MV12 Cloud-Managed Smart Cameras



OVERVIEW

The Meraki MV12 series, part of the MV smart camera family, brings physical security and advanced analytics together in a compact form factor. With powerful hardware and the architectural simplicity of the MV family, MV12 smart cameras are built not only for physical safety and security but for business intelligence as well.

MV12: BEYOND JUST SECURITY

As with the rest of the MV lineup, the MV12 series places high-endurance storage locally on the camera, removing the Network Video Recorder (NVR) and Video Management System (VMS) from the equation. Not only does this drastically simplify both installation and scaling, but it also eliminates a major network security vulnerability in IT infrastructure.

MV12 series cameras are equipped with an industry-leading processor, and have a 4MP sensor for recording in up to 1080P. The processor powers advanced analytics capabilities that previously required specialized software and heavy-duty hardware. Harnessing the power of machine learning for computer vision, MV12 smart cameras can do real time object detection, classification, and tracking. This compelling insight lays the foundation for more effective and efficient processes, like counting, journey pathing, and safe working practices.

MV12 cameras are fixed lens mini-dome cameras, with a sleek compact form factor. There are three models, designed to fit a variety of deployment needs. The MV12W features a wide Field of View (FoV), good for providing overall context of a scene. The MV12N has a narrow FoV, making it ideal for hallways, entrances, and exits to aid in identification. The MV12WE has a wide FoV, with reduced storage at a lower price point.

Product Highlights

- Fixed lens, mini-dome camera with a compact form factor
- Three models designed to meet a variety of needs
- Intelligent motion indexing with search engine
- Built-in motion analytics like Motion Search, Motion Recap, and Motion Heatmaps
- In-camera machine learning capability for intelligent object detection
- No special software or browser plugins required
- Cloud-augmented edge storage minimizes physical infrastructure
- Meraki dashboard simplifies operation
- Secure, encrypted control architecture and storage
- Secure boot and signed firmware backed by hardware security chip
- Granular user access controls
- Integrated 802.11ac wireless for low cost upgrades using analog cabling
- Suitable for deployments of all sizes, 1-10,000+ cameras

MV12 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 (MV12W and MV12WE)

3.8mm focal length (MV12N)

f/1.8 aperture

Field of view: Horizontal 114°, Vertical 61°, Diagonal 132° (MV12W and MV12WE)

Field of view: Horizontal 73°, Vertical 44°, 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)

Audio recording supported with built-in microphone

Networking and Wireless

1x 10/100/1000 Base-T Ethernet (RJ45)

DSCP traffic marking

Supported frequence bands (country-specific restrictions apply):

2.4 GHz 802.11b/g/n radio

- 2.412 - 2.484 GHz

5 GHz 802.11a/n/ac radio

- 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)

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

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

2.4 GHz Bluetooth Low Energy (BLE) radio

Power

Power consumption 12.95W maximum via 802.3af PoE

Environment

Temperature: 0°C - 40°C (32°F - 104°F)

Data and Network Security

Full disk encryption (AES 256-bit)

Automatically purchased and provisioned TLS certificates (publicly-signed)

Management encryption and two-factor authentication

Wireless security:

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

Physical Characteristics

Dimensions 106mm x 74mm (diameter x height)

Weight 286g

Female RJ45 Ethernet connector

Multicolor, multifunction status LED

Reset button

Warranty

Warranty 5 year hardware warranty with advanced replacement

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

In The Box

Quick start & installation guide

MV camera hardware

Wall mounting kit

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.