

# 300-meter Perimeter Radar-Camera System

RVS441



## Features

- 80GHz high-frequency band millimeter-wave radar enables high-precision and high-resolution detection.
- Supports dual-scene coverage with long and short focal lengths to adapt to diverse application scenarios.
- Incorporates starlight-level sensors for enhanced nighttime performance.
- Facilitates radar-video data fusion to boost target detection and recognition capabilities.
- Supports simultaneous detection of 32 targets.
- Supports detection of motor vehicles, non-motor vehicles, and pedestrians.
- Supports accurate recognition of various pedestrian actions, including walking, crawling, crouching, running, and wall climbing.
- Supports simultaneous monitoring of 8 detection zones.
- Maximum 300m detection range.
- Supports automatic tracking of intruders.
- Supports event detection including intrusion detection and cross line detection.
- Applicable to diverse environments including campuses, airports, railways, power facilities, and other operational scenarios.

## Specifications

Model	RVS441@2D-D30-OS
Basic Parameters	
Sensor	Channel 1 (Panorama) : 1/1.8" 4MP CMOS Channel 2 (Detail) : 1/1.8" 4MP CMOS
Min. Illumination	Channel 1 (Panorama) : 0.0003 lux (1.0, AGC ON, color), 0 lux (warm light on) Channel 2 (Detail) : 0.0005 lux (F1.6, AGC ON, color) , 0.0003lux (F1.6, AGC ON, black/white)
Shutter Range	1 ~ 1/100000s
Day/Night	Channel 1 (Panorama) : Color, all day Channel 2 (Detail) : Day : Color, Night : IR

**Lens**

Lens Type	Channel 1 (Panorama) : 4mm fixed focus Channel 2 (Detail) : 8-32mm motorized zoom
Max. Aperture	Channel 1 (Panorama) : F 1.0 Channel 2 (Detail) : F 1.6
Focus	Motorized, only Channel 2 (Detail) support
Zoom	Motorized, only Channel 2 (Detail) support
PTZ	Tilt range: 10° (Detail channel)

**Illuminator**

Built-in Illuminator Type	2 near warm lights + 2 mid-IR lights + 8 far-IR lights
Light Beads	12
Built-in Illumination Range	Channel 1 (Panorama) : Warm light : 40m Channel 2 (Detail) : IR light : 200m

**Key Functional Parameters**

Radar-video Fusion	Support
Max. Detection Targets	32
Max. Detection Areas	8
Detection Target Type	Pedestrian, motor vehicle, non-motor vehicle
Pedestrian Detection Capability	Accurate recognition of various actions, including walking, crawling, crouching, running, and wall climbing
Detection Direction	Supports incoming, outgoing, lateral motion detection
Detection Distance Range	10 ~ 300 m
Lateral Detection Range	20 ~ 200 m

**Radar**

Radar Frequency Band	80GHz
Modulated Waveform	FMCW
Detection Frequency	Up to 16 times per second
Distance Resolution	1.5m
Speed Resolution	0.1m/s
Speed Measurement Range	0.03-30m/s
Azimuth Angle Precision	±1°
Distance Precision	±0.75m
Speed Precision	±0.2m/s
Detection Angle	Horizontal Angle ±8° Elevation Angle ±3

**Video**

Video Compression	H.265, H.264, MJPEG
Video Resolution	Main stream: 2688×1520, 1080P, 720P, D1, 2CIF, CIF Sub stream: 1080P, 720P, D1, 2CIF, CIF Third stream: D1, 2CIF, CIF
Video Frame Rate	2688×1520@30 fps
Video Bit Rate	128-16384Kbps
Video OSD	Multiple types of contents, such as date and time, with custom font color

**Image**

Image Resolution	2688×1520
Image Encoding Format	JPEG
Image Settings	Exposure mode, shutter time, gain, exposure compensation, day/night mode, etc.
Digital Noise Reduction	2DNR/3DNR

**Event**

Event Type	Intrusion detection, cross line detection
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**Storage**

Edge Storage	GB eMMC, supports expansion to 128 GB TF card
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**Network**

Protocols	SSH; RTP; RTCP; IPv4; ARP; TCP; UDP; DHCP; RTSP; DNS; DDNS; NTP; FTP; UPnP; HTTP; HTTPS; 802.1x; SNMP; LAPI
Compatible Integration	ONVIF

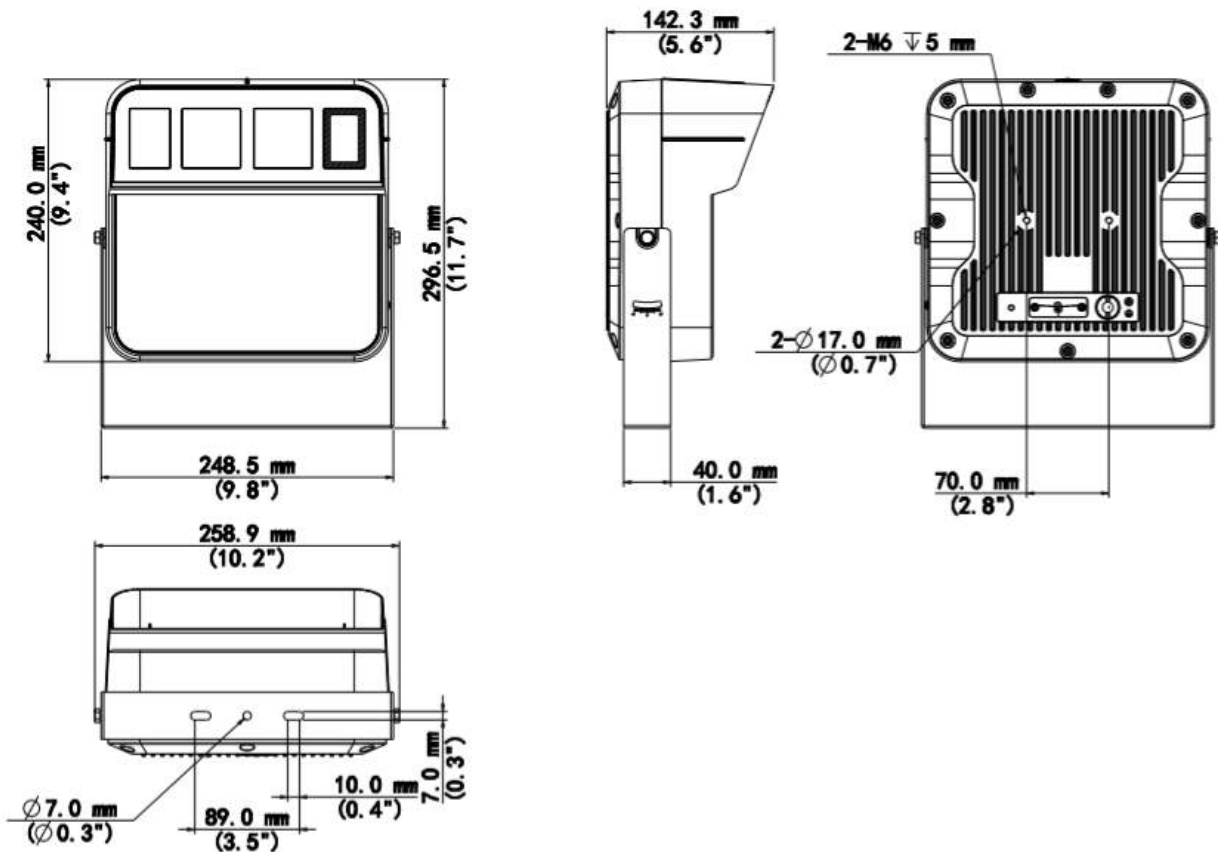
**Interface**

Network Interface	1 x 10M/100M/1000M Ethernet interface
Serial Port	1 x RS 485
Alarm Input	2
Alarm Output	2
USB	N/A
Reset Button	Support

**General**

Power Supply	DC 24V ±25%
Power Consumption	≤ 30W
Dimensions	248.5mm (W) ×142.3mm (D) ×240.0mm (H)
Weight	2.86kg (with bracket)
Lightning and Surge Protection	Support
Operating Temperature	- 40°C to 70°C
Operating Humidity	5% to 95% RH (non-condensing)
Ingress Protection	IP67
Spirit Level	Support

## Dimensions



## Ordering Info

Product Model	Config	Description
RVS441	2D-D30-OS	300-meter Perimeter Radar-Camera System

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