



# IN-CAR VIDEO SYSTEM

In your vehicle out in the field, your eyes are your first line of defense. You're trained to constantly scan your surroundings for threats—to yourself and to the public. It's intense, highly demanding work. But with our technology, you can lighten that load and heighten your situational awareness like never before.

The M500 in-car video system is a groundbreaking leap forward in awareness, safety and efficiency. It's not just an eye recording what it sees, it's a brain analyzing everything around you. Powerful video analytics—driven by industry-leading 4k video—constantly process your surroundings, alerting you in real time to threats and search targets.

An ultra-rugged, tamperproof design withstands the toughest conditions. An intuitive interface is easy to use in the most demanding situations.

And the M500 seamlessly coordinates with the mission critical technology you already count on—from body cameras, to command centers and evidence management.

When you're only as safe as what you can see, the M500 gives you real time awareness of what's happening around you. It's a watchtower calling out what you need to know. A partner that takes you to a new level of calm and collected. Because the more you know what's out there, the more you can keep yourself and the people you serve safe.



# SCAN. ANALYZE. REACT.



## FEATURES



**M500 CORE PROCESSOR**



**M5F FRONT CAMERA**



**M5P CABIN CAMERA**



**M5D CONTROL PANEL**



**HIFI MICROPHONE**

### M500 KEY FEATURES

|                            |   |                                     |  |
|----------------------------|---|-------------------------------------|--|
| Front Camera Recording     | Support for high resolution front camera  | Remote Upgrade                      | System firmware can be upgraded over a wireless link                                   |
| Cabin Camera Recording     | Support for daylight and infrared cabin camera with integrated microphone       | Dual-stream Recording               | System can record 2 streams and select upload resolution based on event tagging        |
| Cabin Microphone Recording | Support for discreet cabin microphone x2  | Covert Mode                         | System can be configured to record with no visual or audio indicators                  |
| Smart Power Switch (SPS)   | Power and/or connectivity for MDC, LTE/WiFi router, and V300 WiFi dock          | Dark Mode                           | System can be configured to turn off screen, and button backlights                     |
| USB Drive Support          | Support for configuration and firmware updates via removable USB drive          | State Capture                       | System can log key parameters for debug purposes                                       |
| USB Evidence Backup        | Removable USB Drive can be used for storing and offloading video evidence*      | Impact Detection                    | System can recognize vehicle impact and automatically start recording                  |
| Auto-record Triggers       | System can be triggered to record by vehicle speed, lights, siren, aux input x2 | Internal UPS                        | System can self-power for several seconds in case of vehicle collision / power failure |
| Auto-stop Record           | Configurable maximum length of video recordings                                 | License Plate Recognition           | System can read license plates and interface with Vigilant LEARN database              |
| Group Recordings           | System can initiate group recordings with body cameras (V300 only)              | Back Seat Occupancy Detection       | Cabin camera will automatically record when a human is detected in back seat*          |
| GPS Support                | Support for GPS location information and timing reference                       | Wide And Cropped Front Camera Views | System will capture panoramic and detailed views (at 2 resolutions each)               |
| WiFi Event Upload          | System can upload events to DEMS solution via WiFi access point                 | Synchronized Playback               | Support for synchronized playback in EvidenceLibrary and CommandCentral Evidence       |
| LTE/WiFi Router Upload     | System can upload events via a Sierra Wireless LTE/WiFi modem/router            | HiFi Microphone Support             | System supports up to 2x portable wireless microphones                                 |
| Encryption                 | Video evidence is encrypted at rest and in transit                              | Live-streaming                      | Video and audio streaming to CommandCentral Aware*                                     |
| Officer Settings           | User access to system preferences to adjust display brightness, etc             | EvidenceLibrary Support             | System can upload events to Evidence Library 5 or EvidenceLibrary.com                  |
| Event Playback             | Video and audio can be played back on the control panel / display               | CommandCentral Evidence Support     | Events can be uploaded to CommandCentral Evidence                                      |
| Record-after-the-Fact™     | Events can be recovered from the system even if no recording was initiated      |                                     |  |

\*Feature not supported at launch

# CORE PROCESSOR



# POWER



## M500 CORE PROCESSOR KEY FEATURES

|                              |  |                    |   |
|------------------------------|--|--------------------|---|
| Form Factor                  | Single DIN   | Recording Triggers | Lights, siren, AUX triggers (x2), impact/ crash, speed, wireless microphone, backseat occupancy   |
| Dimensions (H x W x D)       | 7.0 x 1.9 x 7.7 (180 x 49 x 171 mm)  | Storage            | Dual drive architecture*  |
| Weight                       | 3.1 lb (1.4 kg)  | Pre-Event          | None, 15 sec, 30 sec, 45 sec, 90 sec, 1 min, 2 min, 3 min, 5 min, or 10 min   |
| Operating Temperature        | -30°C to +65°C (-22°F to +149°F)   | Redundancy         | Record-After-The-Fact (patented, configurable)  |
| Mounting Option              | Overhead (vehicle-specific brackets) or universal mount  | Recording Capacity | Dependent on recording resolution, frame rate and cameras connected: Video 1080p@30fps High Quality = 4.5GB per hour per stream 720p@30fps High Quality = 2.25GB per hour per stream 480p@30fps High Quality = 1GB per hour per stream Audio 23.4MB per hour per stream |
| Recording Media (Internal)   | 1 TB automotive-grade solid state drive  | WiFi               | WiFi, LTE/WiFi routers  |
| Recording Media (Removable)  | 128 GB USB Drive*  | Security           | FIPS-140-2 compliant encryption   |
| GPS                          | Integrated   | Cabin Camera Audio | Integrated MEMs microphone (digital audio over coax)  |
| Crash Detection              | 6-axis sensor  |                    |   |
| Additional Input / Outputs   | USB, Ethernet, wired microphone (x2), trigger interface (2 AUX inputs), wireless microphone (x2), powered ethernet (x4)* |                    |   |
| Video Transfer Methods       | Wireless 802.11 router, optional WiFi or all-in-one LTE/WiFi Router, Ethernet, USB*                                      |                    |   |
| Max Camera Capacity          | Up to 5 cameras (Initial release: 2)   |                    |   |
| Resolutions                  | 1920x1080p, 1280x720p, 864x480p (dual stream, configurable), with configurable high/medium/low bitrate                   |                    |   |
| Frame Rate                   | 30, 15, 10, & 5 fps (configurable)   |                    |   |
| Multiple Resolution Encoding | Records two resolutions simultaneously (patented): 1080p/720p, 1080p/4080p, or 720p/480p                                 |                    |   |





# FRONT CAMERA

# CAPTURE



## M500 FRONT CAMERA KEY FEATURES

|   |   |
|---|---|
| Dimensions (H x W x D), including bracket | 1.7 x 1.6 x 2.7 in (43 x 40 x 69 mm)  |
| Weight                                    | 2.68 oz (85.4 g)  |
| Operating Temperature                     | -30°C to +65°C (-22°F to +149°F)  |
| Connection                                | Bayonet-locking HDBNC for power and data  |
| Aspect Ratio                              | Electronic panoramic view (simultaneous wide and cropped streams)   |
| Horizontal Field of View                  | Wide panoramic stream:<br>102/119° with/without dewarp<br>Cropped stream:<br>51/59.5° with/without dewarp |
| Low Light Performance                     | Below 0.1 lux   |
| Sensor Resolution                         | 3840x1920 pixels  |
| Sensor Technology                         | 8MP, BL-CMOS (backlit CMOS)   |
| Sensor Area                               | 1 x 1.7 in  |
| Mounting                                  | Windshield puck or ball mount   |







# CABIN CAMERA



# COMPACT



## M5P CABIN CAMERA KEY FEATURES

|                          |  |
|--------------------------|--|
| Dimensions (H x W x D)   | 4.5 x 1.9 x 1.5 in (113 x 48 x 39 mm)                |
| Weight                   | 5.3 oz (150 g)                                       |
| Operating Temperature    | -30°C to +65°C (-22°F to +149°F)                     |
| Connection               | Single HD-BNC connection for power and data          |
| Resolution               | 1920x1080  |
| Viewing Angle            | 108° (horizontal)                                    |
| Low Light Performance    | 0 lux (infrared illumination)                        |
| Infrared Illumination    | 940nm, not visible                                   |
| Audio                    | Integrated MEMs microphone (digital audio over coax) |
| Environmental Protection | IP54, MIL-STD 810G                                   |
| Mounting                 | Tamperproof screws or zip ties, 180-degree rotation  |



## CONTROL PANEL



### M5D CONTROL PANEL KEY FEATURES

|                        |   |
|------------------------|---|
| Dimensions (H x W x D) | 4.3 x 5.7 x 1.4 in (110 x 144 x 36 mm)      |
| Weight                 | 0.7 lb (0.3 kg)                             |
| Operating Temperature  | -30°C to +65°C (-22°F to +149°F)            |
| Connection             | Single HD-BNC connection for power and data |
| Screen Size            | 5" diagonal                                 |
| Screen Resolution      | 1920x1080                                   |
| Screen Brightness      | 600 nits                                    |
| Touchscreen Technology | Capacitive multi-touch                      |
| Dedicated Controls     | Power, home, record, stop, cameras, display |
| Mounting               | B-size RAM mount                            |
| Other                  | Silicone overmold for secure grip           |





# HFI MICROPHONE

# CONNECT



## HIFI MICROPHONE KEY FEATURES

|  |  |
|--|--|
| Dimensions (H x W x D), Transmitter                  | 3.0 x 2.1 x 1.1 in (75 x 53 x 28 mm), not including clip |
| Dimensions (H x W x D), Charging Dock                | 3.1 x 3.0 x 2.0 in (80 x 75 x 51 mm)                     |
| Dimensions (H x W x D), Transmitter in Charging Dock | 4.2 x 3.0 x 2.0 in (108 x 75 x 51 mm)                    |
| Weight (Transmitter)                                 | 3.0 oz (85 g)  |
| Weight (Charging Dock)                               | 4.5 oz (128 g)   |
| Operating Temperature                                | -25°C to +65°C (-13°F to +149°F)                         |
| Frequency Response                                   | 200-10,000 Hz +/- 3 dB                                   |
| Wireless Link Frequency Band                         | 2.4 GHz  |
| Audio Compression                                    | BV32   |





**NOW OBSERVATION  
BECOMES ACTION**

## **SUPPORT WARRANTY**

Comprehensive 12-month product warranty included.

Warranty may be optionally extended to 5 years at additional cost.

For more information, please visit

[www.motorolasolutions.com/M500](http://www.motorolasolutions.com/M500)



MOTOROLA, MOTO, MOTOROLA SOLUTIONS and the Stylized M Logo are trademarks or registered trademarks of Motorola Trademark Holdings, LLC and are used under license. All other trademarks are the property of their respective owners. ©2021 Motorola Solutions, Inc. All rights reserved.

