



# MS9390-HV

Multi-Sensor Dome Network Camera



8MP • 180° Panoramic View • 20M IR • WDR Pro •  
SNV • Smart Stream III • IP66 • IK10

The MS9390-HV is the latest and most efficient panoramic network camera offered in surveillance. Through the use of two wide angle lenses, electronic image stitching\*, and high-resolution sensors, the 8MP 180° MS9390-HV is in a new class all by itself. With its unique dual-sensor design, the MS9390-HV is able to maintain a higher vertical FOV than most traditional multi-sensor panoramic cameras using 4 sensors. This higher vertical FOV enables users to have more video coverage, thereby enabling them to capture more evidence below the point of camera installation. The MS9390-HV goes even further with WDR Pro technology for high contrast environments, 30fps at full resolution, and 180° IR illuminators up to 20 meters, ensuring users with 24/7 comprehensive panoramic video surveillance.

In addition to its panoramic image quality, the MS9390-HV is also simple to install. It has been designed to be directly wall

mounted, including 20° of internal tilt adjustment on the lenses to get the exact angle desired. With an IP66 weather proof and IK10 vandal proof housing, the MS9390-HV can be installed both indoors and outdoors, and handle most of what mother nature has to offer. The only accessory available for MS9390-HV is a sunshield, which is included with the camera.

To top it all off, the MS9390-HV utilizes H.265 compression and Smart Stream III technology. This combination enables users to greatly save on storage and bandwidth consumption usually associated with high resolution surveillance.

\*Electronic image stitching is best at 3~20m distances. Seamless stitching is improbable below 3m.

## Key Features

- 8-Megapixel Resolution
- H.265 Compression Technology
- 180° Panoramic View
- 30 fps @ 4512x1728
- Video Alignment For a Seamless Image
- Smart Stream III to Optimize Bandwidth Efficiency
- Built-in IR Illuminators, Effective up to 20 Meters
- SNV (Supreme Night Visibility)
- WDR Pro for Unparalleled Visibility in High Contrast Environments
- Built-in Microphone
- Built-in MicroSD/SDHC/SDXC Card Slot
- Weather-proof IP66-rated and Vandal-proof IK10-rated Housing
- Trend Micro IoT Security



8MP Panoramic View



Panoramic IR Illumination

## Technical Specifications

Model	MS9390-HV		
<b>System Information</b>			
CPU	Multimedia SoC (System-on-Chip)		
Flash	128 MB		
RAM	1 GB		
<b>Camera Features</b>			
Image Sensor	1/2.7" Progressive CMOS		
Maximum Resolution	4512x1728 (8MP)		
Lens Type	Fixed-focal		
Focal Length	f = 2.8 mm		
Aperture	F1.2		
Iris Type	Fixed iris		
Field of View	180° (Horizontal) 50° (Vertical) 180° (Diagonal)		
Shutter Time	1/5 sec. to 1/32,000 sec.		
WDR Technology	WDR Pro		
Day/Night	Yes		
Removable IR-cut Filter	Yes		
Illuminators	Built-in IR illuminators, effective up to 20 meters with Smart IR , IR LED*8		
Minimum Illumination	0.05 Lux @ F1.2 (Color) 0.01 Lux @ F1.2 (B/W) 0 Lux with IR illumination on		
Tilt Range	20°		
Pan/Tilt/Zoom Functionalities	ePTZ: 48x digital zoom (4x on IE plug-in,12x built in)		
Storage	Seamless Recording to MicroSD/SDHC/SDXC card and recording to network-attached storage (NAS)		
<b>Video</b>			
Compression	H.265, H.264, MJPEG		
Maximum Frame Rate	30 fps @ 4512x1728		
Maximum Streams	4 video streams (Up to 9 configurable profiles)		
S/N Ratio	46 dB		
Dynamic Range	120 dB		
Video Streaming	Adjustable resolution, quality and constant bit rate control, Smart Stream III		
		Image Settings	General settings: video title and time stamp overlay, video orientation (flip, mirror), day/night settings; Illuminators: illuminators, anti-overexposure; Image settings: white balance, image adjustment (brightness, contrast, saturation, sharpness, gamma curve), defog, 3DNR, HLM, DIS, scene mode (auto, deblur); Exposure: BLC, HLC, exposure control (exposure level, iris adjustment, exposure time, gain control, iris mode), AE speed adjustment, WDR; Privacy mask; Scheduled profile settings
		<b>Audio</b>	
		Audio Capability	One-way Audio
		Compression	G.711, G.726
		Interface	Built-in Microphone
		Effective Range	5 meters
		<b>Network</b>	
		Users	Live viewing for up to 10 clients
		Security	Access list, digest authentication, HTTPS, IEEE 802.1x, password protection, signed firmware, Trend Micro IoT Security (brute force attack event, cyberattack event, quarantine event), user access log, user account management
		Protocols	802.1X, ARP, Bonjour, CIFS/SMB, DDNS, DHCP, DNS, FTP, HTTP, HTTPS, ICMP, IGMPv3, IPv4, IPv6, NTP, PPPoE, QoS (CoS/DSCP), RTSP/RTP/RTCP, SMTP, SNMP, SSL, TCP/IP, TLS 1.2, UDP, UPnP
		Interface	10 Base-T/100 BaseTX Ethernet (RJ-45) *It is highly recommended to use standard CAT5e & CAT6 cables which are compliant with the 3P/ETL standard.
		ONVIF	Profile G, S, T supported, specification available at <a href="http://www.onvif.org">www.onvif.org</a>
		<b>Solution Integration</b>	
		Smart Motion Detection	Five-window video motion detection, people detection, time filter
		Smart VCA	Intrusion detection, loitering detection, line crossing detection, unattended object detection, missing object detection, face detection, crowd detection, running detection *Please access <a href="https://license.vivotek.com/">https://license.vivotek.com/</a> to get the free trial license.
		VADP Package	Deep Learning VCA (Smart Motion Detection, Smart VCA), Stratocast, Trend Micro IoT Security (3-year free trial)
		<b>Alarm and Event</b>	
		Event Trigger	Audio detection, camera tampering detection, cybersecurity events (brute force attack event, cyberattack event, quarantine event), manual trigger, motion detection, periodical trigger, recording notification, SD card life expectancy, shock detection, system boot
		Event Action	Event notification via email, HTTP, FTP, NAS server, SD card, push notification File upload via email, HTTP, FTP, NAS server, SD card

## Technical Specifications

General		Warranty	36 months
Connectors	RJ-45 cable connector for 10/100 Mbps Network/PoE connection	System Requirements	
LED Indicator	System power and status indicator	Operating System	Microsoft Windows 10/8/7 Mac 10.12 (Chrome only)
Power Input	IEEE 802.3at PoE Class 4	Web Browser	Chrome 58.0 or above Internet Explorer 10/11
Power Consumption	Max: 15.2 W/6.9 W (IR on/off)	Other Players	VLC: 1.1.11 or above
Dimensions	165 x 112 x 97 mm (w/o sunshield) 165 x 119 x 100 mm (w/ sunshield)	Included Accessories	
Weight	1.2 kg	Packing Contents	Quick installation guide, alignment sticker, desiccant bag, screw driver, screws pack, sunshield
Certifications	EMC: CE (EN55032, EN55024 Class A), FCC (FCC Part 15 Subpart B Class A), RCM (AS/NZS CISPR 32 Class A), VCCI (VCCI-CISPR 32 Class A); Safety: UL (UL60950-1), CB (IEC 60950-1); Environment: IK10 (IEC 62262), IP66 (IEC 60529)	Dimensions	
Operating Temperature	Starting Temperature: -10°C ~ 50°C (14°F ~ 122°F) Working Temperature: -20°C ~ 55°C (-4°F ~ 131°F) (IR off) -20°C ~ 50°C (-4°F ~ 122°F) (IR on)	<ul style="list-style-type: none"> <li>w/o sunshield</li> <li>w/ sunshield</li> </ul>	
Humidity	90%		

## Compatible Accessories

### Mounting Kits



AM-21N  
Wall Mount Bracket



AM-312  
Pole Mount



AM-412  
Corner Mount Adapter