



# **S** MS9321-EHV

Multi-Sensor Panoramic  
Network Camera



20MP 30fps • 30M IR • WDR Pro • SNV • Smart Stream III •  
IP66 • Panoramic View

VIVOTEK's newly designed MS9321-EHV multi-sensor panoramic network camera offers the highest resolution and maximum field of view, reducing the total number of cameras required and helping save on the installation costs.

Featuring 4 x 5MP CMOS Sensors, the multiple sensor network camera can monitor full 180° horizontal views and deliver the highest-quality comprehensive coverage, making it an ideal outdoor surveillance solution with excellent image details. Improving on the previous version, the MS9321-EHV now includes H.265 compression for reduced bandwidth and storage over H.264 compression. WDR Pro (120dB) has been added for improved image quality in high contrast environments. Smart IR II

is included for manual or auto IR adjustments based on different night viewing scenarios. And last but not least, the MS9321-EHV is capable of 30fps at all resolutions including the max 20MP.

Like its predecessor MS8391-EV, the MS9321-EHV has the Video Alignment feature that allows you to adjust the positioning and image quality of each sensor, enabling users to view a seamless picture, with no repetition. MS9321-EHV's new housing design is IP66 and IK10-rated to enable use in rain and dust as well as to protect against vandalism or tampering. The new housing design also allows for more tilt and pan during installation, allowing for more versatility.

## Key Features

- H.265 Compression Technology
- 20MP Panoramic 180° View
- 30 fps @ 7680x2560 (WDR Pro on)
- Smart Stream III to Optimize Bandwidth Efficiency
- WDR Pro (120 dB) for Unparalleled Visibility in Extremely Bright and Dark Environments
- SNV (Supreme Night Visibility) for Low Light Conditions
- Built-in IR Illuminators with Smart IR II, Effective up to 30 Meters
- Trend Micro IoT Security
- Weather-proof IP66-rated and Vandal-proof IK10-rated Housing



Day Mode



Night Mode



IR Mode (Smart IR II)

## Technical Specifications

Model	MS9321-EHV		
<b>System Information</b>			
CPU	Multimedia SoC (System-on-Chip)		
Flash	8GB		
RAM	4GB		
<b>Camera Features</b>			
Image Sensor	1/2.7" Progressive CMOS		
Max. Resolution	7680x2560 (20MP)		
Lens Type	Fixed-focal		
Focal Length	f = 3.8 mm		
Aperture	F1.8		
Iris type	Fixed-iris		
Field of View	180° (Horizontal) 65° (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		
IR Illuminators	Built-in IR illuminators, effective up to 30 meters with Smart IR II		
Minimum Illumination	0.095 Lux @ F1.8 (Color) 0.005 Lux @ F1.8 (B/W) 0 Lux with IR Illuminators on		
Pan Range	±90°		
Tilt Range	90°		
Pan/Tilt/Zoom Functionalities	ePTZ: 48x digital zoom (4x on IE plug-in, 12x built-in)		
On-board Storage	Slot type: MicroSD/SDHC/SDXC card slot (Max. SD card capacity: 256GB) Seamless Recording		
<b>Video</b>			
Compression	H.265, H.264, MJPEG		
Maximum Frame Rate	30 fps @ 7680x2560 (WDR Pro on)		
Maximum Streams	4 simultaneous streams		
S/N Ratio	61.5 dB		
Dynamic Range	120 dB		
Video Streaming	Adjustable resolution, quality and bitrate, Smart Stream III		
		Adjustable image size, quality and bit rate, time stamp, text overlay, flip and mirror, configurable brightness, contrast, saturation, sharpness, white balance, exposure control, gain, backlight compensation, privacy masks, scheduled profile settings, HLC, defog, 3DNR, DIS	
		<b>Image Settings</b>	
		<b>Audio</b>	
		Audio Capability	Two-way Audio (full duplex)
		Compression	G.726, G.711
		Interface	External microphone input External line output
		<b>Network</b>	
		Users	Live viewing for up to 10 clients
		Protocols	802.1X, ARP, CIFS/SMB, CoS, DDNS, DHCP, DNS, FTP, HTTP, HTTPS, ICMP, IGMP, IPv4, IPv6, NTP, PPPoE, QoS, RTSP/RTP/RTCP, SMTP, SNMP, SSL, TCP/IP, TLS, UDP, UPnP
		Interface	10 Base-T/100 BaseTX/1000 Base-T Ethernet (RJ-45) *It is highly recommended to use standard CAT5e & CAT6 cables which are compliant with the 3P/ETL standard.
		ONVIF	Supported, specification available at <a href="http://www.onvif.org">www.onvif.org</a>
		<b>Intelligent Video</b>	
		Video Motion Detection	Five-window video motion detection
		VADP Package	Genetec Package, Trend Micro IoT Security
		<b>Alarm and Event</b>	
		Alarm Triggers	Motion detection, manual trigger, digital input, periodical trigger, system boot, recording notification, camera tampering detection, audio detection, SD card life expectancy, cybersecurity event (block brute force attack, block cyber attack, quarantine event)
		Alarm Events	Event notification via digital output, email, HTTP, FTP, NAS server, SD card File upload via email, HTTP, FTP, NAS server, SD card
		<b>General</b>	
		Connectors	RJ-45 cable connector for 10/100/1000Mbps Network/PoE connection Audio input Audio output AC 24V power input Digital input*1 Digital output*1
		LED Indicator	System power and status indicator
		Power Input	AC 24V IEEE 802.3at PoE Class 4
		Power Consumption	AC 24V: Max. 24 W PoE: Max. 24.65 W
		Dimensions	308 x 167 x 130 mm (w/o junction box) 369 x 167 x 132 mm (w/ junction box )

## Technical Specifications

Weight	2,400 g
Casing	IP66, IK10
Safety Certifications	CE, FCC Class A, UL, LVD, VCCI, C-Tick
Operating Temperature	Start Temperature: -30°C ~ 60°C (-22°F ~ 140°F) Working temperature: -40°C ~ 60°C (-40°F ~ 140°F)
Humidity	90%
Warranty	36 months

### System Requirements

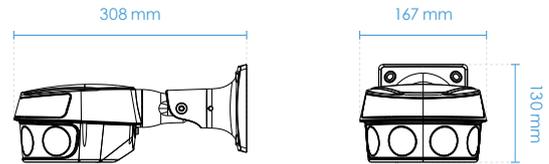
Operating System	Microsoft Windows 8/7 Mac 10.12 (Chrome only)
Web Browser	Chrome 58.0 or above Internet Explorer 10/11
Other Players	VLC: 1.1.11 or above QuickTime: 7 or above

### Included Accessories

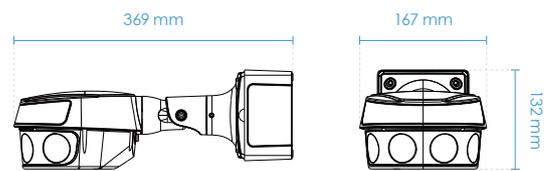
Others Quick installation guide, alignment sticker, screw pack, warranty card, junction box

### Dimensions

w/o junction box



w/ junction box



## Compatible Accessories

### Mounting Kits



AM-312  
Pole Mount Adapter



AM-412  
Corner Mount Adapter

### Cabinet



AT-CAB-001  
Cabinet, IP66, IK10



AT-CAB-002  
Side-mount Bracket  
for HLG Series Power  
Supply



AT-SUN-002  
Sunshield for AT-CAx +  
AT-CAB-002 Cabinet



AT-SWH-000  
Power Safety Kit



HLG-80H-54  
90~305VAC in,  
54VDC/80W out, IP67,  
-40°C ~ 70°C



AW-IHT-0200  
Industrial 1xGE 30W  
PoE + 1xGE SFP Switch



AT-PSP-001  
PoE Surge Protector



AT-WPC-001  
M16 Cable Gland for  
4~7mm AWG

## Compatible Accessories

### PoE Kits - 30W

#### Outdoor



AW-GET-083A-120

Outdoor 4xGE PoE + 2xGE UTP + 2xGE SFP Unmanaged PoE Switch

#### Indoor



AP-GIC-010A-030  
30W PoE Injector



AW-FET-060C-065  
Unmanaged 4xFE PoE +  
2xFE UTP Switch



AW-FGT-100C-120  
Unmanaged 8xFE PoE +  
1xGE UTP + 1xGE SFP Switch



AW-GEV-184B-250  
Web Smart Managed  
16xGE PoE + 2xGE SFP  
Switch



AW-GEV-267A-370  
VivoCam L2 Managed  
24xGE PoE + 2xGE Combo  
Switch