

# NSR300WV Wide Area Radar Video Surveillance System



## NSR300WV

### 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 customized 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 1m<sup>2</sup> within 300m.
- **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 tracking is performed in real time to locate the invasion target and alarm.
- **Multi-target Detection :** Supports detection and tracking of 32 targets at the same time and ≤10 target data synchronization 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 IP66, high waterproof, dust proof, shock resistance performance
- **High accuracy:** With advanced digital signal processing

Nanoradar NSR300WV 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 it's distance, angle and speed. After double audit of video analysis technology and AI algorithm, the system will determines 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

techniques including 2FFT, DBF, TBD, JIPDA, PF and target cluster tracking, the radar is able to detect target with minimum speed of 0.5m/s, quickly position the target in any posture within the system coverage.

#### High Efficiency&Reliability

- **High Efficiency:** Working in 24GHz-ISM-Band for moving target detection, featured with low-power consumption FMCW modulation technology, the system performs well even in harsh environments such as rain and snow,etc.
- **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 easy 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.
- **Open architecture:** can be flexibly expanded to multi-level networking.



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## Technical Parameter

Model	NSR300WV		
Composition	Radar + HD PTZ camera	Power	<100mW (20dBm)
Detection Target	Animal, human, vehicles	Angle accuracy	±1°
Identification Mode	Radar triggers alarm and link with ptz camera for target double checking	Refresh rate	8Hz
Detection speed	-30m/s~30m/s	Distance accuracy	0.75m
Detection range (Pedestrian)	1.5~300m	Beam width /Tx	Azimuth: 90°
Detection range (Passenger vehicle)	1.5~450m		Elevation: 13°
Distance resolution	1.5m	Radar dimension	235×175×47.5mm
Coverage	Max: 150000m <sup>2</sup> , Min: 20m <sup>2</sup>	Power supply	12V DC
Detection rate	99% (RCS 1m <sup>2</sup> human target at speed of 0.5m/s)	Power consumption	17W
<b>Software characteristics</b>		Working temperature	-40~75℃
Protect zone setting	support customized protect zone drawing ,timing deployment and withdraw	Storage temperature	-60~85℃
		<b>Camera</b>	
Map	Support static map	Camera type	2M pixel, IR HD IP PTZ camera
Access classification	Support different level of access Classification	Sensor	1/1.8" Progressive Scan CMOS
Alarm	Alarm prompt tone	Max image size	1920*1080
Alarm record playback	Support alarm record, customized search model and Excel sheet export	Lens	5.9-135mm, 23X(optical)
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	200m
Data stream	Data with target location and speed	Video compression standard	H.264/MJPEG/MPEG4, H.264, Baseline/Main/High Profile
<b>Radar characteristics</b>		Power supply	24V AC
Radar sensor	FMCW	Power consumption	50W max (visible :5W max, IR: 15W max)
Radar output data	Distance, direction,angle	Working temperature	-30~65℃



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Transmission Frequency	24.00~24.10GHz	Storage temperature	-40~70℃
<b>System Physical Characteristics</b>			
Interface	Ethernet、 (POE also supported by radar)	Installation Height	Radar 2m camera >3m
Weight	1.6kg (radar) 8kg (camera)	Certification	Radar : RoHS, CE
Protection grade	IP66	Language	English , Chinese

