

**EVO-HD In-Vehicle Camera Kit  
(two-camera or four-camera system)**

**North Carolina Sheriffs' Association  
"Technology Procurement Program"**

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Submitted by:



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## Introducing the EVO-HD In-Car Camera System



Digital Ally's next generation of In-Car Camera Systems is the EVO-HD. The EVO-HD is the first product in a new line of non-mirrored in-car camera systems that maximizes space and offers top-end reliability.

The FirstVu HD Body Camera can serve dual functionality by being utilized as a body microphone and body camera with the EVO-HD System. The EVO-HD represents the industry's only multiple High Definition video solution product and features the built-in patented VuLink automatic activation technology.

### **The System**

#### **Completely New and Highly Advanced**

A revolutionary non-mirrored system will give your Department versatility and reliability. The miniaturized system can be custom mounted to fit your Department's needs. The EVO-HD can support up to four HD cameras with two cameras having pre-event and evidence capture assurance (ECA) capabilities.

### **Cloud Connectivity**

#### **Cloud Storage Powered by Amazon Web Services**

Cloud is the future in video storage. EVO-HD is designed with the purpose of utilizing our partnership with the world-wide leader in cloud software, Amazon Web Services. Our cloud connectivity allows for easy upload to VuVault.com, near real-time mapping and system health to be monitored.

## Complete Connectivity

### Automatic Activation of the In-Car and Body Camera

Built-in patented automatic activation technology allows for multiple recording angles to be captured in sync when either your FirstVu HD Body Camera or in-car camera is activated by a single trigger with built-in VuLink technology. The EVO-HD display can be configured to work with your MDT, tablet, or available monitor. The FirstVu HD Body Camera can serve as the primary microphone (a wireless microphone will also be available).



## EVO-HD In-Car Camera System Features

Digital Ally's next generation of In-Vehicle Video Systems is the EVO-HD. The new EVO-HD represents the industry's only multiple High Definition video solution product and features the built-in patented VuLink automatic activation technology.

The EVO-HD In-Vehicle Video System will include the following features:

- Multiple HD Camera Solution
- Patented VuLink Triggering
- 256GB Internal Storage
- System Firmware
- 4 Channel Video (2 with Pre-event and ECA)
- Configuration / Logging
- 6 Input Sensors: 9vdc threshold (Lights, Siren, Brakes, Vehicle Speed, etc.)
- 1 Output Trigger
- RS232 Radar Interface
- 4 USB Ports



- 1 RJ45 Port
- Radio interface
- HD Front Facing Camera(s)
- HD Backseat Camera(s)
- Optional Network Switch (POE)
- Optional Powered USB Hub)
- Optional external monitor
- High-G event sensor
- Internal GPS
- Vehicle Location, and Speed
- Internal Wi-Fi Module
- VuLink Body Camera Triggering
- Internal Cell Mode: Cloud Connectivity
- Real time metadata and Remote System Diagnostics
- One antenna for GPS/Wi-Fi/Cell
- Back-up battery
- Browser based MDT application to setup and control the EVO as well as record and tag events
- Dedicated Cloud solution



Full HD Zoom Camera



Full HD Fixed Focus Camera

- Video Storage/Review
  - Playback 4 videos simultaneously along with the metadata
- Near real-time location mapping, status updates, and geo-spatial searches
- Remote cloud trigger feature to start recordings from the dispatch office
- Simplified and improved product configuration
- Remote troubleshooting and firmware update
- Improved user log-in security
- Possible Active Directory integration (won't be available at time of first shipment)

## CUSTOM SOLUTION TO FIT YOUR NEEDS

### Highly Configurable Systems

Our camera systems can be configured to work in any way your agency needs. All of our systems have multiple settings that you can configure to make the solution fit any requirements your policy might have, such as, audio/video quality, pre-event customization, user control, multiple camera options, and more customization on the back-end with our VuVault.com cloud solution.



## NEVER MISS AN IMPORTANT EVENT

### Evidence Capture Assurance (ECA)

ECA tells the system to record on a continuous loop. Individual events are recorded, but ECA enables an agency to go back and look at video from an entire shift.

### Pre-Event Recording

With Pre-Event enabled, the system is always recording the last 30 to 60 seconds to capture the events leading up to the activation of a recording.

## EVO-HD Specifications

<b>Power</b>	
Operating Voltage	9 to 32 VDC
On	400mA @ 13.8VDC Typical
Off	25mA @ 13.8VDC Typical
Backup Battery	600mAh Rechargeable NiMH
Built-in Protections	Over voltage, over current, short circuit
<b>Environmental &amp; Mechanical</b>	
Operating Temperature	-10°C to 70°C (14°F to 158°F)
Storage Temperature	-40°C to 80°C (-40°F to 176°F)
Dimensions	188mm x 94mm x 51mm (7.4in x 3.7in x 2in) [LxWxH]
Weight	680g (1.5lbs)
<b>Internal Components</b>	
Real-time Clock	✓
Accelerometer	6 Axis, Up-to ±16g acceleration full scale
GPS Receiver	1Hz, 4.9m (16ft) accuracy
Cell Receiver	3G (GSM) or 4G LTE (CAT-M1)
WiFi	2.4GHz 802.11n
VuLink Functionality	✓
Inputs	6 inputs – 3.3-24V for Blue, Green, Orange, and White; 12-24V for Red
Outputs	2 outputs – Ground when triggered, 36VDC/1A maximum
Radar Support	Decatur Future: Stalker, MPH Ranger, and Kustom
Pre-event buffer capacity	Configurable: 0 to 60 seconds
Memory	256GB Industrial Grade - 230GB available for all recordings ECA configurable for: 10, 20, 40, 80, and 100GB
<b>Recorder</b>	
Codec	H.264
Bit Rate	2, 4, 6 mbps
Frame Rate	15, 30 FPS
Container	MP4
Audio	AAC, mono @ 32Kbps

## PoE Switch Specifications

<b>Power</b>	
Operating Voltage	9 to 36VDC
On	No cameras - 0.42A @ 12VDC 0.23A @ 24VDC Standard 2 camera kit - 1.2A @ 12VDC 0.54A @ 24VDC
Off	15mA @ 12V (~180mW)
Power over Ethernet	IEEE 802.3af - 48VDC, 350mA max (15.4W) per port
Built-in Protections	Configurable low battery voltage protection
Number of Available Ports	4 Port Standard - 4 cameras or 3 cameras + MDT 8 Port (Optional) - 4 cameras + MDT
<b>Environmental &amp; Mechanical</b>	
Operating Temperature	-30 to 70°C (-22°F to 158°F)
Storage Temperature	-35 to 85°C (-31°F to 185°F)
Dimensions	167mm x 59mm x 140mm (6.58in x 2.32in x 5.5in) [LxWxH]
Weight	1kg (2.2lbs)
Vibration	Random: 1g @5~500 Hz Operating: MIL-STD-810G, Method 514.6, Category 4 Storage: MIL-STD-810G, Method 514.6, Category 24
Shock	Operating: MIL-STD-810G, Method 516.6, Procedure I, 20g Non-Operating: MIL-STD-810G, Method 516.6, Procedure V, 75g

## Mini Monitor Specifications

Screen Size	3.5"
Resolution	Quarter-VGA resolution [320 x 240]
Brightness	300cd/m <sup>2</sup>
Weight	450g (1.3lbs)
Dimensions	100mm x 125mm x 35mm (3.94in x 4.92in x 1.38in) [LxWxH]
Speaker	1.5 Watt 8Ω Speaker

## Camera Specifications

<b>10X Front Facing Road Camera</b>	
Field of View (D, H, V)	Wide (68°, 54°, 31°) Tele (6.7°, 4.9°, 4.0°)
Resolution	1920(H) x 1080(V)
Shutter Speed	1/1 ~ 1/10000 Auto controlled
Sensor Size and Type	1/3" CMOS Sensor
Maximum Zoom	10X optical
Focal Length	5.1mm~51mm
Focus	Auto or Manual
Focus Near Limit Setting	1, 1.5, 2, 3, 5 meters
Aperture	f/2.4
White Balance	Auto
Lux Ratings	Color: 0.5Lux B/W: 0.1Lux Digital Slow Shutter (10FPS) - Color: 0.125Lux B/W: 0.025Lux
<b>Wide Angle Back Seat Camera</b>	
Field of View (D, H, V)	140.5°, 120.2°, 65.3°
Resolution	1920(H) x 1080(V)
Shutter Speed	1/25 ~ 1/10,000
Sensor Size and Type	1/2.7" CMOS Sensor
Focal Length	2.9mm
Focus	Fixed
White Balance	Auto
Lux Ratings	Color: 0.2Lux B/W: 0.02Lux





## EVO-HD Upload System

### Wireless Uploading via Cellular Network or Wi-Fi

- No laptop or MDT required for file transfer, but can be used for uploading data.
- Secure and Automatic file transfer upon successful connection to the network.
- Automatic removal of files from the internal memory after the files are successfully transferred and verified for integrity.
- If the connection to the network is lost, or if the transfer is interrupted, the files will be saved and the software will resume transfer when it reconnects to the network.
- After successful transfer from the EVO-HD to the cloud, the files will be automatically uploaded into VuVault.com.
- All file transfers will be logged for a complete audit trail.



### Wireless Security

- EVO-HD units utilize Digital Ally's wireless transfer module or internal cell modem, which allows for automatic encrypted (WPA or WPA2) transmission of video and metadata whenever in range of a configured access point over a cellular network.
- During a wireless upload, a SHA-256 checksum is initiated to validate and ensure the integrity of the video file during the file transfer.
- The video is recorded in a standard MP4 format.
- File integrity check function identifies if a file has been altered or is corrupted.
- Integrity Check Report can be quickly generated to illustrate detailed information
- Automated file transfer assures chain of evidence.
- Chain of Custody report can be generated as an unalterable, encrypted PDF file to illustrate all activity associated with the recorded event file.



### Wireless Updating

- Instantaneously keep an entire fleet current with the latest updates, newest features, and individualized device configurations without having to visit each vehicle.
- EVO-HD can wirelessly receive firmware and configuration file updates when it connects to a configured wireless access point.



## Automatic Activation

### **Internal VuLink technology included in the EVO-HD: Patented Automatic Activation**

Digital Ally's VuLink was the first product on the market to fully integrate in-car cameras and body worn video. The patented technology behind VuLink enables wireless automatic activation of your In-Car Camera, Wireless Microphone, and Body Camera.

#### *VuLink Technology Features:*

- View all related video feeds at the same time: Video from both your In-Car and Body Camera will sync
- Hands Free: Automatically activates Body Camera and In-Car Camera Systems
- Eliminates Distractions: Reduce incidents of user-error and the need to continuously record

#### *Most Common VuLink Triggers:*

- Emergency Lights
- G-Force or Impact Events
- Vehicle Speed
- In-Car Camera System
- Gun Lock
- Seat Belt
- Emergency Radio Switch
- Motorcycle Kickstand
- Motorcycle Handle Bar Switch
- Trunk Latch
- Fire Suppression Systems
- Doors
- GPS Zones (with In-Car Camera System)
- 12 Volt Relay