



# Technical Specifications

## MOBOTIX MOVE 5MP Varifocal IR Vandal Turret

The MOBOTIX MOVE 5MP Varifocal IR Vandal Turret is designed to bring clarity and vigilance to your surveillance needs. This state-of-the-art turret camera with DNN-based video analytics combines advanced features with a compact and sleek design, making it an ideal choice for various indoor and outdoor applications. The Vari-Focal Turret Camera allows you to easily remote adjust the field of view and focus by a motorized lens, ensuring optimal positioning and alignment to meet the specific requirements of your surveillance scenario. The camera's weather-resistant design IP67 and IK10 ensures reliable operation even in challenging environmental conditions. Its compact turret form factor, combined with easy installation options, makes it a hassle-free choice.

- High Low-Light sensitivity
- 1/2.8" Progressive CMOS
- Motorized Vari-Focal Lens 2.7mm to 13.5mm
- WDR up to 120 dB
- Integrated adaptive IR Illumination, working distance up to 30 m/98 ft
- Triple Streaming H.264/H.265/MJPEG
- 2D & 3D Motion Compensated Noise Reduction (MCTF)
- ONVIF Profile S/G/T/M support
- Micro SD Card supports up to 512 GB.
- Integrated Microphone
- NDAA compliant
- DNN-based object detection with filtering (people/vehicles, etc.)
- Dual power Supply IEEE802.3af Class 3 / DC 12 V
- Temp. Range -30°C to 60°C/-22°F to 140 °F with heater
- Protection Rate IP67 / IK10
- Intelligent Encoding, Smart Low Bitrate Control is same as Smart compression offering optimally useable bandwidth and storage.



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## Product Information

Product Name	5MP Varifocal IR Vandal Turret
Order Code	Mx-VT1A-503-IR

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## Hardware Design

Processor	Novatec NT98560 (Single-core ARM® Cortex®-A9, 960 MHz)
Memory	RAM: 512 MBytes FLASH: 256 MBytes
Image Sensor	5MP, 1/2.8" Progressive CMOS
Effective (Used) Pixels	2688x1944 (5MP)

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## Lens

Minimum Illumination	Color: 0.18 lux B/W: 0.09 lux, (0 lux, IR on) F1.6, AGC=on, 30 IRE, 1/1 s
Lens Characteristics	Vari-Focal Lens Focal Length: 2.7mm to 13.5mm Aperture: F1.4-2.8 H x V FOV: 103°-31°(H) 76°-23°(V)

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## Camera

Day/Night	Automatically switchable IR-cut filter
Shutter Speed	Auto / Manual / WDR: 1 to 1/10000 s
Shutter Priority Mode	Up to 1/7.5 s
Frame Rate (maximum)	<b>WDR on/off:</b> H.265/H.264: 5MP@30 fps MJPEG: 1080p@30 fps
Auto Gain	Min. gain: 0 dB, max. gain: 36 dB, step size: 3
WDR	Up to 120 dB

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Zoom	Motorized optical: 2.67x
Image Settings	Color, Brightness, Sharpness, Contrast, White Balance, Gain Control, 2DNR, 3DNR, BLC, EV, Gamma corection, Saturation, Hue
Image Rotation	90°, 180°, 270°
Camera Body Adjust	Pan/Tilt/Rotation

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## Video Codec

Compression/Encoding	H.265/H.264/MJPEG
Streaming	Up to 3 individually configurable streams in H.264/H.265/MJPEG. Configurable resolution, frame rate, bandwidth CVBR/CBR/istream in H.265/H.264

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## Audio Codec

Compression/Encoding	G.711a/u
Streaming	One-way
Audio Input	Integrated Microphone

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## Network

Interface	10/100 Mbps Ethernet
Supported Protocols	ARP, DHCP, DNS, FTP, HTTP, HTTPS, ICMP, IGMP, IPv4/6, NTP, RTSP/RTCP/RTP, RTMP, QoS, SMTP, SNMP v1/2c/3, TCP, TLS/TTLS, UDP, UPnP, 802.1X, Bonjour, DDNS, PPPoE
ONVIF conformance	Supports profiles S/G/T/M
Supported Browsers	Microsoft Edge, Firefox, Google Chrome

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## System Integration

### Event Actions

- Schedule Recording (JPG/MP4)
- DNN-based video analytics (line counting, border line, object classification/filtering for people, vehicles, etc.)
- Video and audio recording to edge storage
- File upload: FTP and email
- Notification: Email (JPG)
- OSD indication
- SD Card recording (\*JPG/MP4)

## General

### Housing Material

Metal

### Housing Color

RAL 9003

### Adaptive IR Illumination

850 nm; up to 30 m/98 ft distance depending on reflection of scenery

### Video Storage

Micro SD card support up to 512 GB.

Support for recording to MOVE NVR, MOBOTIX Cloud (via MOBOTIX Bridge), MOBOTIX HUB, MxMC (via MOBOTIX NAS)

### Remotely Upgradable

Yes

### Power Requirements

IEEE802.3af, class 3, max 10 watt

DC12V, max 10 watt

### Connectors

- RJ45
- 1 x DC 12V Jack Socket
- 1 x Reset / Default Button

### Environmental Protection

IP67/IK10

### Class

### Operating Temperature

-30°C to 60°C/-22°F to 140 °F with heater

### Relative Humidity

95 % non-condensing

### Storage Conditions

-40 to 60 °C/-4 to 158 °F

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Approvals                      EMC: CE/FCC/BIS  
   Safety: LVD

Warranty                        5 years; mechanically wearable parts (motor, gears, belts, etc.) excluded

Dimensions                     $\varnothing$  120 x 104 mm (overall)

Weight                         715 g

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**NOTE!** Observe the [MOBOTIX MOVE Installation Hints](#) document to ensure optimum performance of the camera features.

# DORI Specifications

In the video surveillance context, “DORI” stands for Detection, Observation, Recognition and Identification and is based on IEC EN62676-4: 2015. These levels define the minimum pixels that a face of a person must have to provide proper identification, for example.

- **Detection:** Up to this distance, you can reliably determine if a person or vehicle is present.
- **Observation:** Up to this distance, you can see characteristic details of an individual, such as distinctive clothing.
- **Recognition:** Up to this distance, you can determine with a high degree of certainty whether an individual is the same as someone that has been seen before.
- **Identification:** Up to this distance, you can determine the identity of an individual beyond reasonable doubt.

DORI Level Order Code	Focal Length	Detection	Observation	Recognition	Identification
Mx-VT1A-503-IR	2.7 mm (Wide)	23 m/ 75.66 ft	12 m/ 39.47 ft	9.8 m/ 32.24 ft	4 m/ 13.16 ft
	13.5 mm (Tele)	52 m/ 171.05 ft	31.6 m/ 103.95 ft	25.8 m/ 84.87 ft	10.9 m/ 35.86 ft

## Dimensions

**NOTE!** Download the drilling template from the section or on the MOBOTIX website: [www.mobotix.com](http://www.mobotix.com) > [Support > Download Center > Marketing & Documentation > Drilling Templates](#).

**CAUTION!** Always print or copy the drilling template at 100% of the original size!

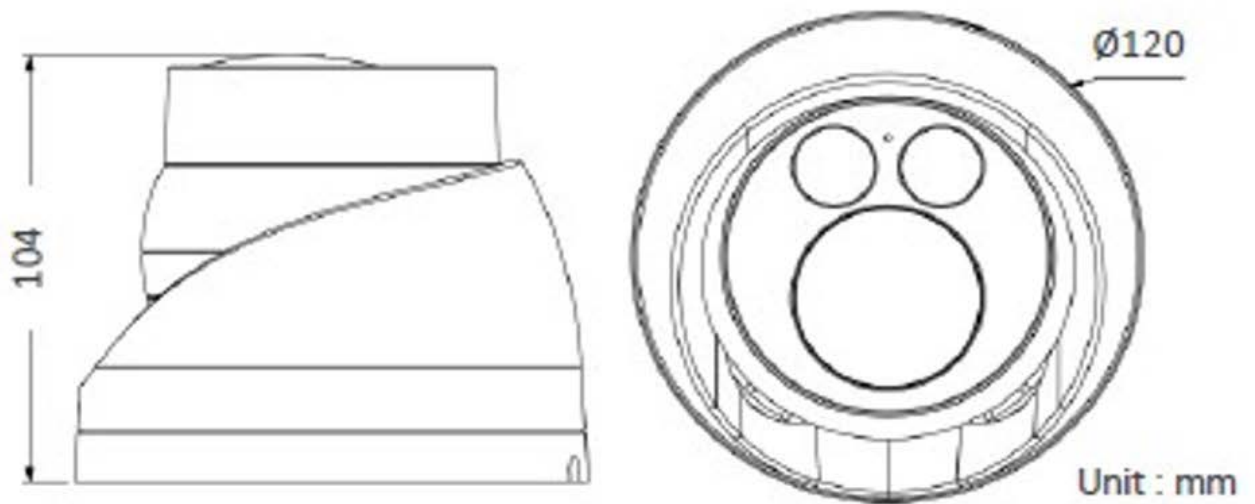


Fig. 1: Mx-VT1A-503-IR: All measurements in mm

## Accessories for Vandal Turret Cameras

Order Code/ Picture	Description	Compatible Products	Material/ Color	Weight
Mx-M-VT-AP 	Adapter mounting plate for MOVE Vandal Turret cameras.	MOVE Vandal Turret (VT) cameras.	Aluminum, RAL9003	0.3 kg
Mx-M-VT-JB 	Junction box for MOVE Vandal Turret cameras.	MOVE Vandal Turret (VT) cameras.	Aluminum, RAL9003	0.85 kg
Mx-M-VT-WM 	Wall mount for MOVE Vandal Turret cameras.	MOVE Vandal Turret (VT) cameras.	Aluminum, RAL9003	0.3 kg

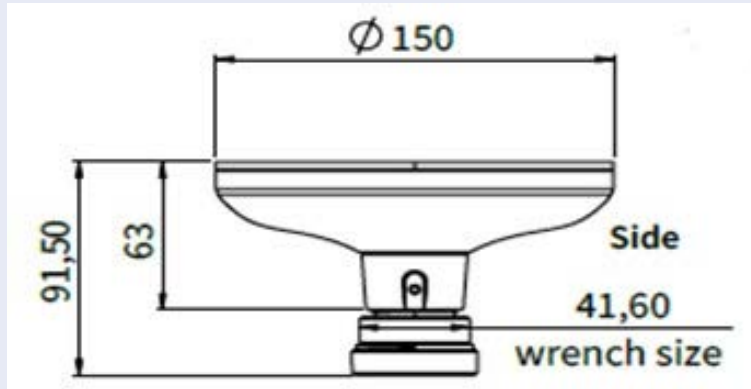


# Dimensions

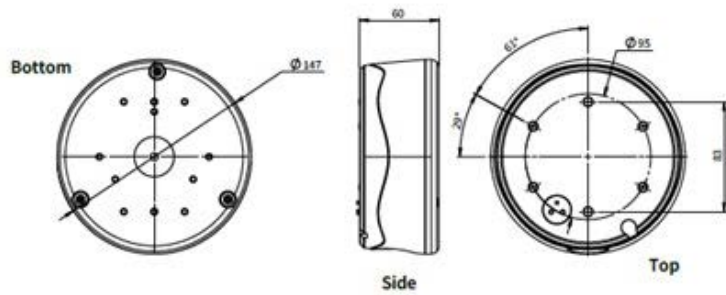
## Order Code

Mx-M-VT-AP

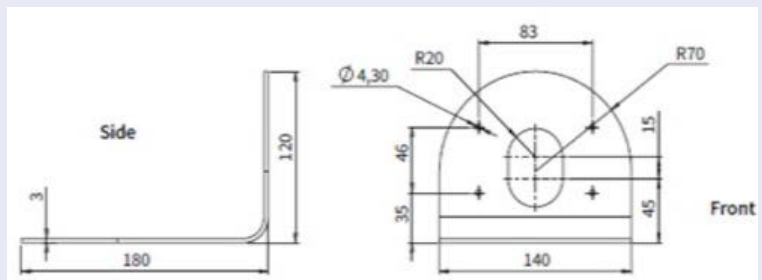
## Dimensions




Mx-M-VT-JB



Mx-M-VT-WM



# Accessories for All Cameras

Order Code/ Picture	Description	Compatible Products	Material/ Color	Weight
MX-NPA-UPOE1A-60W 	<p>UPoE Power Injector 60W. 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: • -10° to 40°C @60W • -10° to 50°C, humidity 10 to 90% @30W • IEEE 802.3bt compliant • Output power of 60W over 4-pairs • Supports 10/100/1000Base-T applications • Plug-and-play installation • Full Protection OVP, OCP• Supports 10/100/1000Base-T applications.</p>	All cameras.	Plastic housing, black	0.45 kg

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Order Code/ Picture	Description	Compatible Products	Material/ Color	Weight
Mx-A-ETP1A-2601-SET 	<p>Media converter set Ethernet (PoE+) – Twisted-Pair.</p> <p>Complete set consisting of two two-wire transmit/receive units for establishing an Ethernet transmission path via twisted-pair cables.</p> <ul style="list-style-type: none"><li>• Transmission of Ethernet and PoE+ power supply via two-wire line according to IEEE1901.</li><li>• Simple connection of 10/100 Mbps Ethernet end devices</li><li>• Max. 95 Mbps transmission bandwidth, range up to 600 m/656 yd for data only, 300 m/328 yd for PoE depending on the quality of the twisted-pair link</li><li>• 128 bit AES network data encryption</li><li>• Power supply 2-wire transmitter (Tx) and receiver (Rx) as well as end device via PoE+ network switch or external power supply 56VDC / 1.2A (not included!)</li><li>• Connected end devices are supplied via PoE switch IEEE802.3af(PoE), IEEE802.3at (PoE+), UPoE up to 60W (requires ext. power supply unit).</li><li>• Status LEDs (data, power supply, data link, PoE)</li><li>• Integrated Overvoltage protection (IEC 61000-4-5 4kV (1.2 / 50us), 2kA(8 / 20us))</li><li>• Power Supply: TX: T-Linx or DC12V~57V, RX: PoE Switch or</li></ul>	<p>All cameras.</p> <p>Requires Mx-A-ETP1A-2601-POW.</p>	<p>Plastic housing, black</p>	0.368 kg

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Order Code/ Picture	Description	Compatible Products	Material/ Color	Weight
Mx-A-ETP1A-2601-POW	<p>DC48V~57V • Operational temperature: -20 to 60°C • Dimensions: 80.4(L) x 61.6(W) x 24 (H)mm • Weight: RX/TX: 102g • Warranty: 2 years</p> <p>Plug-type power supply for Mx-A-ETP1A-2601-SET.</p> <p>Output: 57V DC +/-3% / 1.2 A •            Input: 90-260V AC (47-63Hz) •            68,4 Watt • Operating Temperature: 0-40°C/32-122°F</p>	Mx-A-ETP1A-2601-SET	Plastic housing, black	0.49 kg



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### MOBOTIX MOVE 5MP Varifocal IR Vandal Turret

Order Code/ Picture	Description	Compatible Products	Material/ Color	Weight
Mx-A-KBD1A-PTZ-JOG 	<p>MOBOTIX USB Keyboard with PTZ Joystick &amp; Jog-Shuttle. USB control panel for operating MOBOTIX MxMC 2.6 and higher and MOBOTIX HUB incl. Control of software PTZ and motorized PTZ cameras and pan/tilt devices • Integrated 3-axis joystick • Integrated jog shuttle • 38 control keys with backlight predefined for MxMC functions or freely definable for MOBOTIX HUB • Integrated alarm buzzer • Suitable for operation as HID device on MOBOTIX VMS with Windows and MAC based operating systems via USB 2.0 • Suitable for right- and left-handed users • Power supply: USB, max. 350 mA • Operating temperature: 0°–45°C/32–113 °F.</p>	<p>All cameras. Requires Windows or macOS computer with USB 2.0 or better.</p>	<p>Plastic housing, black</p>	<p>1.9 kg</p>
MX-SWITCH1 	<p>MOBOTIX network switch for DIN (top-hat) rail mounting. 5x RJ45 port with 100 MBit/s (1x uplink, 4x PoE+ with max. 75 W). Supply: 48 V DC, max. 75 W. Simplified cabling for door stations due to available connectivity for anti-theft protection, door opener and MxBus. MxBus, anti-theft protection, door and lock contact can be connected via separate wires of Ethernet cable.</p>	<p>All cameras.</p>	<p>Plastic housing, gray</p>	<p>0.31 kg</p>

## Further Reading

[Manuals and Quick Installation documents](#)



[Technical Specifications](#)



[MOBOTIX MOVE Installation Hints](#)



[MOBOTIX Community](#)



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