

NSR100VF Perimeter Radar Video Surveillance System



NSR100VF

Product Features

Intelligent, Active Detection, 3D Protection

- **Intelligent:** intelligent algorithms and active learning ability make the system can be adapted to different environment and target identification; the system also support integration with various platforms.
- **3D Protection:** the system adopts fusion technology of video and radar to create a three-dimensional protection system that can identify various moving targets of 0.5m² within 100m.
- **Active Detection:** Electromagnetic beams are actively launched and the target echoes are detected at the speed of 8 times per second to obtain the target's position, distance, and other information. At the same time, visual confirmation is performed in real time to determine whether to make alarm or not.
- **Multi-target Detection :** Supports detection and tracking of 32 targets at the same time and ≤10 target data Synchronous outputs.

All Day&All Weather Protection

- **All-weather:** 7×24h real-time protection in all weather, adaptable to bad weather such as rain, snow, fog, haze, sand and dust, which minimize false and eliminate false alarms at most.
- **MTBF:** Adopts military-level equipment and components. MTBF is above 50000h
- **Protection Grade:** Radar IP67, high waterproof, dust proof, shock resistance ability
- **High accuracy:** With advanced digital signal processing techniques including 2FFT and target cluster tracking. the radar is

Nanoradar NSR100VF is a radar and video fusion intelligent alert system. The system gives early warning when the target enters into protection zone, meanwhile, positioning the target by detecting its distance, angle and speed. After double audit of video analysis technology and AI algorithm, the system will determine whether the target needs to be alerted or not.

This system realized fusion of radar and visual signal, which highly integrates the active detection, high sensitivity of the radar technology with video intelligence analysis. It greatly improves target detection and identification performance of system.

With its unique radar video fusion technology, NSR100VF is widely used in prisons, squares, sea ports, oil plant and other critical areas.

able to detect target with minimum speed of 0.3m/s, quickly position the target in any posture within the system coverage.

High Efficiency&Reliability

- **High Efficiency:** support real-time processing of multi-channel video data parallel computing, accurate analysis of video data, target classification and target locking in real-time.
- **High Reliability:** With advanced asynchronous signal filtering technology, the system is able to detect&identify human targets in any posture such as slow crawling, fast running, squat-walking,etc even under interference of neighboring devices or nearby 24GHz radar have co-channel interference.
- **Good compatibility:** 10/100M adaptable Ethernet interface(TCP/UDP),and fiber optic interface support integration with mainstream security platforms.

User-friendly Design

- **System Software:** Easy operation, support GPS map import, customized protection zone settings, real-time viewing, recording and playback.
- **Alarm:** High-pitched waterproof alarm speaker, accurate alarm information report and warning to intruder.
- **Open architecture:** can be flexibly expanded to multi-level



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Technical Parameter

Model	NSR100VF		
Composition	Radar + Bullet camera	Radar Characteristics	
Detection Target	Animal, human, vehicles	Radar Sensor	FMCW
Detection speed	0.3m/s~30m/s	Radar output data	distance, direction,angle
Detection range	Min:5m, Max: 100m	Transmission Frequency	24.00~24.15GHz
Distance resolution	1m	Power	<100 mW (20dBm)
Coverage	Max: 1500 m ² , Min: 0.5 m ²	Angle accuracy	±1°
Radar size	194×158×49mm	Refresh rate	8Hz
Detection rate	99% (RCS 0.5m ² human target at speed of 0.3m/s)	Distance accuracy	0.5m
False alarm	≤1/24h/line (in case of light shadow,bad weather,small animal)	Detection range(pedestrian)	5~100m
Small target filter	>85%(target smaller than 0.05m ²)	Beam width /Tx	Azimuth (-6dB) : 20°
Software characteristics			Elevation (-6dB) : 13°
Protect zone setting	support customized protect zone drawing ,timing deployment and withdraw	Camera	
Map	Electronic map	Camera type	3M pixel , IP Camera
Access classification	Support different level of access Classification	Sensor	1/3" Progressive Scan CMOS
Alarm	Speak louder and light alarm	Max image size	2048*1536
Alarm record playback	Support alarm record, customized search model and Excel sheet export	Lens	16mm,4mm
Support camera protocol	IPv4/IPv6,HTTP,HTTPS,802.1x,Qos,FTP,SMTP,UPnP,SNMP,DNS,DDNS,NTP,RTSP,RTCP,RTP,TCP/IP,DHCP,PPPoE,Bonjour	IR	≤100m
Data stream	Data with target location and Speed	Video compression standard	H.265/H.264/MJPEG
System Physical Characteristics			
Power	100 ~240V AC	Fill-in light at night	Avoid ground projection lights on camera coverage area. Suggest supplementary light with illumination of 50 Lux at interval of 15 meters



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Interface	Ethernet	Working temperature	-40~75°C
Power dissipation	55W @220V AC	Storage temperature	-60~85°C
Weight	≤22.98kg	Certificate	Radar: RoHS, CE
Installation Height	<0.5m (from the ground) It is recommended to install the system end to end to cover the blind area	Dimension	478*1369*290mm
Protection grade	Waterproof box: IP54; Radar:IP67;Bullet camera IP66	Language	English , Chinese

