



# MV Cloud Managed Smart Cameras

SECOND GENERATION (MV12, MV22, AND MV72)

## OVERVIEW

The MV Smart Camera family brings powerful, advanced analytics to the typical security camera world. With a powerful processor—the same kind found on many of today’s smartphones—and an innovative architecture which minimizes physical infrastructure as

well as software requirements, these smart cameras from Cisco Meraki represent a shift from cameras simply ensuring physical safety and security, to providing powerful business intelligence as well.

## MV: BEYOND JUST SECURITY

MV cameras feature an innovative architecture which places high-endurance storage locally on the camera and removes the network video recorder (NVR) from the equation. Not only does this drastically simplify both installation and scaling, but it also eliminates a major network security vulnerability in the IT infrastructure.

Features like LLDP insights, offline device alerting, and built-in remote troubleshooting tools reduce time to resolution and free up personnel to make IT improvements, providing added business value. And, because MV is managed through the browser-based Meraki dashboard and operates using a licensing model, there’s no need to purchase, download, and maintain any additional software. Management through the Meraki dashboard ensures

firmware updates will continually roll out over the lifespan of the product, meaning its value will only increase over time.

Featuring an industry-leading processor, these cameras are not only capable of providing high definition (1080p) video, but they also allow for on-board analytics capabilities that previously required additional software and heavy-duty hardware. Harnessing the power of computer vision and machine learning, this camera line can dynamically classify people as objects within a frame. This simple-seeming insight builds the foundation for more effective and efficient processes, like people counting. And the best part is that they will only get smarter, and more accurate, over time.

## Product Highlights

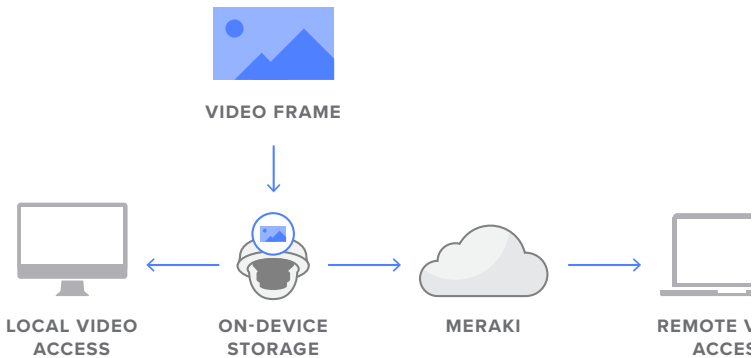
- Meraki dashboard simplifies operation
- Machine learning capability for intelligent object detection
- Cloud-augmented edge storage minimizes physical infrastructure
- Suitable for deployments of all sizes: 1 camera or 10,000+
- Intelligent motion indexing with search engine
- Built-in motion analytics tools like motion search and motion heat maps
- Secure encrypted control architecture
- No special software or browser plugins required
- Granular user access controls
- Wireless options for easy upgrades from analog



## CUTTING EDGE ARCHITECTURE

Meraki's expertise in distributed computing has come to the security camera world. With cloud-augmented edge storage, MV cameras provide ground breaking ease of deployment, configuration, and operation. Completely eliminating the Network Video Recorder (NVR) not only reduces equipment CAPEX, but the simplified architecture also minimizes lifetime OPEX costs.

Each MV camera comes with integrated, ultra reliable, industrial-grade storage. This cutting edge technology allows the system to efficiently scale to any size because the storage expands with the addition of each camera. Plus, administrators can rest easy knowing that even if the network connection cuts out, the cameras will continue to record footage.



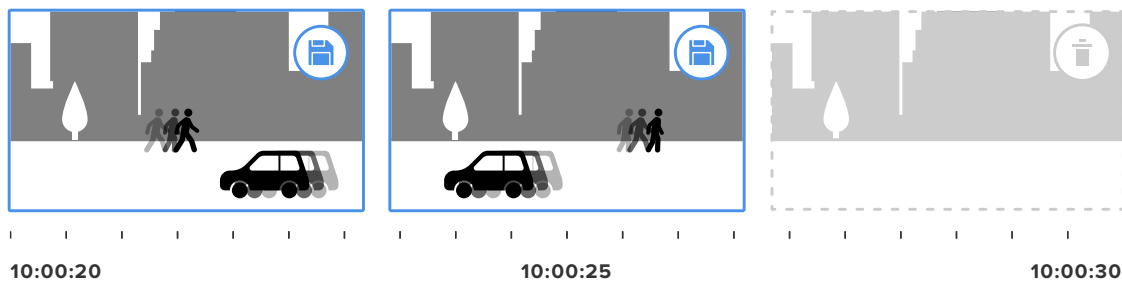
## OPTIMIZED RETENTION

MV takes a unique approach to handling motion data by analyzing video on the camera itself, but indexing motion in the cloud. This hybrid motion-based retention strategy plus scheduled recording give users the ability to define the video retention method that works best for every deployment.

The motion-based retention tool allows users to pick the video bit rate and frame rate to find the perfect balance between storage length and image quality. All cameras retain continuous footage as a safety net for the most recent 72 hours before intelligently trimming stored video that contains no motion.

Users can define when cameras are recording, and when they're not, with scheduled recording. Create schedule templates for groups of cameras and store only what's needed, nothing more. Turn off recording altogether and only view live footage for selective privacy.

Best of all, the dashboard provides a real-time retention estimate for each camera, removing the guesswork. For users who have non-negotiable regulatory requirements surrounding storage, optional licenses for 90- and 180-day 24/7 cloud archive are available, too.

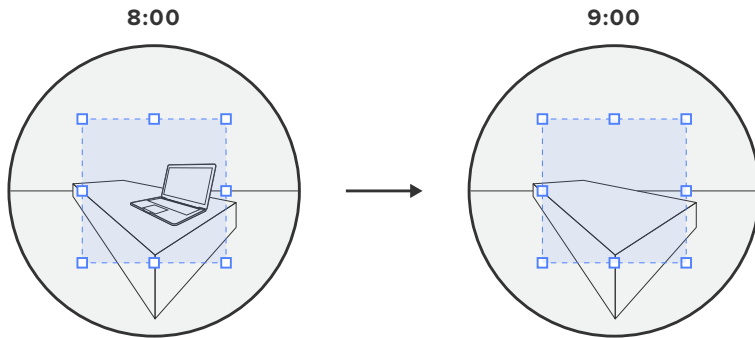
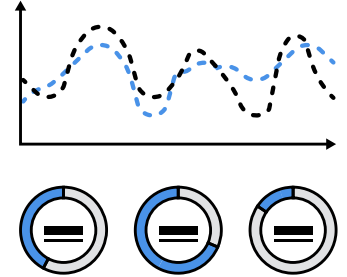
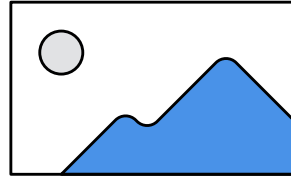


## ANALYTICS, BUILT RIGHT IN

With an industry-leading processor onboard every MV camera\*, advanced analytics, including computer vision and machine learning are now easy, scalable, and cost effective to implement. MV cameras can detect what's a person—and what's not—to enable features like people counting over time. You'll gain valuable insights into office foot traffic and your customers' behavior patterns with a single security camera solution—no servers, special software, or dedicated hardware required.

Motion heat maps provide an overview of relative motion in a given area hour-by-hour or day-by-day, helping you to paint a picture of general motion trends. These functionalities make it possible to start expecting more from your cameras than just security.

\*Second generation MV cameras; MV12 (2018) and later



## ISOLATE EVENTS, INTELLIGENTLY

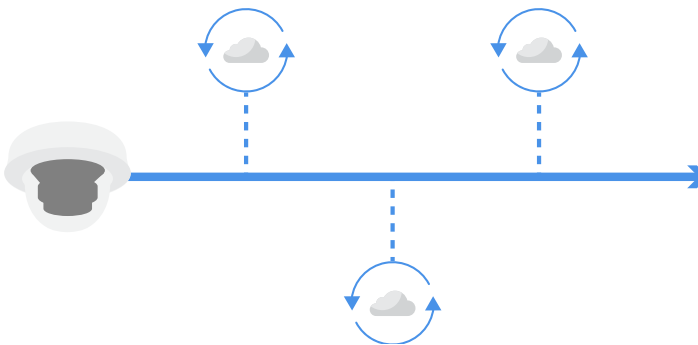
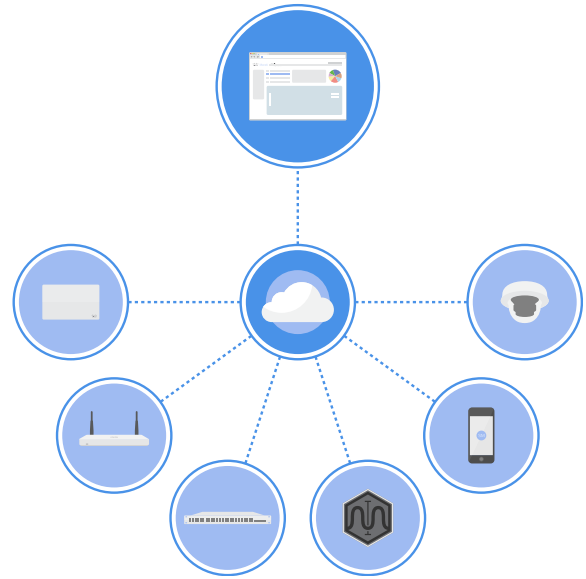
Meraki MV cameras use intelligent motion search to quickly find important segments of video amongst hours of recordings. Optimized to eliminate noise and false positives, this allows users to retrospectively zero-in on relevant events with minimal effort.

MV's motion indexing offers an intuitive search interface. Select the elements of the scene that are of interest and dashboard will retrieve all of the activity that occurred in that area. Laptop go missing? Drag the mouse over where it was last seen and quickly find out when it happened and who was responsible.

## SIMPLY CLOUD-MANAGED

Meraki's innovative GUI-based dashboard management tool has revolutionized networks around the world, and brings the same benefits to networked video surveillance. Zero-touch configuration, remote troubleshooting, and the ability to manage distributed sites through a single pane of glass eliminate many of the headaches security administrators have dealt with for decades. Best of all, dashboard functionality is built into every Meraki product, meaning additional video management software (VMS) is now a thing of the past.

Additionally, features like the powerful drag-and-drop video wall help to streamline remote device management and monitoring — whether cameras are deployed at one site, or across the globe.



## SECURE AND ALWAYS UP-TO-DATE

Centralized cloud management offers one of the most secure platforms available for camera operation. All access to the camera is encrypted with a public key infrastructure (PKI) that includes individual camera certificates. Integrated two-factor authentication provides strong access controls. Local video is also encrypted by default and adds a final layer of security that can't be turned off.

All software updates are managed automatically for the delivery of new features and to enable rapid security updates. Scheduled maintenance windows ensure the MV family continues to address users' needs with the delivery of new features as part of the all-inclusive licensed service.

# MV12 Mini-Dome Camera Specifications

## Camera

1/3" 4MP (2688x1520) progressive CMOS image sensor
128GB high endurance solid state storage (MV12WE)
256GB high endurance solid state storage (MV12N and MV12W)
2.8mm focal length fixed lens (MV12W and MV12WE)
3.8mm focal length fixed lens (MV12N)
f/1.8 aperture
Field of view:
Horizontal 114° (MV12W and MV12WE)
Horizontal 73° (MV12N)
Vertical 61° (MV12W and MV12WE)
Vertical 44° (MV12N)
Diagonal 132° (MV12W and MV12WE)
Diagonal 86° (MV12N)
1/30s to 1/32,000s shutter speed
Minimum illumination 0.18 Lux (standard recording) and 0.01 Lux (night mode)
Built-in IR illuminators, effective up to 15m (49ft)

## Video

1080p HD video recording (1920x1080) with H.264 encoding, up to 20fps
Cloud augmented edge storage (locally stored video with metadata in the cloud)
Optimized retention settings (scheduling and motion-based) for variable retention
Up to 40 days of 24/7 continuous video storage per camera*
Direct live streaming with no client software (native browser playback)**
Stream video anywhere with automatic cloud proxy
High dynamic range (HDR)

## Data Security

Full disk encryption (AES 256-bit)
Automatically purchased and provisioned TLS certificates (publicly-signed)
Management encryption and two-factor authentication

## Networking

1x 10/100/1000 Base-T Ethernet (RJ45)
Dual band WLAN with supporting 2.4GHz and 5GHz
802.11 a/b/g/n/ac
DSCP traffic marking

## Power

Power consumption 12.95W maximum via 802.3af PoE
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## Features

Cloud managed with complete integration into the Meraki dashboard
Plug and play deployment with self-configuration
Dynamic day-to-night transition with IR illumination
Noise optimized motion indexing engine with historical search
Shared video wall with individual layouts supporting multiple cameras
Selective export capability with cloud proxy (with watermarked timestamps)
Highly granular view, review, and export user permissions with SAML integration
Motion heat maps for relative hourly or day-by-day motion overview
Motion alerts

## Wireless

2.4 GHz 802.11b/g/n radio
5 GHz 802.11a/n/ac radio
Supported frequency bands (country-specific restrictions apply):
2.412 - 2.484 GHz
5.150 - 5.250 GHz (UNII-1)
5.250 - 5.350 GHz (UNII-2)
5.470 - 5.600, 5.660 - 5.725 GHz (UNII-2e)
5.725 - 5.825 GHz (UNII-3)

## 802.11ac and 802.11n capabilities

1x1 with one spatial stream
MU-MIMO support
20 and 40 MHz channels (802.11n)
20, 40, and 80 MHz channels (802.11ac)
Up to 256 QAM on both 2.4 GHz and 5 GHz bands

## Antenna

Integrated omni-directional antennas (4.4 dBi gain at 2.4 GHz, 6.3 dBi gain at 5 GHz)
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## Security

WPA, WPA2-PSK, WPA2-Enterprise with 802.1X
EAP-TTLS
TKIP and AES encryption

## Environment

Temperature: 0°C - 40°C (32°F - 104°F)
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# MV12 Mini-Dome Camera Specifications

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## In the Box

Quick start & installation guide

MV camera hardware

Wall mounting kit

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## Physical Characteristics

Dimensions 106mm x 74mm (diameter x height)

Fixed lens

Weight 286g

Female RJ45 Ethernet connector

Multicolor, multifunction status LED

Reset button

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## Waranty

Warranty 3 year hardware warranty with advanced replacement

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## Ordering Information

MV12N-HW: 256GB Narrow Angle Mini Dome Camera

MV12W-HW: 256GB Wide Angle Mini Dome Camera

MV12WE-HW: 128GB Wide Angle Mini Dome Camera

LIC-MV-XYR: Meraki MV Enterprise License (X = 1, 3, 5, 7, 10 years)

MA-INJ-4-XX: Meraki 802.3at Power over Ethernet injector (XX = US, EU, UK, or AU)

MA-PWR-MV-LV: Low voltage 12VDC/24VAC input PoE injector for MV cameras (coax converter)

Note: Each Meraki camera requires a license to operate

\* Storage duration dependent on encoding settings and camera storage model.

\*\* Browser support for H.264 decoding required.

# MV22 Indoor Varifocal Camera Specifications

## Camera

1/3" 4MP (2688x1520) progressive CMOS image sensor
256GB high endurance solid state storage
3-9mm focal length
f/1.2-2.3 aperture
Field of view:
Horizontal 36° - 112°
Vertical 20° - 57°
Diagonal 42° - 138°
Lens adjustment range:
Tilt: 65°
Rotation: +/- 90°
Pan: 354°
1/30s to 1/32,000s shutter speed
Minimum illumination 0.18 Lux (standard recording) and 0.01 Lux (night mode)
Built-in IR illuminators, effective up to 30m (98ft)

## Video

1080p HD video recording (1920x1080) with H.264 encoding, up to 20fps
Cloud augmented edge storage (locally stored video with metadata in the cloud)
Optimized retention settings (scheduling and motion-based) for variable retention
Up to 40 days of 24/7 continuous video storage per camera*
Direct live streaming with no client software (native browser playback)**
Stream video anywhere with automatic cloud proxy
High dynamic range (HDR)

## Data Security

Full disk encryption (AES 256-bit)
Automatically purchased and provisioned TLS certificates (publicly-signed)
Management encryption and two-factor authentication

## Networking

1x 10/100/1000 Base-T Ethernet (RJ45)
Dual band WLAN with antenna diversity supporting 2.4GHz and 5GHz
802.11 a/b/g/n/ac
DSCP traffic marking

## Power

Power consumption 12.95W maximum via 802.3af PoE
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## Features

Cloud managed with complete integration into the Meraki dashboard
Plug and play deployment with self-configuration
Dynamic day-to-night transition with IR illumination
Noise optimized motion indexing engine with historical search
Shared video wall with individual layouts supporting multiple cameras
Selective export capability with cloud proxy (with watermarked timestamps)
Highly granular view, review, and export user permissions with SAML integration
Motion heat maps for relative hourly or day-by-day motion overview
Motion alerts

## Wireless

2.4 GHz 802.11b/g/n radio
5 GHz 802.11a/n/ac radio
Supported frequency bands (country-specific restrictions apply):
2.412 - 2.484 GHz
5.150 - 5.250 GHz (UNII-1)
5.250 - 5.350 GHz (UNII-2)
5.470 - 5.600, 5.660 - 5.725 GHz (UNII-2e)
5.725 - 5.825 GHz (UNII-3)

## 802.11ac and 802.11n Capabilities

1x1 with one spatial stream
MU-MIMO support
20 and 40 MHz channels (802.11n)
20, 40, and 80 MHz channels (802.11ac)
Up to 256 QAM on both 2.4 GHz and 5 GHz bands

## Antenna

Integrated omni-directional antennas (4.4 dBi gain at 2.4 GHz, 6.3 dBi gain at 5 GHz)
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## Security

WPA, WPA2-PSK, WPA2-Enterprise with 802.1X
EAP-TTLS
TKIP and AES encryption

## Environment

Temperature: 0°C - 45°C (32°F - 113°F)
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# MV22 Indoor Varifocal Camera Specifications

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## In the Box

Quick start & installation guide

MV camera hardware

Wall mounting kit

Junction box adapter plate

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## Physical Characteristics

Dimensions 149mm x 97mm (diameter x height)

Varifocal lens (up to 3x optical zoom)

Weight without mounting plate 706g

Weight with mounting plate 842g

Female RJ45 Ethernet connector

Multicolor, multifunction status LED

Reset button

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## Ratings

IK08 vandal-resistance

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## Waranty

3 year hardware warranty with advanced replacement

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## Ordering Information

MV22-HW: Varifocal MV22 Indoor HD Dome Camera With 256GB Storage

LIC-MV-XYR: Meraki MV Enterprise License (X = 1, 3, 5, 7, 10 years)

MA-INJ-4-XX: Meraki 802.3at Power over Ethernet injecto (XX = US, EU, UK, or AU)

MA-PWR-MV-LV: Low voltage 12VDC/24VAC input PoE injector for MV cameras (coax converter)

Note: Each Meraki camera requires a license to operate

\* Storage duration dependent on encoding settings and camera storage model.

\*\* Browser support for H.264 decoding required.



# MV72 Outdoor Varifocal Camera Specifications

## Camera

1/3" 4MP (2688x1520) progressive CMOS image sensor
256GB high endurance solid state storage
3-9mm focal length
f/1.2-2.3 aperture
Field of view:
Horizontal 36° - 112°
Vertical 20° - 57°
Diagonal 42° - 138°
Lens adjustment range:
Tilt: 65°
Rotation: +/- 90°
Pan: 354°
1/30s to 1/32,000s shutter speed
Minimum illumination 0.18 Lux (standard recording) and 0.01 Lux (night mode)
Built-in IR illuminators, effective up to 30m (98ft)
Heating elements

## Video

1080p HD video recording (1920x1080) with H.264 encoding, up to 20fps
Cloud augmented edge storage (locally stored video with metadata in the cloud)
Optimized retention settings (scheduling and motion-based) for variable retention
Up to 40 days of 24/7 continuous video storage per camera*
Direct live streaming with no client software (native browser playback)**
Stream video anywhere with automatic cloud proxy
High dynamic range (HDR)

## Data Security

Full disk encryption (AES 256-bit)
Automatically purchased and provisioned TLS certificates (publicly-signed)
Management encryption and two-factor authentication

## Networking

1x 10/100/1000 Base-T Ethernet (RJ45)
Dual band WLAN with antenna diversity supporting 2.4GHz and 5GHz
802.11 a/b/g/n/ac
DSCP traffic marking

## Power

Power consumption when not using heater 12.95W maximum via 802.3af PoE
Power consumption when using heater 25.5W maximum via 802.3at PoE

## Features

Cloud managed with complete integration into the Meraki dashboard
Plug and play deployment with self-configuration
Dynamic day-to-night transition with IR illumination
Noise optimized motion indexing engine with historical search
Shared video wall with individual layouts supporting multiple cameras
Selective export capability with cloud proxy (with watermarked timestamps)
Highly granular view, review, and export user permissions with SAML integration
Motion heat maps for relative hourly or day-by-day motion overview
Motion alerts

## Wireless

2.4 GHz 802.11b/g/n radio
5 GHz 802.11a/n/ac radio
Supported frequency bands (country-specific restrictions apply):
2.412 - 2.484 GHz
5.150 - 5.250 GHz (UNII-1)
5.250 - 5.350 GHz (UNII-2)
5.470 - 5.600, 5.660 - 5.725 GHz (UNII-2e)
5.725 - 5.825 GHz (UNII-3)

## 802.11ac and 802.11n Capabilities

1x1 with one spatial stream
MU-MIMO support
20 and 40 MHz channels (802.11n)
20, 40, and 80 MHz channels (802.11ac)
Up to 256 QAM on both 2.4 GHz and 5 GHz bands

## Antenna

Integrated omni-directional antennas (4.4 dBi gain at 2.4 GHz, 6.3 dBi gain at 5 GHz)
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## Security

WPA, WPA2-PSK, WPA2-Enterprise with 802.1X
EAP-TTLS
TKIP and AES encryption

## Environment

Temperature: -40°C - 50°C (-40°F - 122°F)***
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# MV72 Outdoor Varifocal Camera Specifications

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## In the Box

Quick start & installation guide

MV camera hardware

Wall mounting kit

Junction box adapter plate

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## Physical Characteristics

Dimensions 165mm x 103mm (diameter x height)

Varifocal lens (up to 3x optical zoom)

Weight without mounting plate 1247g

Weight with mounting plate 1353g

Female RJ45 Ethernet connector

Multicolor, multifunction status LED

Reset button

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## Ratings

IK10 vandal-resistance

IP67 weather-proofing

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## Waranty

Warranty 3 year hardware warranty with advanced replacement

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## Ordering Information

MV72-HW: Varifocal MV72 Indoor HD Dome Camera With 256GB Storage

LIC-MV-XYR: Meraki MV Enterprise License (X = 1, 3, 5, 7, 10 years)

MA-INJ-4-XX: Meraki 802.3at Power over Ethernet injecto (XX = US, EU, UK, or AU)

MA-PWR-MV-LV: Low voltage 12VDC/24VAC input PoE injector for MV cameras (coax converter)

Note: Each Meraki camera requires a license to operate

\* Storage duration dependent on encoding settings and camera storage model.

\*\* Browser support for H.264 decoding required.

\*\*\* Operation of the MV72 under 0°C will make use of the internal heater.

# Mounting Accessories Specifications

## Wall Mount Arm for MV72

Wall mount for attaching camera perpendicular to mounting surface

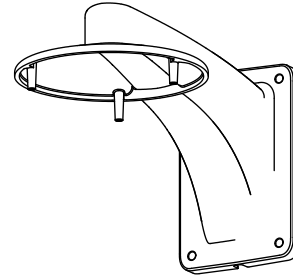
Includes pendant cap

Supported Models: MV72

Dimensions (wall bracket) 160.0mm L x 104.0mm W x 286.0mm D

Combined weight: 0.67kg

MA-MNT-MV-10



## Pole Mount

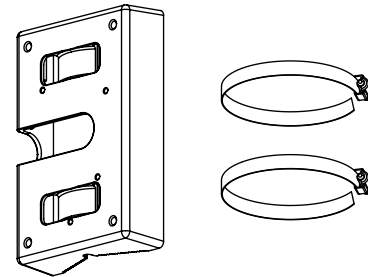
Can be used in conjunction with MA-MNT-MV-10 Wall Mount Arm

Supported Models: MV72

Dimensions: 163.5mm L x 107.6mm W x 34.0mm D

Combined weight: 0.289kg

MA-MNT-MV-20



## Wall Mount Arm for MV12

Wall mount arm for attaching camera perpendicular to mounting surface

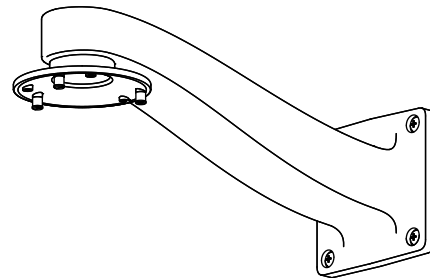
Includes pendant cap

Supported Models: MV12

Dimensions (wall bracket): 91.3mm L x 94.0mm W x 302.3mm D

Combined weight: 0.697kg

MA-MNT-MV-30



## Wall Mount Bracket

Support models: MV22

Dimensions: 48.0mm L x 130.0mm W x 156.2mm D

Combined weight 0.503kg

MA-MNT-MV-31

