a target enters the marked range, the radar directly triggers the alarm to sound.

Intelligent Anti-collision of Bridge Early Warning System

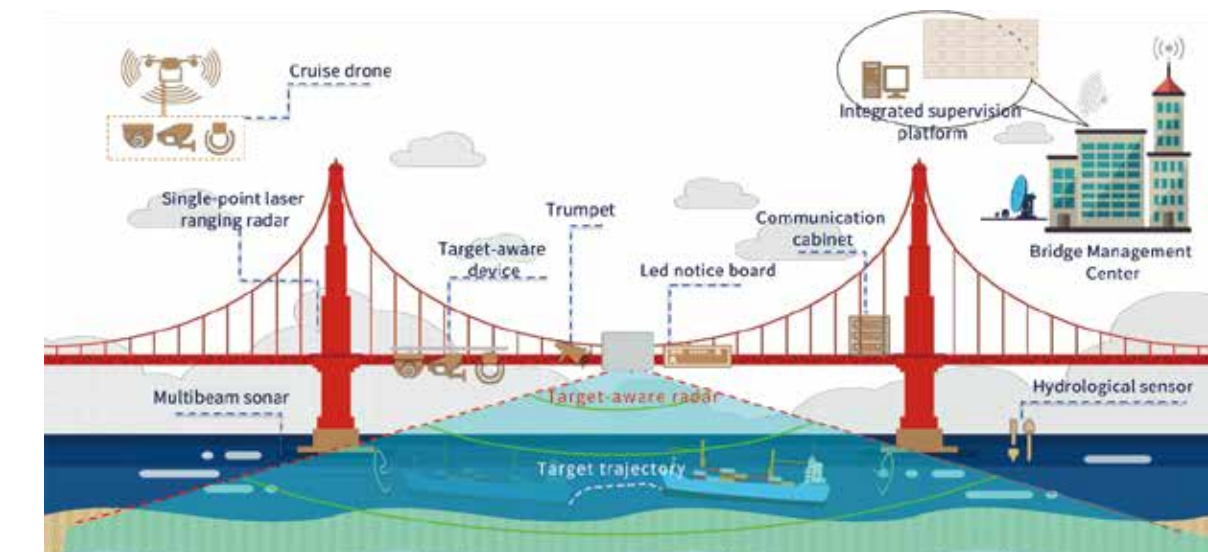
The intelligent anti-collision early warning system of bridge based on millimeter wave radar can detect the ships at a long distance in advance, and realize the early warning of all kinds of dangerous behaviors of ships through track tracking and management, improve the safety of bridge and channel operation, and effectively avoid the ships from touching the bridge and causing accidents.

The on-duty personnel can accurately monitor real-time navigation conditions in the bridge area waters, effectively guiding vessels to safely pass through. In case of vessel deviation or excessive height, the system alerts ships through VHF, AIS, audio-visual alarms, large-screen displays, and phone calls, prompting them to take necessary measures. Additionally, the system features built-in functions like historical vessel trajectory playback and video replay, which help prevent bridge collisions.



System Components of Ship Collision Prevention System for Bridge

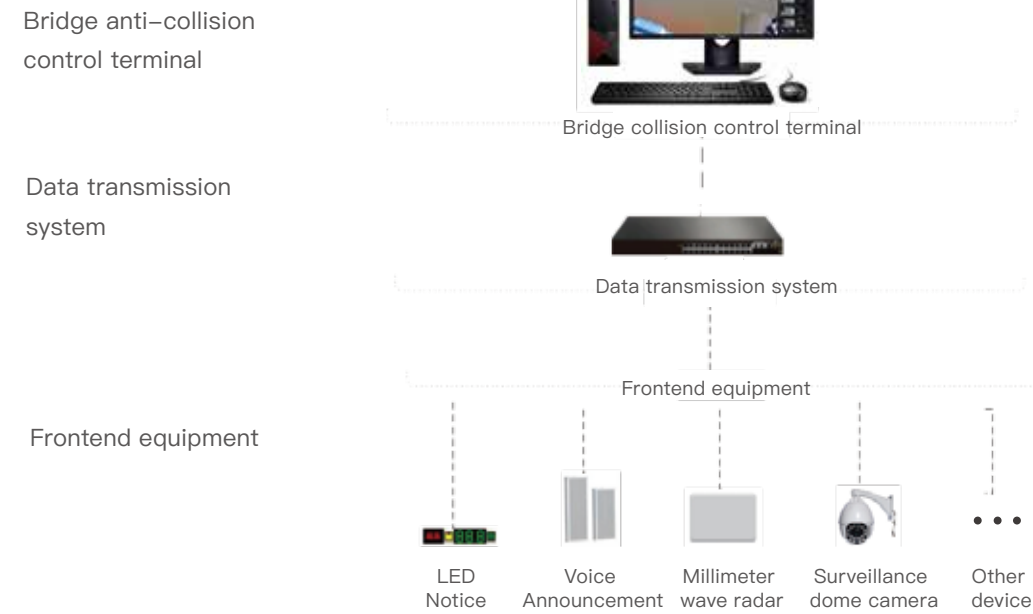
The multifunctional bridge ship collision prevention integrated monitoring system combines modern wireless communication technologies such as laser high-speed ship detection, radar detection, thermal imaging image monitoring of vessels deviating from the course, electronic fence course deviation warning, AIS ship identification warning notification, VHF radio notification, video surveillance recording, wireless data transmission, and audio-visual alarm.



Bridges Safety--Early Warning System

- Bridge collision control terminal
Process and store data collected by front-end devices, while sending commands to them. Track and manage the ship's identity and navigation trajectory.
- Data transmission system
The data from the front-end devices is transmitted to the control terminal via networks (4G,5G, Ethernet, etc.), while the commands from the terminal are sent back to the front-end devices.
- Frontend equipment
The system integrates LED display, voice announcement, millimeter-wave radar, and surveillance dome cameras to collect target trajectories and video data, while simultaneously broadcasting information from the terminal.

Topological graph

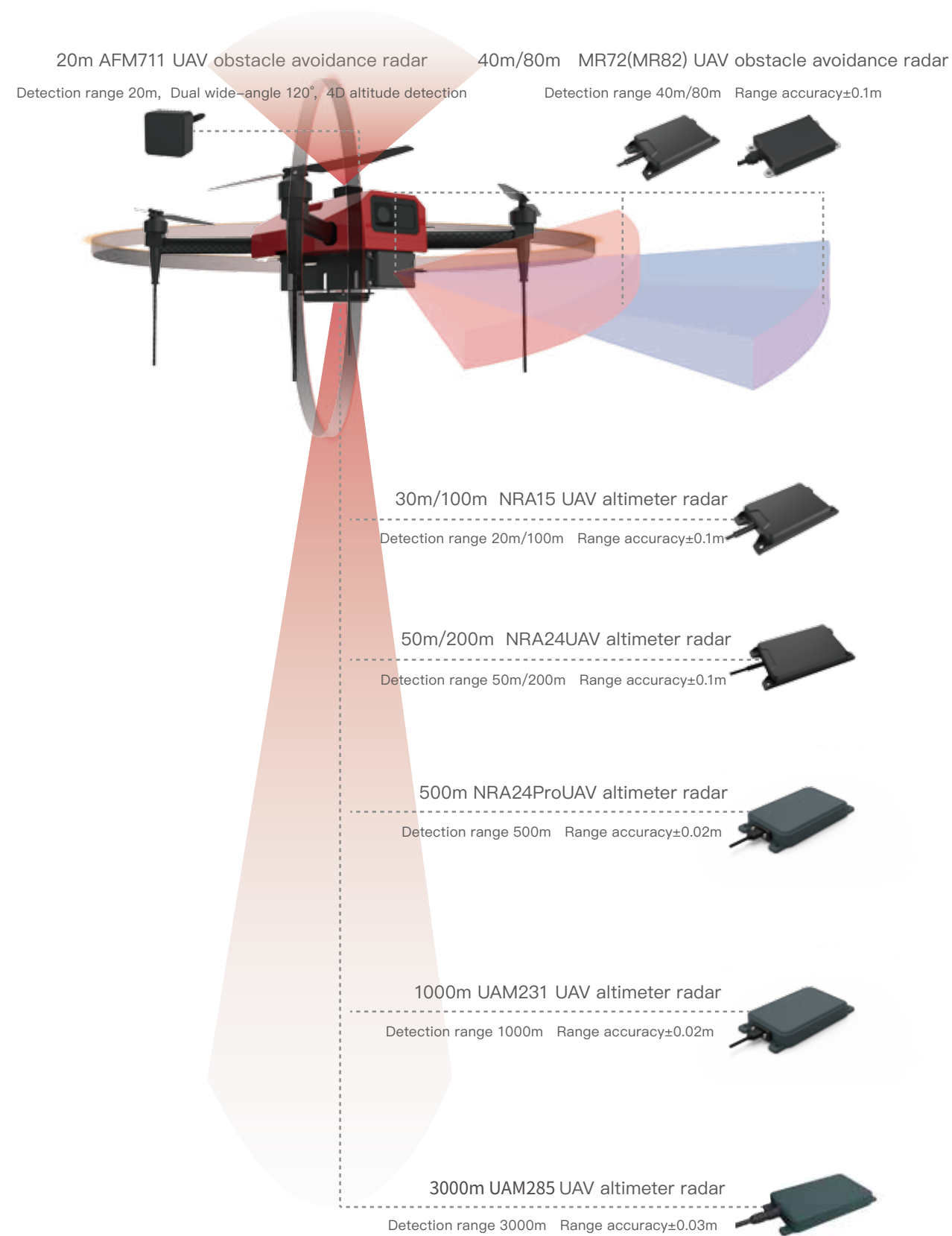


Product Parameter

Model		WTC261-3000	
Modulation mode	FMCW	Refresh rate	10Hz
Beam width	90°x13°	Working voltage	12V DC
Speed range	-120~+120km/h	Power consumption	28W (@12V DC 25°C)
Detection range (large vessel>50m)	3000m	Operating temperature	-40°C~+70°C
Detection range (boat ≤10m)	1500m	Protection rating	IP66
Ranging accuracy	±2m	Product size	234x292x49.3mm
Output interface	RJ45、RS485、GSP/Beidou、Relay_Out、IO_Out、IO_In		

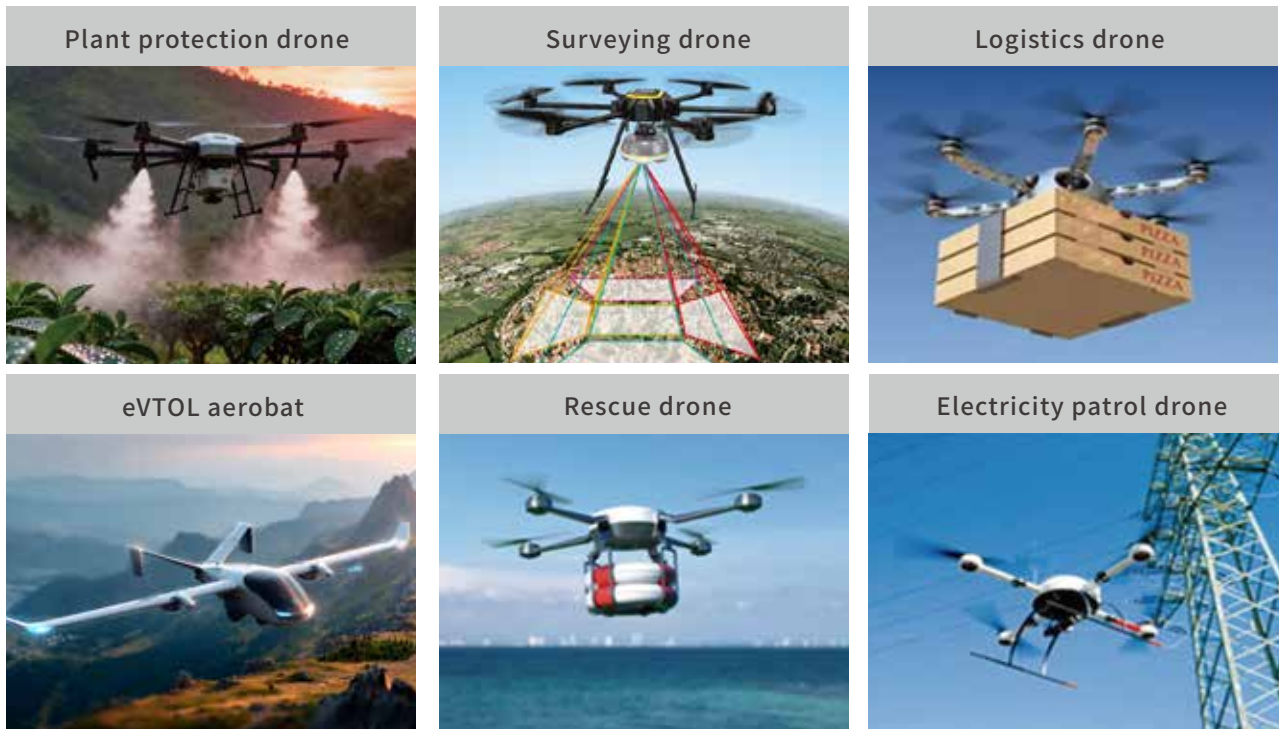
Six-Directional Millimeter Wave Radar Solution for Drones

Provide 720° Full-spectrum awareness capability



The altimeter radar measures flight altitude beneath the drone, while front, rear, and side radars detect obstacles. The top radar ensures the drone avoids overhead hazards like high-voltage lines. Six radars cover detection ranges from 30 meters to over 3,000 meters, featuring dual-beam detection with 50–500Hz refresh rates and $\pm 0.02m$ accuracy. With a 0.2m small blind zone, they provide 720° all-around 360-degree surveillance for drones.

Typical application



Recommended product specifications

System Performance		
	MR82 UAV obstacle avoidance radar	UAM285 altimeter radar
Operation	12V DC	12V DC
Power consumption	$\leq 3W$	4.5W
Refresh rate	30Hz	30Hz
Operating temperature	$-40\sim+70^{\circ}C$	$-40\sim+70^{\circ}C$
Storage temperature	$-40\sim+85^{\circ}C$	$-40\sim+85^{\circ}C$
Detection performance		
Detection range	0.2~40m@ $\pm 56^{\circ}$, 0.2~80m@ $\pm 16^{\circ}$	0.2~3000m
Range accuracy	$\pm 0.1m$	$\pm 0.03m$
Beam width	112°×14° (short range) 15.6°×30° (medium range)	21°×17°
Number of objective	Up to 64	Simple target