MOBOTIX MOVE Vandal Multisensor Systems

- MOBOTIX MOVE Vandal Multisensor 4x5MP

- MOBOTIX MOVE Vandal Multisensor PTZ Combo 20+2MP

MOBOTIX MOVE Vandal
Multisensor VM-20-IR-VA

MOBOTIX MOVE Vandal
Multisensor PTZ Combo
VMSD-2021-VA

BeyondHumanVision

MOBOTIX

MOBOTIX MOVE VANDAL MULTISENSOR 4x5MP

25.4 cm / 10.0 in

MOBOTIX
BeyondHumanVision

Discreet and compact design.

MOBOTIX MOVE Vandal Multisensor 4x5MP (Mx-VM1A-20-IR-VA)

The four sensor modules can be arranged next to each other as required and thus optimally aligned to the detection area.

Each sensor module can be tilted by up to 90 degrees. In addition, you can rotate it 20 degrees to the left and right respectively.


95°

±20°
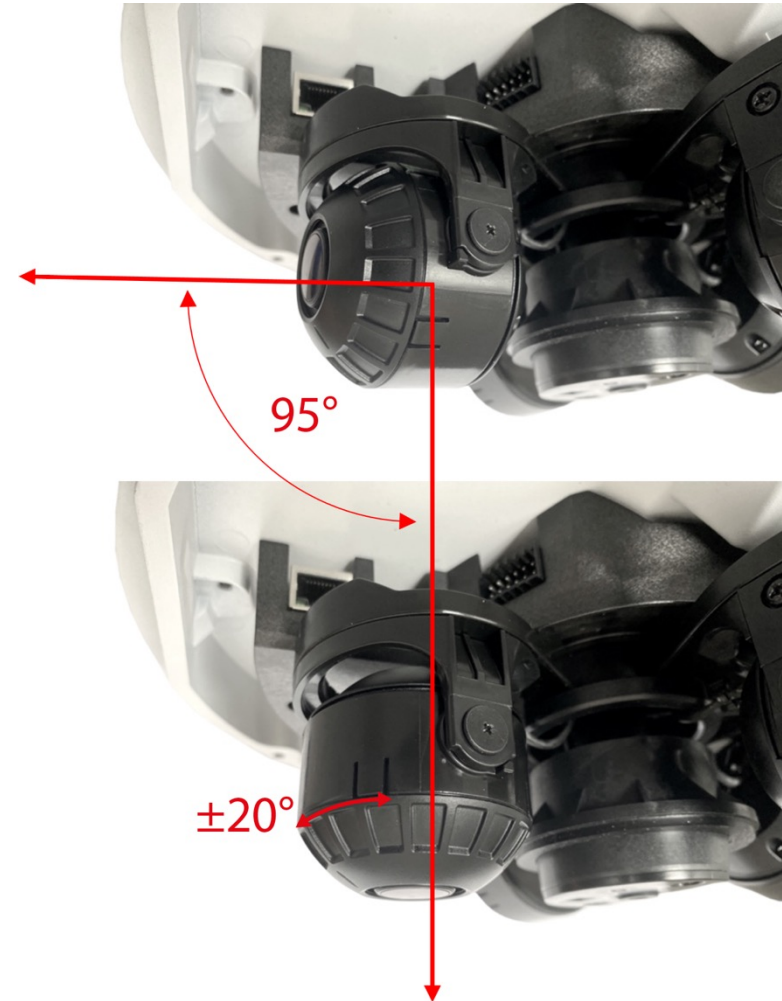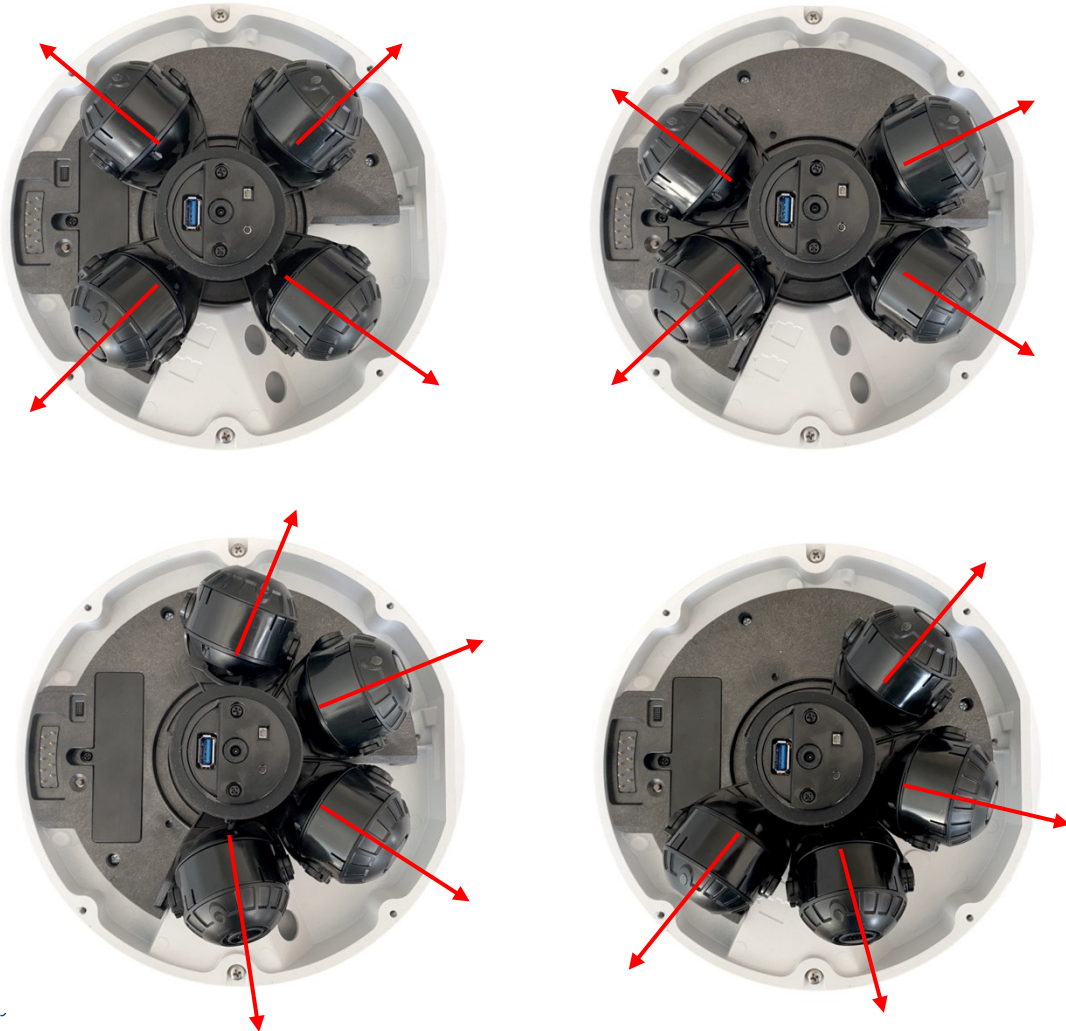
MOBOTIX

MOBOTIX MOVE Vandal Multisensor 4x5MP (Mx-VM1A-20-IR-VA)

Four eyes see more. Detailed like a motor PTZ camera, but without motor and with 360° coverage! In compact and robust design (IK10, IP66).

With its individually adjustable sensor modules, the multisensor camera provides four independent plus a combined video stream with up to 360° coverage. Each individual image sensor has a resolution of up to 5MP and an individually adjustable angle of view of **53.7°-111.5° (horizontal)** and **40.2°-79° (vertical)**.

Typical applications:
- Industrial plants
- Parking and waiting areas (indoor or outdoor)
- Public areas and buildings, prisons
- City/traffic control
- Casinos, hotel lobbies
- Sales and storage areas
- Airports, train stations, ports
- Sports facilities
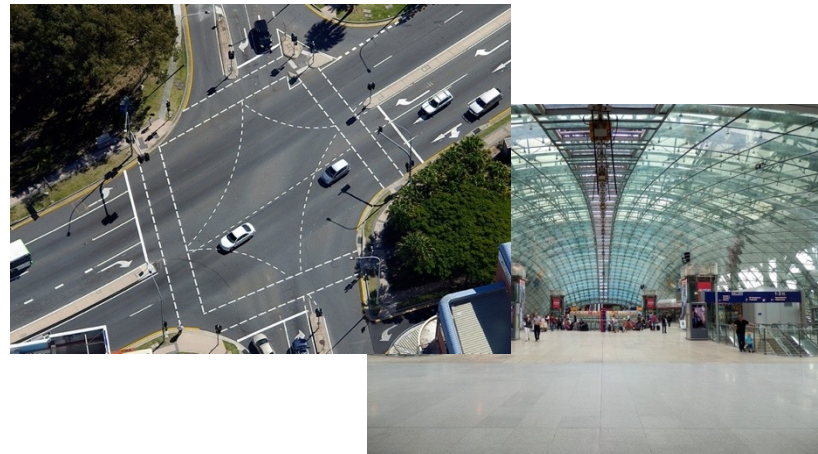
Large areas can now be conveniently monitored with the highest level of detail. And all this with a single camera installation and only one connection line!

High performance processor Ambarella CV52:

- IR illumination (up to 30 m)
- ONVIF Profile S/G/T/M
- FIPS140-2 compliance
- NEMA 4 compliance
- SSD recording (M.2)
- EverClear Dome

Integrated Deep Neural Network Analytics (one application per sensor module)

- Counting, Intrusion, Distant Objects, Face Detection, Left Behind Objects, Stopping Vehicle, Wrong Direction, Loitering, ALPR

Smart Event Functions

- External Input / Motion Detection
- Network Failure Detection/ Tampering Alarm
- Periodical Event/ Manual Trigger/ Audio Detection (integrated microphone)

BeyondHumanVision

MOBOTIX

What makes this MOBOTIX MOVE Multisensor Camera so unique?

SSD storage (in addition to the SD card slot)

With PCIe M.2 interface support, up to **8TB of edge storage** is possible. And extremely cost-effective by using M.2 SSDs compatible with notebook PCs.

Innovative and compact design

With a diameter of only 25.4 cm and a height of 10.5 cm, the camera offers high performance in a small space. A multisensor camera with four connected 5MP cameras also replaces a conventional PTZ camera without its disadvantages: Motor control with mechanical wear, lack of overall 360° view of the scenery, significantly larger design due to the motor.

Superior image performance

The combination solution of four sensor modules enables up to 20 MP (4x5MP) resolution, provides exceptional clarity and captures every detail. The advanced ISP pipeline effectively suppresses image noise while maintaining image sharpness - for remarkable image quality with extremely economical power consumption compared to four individual cameras. The intelligent design with the four sensor modules with varifocal lens (F1.6, 2.8-8 mm, horizontal angle of view from 53.7 to 111.5 degrees) that can be freely positioned on the base carrier allows manual pan, tilt and rotate movements and thus offers the very highest flexibility for fine adjustment of the camera.

Easy installation and maintenance

Since only one network cable is required for installation, the camera saves time and costs compared to installations with multiple cameras. The integrated USB interface allows direct connection to the camera via a USB dongle, making it easy to adjust and configure the autofocus lenses on site. The modular structure with the space-saving and individually installed image sensors allows for easy maintenance. Due to the lack of servo motors as with conventional PTZ cameras, the multisensor system naturally requires less maintenance overall.

BeyondHumanVision

MOBOTIX

Technology that sets standards:

- Uo to 8 individual video streams plus a single combined 4-sensor stream (20MP, 360° possible)
- 4 individual, manually alignable sensor modules with vario lens (F1.6 2.8-8 mm)
- Multi codec support (H.265/H.264/MJPEG)
- True day/night function and integrated IR illumination, WDR
- 3D Motion Compensated Noise Reduction (MCTF)
- **M.2 SATA3 SSD support for high-performance in-camera recording**
- Additional support for Micro SD/SDHC/SDXC cards
- **10 integrated video analysis functions with Deep Neural Network accelerated engine**
- ONVIF profile S/G/T/M support
- EverClear coating
- FIPS140-2 compliance (level 3) by using a certified "Trusted Platform Module" TPM
- Weatherproof (IP66) and vandal-proof (IK10)
- NEMA 4x compliant
- Camera weight: 2.4 kg (5.3 lb)

BeyondHumanVision
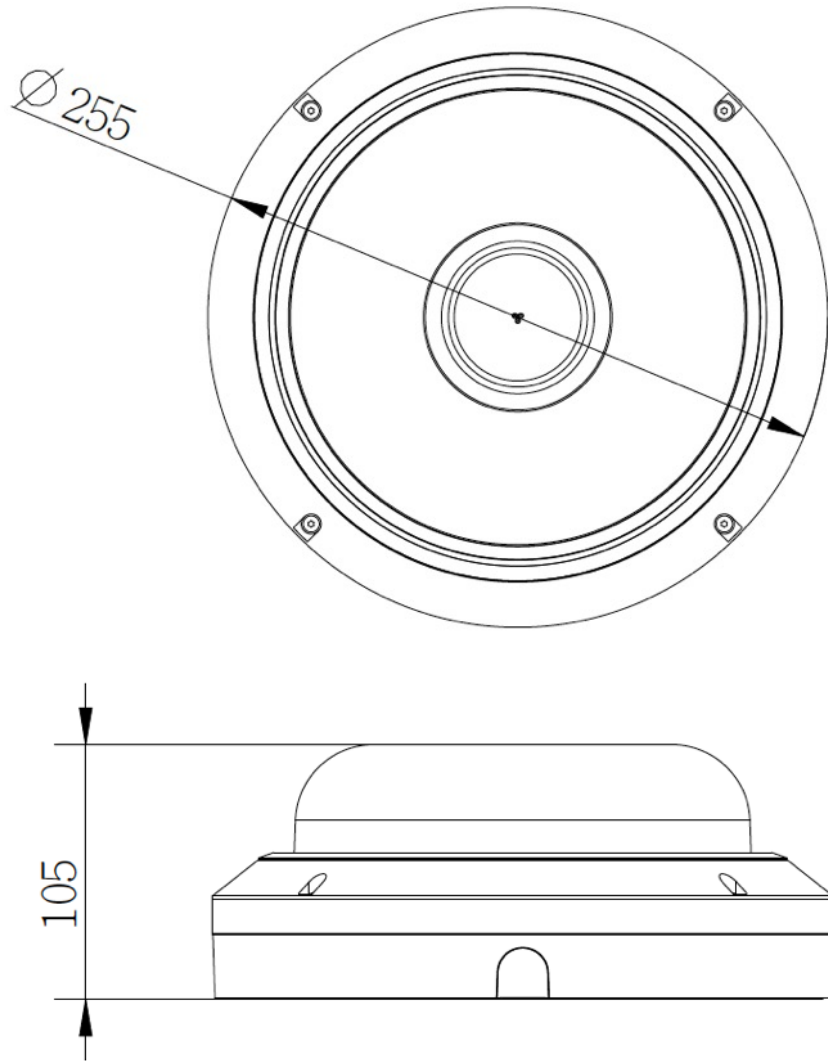
MOBOTIX

MOBOTIX MOVE Vandal Multisensor 4x5MP (Mx-VM1A-20-IR-VA)

The matching accessories for the MOVE Multisensor Camera:

- The Multisensor camera is compatible with all accessory mounts of the MOBOTIX MOVE SpeedDome camera series (see Online Catalog). Only the new **Mx-M-VM-AP adapter mounting plate** is required.

- Alternatively, the camera can be mounted using the **Mx-M-VM-IC in-ceiling** installation kit.

- Power supply: **PoE++ IEEE802.3bt**, for example via the PoE++ injector 60W **Mx-NPA-PoE1A-60W-BT, which is** available as an accessory (additionally requires a standard C14 cold device plug for operation, not included in delivery).

- Replacement domes with EverClear coating available in clear (already included) and, for particularly bright environments, also in tinted version (**Mx-A-VM-DBC** and **Mx-A-VM-DBT**). The groundbreaking MOBOTIX **EverClear** coating uses a special nanotechnology that transforms water drops into an ultra-thin film of water immediately upon impact. This ensures the best image quality in the rain. In addition, the self-cleaning MOBOTIX EverClear coating increases the stability and scratch resistance of the dome, which reduces maintenance and thus operating costs.

- In addition to the MOBOTIX HUB VMS system, MxManagementCenter or MOBOTIX CLOUD, MOBOTIX also offers a MOVE NVR (Network Video Recorder), a particularly practical and easy-to-use plug & play solution for smaller, local installations. All connected cameras are optimally supported in their functionality by the integrated, cost- and license-free MOBOTIX MOVE NVR video management software.

BeyondHumanVision

MOBOTIX

MOBOTIX MOVE Vandal Multisensor 4x5MP (Mx-VM1A-20-IR-VA)

Ordering information camera	
Model name **Order number**	**Description**
MOBOTIX MOVE Vandal Multisensor VM-20-IR-VA Mx-VM1A-20-IR-VA	MOBOTIX MOVE Vandalism Multisensor Network Camera Mx-VM1A-20-IR-VA - Image sensor: 4x5MP (2608x1964) - 1/2.7" Progressive CMOS IMX 675 SONY STARVIS II - Up to 3x optical zoom - ONVIF S/G/T/M - 10 built-in video analysis functions incl. DNN face and license plate recognition - Automatic object tracking - Multisensor camera with built-in IR LED illumination (up to 30 m) for day and night use - Automatic switching from color to B/W image (mechanical IR cut filter) - FIPS140-2 Level 3 compliant with TPM chipset - NEMA-4x compliant - M.2 SATA 3 SSD support - 2D & 3D Motion Compensated Noise Reduction - 4 camera modules with motorized varifocal lens (F1.6: 2.8mm to 8 mm - Viewing angle HxV: 53,7° −111,5° x 40,2°−79° - Autofocus and P-Iris with automatic adjustment to changing light situations - IK10 / IP66 - Ambient temperature -40 to 60 °C (-40° to 140 °F), humidity 10 to 90% - Video codecs: H.264, H.265, MJPEG (up to 9 video streams simultaneously - 4x3 per camera module + 1 Quadview stream) - Wide Dynamic Range (130 dB) - Max. Frame rate: 5MP@30 fps (H.264, with and without activated WDR), MJPEG: 1080p@30 fps - Power supply: **PoE++ IEEE802.3bt**, max. 51 W AC 24V max. 53.10 W / 74.80 VA - Opt. integrated microphone & speaker (bidirectional communication) - Hardened and "self-cleaning" anti-reflective front glass coating of the camera by MOBOTIX EverClear - MTBF: 95,000h
Adapter mounting plate Mx-M-VM-AP	Adapter Mounting Plate suitable for the MOBOTIX MOVE Vandal Multisensor Camera Mx-VM1A-20-IR-VA
In-Ceiling installation set Mx-M-VM-IC	In-Ceiling Installation Set suitable for the MOBOTIX MOVE Vandal Multisensor Camera Mx-VM1A-20-IR-VA
Replacement dome clear Mx-A-VM-DBC	Standard Replacement Dome - Suitable for MOBOTIX MOVE Vandal Multisensor Camera Mx-VM1A-20-IR-VA
Replacement dome tinted Mx-A-VM-DBT	Tinted replacement dome for particularly bright environments - Suitable for MOBOTIX MOVE Vandal Multisensor Camera Mx-VM1A-20-IR-VA
PoE++ Power Injector 60W Mx-NPA-PoE1A-60W-BT	PoE++ 60W Network Power Injector - AC input voltage: 100 to 240 VAC (50 to 60Hz) - AC input current: 1.5A @100-240 VAC - Operating ambient temperature: -10º to 40ºC @60W, -10º to 50ºC, humidity 10 to 90% @30W - **IEEE 802.3bt standard -** Output power of 60W over 4 pairs - Supports 10/100/1000Base-T applications - Plug-and-play installation - Full protection OVP, OCP - Standard IEC plug C14 not included in delivery

BeyondHumanVision

MOBOTIX

MOBOTIX MOVE VANDAL MULTISENSOR PTZ COMBO 20+2MP

MOBOTIX

MOBOTIX MOVE Vandal Multisensor PTZ Combo 20+2MP (Mx-VMSD1A-2021-VA)

360° all-round view + PTZ in one camera.

Experience the best overview combined with remarkable mobility outdoors or indoors. Everything compactly accommodated in the smallest space!

The four 5MP sensors of the MOBOTIX MOVE Combo camera enable seamless 360-degree surveillance. With the additional 2MP high-speed PTZ camera for panning, tilting and 21x zooming, you can also capture all details. A network cable is all that is needed for connection, and only two camera licenses are required for integration in ONVIF VMS systems (1x multisensor, 1x PTZ, each with its own IP address).

The pre-installed, **AI-supported motion and object detection** AI-VMD (people, vehicles) on the multisensor and PTZ unit enables a seamless handover of an event from sensor to sensor. Thanks to auto-tracking, the PTZ camera keeps a constant eye on the relevant object and captures any activity reliably and automatically. Of course, as the operator, you can also pan and zoom to a desired position yourself to get a closer look.

The pre-installed **AI-powered video analytics** (intrusion, wrong direction, crossing lines, loitering) work license-free on all four directional sensors simultaneously, enabling reliable video surveillance 24/7.

The perfect all-in-one video solution for larger surveillance areas:

- Smart City
- Parking and waiting areas, foyers
- Public areas
- Airports, train stations, ports
- Industrial plants
- Sales and storage areas
- Sports stadiums and halls

The main advantages:

- Multidirectional 4x 5MP (fixed)
- PTZ: 2MP Optical Zoom (x21)
- No manual calibration of multisensor and PTZ unit required
- AI Auto Tracking, AI Vdeo Analysis; **MxMessageSystem**
- HighSpeed Pan/Tilt with up to 500°/s
- Integrated IT security TPM chipset (certified to FIPS 140-2 Level 3)
- NDAA compliant
- IP66, IP67, IK10, NEMA 4X
- Durable, beltless PTZ motor
- 5 years warranty

MOBOTIX

MOBOTIX MOVE Vandal Multisensor PTZ Combo 20+2MP (Mx-VMSD1A-2021-VA)

Multisensor (4x 5MP)

Max. Resolution per sensor	3072 x 1728 [16:9] 3072 x 2304 [4:3]
Max. Frame rate	15 fps
Zoom	1x
Angle of view per sensor	[H] 97° x [V] 52°
Dynamic Range	108 dB
Min. ambient brightness	0.12 lx
Focal length	3.2 mm

PTZ (2MP, 21x zoom)

Max. Resolution	1920 x 1080 [16:9] 2048 x 1536 [4:3]
Max. Frame rate	60 fps
Zoom	21x
Angle of view	[H] Wide: 77° / Tele: 3.7° [V] Wide: 44° / Tele: 2.2°
Dynamic Range	144 dB
Min. ambient brightness	0.011 lx
Focal length	4.0-84.6 mm

Housing	Aluminum
Power	IEEE802.3bt, Type 3, class 6 DC 12V, AC 24V
Connections	RJ45, USB-C, 2xAlarm in, 2x Alarm out, DC/AC, Audio in, Audio out, 2x SD-Card Slot

BeyondHumanVision

MOBOTIX

MOBOTIX MOVE Vandal Multisensor PTZ Combo 20+2MP (Mx-VMSD1A-2021-VA)

The four **inconspicuously integrated multi-sensor modules**, each with 5MP resolution, have a 40° tilt angle ex works. The modules can be manually adjusted in three positions during installation to ensure such an optimal adjustment to the surveillance area at different distances.

The dome-protected **2MP motorized PTZ unit** with 21x zoom offers pan/tilt speeds of up to 500 degrees per second! In addition to manual operation, the camera offers AI-based automatic PTZ control for real-time object tracking.

Adjusting tilt angle: 40±7°

MOBOTIX

MOBOTIX

MOBOTIX MOVE Vandal Multisensor PTZ Combo 20+2MP – Manual PTZ Control

User-friendly manual PTZ control:

The camera was installed at a height of 6 m. On the left the images of the four individual image sensors (Cam1-4), on the right the image of the PTZ unit. By simply drawing a section of the image (yellow frame in Cam2), the PTZ unit is directed directly to this target.

BeyondHumanVision

MOBOTIX

MOBOTIX MOVE Vandal Multisensor PTZ Combo 20+2MP – Auto Tracking

Auto-tracking of objects/persons in case of motion alarms:

After a motion alarm is triggered for the first time via the multisensor in the Cam1 area by the person in front of the car - detected with AI-based video analysis for object detection (people and/or vehicles) - the tracking and recording of the person automatically starts with the automatically controlled PTZ unit in the entire 360° coverage area of the camera.

MOBOTIX

MOBOTIX MOVE Vandal Multisensor PTZ Combo 20+2MP – Accessories

Φ250(9-27/32")

114(4-1/2")

195(7-11/16")

SR63.5(2-1/2")
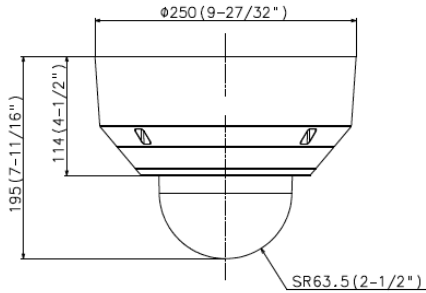
The camera is compatible with all **accessory mounts of** the MOBOTIX MOVE SpeedDome camera series ([see online catalog](#)). Only the new Mx-M-VMSD-AP adapter mounting plate is required. Alternatively, the camera can be mounted using the Mx-M-VMSD-IC **ceiling installation kit** (see figure below).

The **power supply** is provided, for example, by the PoE++ injector 60W with **IEEE 802.3bt standard** available from MOBOTIX (Mx-NPA-PoE1A-60W-BT, also requires a standard C14 IEC plug for operation).

VMS integration: The MOVE NVR devices that can be used for the previous MOBOTIX MOVE camera series are not compatible with this camera. However, integration into MOBOTIX HUB, CLOUD or even MxManagementCenter is possible. The camera complies with the **ONVIF profiles G/M/S/T.**
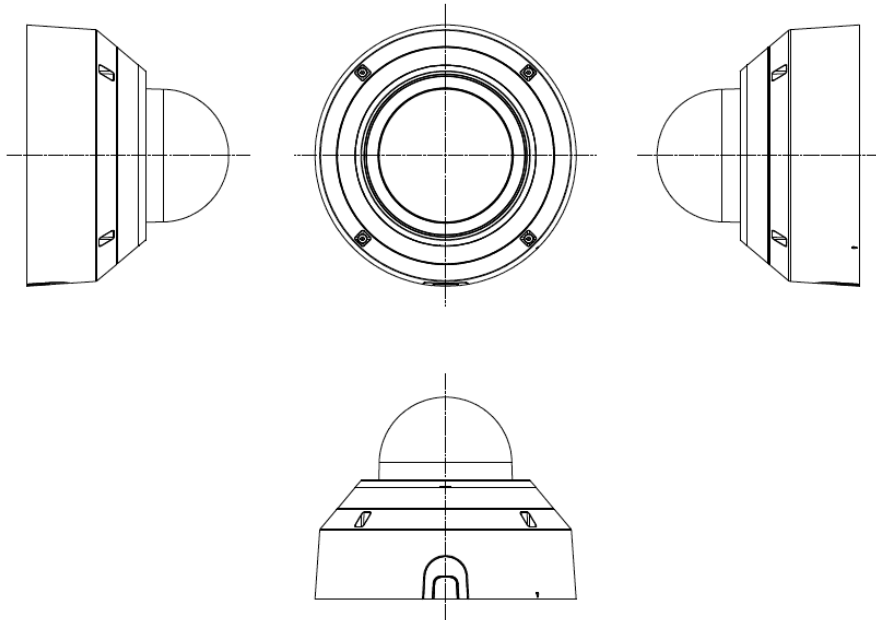
Mx-M-VMSD-AP

Mx-M-VMSD-IC

SpeedDome Mounts

Not included
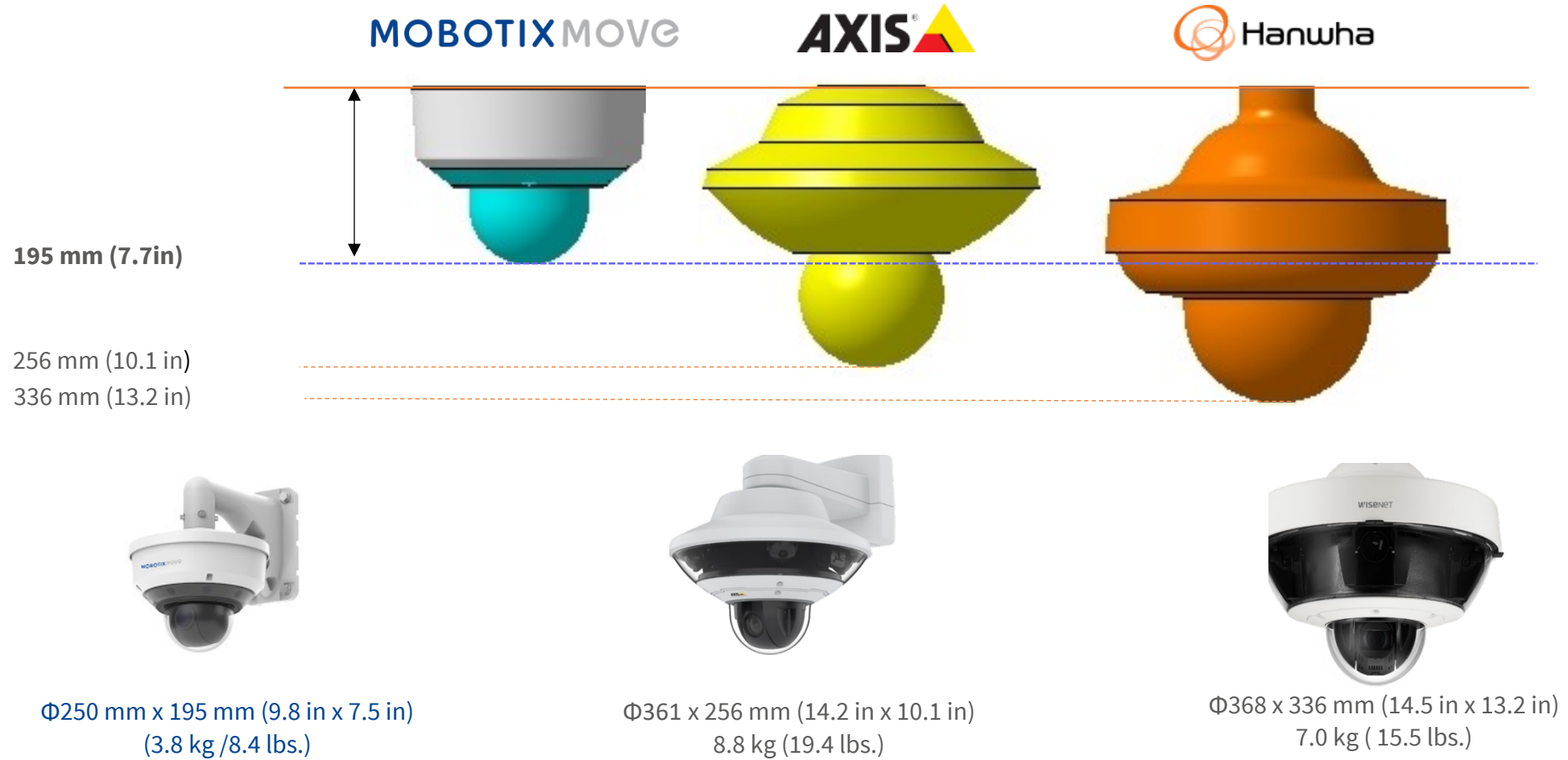
Mx-NPA-PoE1A-60W-BT

Beyond**Human**Vision

MOBOTIX

MOBOTIX MOVE Vandal Multisensor PTZ Combo 20+2MP – Ordering Information

Ordering information camera		
Model name **Order number**	**Description**	**MSRP Price***
MOBOTIX MOVE Vandal Multisensor PTZ Combo Mx-VMSD1A-2021-VA	MOBOTIX MOVE Vandalism Multisensor PTZ Combo Network Camera Mx-VMSD1A-2021-VA - Image sensor Multi: 4x5MP (2560x1920), 1/2.7" Progressive CMOS - Image sensor PTZ: 2MP (1920x1080), 1/2.8" Progressive CMOS - ONVIF S/G/T/M - Pre-installed AI-VMD DNN based video motion detection - Automatic object tracking with PTZ unit - Automatic switching from color to B/W image (mechanical IR cut filter) - FIPS140-2 Level 3 certified IT security TPM chipset - Intelligent encoding "Smart Low Bitrate Control" - Multisensor: 4x fixed focal length lens 3.2mm (Viewing Angle HxV: 97 °x 71 °) - PTZ: 21x Motorized Zoom/Focus Lens 4.0mm - 84.6mm with Autofocus and P-Iris (Viewing Angle HxV: 3. 7° - 77° x 2.2° -44°) - IK10 / IP66/ IP67 - NDAA Compliant - NEMA-4x Compliant - Ambient Temperature -40 to 55°C (-4° to 131°F), Humidity 10 to 100% - Video Codecs: H.264, H.265, MJPEG - Wide Dynamic Range up to 108dB for multisensor / 144 dB for PTZ unit - 1 Micro SD/SDHC/SDXC Card support each up to 512 GB (multisensor/ PTZ) - Max. Frame rate multisensor: 5MP@15 fps H.264, MJPEG: 1080p @ 15 fps Max. Frame rate PTZ: 2MP@60 fps H.264, MJPEG: 1080p @ 60 fps - Power supply: PoE++ IEEE802.3bt, max. 35.6 W, DC54V max. 35.6 W - Audio Line In/Out - MTBF: 95000h - Warranty: 5 yrs.	Price on demand
Ceiling installation set Mx-M-VMSD-IC	VMSD Ceiling Mount Kit suitable for the MOBOTIX MOVE Vandal Multisensor PTZ Combo Camera Mx-VMSD1A-2021-VA	Price on demand
Adapter mounting plate Mx-M-VMSD-AP	VMSD Adapter Mounting Plate suitable for the MOBOTIX MOVE Vandal Multisensor PTZ Combo Camera Mx-VMSD1A-2021-VA	Price on demand
PoE++ Power Injector 60W Mx-NPA-PoE1A-60W-BT	PoE++ 60W Network Power Injector - AC input voltage: 100 to 240 VAC (50 to 60Hz) - AC input current: 1.5A @100-240 VAC - Operating ambient temperature: -10º to 40ºC @60W, -10º to 50ºC, humidity 10 to 90% @30W - **IEEE 802.3bt standard** - Output power of 60W over 4 pairs - Supports 10/100/1000Base-T applications - Plug-and-play installation - Full protection OVP, OCP - Standard C14 IEC plug not included.	Price on demand

*MOBOTIX MSRP prices are recommended net sales prices Ex Works (EXW), ex works in Germany. In some countries, MOBOTIX distributors have to apply locally higher sales prices due to import regulations/duties.

MOBOTIX

Competitor Comparison

195 mm (7.7in)

256 mm (10.1 in)

336 mm (13.2 in)

Φ250 mm x 195 mm (9.8 in x 7.5 in)
(3.8 kg /8.4 lbs.)

Φ361 x 256 mm (14.2 in x 10.1 in)
8.8 kg (19.4 lbs.)

Φ368 x 336 mm (14.5 in x 13.2 in)
7.0 kg (15.5 lbs.)

BeyondHumanVision
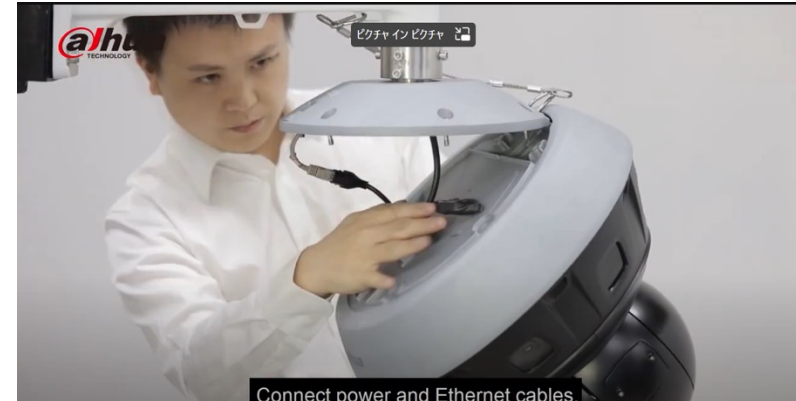
MOBOTIX

MOBOTIX MOVE Mx-VMSD1A-2021-VA - Video Analysis Functions

		Mx-VMSD1A-2021-VA	Q6010-E + Q6075-E	Indoor M-5000-G	PNM-9322VQP+SLA-5M3700P
		MOBOTIX MOVE	AXIS COMMUNICATIONS	AXIS COMMUNICATIONS	Hanwha
AI processor		YES	N/A	N/A	N/A
AI auto tracking		Camera function	Non-AI	N/A	Non-AI
AI-VMD	Intruder	Pre-installed	Non-AI	Non-AI	Non-AI
	Direction	Pre-installed	Non-AI	Non-AI	Non-AI
	Cross Line	Pre-installed	Non-AI	Non-AI	Non-AI
	Loitering	Pre-installed	Non-AI	Non-AI	Non-AI
AI People Detection		Pre-installed	N/A	N/A	N/A
AI Vehicle Detection		Pre-installed	N/A	N/A	N/A
Sound Detection		Camera function	Camera function	Camera function	N/A

MOBOTIX

MOBOTIX MOVE
Mx-VMSD1A-2021-VA

AXIS
Q6135-LE

Hanwha
PNM-9322VQP

-40 °F to +140 °F

IP67 and IP66, IK10

5 years warranty

5 years maintenance-free (corresponds to 3.7 million P&T movements)
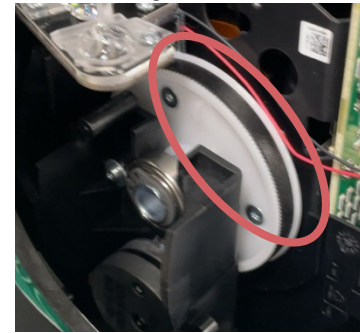
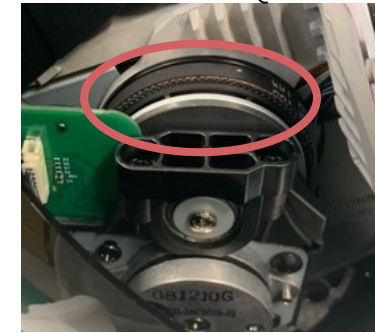|	**Gear** structure	**Belt** structure	**Belt** structure
Product life	**Long**	Short (annual replacement recommended)	Short (annual replacement recommended)
Engineering design complexity	**High**	Low	Low

BeyondHumanVision

MOBOTIX

MOBOTIX MOVE Mx-VMSD1A-2021-VA - Competitor Comparison

Mx-VMSD1A-2021-VA

M5000-G

	Mx-VMSD1A-2021-VA	M5000-G
PTZ	21x	10x
PTZ focal length	4.0-84.6 mm	4.7-47 mm
Coverage	FOV: H: 77.0 - 3.7 degrees / V: 44.0 - 2.2 degrees	FOV: H: 61.8 - 6.7 degrees / V: 36.3 - 3.8 degrees
Dimensions	ø 250mm (9.8") x H195mm (7.5") 3.8 kg (8.4 lbs.)	ø 247 mm (9.7") x 138 mm (5.4") 1.95 kg (4.3 lbs.)
Video analysis	Reliable AI-based video analysis	Not AI-based, limited anylse functions
Further	IP66/67, IK10 vandalism protection Intergated holder	IP51, no vandalism protection No integrated holder

BeyondHumanVision

MOBOTIX

MOBOTIX MOVE Mx-VMSD1A-2021-VA - Competitor Comparison

	Mx-VMSD1A-2021-VA	DS-2DP Series	DH-PSDW81642
Edge AI Application	Multidirectional: 4 PTZ: 2	No	No
Cyber Security	Certified according to FIPS 140-2 Level 3 GlobalSign certificate Brute force delay protection	n.a.	n.a.
Dimensions & Weight	Φ250mm x 195mm 3,8 kg	Φ433.5 mm x 430.4 mm 18,0 kg	Φ383mm x 462mm 14,4 kg
Installation	No brackets need to be attached Simply connecting the LAN cable is enough	Wall bracket must be installed 8 cables must be connected separately	Installation of a wall bracket is always necessary
Calibration	Automatic calibration	Automatic and manual calibration (manual calibration is recommended for certain scenarios).	Manual calibration

MOBOTIX

Important Links and Downloads

Products
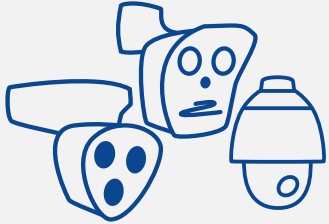
Overview of the entire MOBOTIX product range...

Software

Download software, firmware, apps and driver packages...

Documentation

Technical documentation, whitepapers, technical drawings and more...

Trainings

Current dates about webinars, trainings and events...

Where to buy MOBOTIX

MOBOTIX network solutions are sold through qualified distributors, dealers and partners around the world, also to professional installers and service providers for video surveillance, security applications, home automation and commercial applications.

BeyondHumanVision

MOBOTIX

Beyond**HumanVision**

MOBOTIX