



# Technical Specifications

## **MOBOTIX MOVE 12MP Vandal Hemispheric Analytics Indoor Camera**

This high-performance 12MP indoor camera with Edge and backend dewarping delivers a 360-degree view of the entire surveillance area. Thanks to its integrated IR illumination and advanced exposure control, darkness poses no problem to this camera, which also offers eight embedded video analysis functions. DNN (Deep Neural Network) support for intrusion detection, loitering detection, object counting, face and license plate recognition. Easy installation and ready-to-go straight out of the box.

- Edge Dewarping and Backend Dewarping
- IR LED (true day/night function, up to 15 m)
- Vandal-Proof IK10 (indoor)
- Sony Progressive Scan CMOS
- Image Sensor Resolution up to 12MP
- Multi Codec support (H.265/H.264/MJPEG)
- Multiple Dewarp Display Modes Digital PTZ/Panorama View/Quad View
- True Day/Night function (ICR)
- 3D Motion Compensated Noise Reduction
- ONVIF Profile S/G/T support
- Smart Event Functions: External Input/Manual Trigger, Motion Detection/Periodical Event, Network Failure Detection/Audio Detection
- Micro SD/SDHC/SDXC Card support up to 1 TB
- Enhanced Video Analytics Package (abandoned objects/sabotage/wrong direction/object count and removal)



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## Product Information

|              |   |
|--------------|---|
| Product Name | 12MP Vandal Hemispheric Analytics Indoor Camera |
| Order Code   | Mx-VH1A-12-IR-VA                                |

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## Image Quality

|                         |  |
|-------------------------|--|
| Image Sensor            | 12MP, 1/1.7" Sony Progressive CMOS   |
| Effective (Used) Pixels | 4072x3046 (12MP)   |
| Pixel Size              | 1.85 µm  |
| Frame Rate<br>(maximum) | <b>H.265/H.264</b> <ul style="list-style-type: none"><li>▪ Single-stream, <b>Backend</b> (software) dewarping:<ul style="list-style-type: none"><li>▪ 12MP@20 fps</li><li>▪ 2992x2992@30 fps</li></ul></li><li>▪ Single-stream, <b>Edge</b> (camera) dewarping:<ul style="list-style-type: none"><li>▪ 8.9MP@27 fps</li><li>▪ 2048x2048@30 fps</li></ul></li></ul> <b>MJPEG</b> <ul style="list-style-type: none"><li>▪ <b>Backend</b> (software) dewarping:<ul style="list-style-type: none"><li>▪ 1920x1080@60 fps</li></ul></li><li>▪ <b>Edge</b> (camera) dewarping:<ul style="list-style-type: none"><li>▪ 1920x1080@30 fps</li></ul></li></ul> |

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## Lens

|                      |  |
|----------------------|--|
| Minimum Illumination | Color: 0.1 lux<br>B/W: 0.01 lux  |
| Lens Characteristics | Type: 1/1.7" Hemispheric Lens<br>Focal Length: 1.65 mm<br>Aperture: F2.8 |

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## Camera

|               |   |
|---------------|---|
| Day and Night | Automatic mechanically switchable IR-cut filter |
| Shutter Time  | 1 – 1/24767 sec.                                |

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|                |  |
|----------------|--|
| Zoom           | Digital zoom   |
| Image Settings | Backlight Compensation, White Balance, Noise Reduction, Wide Dynamic Range, Privacy Mask, Brightness, Exposure, Sharpness, Contrast, Saturation, Hue, Digital Zoom, Privacy Mask Type, ICR, IR Threshold |
| Rotation Mode  | 180° rotation  |

**Video Codec**

|             |  |
|-------------|--|
| Compression | H.265/MJPEG/H.264 (MPEG-4 Part 10/AVC)<br>Baseline/Main Profile/High Profile   |
| Streaming   | Up to 4 individually configurable streams in H.265/H.264/MJPEG<br>Configurable resolution/frame rate/bandwidth<br>LBR/VBR/CBR in H.265/H.264 |

**Audio Codec**

|              |                      |
|--------------|----------------------|
| Compression  | G.711/G.726/AAC/LPCM |
| Streaming    | 2 way                |
| Audio Input  | Microphone built-in  |
| Audio Output | Speaker built-in     |

**Cyber Security Features**

|  |     |
|--|-----|
| Password Protection                    | Yes |
| IP address filtering                   | Yes |
| IEEE 802.1X network access control     | Yes |
| Digest authentication                  | Yes |
| AES encryption for password protection | Yes |
| SNMP, TLS, HTTP, HTTPS                 | Yes |
| User and Group Management              | Yes |
| SSL connections                        | Yes |

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|                            |     |
|----------------------------|-----|
| VPN                        | Yes |
| Digital image signature    | Yes |
| RSA encryption (2048 bits) | Yes |

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## Network

|                     |   |
|---------------------|---|
| Interface           | RJ45, 1 Gbps Ethernet   |
| Supported Protocols | ARP, IPv4/v6, TCP/IP, UDP, RTP, RTSP, HTTP, HTTPS, ICMP, FTP, SMTP, DHCP, PPPoE, UPnP, IGMP, SNMP, QoS, ONVIF |
| ONVIF               | Supports profiles S/G/T   |

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## System Integration

|                                     |  |
|-------------------------------------|--|
| Base Video Analytics                | <ul style="list-style-type: none"><li>▪ Motion Detection</li><li>▪ Tampering</li><li>▪ Audio noise Detection</li></ul>   |
| Enhanced Video Analytics (embedded) | <ul style="list-style-type: none"><li>▪ Abandoned objects</li><li>▪ Intrusion (object classification)</li><li>▪ Sabotage</li><li>▪ Wrong direction</li><li>▪ Loitering (object classification)</li><li>▪ Object counting (object classification)</li><li>▪ Object removal</li><li>▪ Stopped vehicle (object classification)</li></ul> <p>2 analytics functions can be activated simultaneously</p> |
| Event Triggers                      | <ul style="list-style-type: none"><li>▪ External input</li><li>▪ Analytics</li><li>▪ Network failure detection</li><li>▪ Periodical event</li><li>▪ Manual trigger</li></ul>   |
| Event Actions                       | <ul style="list-style-type: none"><li>▪ External output activation</li><li>▪ Video and audio recording to edge storage</li><li>▪ File upload: FTP, network share and email</li><li>▪ Notification: HTTP, FTP, email</li></ul>  |

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**MOBOTIX MOVE 12MP Vandal Hemispheric Analytics Indoor Camera**

**General**

|                       |  |
|-----------------------|--|
| Casing                | Metal and Plastic  |
| Power Requirements    | PoE IEEE802.3af, class 0, max 12.95 W  |
| PoE Modes Supported   | Mode A or Mode B   |
| Connectors            | RJ45<br>Alarm in x1, Alarm out x1, Terminal Block<br>Audio in Terminal Block<br>Audio out Terminal Block |
| Storage               | Micro SD/SDHC/SDXC card support up to 1 TB,<br>Support for recording to NAS, MOBOTIX MOVE NVR            |
| Operating Temperature | -10 to 55 °C/14 °F to 131 °F   |
| Relative Humidity     | 10 to 90 % non-condensing  |
| Storage Conditions    | -20 to 70 °C/-4 to 158 °F  |
| Approvals             | EMC, Safety, Environment, CE/FCC, RoHS, IK10   |
| MTBF                  | 95,000 hours   |
| Warranty              | 5 years  |
| Dimensions            | Ø 130x57.8 mm  |
| Weight                | 565 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.

- **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       | Detection  |      | Observation  |      | Recognition                                      |      | Identification                                   |      |
|------------------|--|------|--|------|--|------|--|------|
|                  | Wide   | Tele | Wide   | Tele | Wide   | Tele | Wide   | Tele |
| Mx-VH1A-12-IR-VA | Front End: 36 m/<br>118 ft Back End:<br>36 m/ 118 ft |      | Front End: 14 m/<br>46 ft Back End:<br>14 m/ 46 ft |      | Front End: 7 m/<br>23 ft Back End:<br>7 m/ 23 ft |      | Front End:<br>3 m/ 10 ft Back<br>End: 4 m/ 13 ft |      |

## Accessories

| Picture   | Order Code          | Description  |
|---|---------------------|--|
|  | Mx-NPA-UPOE1A-60W   | UPoE Network Power Injector 60 W                   |
|  | Mx-A-ETP1A-2601-SET | Media Converter Set Ethernet (PoE+) – Twisted-Pair |

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# 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!

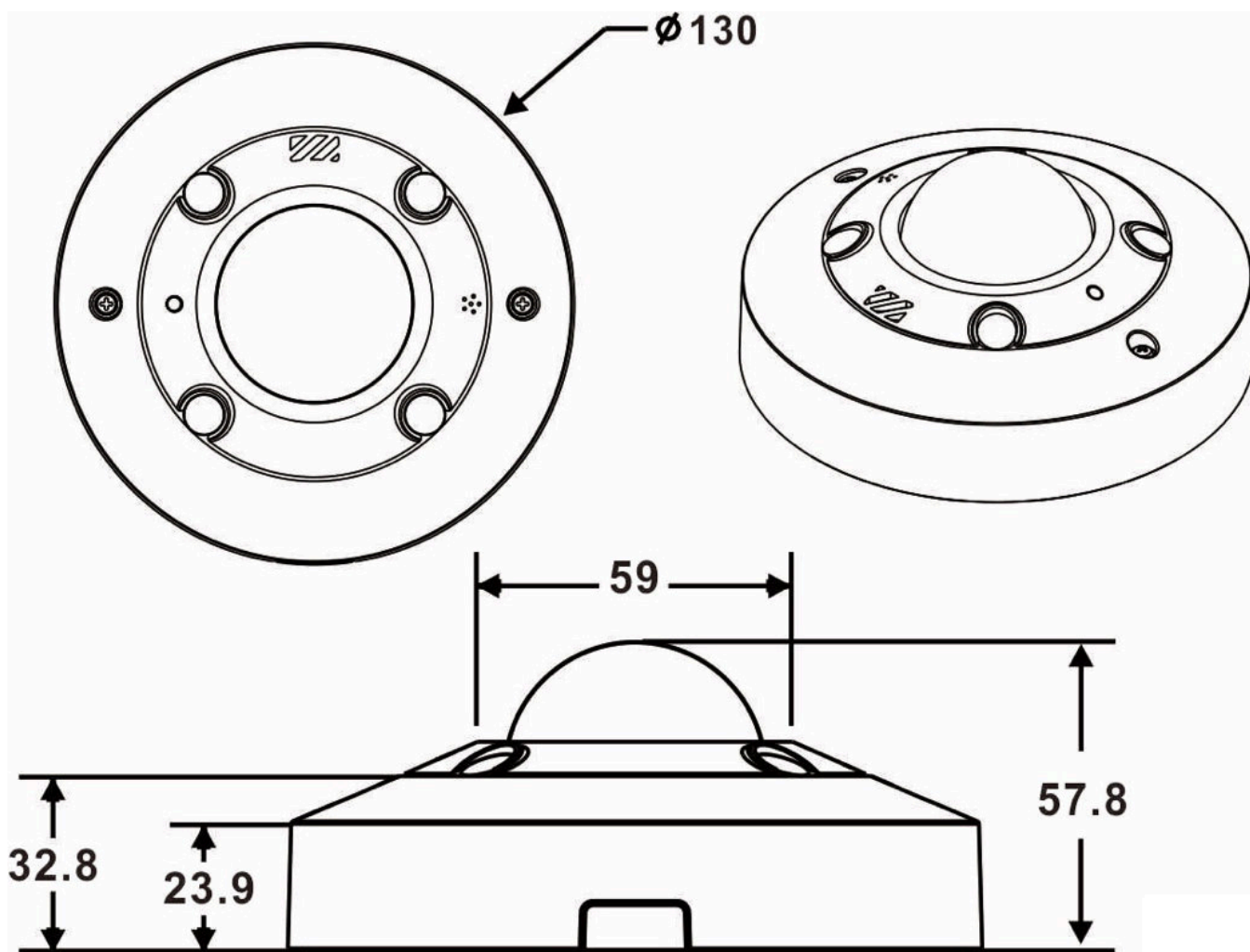


Fig. 1: 12MP Vandal Hemispheric Analytics Indoor Camera: All measurements in mm



## Further Reading

Manuals and Quick Installation documents



Technical Specifications



MOBOTIX MOVE Installation Hints



# MOBOTIX

BeyondHumanVision

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