



Technical Specifications

MOBOTIX MOVE 2MP Varifocal IR Vandal Turret

The MOBOTIX MOVE 2MP 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 integrated heater ON
- Protection Rate IP67 / IK10
- Intelligent Encoding, Smart Low Bitrate Control is same as Smart compression offering optimally useable bandwidth and storage.



BeyondHumanVision

MOBOTIX MOVE

www.mobotix.org.cn
北京新盛阳光科技有限公司

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Product Information

Product Name	2MP Varifocal IR Vandal Turret
Order Code	Mx-VTLA-203-IR-SL

Hardware Design

Processor	Novatec NT98560 (Single-core ARM® Cortex®-A9, 960 MHz)
Memory	RAM: 512 MB FLASH: 256 MB
Image Sensor	2MP, 1/2.8" Progressive CMOS
Effective (Used) Pixels	1920x1080 (2MP)

Lens

Minimum Illumination	Color: 0.03 lux B/W: 0.01 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: 111°-34°(H) 61°-19°(V)

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)	WDR on/off: H.265/H.264: 2MP@30 fps MJPEG: 2MP@30 fps
Auto Gain	Min. gain: 0 dB, max. gain: 36 dB, step size: 3
WDR	Up to 120 dB

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

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

Audio Codec

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

Cyber Security Features

Password Protection	Yes (including “forced” password change during initial setup)
IP address filtering	Yes (to restrict unauthorized access based on IP addresses)
IEEE 802.1X network access control	Yes (for advanced network security and authentication)
Digest authentication	Yes (for secure user authentication)
Secure Boot	Yes (support of fixed IP setting and automatic DHCP IP configuration according to individual MAC address)
AES encryption for password protection	Yes (to ensure strong encryption for password storage)
HTTPS/SSL (using TLS)	Yes (TLS 1.2 default, TLS 1.0/1.1 optional selectable)
User and Group Management	Yes (for fine-grained access control)

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Advanced Security	Yes (Active/Passive: Active protection controls the enabling and disabling of various network communications. Passive protection limits the number of operations and the duration of the ban. If the limit is reached, the user will be banned)
RTSP Authentication	Yes (for restricting unauthorized access to RTSP streams)
SFTP	Yes (network protocol that securely transfers files between a client and a server using SSH)

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

System Integration

Event Actions	<ul style="list-style-type: none">▪ 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)
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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	<ul style="list-style-type: none"> ▪ RJ45 ▪ 1 x DC 12V Jack Socket ▪ 1 x Reset / Default Button
Environmental Protection Class	IP67/IK10
Operating Temperature	-30°C to 60°C/-22°F to 140 °F with integrated heater ON
Relative Humidity	95 % non-condensing
Storage Conditions	-40 to 60 °C/-4 to 158 °F
Approvals	EMC: CE, FCC, BIS Safety: LVD
Warranty	3 years; mechanically wearable parts (motor, gears, belts, etc.) excluded
Dimensions	ø 120 x 104 mm (overall)
Weight	715 g
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.

DORI Levels According to 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 Distances

DORI Level	Focal Length	Detection	Observation	Recognition	Identification
Order Code					
Mx-VTJA-203-IR	2.7 mm (Wide)	19.9 m/ 65.46 ft	11.5 m/ 37.83 ft	7.2 m/ 23.68 ft	3.2 m/ 10.53 ft
	13.5 mm (Tele)	51 m/ 167.76 ft	26.1 m/ 85.86 ft	15.9 m/ 52.3 ft	6.9 m/ 22.7 ft

Dimensions

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

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

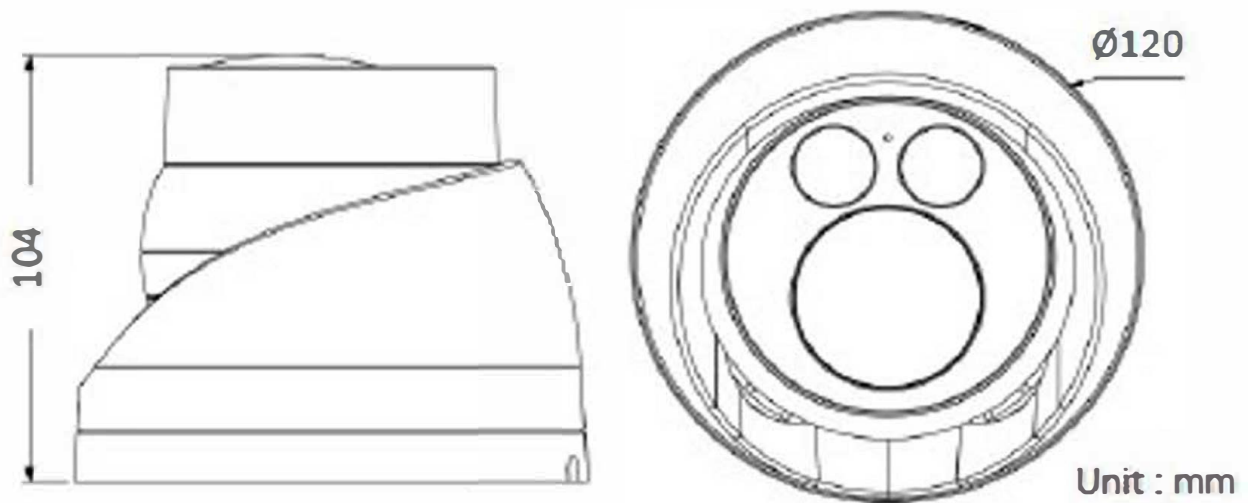
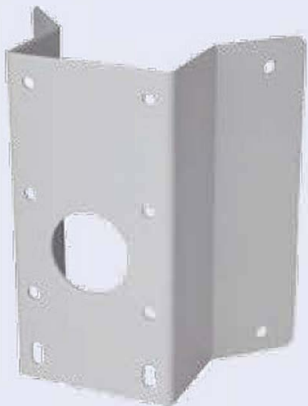



Fig. 1: Mx-VT1A-203-IR: All measurements in mm

Accessories for Vandal Turret Cameras

Picture/ Order Code	Description	Compatible Products	Material/ Color	Weight
 <p>Mx-M-SD-C</p>	Weatherproof corner mount.	Mx-M-SD-W or Mx-M-SD-WL. CAUTION! Cannot be used with MX-M-SD-WM or Mx-M-SD-WMJB!	SPCC steel, hammer-blow painted RAL9003	2.17 kg
 <p>Mx-M-SD-P</p>	Weatherproof pole mount.	Mx-M-SD-W or Mx-M-SD-WL. CAUTION! Cannot be used with MX-M-SD-WM or Mx-M-SD-WMJB!	Zinc-galvanized SECC steel, powder-coated RAL9003	1.58 kg

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 <p>MX-MH-SecureFlex-ESWS</p>	Weatherproof pole mount for extreme conditions.	Mx-M-SD-W or Mx-M-SD-WL. CAUTION! Cannot be used with Mx-M-SD-WM or Mx-M-SD-WMJB!	Stainless steel 3 mm, white	1.23 kg
 <p>Mx-M-SD-W</p>	Weatherproof wall mount for MOVE Speed Dome/Vandal Multi-sensor/Vandal Turret cameras.	All MOVE Speed Dome/Vandal Multi-sensor/Vandal Turret cameras. Can be combined with Mx-M-SD-C or Mx-M-SD-P and camera adaptor plates (MX-M-VT-AP, MX-M-VM-AP, Mx-M-VMSD-AP).	Die-cast ADC12 aluminium alloy, hammer-blow painted RAL9003	0.84 kg
 <p>Mx-M-SD-WL</p>	Extended weatherproof wall mount for MOVE Speed Dome/Vandal Multisensor/Vandal Turret cameras.	All MOVE Speed Dome/Vandal Multi-sensor/Vandal Turret cameras. Can be combined with Mx-M-SD-C or Mx-M-SD-P and camera adaptor plates (MX-M-VT-AP, MX-M-VM-AP, Mx-M-VMSD-	Die-cast ADC12 aluminium alloy, hammer-blow painted RAL9003	1.5 kg

Picture/ Order Code	Description	Compatible Products	Material/ Color	Weight		
	<p>Weatherproof wall mount for MOVE Speed Dome/Vandal Multi-sensor/Vandal Turret cameras. Can also be mounted on top of wall mount junction box MX-M-SD-WMJB.</p>	<p>AP). All MOVE Speed Dome/Vandal Multi-sensor/Vandal Turret cameras. Can be combined with camera adaptor plates (MX-M-VT-AP, MX-M-VM-AP, Mx-M-VMSD-AP).</p>	<p>Die-cast ADC12 aluminium alloy, RAL9003</p>	<p>1.3 kg</p>		
<p>MX-M-SD-WM</p>	<p>NOTE! Can be combined with MX-M-SD-WMJB (wall mount is mounted on top of junction box).</p>		<p>Weatherproof wall mount junction box (IP67) for Mx-M-SD-WM. Allows for comfortable cabling and installation of additional HW equipment such as PoE Injectors, lightning protection, etc.</p>	<p>All MOVE Speed Dome/Vandal Turret cameras.</p>	<p>Bracket: Steel, powder-coated RAL9003 Junction box: Die-cast ADC12 aluminium alloy, RAL9003</p>	<p>4.8 kg</p>
<p>MX-M-SD-WMJB</p>	<p>CAUTION! Only to be used as base for Mx-M-SD-WM (wall mount is mounted on top of junction box).</p>					

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Picture/ Order Code	Description	Compatible Products	Material/ Color	Weight
	Pendant mount kit incl. base mount, 25 cm/10 in pendant pipe, installation materials and safety wires 50 cm/20 in & 1 m/39 in.	All MOVE Speed Dome/Vandal Multi-sensor/Vandal Turret cameras. Can be combined with camera adaptor plates (MX-M-VT-AP, MX-M-VM-AP, Mx-M-VMSD-AP).	Die-cast ADC10 aluminium alloy, powder-coated RAL9003	1.58 kg
MX-M-SD-PM	Extension pipe 25 cm/10 in for MX-M-SD-PM.	Extends MX-M-SD-PM; max. extended total length is 1 m/39 in (3 extensions).	Die-cast ADC10 aluminium alloy, powder-coated RAL9003	0.8 kg
	MX-M-SD-PMEXT			

Picture/ Order Code	Description	Compatible Products	Material/ Color	Weight
	<p>Weatherproof parapet mount (goose neck; IP67) with integrated junction box.</p> <p>Integrated junction box allows for comfortable cabling and installation of additional hardware equipment such as PoE Injectors, lightning protection, etc.</p>	<p>All MOVE Speed Dome/Vandal Multi-sensor/Vandal Turret cameras.</p> <p>Can be combined with camera adaptor plates (MX-M-VT-AP, MX-M-VM-AP, Mx-M-VMSD-AP).</p>	<p>Bracket and goose neck: Steel, powder-coated RAL9003</p> <p>Junction box: Die-cast ADC12 aluminium alloy, RAL9003</p>	14.8 kg
<p>MX-M-SD-GN</p>		<p>Adapter mounting plate for MOVE Vandal Turret cameras.</p> <p>Can be combined with MX-M-SD-GN, MX-M-SD-PM, MX-M-SD-PMEXT, Mx-M-SD-W, Mx-M-SD-WL, Mx-M-SD-WM.</p>	<p>Bracket: Die-cast ADC12 aluminium alloy, stove-enamel finish RAL9003</p> <p>Mounting plate: A1050P aluminium alloy, stove-enamel finish RAL9003</p>	0.3 kg
<p>Mx-M-VT-AP</p>				

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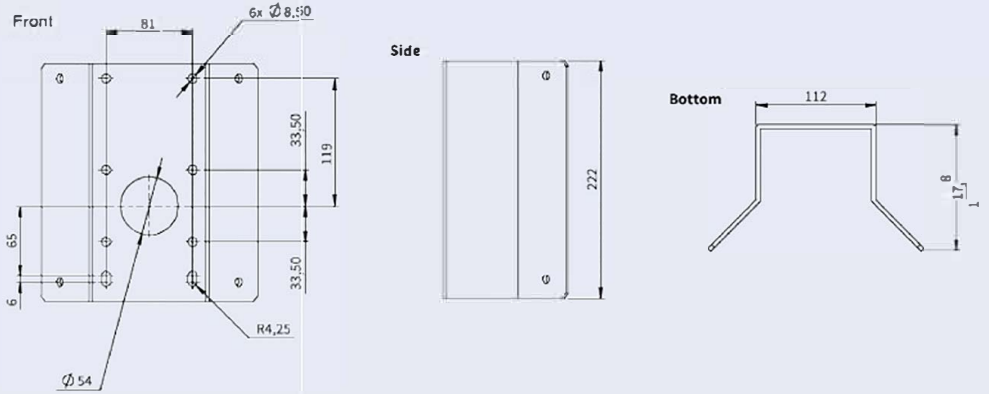
Picture/ Order Code	Description	Compatible Products	Material/ Color	Weight
 Mx-M-VT-WM	Wall mount for MOVE Vandal Turret cameras.	All MOVE Vandal Turret (VT) cameras. Can be combined with Mx-M-VT-JB.	A1050P aluminium alloy, stove-enamel finish RAL9003	0.3 kg
 Mx-M-VT-JB	Junction box for MOVE Vandal Turret cameras.	All MOVE Vandal Turret (VT) cameras. Can be combined with Mx-M-VT-WM.	Top/bottom covers: Die-cast ADC12 aluminium alloy, stove-enamel finish RAL9003	0.85 kg

Dimensions

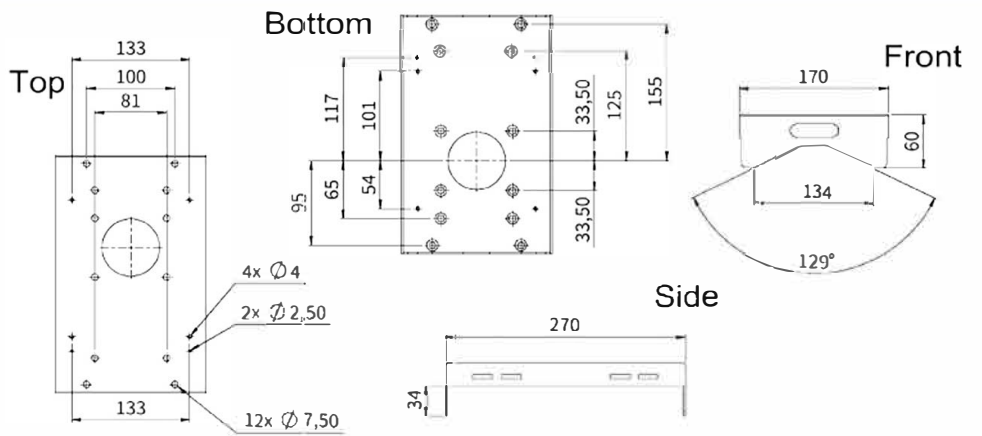
Order Code

Dimensions

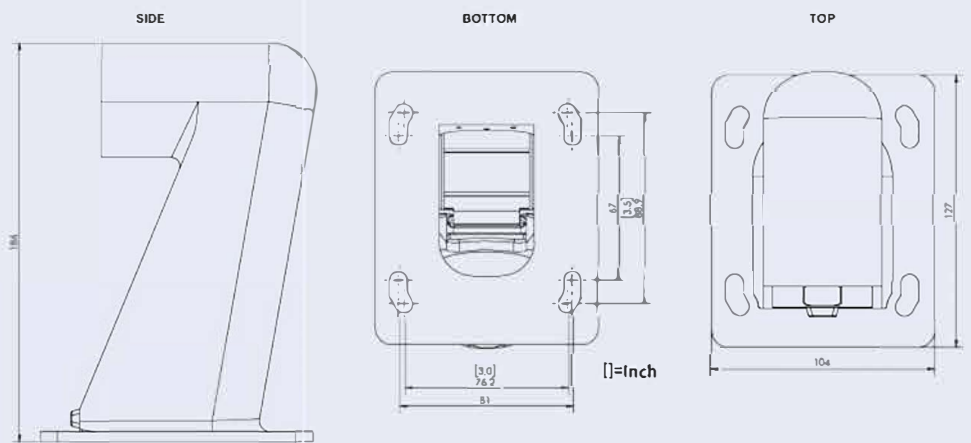
Mx-M-SD-C



Mx-M-SD-P



Mx-M-SD-W



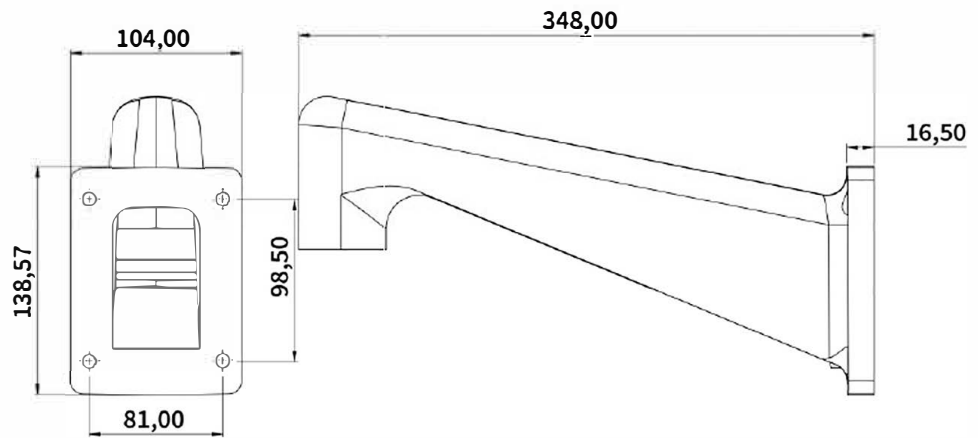
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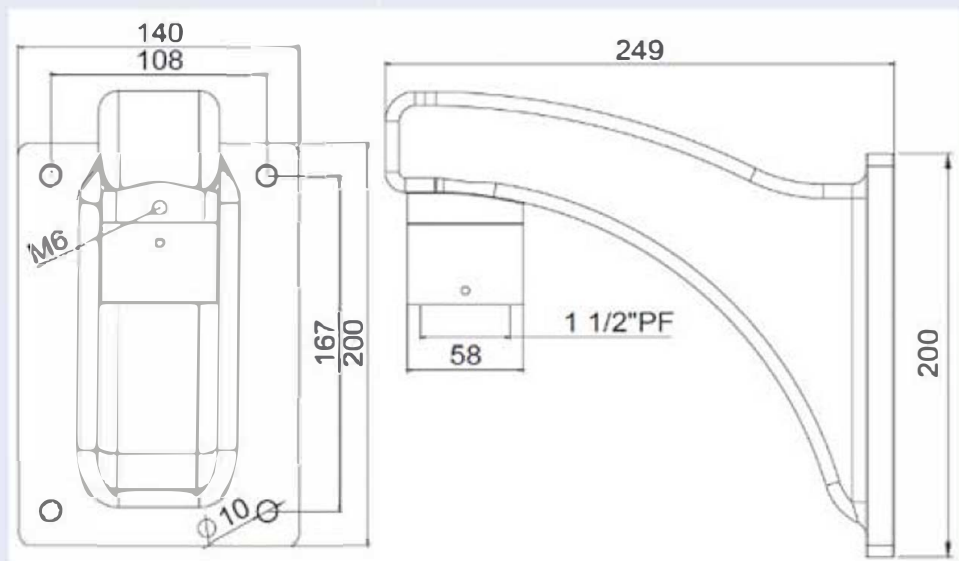
Order Code

Mx-M-SD-WL

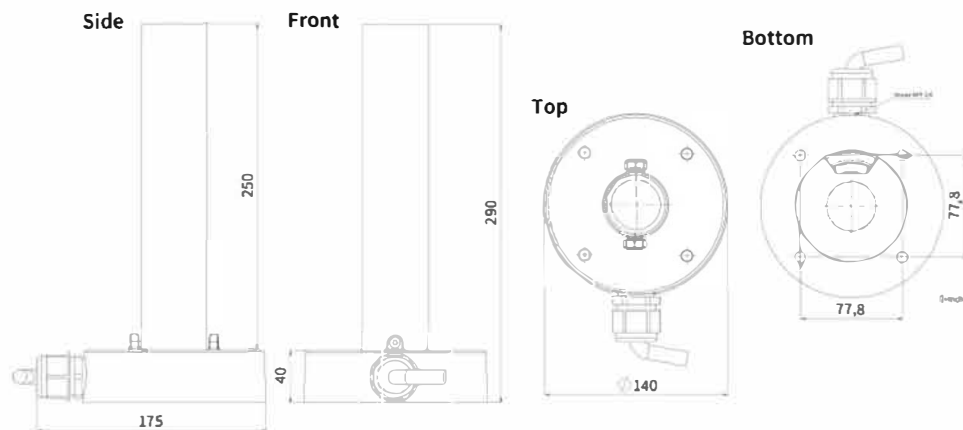
Dimensions



MX-M-SD-WM



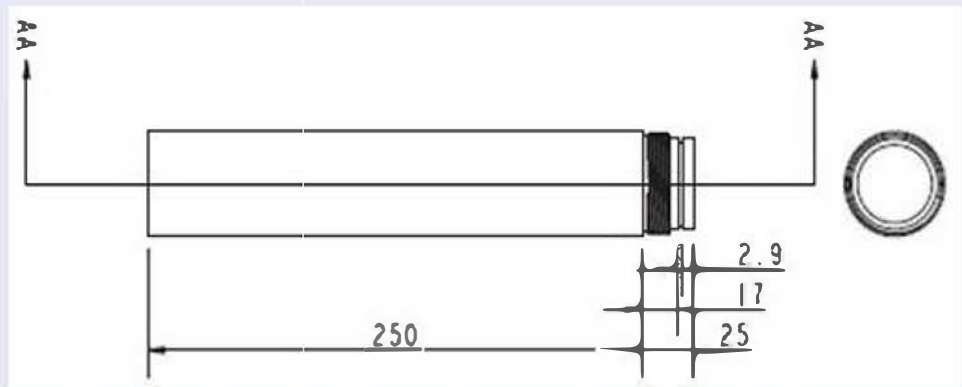
MX-M-SD-PM



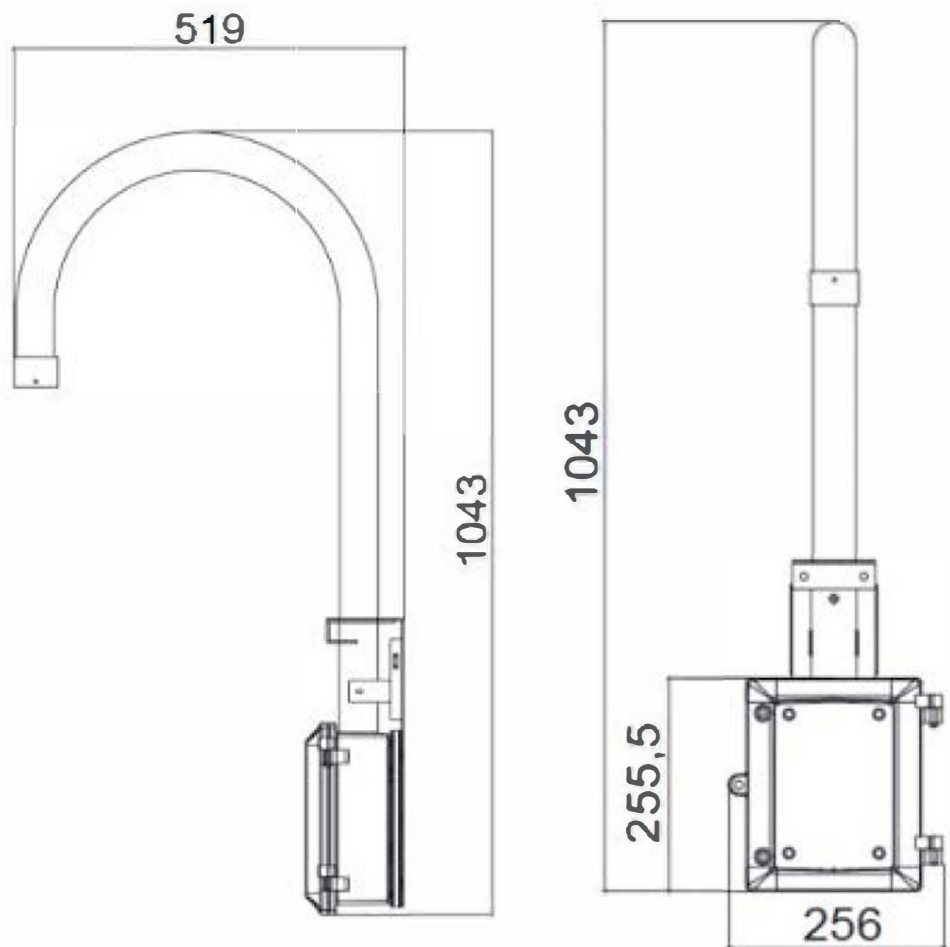
Order Code

Dimensions

MX-M-SD-PMEXT



MX-M-SD-GN



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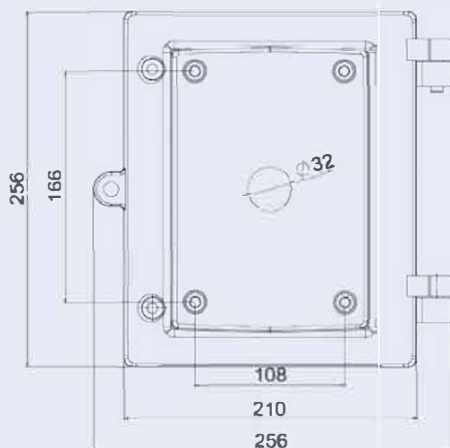
MOBOTIX MOVE 2MP Varifocal IR Vandal Turret

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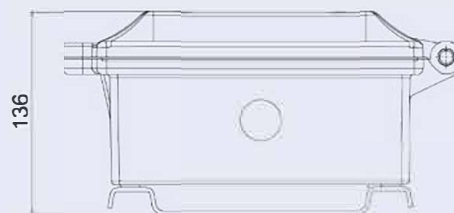
MX-M-SD-WMJB

Dimensions

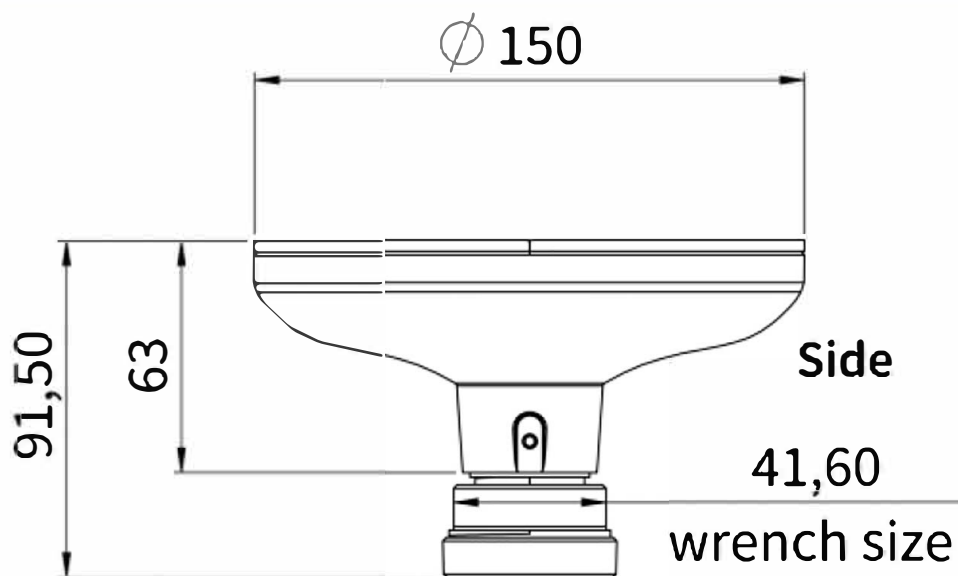
FRONT



SIDE



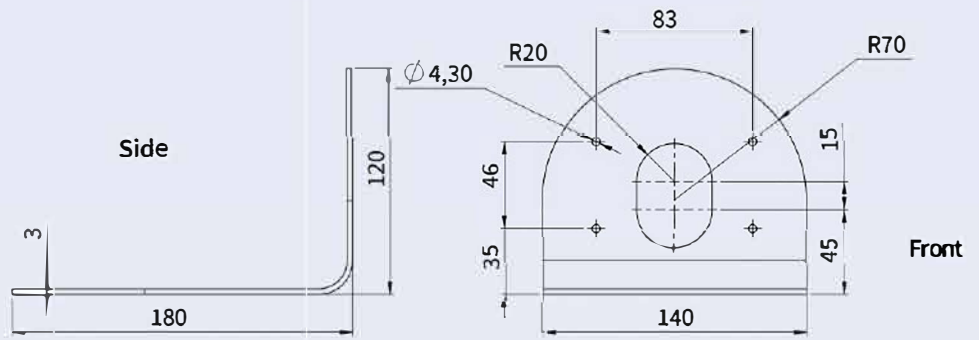
Mx-M-VT-AP



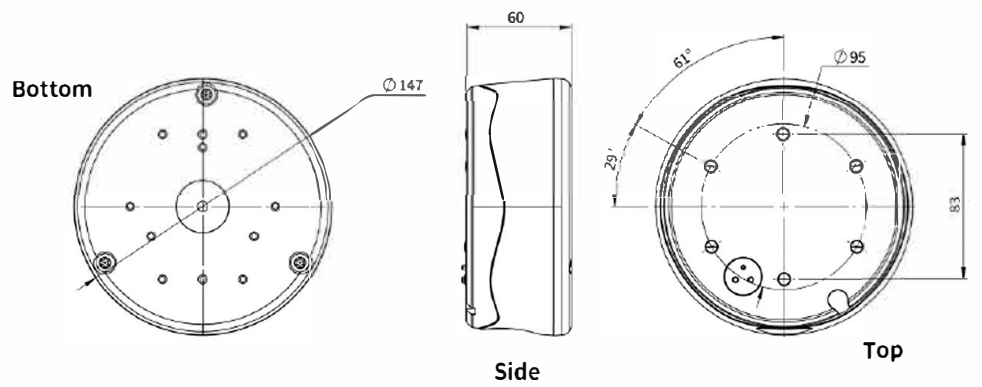
Order Code

Mx-M-VT-WM

Dimensions



Mx-M-VT-JB



All measurements in mm.



Accessories for All Cameras

Picture/ Order Code	Description	Compatible Products	Material/ Color	Weight
 <p data-bbox="165 1070 440 1102">MX-NPA-UPOE1A-60W</p>	<p data-bbox="531 524 906 1290">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>	<p data-bbox="922 524 1074 555">All cameras.</p>	<p data-bbox="1145 524 1265 600">Plastic housing, black</p>	<p data-bbox="1321 524 1417 555">0.45 kg</p>
 <p data-bbox="165 1742 440 1774">Mx-A-ETP1A-2601-SET</p>	<p data-bbox="531 1330 906 1960">Media converter set Ethernet (PoE+) – Twisted-Pair. Complete set consisting of two two-wire transmit/receive units for establishing an Ethernet transmission path via twisted-pair cables. • Transmission of Ethernet and PoE+ power supply via two-wire line according to IEEE1901. • Simple connection of 10/100 Mbps Ethernet end devices • Max. 95 Mbps transmission</p>	<p data-bbox="922 1330 1074 1496">All cameras. Requires Mx-A-ETP1A-2601-POW.</p>	<p data-bbox="1145 1330 1265 1406">Plastic housing, black</p>	<p data-bbox="1321 1330 1417 1361">0.368 kg</p>

Picture/ Order Code	Description	Compatible Products	Material/ Color	Weight
	<p>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 • 128 bit AES network data encryption • 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!) • Connected end devices are supplied via PoE switch IEEE802.3af(PoE), IEEE802.3at (PoE+), UPoE up to 60W (requires ext. power supply unit). • Status LEDs (data, power supply, data link, PoE) • Integrated Overvoltage protection (IEC 61000-4-5 4kV (1.2 / 50us), 2kA(8 / 20us)) • Power Supply: TX: T-Linx or DC12V~57V, RX: PoE Switch or 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>			

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Picture/ Order Code	Description	Compatible Products	Material/ Color	Weight
 <p data-bbox="161 819 448 846">Mx-A-ETP1A-2601-POW</p>	<p data-bbox="531 371 906 443">Plug-type power supply for Mx-A-ETP1A-2601-SET.</p> <p data-bbox="531 465 906 636">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>	<p data-bbox="922 371 1074 443">Mx-A-ETP1A-2601-SET</p>	<p data-bbox="1145 371 1265 443">Plastic housing, black</p>	<p data-bbox="1321 371 1417 398">0.49 kg</p>
 <p data-bbox="169 1223 440 1249">Mx-A-KBD1A-PTZ-JOG</p>	<p data-bbox="531 887 906 958">MOBOTIX USB Keyboard with PTZ Joystick & Jog-Shuttle.</p> <p data-bbox="531 981 906 1930">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 pre-defined 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 data-bbox="922 887 1074 913">All cameras.</p> <p data-bbox="922 936 1074 1151">Requires Windows or macOS computer with USB 2.0 or better.</p>	<p data-bbox="1145 887 1265 958">Plastic housing, black</p>	<p data-bbox="1321 887 1417 913">1.9 kg</p>

Picture/ Order Code	Description	Compatible Products	Material/ Color	Weight
	<p>MOBOTIX network switch for DIN (top-hat) rail mounting.</p> <p>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>

MX-SWITCH1

Further Reading

[Manuals and Quick Installation documents](#)



[Technical Specifications](#)



[MOBOTIX MOVE Installation Hints](#)



[MOBOTIX Community](#)



MOBOTIX

Beyond Human Vision

www.mobotix.org.cn

北京新盛阳光科技有限公司
15001066905

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MOBOTIX AG • Kaiserstrasse • D-67722 Langmeil • Tel.: +49 6302 9816-103 • sales@mobotix.com • www.mobotix.com

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