



CITY OF GREENVILLE

"Danish Festival City"

411 South Lafayette Street

Greenville, Michigan 48838

Phone: (616)754-5645 Fax: (616)754-6320

infocity@greenvillemi.org

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CITY OF GREENVILLE

GREENVILLE, MICHIGAN

DEPARTMENT OF PUBLIC

SAFETY

2017

**NOTICE TO
BIDDERS**

The City of Greenville is currently accepting bids for 5 complete in-car video systems, including 10 Microphone / Transmitters with docking stations, video redacting software compatible with video management software. Also to include training on the use of the video system. All exceptions to the below listed specifications must be listed on a separate sheet entitled "Specification Exceptions" Each exception must be clearly documented, explained and returned with the bid.

TECHNICAL SPECIFICATIONS

DIGITAL SYSTEM AND COMPONENTS

- The DVR main unit shall contain the digital video/audio recorder, storage memory, GPS receiver, wireless microphone receiver, video display, speaker, internal microphone, internal passenger facing camera, internal forward facing road camera, IR LED's for internal illumination, and backlit system controls.
- The unit shall utilize an extremely compact, high-quality, color, 12X optical zoom video camera, mounted in an external housing.
- The mirror housing (Control Head) of the system shall be approximately 48mm (1.9 in.)(D) x 279mm (11 in.) (W) x106mm (4.7 in.) (H) in size.
- The shell construction of the system shall be of Poly Carbonate high impact, high heat resistant plastic.
- The system shall have an operating temperature range of- 4 F to +158 F (-20C to+70C) degrees.
- The system shall be capable of recording pre-event data up to a minimum of 30 seconds for each of the two recording channels, adjustable in 6 second increments.
- The rear view mirror shall house a minimum of 3.5" diagonal, 640x480 Ultra-Bright 500 NIT TFT LCD Color Monitor, which shall be mounted behind the mirror glass. The monitor shall be invisible when not in operation or when used in covert mode or monitor off mode. The monitor must meet the reflectivity requirements set by the National Highway Traffic safety Administration (NHTSA).
- The system must have a password code to login and use the system.
- The system must have an optional tamper resistant screw which can be installed in the access door, requiring a corresponding security key to unlock the access door to the SD card.

- The system must have the ability to mark a segment of video to show current GPS location.
- The system must be able to power on and off with the vehicle's ignition, and provide at least a 24 hour configurable automatic shutdown timer.
- The system shall have the following minimum controls.
 1. Covert Mode
 2. Mark
 3. Record
 4. Stop
- The system shall have the ability and connectors for the following minimum connections.
 1. Power in/Triggers in
 2. External Camera in
 3. Wi-Fi Antenna
 4. USB 2.0 Port
- The system shall be capable of automatically entering record mode from any of the following minimum triggers
 1. Activation of emergency lights
 2. Activation of siren
 3. Pressing the Record button on the control system
 4. Activating Remote Microphone Transmitter (RMT)
- The system shall internally house an embedded accelerometer for measuring acceleration, braking, cornering, collision, and vertical movement.
- The operator may stop the recording while the emergency vehicle lights and/or sire are still on.
- Recorded information cannot be overwritten, edited or deleted while in the Digital Recorder. It may only be erased using the PC application program and must require a password.
- At a minimum, the following information shall be available to be recorded to the Secure Digital media and be stored as Metadata.
 1. Text-(i.e.: officer name, vehicle ID, agency, etc.)
 2. Date/Time-MODNR HR:MN
 3. Vehicle speedometer speed
 4. Light-bar Activated
 5. Brake Depressed
 6. Siren Activated Event Mark
 7. Wireless Microphone On/Off
 8. Accelerometer X,Y,Z axis data
- The following information shall be displayed on the monitor, but not recorded to the media
 1. Record time left-A warning shall be displayed when there is 30 minutes of record time remaining and when there is 10 minutes of record time remaining
 2. Wireless file transfer status
 3. Audio status
 - 4.
- Internal memory for the time, date and settings shall be retained by a method to assure information is secure from loss for minimum 5-year lifetime expectancy.

CAMERAS

- The DVR main unit must contain both an embedded road facing camera and separate built in passenger facing camera.
- The system must support an auxiliary front camera and auxiliary passenger camera, or a backup camera.
- Auxiliary Front Camera
 1. The main camera shall be no larger than 2"x2"x3" in size.
 2. The approximate weight of the camera shall be no more than 6 oz.
- Auto Focus
- The camera system shall have the following Zoom functions:
 1. Press "ZOOM IN/OUT". Toggles between Zoom In/Out up to 10x optical.\
 2. Press "Auto Zoom". Zooms in to preset magnification, autofocuses and Zooms back out to widest setting.
 3. The system memorizes magnification after power is OFF, so when power is ON again, system sets same magnification as before.
 4. Auto Zoom setting has fixed magnification.
 5. Auto Focus ON/OFF controls are located on the front camera.
- The auxiliary front camera must meet the following minimum specifications:
 1. 1/4" Super HAD CCD Imager, 1/4 inch CCD
 2. Auto White Balance, Auto Iris
 3. 500 TVL Resolution
 4. 10x Optical Zoom, 12X digital Zoom; Total 120x Zoom
 5. Auto Focus (manual via menu)
 6. View Angle-Tele: 4.64" (H) x 3.52" (V), Wide: 54.44" (H)x 41.42" (V)
 7. 1LUX Standard Mode
 8. 0.7 LUX Low Light (Night) Mode
 9. 50 dbS./N
 10. Auto Zoom
 11. Manual Zoom
 12. Auto Focus
 13. Manual Focus
 - 14.
- Internal passenger Camera
 1. The internal camera must meet the following minimum specifications:
 - Sony EX view 113 Super HAD CCD image sensor
 - FOV: 96" (V) x119" (H) x 141" (D)
 - 0 LUX Sensitivity with IR LED's
- Other Cameras
 1. System must allow for the input of a backup camera provided by the manufacturer of the video system, and allow the recording of two video channels (2) simultaneously. The backup camera image must be displayed on the rear view mirror unit when the vehicle is in reverse.

10 MICOPHONE/TRANSMITTERS WITH DOCKING STANTIONS

- The system shall come equipped with both a remote microphone transmitter (RMT) and an in-car microphone.
- The remote microphone(s) and internal microphone must be recorded on separate audio channels. The system shall also have the ability to record up to (3) separate audio sources simultaneously.

REMOTE MICROPHONE TRANSMITTER (RMT)

- The RMT system shall utilize a 2.4 GHz digital Spread Spectrum, Dual Receiver Capable remote microphone system. This shall enable two officer-worn remote mics to be used at the same time.
- The nominal range of the RMT system shall be 1000 feet.
- The RMT system shall be capable of automatically finding a clear channel utilizing automatic frequency hopping.
- The RMT system shall be capable of automatic activation when Record Mode is activated, by pressing "Record" or by activation of any of the system activation triggers.
- The RMT shall have Low Battery, Operating State, and Out of Range indicators.
- The operator shall be able to remotely activate the system's RECORD mode by pressing a button on the RMT.
- Once the RMT transmitter is activate, it shall only be deactivated by stopping the RECORD function manually via the STOP button on the control head.
- The RMT shall have an internal microphone and shall also be equipped with an external mic jack.
- The RMT shall be provided with a lavalier microphone and cable that is connected to the transmitter via a miniature connector.
- The RMT shall contain an internal antenna. Transmitters that rely on the microphone cable for an antenna, or which utilize an external antenna shall not be permitted.
- The RMT must have both a vibrate (silent) and audible mode.
- The RMT shall have the capability to engage a 12Vdc output alarm for use with auxiliary police equipment.
- The RMT shall come with a re-chargeable battery and battery charger/docking station. Must be capable of having a nominal operating time of approximately 8 hours and 14 days of standby time, when fully charged.

In-Car Microphone

- There shall be a microphone mounted inside the Mirror body for interior audio recording.
- There shall be a microphone jack on the system for connecting a rear seat microphone which is also provided with the system
- The unit shall include an integrated GPS receiver so the recorded video may be marked with real-time latitude and longitude (LAT/LONG) position data, vehicle speed.
- Greenville Department of Public Safety receiver shall be used for synchronization of date and time

MEDIA/VIDEO STORAGE

- The system shall use an industrial grade Class 10 SD form factor memory module, with a standard size of 32 GB for video storage.
- The system shall be capable of recording a minimum of 1 hour/GB at High Resolution. (8 hours record time)
- The system shall be capable of recording a minimum of 2 hours/GB at Standard Resolution. (16 hours record time)
- The system must provide media storage redundancy inside the vehicle in the event the primary storage media becomes unusable.

- Standard full speed video recordings are made at 30fps. (frames per second)
- The following minimum video storage resolutions shall be selectable through a menu:
 1. Very high 640 x 480 at 30 fps (30MB per Event Minute)
 2. High: 640 x 480 at 30 fps (16MB per Event Minute)
 3. Standard: 640 x 480 at 30 fps (9 MB per Event Minute)
- The video storage format shall be MPEG 4 h 264 codec
- The following record frames per second (FPS) shall be selectable through a menu:
 1. 30 FPS
 2. 15 FPS
 3. 10 FPS
 4. 5 FPS
- The system's operating software and device configuration shall be capable of being field updated wirelessly through the back office software.
- The system shall be capable of its initial setup by loading encrypted code onto the memory card and inserting it into the unit.
- The memory card must be located behind a locked door requiring a special access key.

POWER REQUIREMENTS

- The power supply for the system shall require no more than 2 amps. 10-13.8 V DC
- The power supply must be heavily filtered and regulated to avoid interference
- The system shall be fused between the battery (12v source) and the system
- The system shall provide an internal battery backup that will provide up to 30 minutes of continuous operation during unexpected power loss. This will allow for the system to automatically power down correctly and prevent any loss of data files.
- Over voltage protection and surge protection shall be provided.

WIRELESS TRANSFER

- The system shall support uploading video files utilizing a wireless 802.11 (a, b/g/n)
- The system must use WPA or WPA2 (PSK and AES) encryption for enhanced security
- The system must automatically connect to the network once the vehicle enters a designated hot spot
- The system must automatically transfer the data and must not require manual intervention
- The system must provide real time feedback to the operator regarding wireless activity without any user intervention
- The system must transfer all files including the video, audio, metadata and any other files associated with the video events.
- The system must automatically remove the files from the secure digital flash card after the files are successfully transferred and verified for integrity
- If the connection to the network is lost, or the transfer is interrupted, the files must be saved and the transfer must resume where it left off when it reconnects to the network
- The in-car video system must be able to wirelessly receive device configuration and firmware files from the back office computer

DEVICE CONFIGURATION

- The in-car device configuration shall be made using the office software. No device configuration settings shall be made inside the vehicle. Device configurations may be updated manually through an SD card, or wirelessly through an 802.11a/b/g/n access point
- The following minimum device configuration options shall be available using the back office software
- Time and date with local time zone assignment
- Ignition shutdown timer up to 24 hours
- Low power standby up to 10 days
- Day and night mode LCD brightness
- Login mode: username, user id, or disabled
- Event profiling at the time of the traffic stop must be available. The operator has the option to enter the event type, incident, number, age, gender, and race of the person involved in the event.
- Pre-event recording (audio and video) must be available up to 30 seconds\
- Multiple record frame rate settings shall be available up to 30 seconds
- The system shall be capable of recording to internal memory and external memory. If external memory is chosen, the internet memory becomes redundant memory
- Recordings must be able to be ended by record button, configurable timer, or by deactivation of a triggered sensor.
- The system accelerometer sensitivity must have the ability to be customized by all of the following parameters: acceleration, braking, cornering, collision, and vertical
- GPS information must be logged into metadata and configurable speed record activation triggers shall be available
- The system must provide at least 6 external input triggers. All input triggers shall be individually customizable by name, type (sensor or record trigger), and input voltage detection
- Each external input sensor must be capable of activating a 12Vdc output alarm
- The system administrator shall be able to configure multiple wireless upload parameters including Wi-Fi session intervals, authorized upload times, and multiple SSID's
- The system administrator shall be able to configure a home base location using Greenville Department of Public Safety coordinates which can act as a geophone for the in car video system.
- Each input sensor must have the ability to be associated to one of the in-car system cameras, allowing automatic switching of video channels based on the detected sensor.
- The system shall be capable of recording minimum of 1 hour/GB at High Resolution. (8 hours record time per channel)
- The system shall be capable of recording a minimum of 2 hours/GB at Standard Resolution (16 hours record time per channel)
- The system must provide media storage redundancy inside the vehicle in the event the primary storage media becomes unusable.
- Standard full speed video recordings a made at 30fps. (frames per second)

OFFICE SOFTWARE

- The office software shall support Windows Active Directory integration.
- Each user shall be assigned a unique user name and password.
- The administrator shall have the ability to create an auto archive policy based on workflow state and upload date.
- The administrator shall have the ability to create an auto delete policy based on workflow state and upload date.
- The office software shall support an Enterprise-level network environment for video access.
- Multiple video search filters must be available including (at minimum): date/time, operator name, vehicle name, event profiling data, workflow state, event type, and event trigger.

- The office software shall allow an authorized user to burn and export data DVD's and movie DVD's
- The office software shall allow video to be segmented into new videos without altering the original video.
- The office software shall allow a still image snapshot of a video to be exported as a jpg, bmp, or other common file format.
- Shall have the ability to generate multiple reports, including chain of custody, video detail, video summary, and device activity and operator history.
- All access and activity within the office software shall be logged and available to the system administrator.
- The office software must have the ability for an administrator to create customizable search fields.
- All future upgrades to the back office software shall be free of charge for the life of the product.
- Video redaction software compatible with video management software

Any questions regarding this bid should be directed to Interim Director Dennis Magirl, 415 S. Lafayette St. Greenville, Michigan, 48838; (616) 754-9161 ext. 1004 or dmagirl@greenvilledps.org.

The outside of the envelope should be clearly marked **"In-Car Video System BID"**

Bids will be received until July 25, 2017 at 2pm, at the office of the City Clerk, 411 S. Lafayette St. Greenville, Michigan, 48838, at which time they will be publicly opened and read aloud.

The City Council of the City of Greenville reserves the right to reject any or all bids and/or waive any defect bids and to accept any bid which it shall deem to be in the best interest of the city.

The mission of the City of Greenville, as a part of the Coalition of Greater Greenville, is to serve through leadership and action, to assure all citizens a collaborative, planned and visionary community.