City of Conway – Mayor's Office
1201 Oak Street
Conway, AR 72032
www.cityofconway.org

Invitation and Bid – 2010-09

INVITATION
TO THE VENDOR ADDRESSED:

Bidders are invited to furnish the items listed herein in accordance with the terms and conditions attached. **Sealed** bids must be in the hands of the Mayor not later than **10 am, Wednesday, January 20th, 2010** at which time all bids will be opened and read in the Downstairs Conference Room in City Hall. Successful bidders will receive purchase order, if necessary **within 30 days after the City Council approval.** ***Unsigned bids will be rejected.***

City of Conway, AR

In-Car Digital Video Recording System

***SPECIFICATIONS FOR DIGITAL RECORDING SYSTEM ***

QUANTITY: (11) In-Car Digital Video Recording Systems

SCOPE OF SPECIFICATIONS
These specifications describe the law enforcement In-Car Digital Video Recording System which will be used by the Conway Police Department.

A. System Description

1. The in-car digital video system shall consist of a digital video recorder, windshield mounted miniature color camera with zoom capability, color LCD monitor with audio, a bi-directional digital spread spectrum wireless microphone system, and a microphone mounted within the law enforcement vehicle. It shall be capable of providing a clear audio and video record of traffic stops, pursuits, sobriety tests, etc.
2. The digital video recorder (DVR) shall have no moving parts and shall use compact flash (CF) media that can withstand up to 50 Gs while recording for maximum reliability. All operator controls shall be mounted on the front panel. The DVR shall allow the simultaneous recording of two video sources and three audio sources plus multiple sources of metadata. The DVR shall be capable of operating within the range of interior temperatures found within a law enforcement vehicle without the need for supplemental heating or cooling. Systems utilizing hard drives or DVD media will not be considered
3. The windshield mounted miniature color camera shall utilize a Sony EXview® HAD CCD for maximum nighttime performance. It shall be fitted with an automatic zoom lens. The camera shall be extremely compact so as not to obstruct driver's view through windshield.
4. A compact color LCD monitor console shall be provided with a minimum screen size of 3.5 inches. The monitor console shall include a built-in speaker and shall have backlit operational controls which mimic those on the DVR so it can be secured in remote locations.
5. The officer worn wireless microphone must be capable of being automatically activated whenever the DVR is triggered into the RECORD mode, and deactivated whenever the DVR is put into the STOP mode. The automatic wireless microphone system shall use a rechargeable battery and shall be capable of being recharged within the vehicle or with a separate charger located at the post or precinct.
6. The DVR shall include an in-car microphone that can be mounted anywhere within vehicle. The DVR shall provide a third audio channel for recording conversations picked up by this microphone.
7. The DVR shall include an easily accessible USB port to accommodate the programming of unique user information through the use of a USB key.
8. The in-car digital video system shall include all cables and hardware required for installation

B. Digital Video Recorder – DVR

1. The DVR shall be designed for mobile applications. It shall mount in standard equipment consoles or glove boxes found in most law enforcement vehicles. It can also be mounted in any remote location of the vehicle (i.e., trunk, etc.). For absolute reliability, it shall have no moving parts and shall record onto compact flash (CF) media.
2. System shall not require use of an over head (one-piece) console with integrated LCD monitor and controls.
3. System shall not require removal of the OEM factory radio or be mounted in the OEM factory radio location.
4. System shall not require removal of the OEM approved rearview mirror.

5. System shall not use an in-car hard drive or laptop grade hard drive.
6. System shall not record to DVD media in the vehicle.
7. The DVR shall include a programmable pre-event recording mode allowing it to capture images up to 60 seconds prior to the activation of the RECORD mode.
8. The DVR shall utilize an MPEG-4 codec that has been optimized for law enforcement applications. Systems recording in multiple formats will not be considered. The codec shall allow for simultaneous recording of two video channels and three audio channels as well as multiple sources of metadata.
9. The MPEG-4 codec used shall provide good quality real-time video images under both daylight and nighttime conditions whether the vehicle is stationary or moving.
10. Video must be signed using PKI encryption.
11. The DVR shall include an internal GPS receiver to provide vehicle position, course and speed information. The GPS receiver shall also be used to set the internal DVR clock to the proper time and date so that all vehicles display and record proper time.
12. Digital video files shall be transferred from the DVR by any of the following
    a. Removal of the compact flash card
    b. Through the DVR's Ethernet connection
    c. Automatically via the DVR's internal 802.11 (a, b/g) wireless LAN card.

13. The front panel of the DVR shall have backlit controls for: RECORD, STOP, PLAY/PAUSE, FAST FORWARD, FAST REVERSE and TRACE.
14. The front panel of the DVR shall have lighted indicators for: POWER ON, RECORD and PLAY.
15. A USB port shall be provided on the DVR front panel to accommodate the transfer of user information from a data key.
16. The DVR shall be provided with a minimum 8GB compact flash card with expansion capability to include larger size CF cards in the future.
17. The compact flash card shall be easily removable to accommodate file transfer when wireless transfer is not the preferred method of delivering files to the file server.
18. A locked door shall be provided on the front panel of the DVR to secure the removable compact flash card as well as the MENU select button and power control switch. The DVR RECORD function shall be disabled whenever this front door is open.
19. The power control switch shall allow the DVR to automatically power on thirty seconds after the vehicle's ignition is switched on.
20. The DVR shall automatically power down after the vehicle's ignition is turned off provided the DVR is not in RECORD and is not in the process of downloading files through its built-in 802.11 (a, g) wireless link.
21. Manual activation of the DVR into the RECORD mode shall be attainable by means of a backlit push button on the face of the DVR.
22. Automatic activation of the DVR into the RECORD mode shall be accomplished by any of the following user programmable methods:
    a. Activation of the vehicle's emergency lights
    b. Activation of the vehicle's siren
    c. Activation of any auxiliary input.
    d. Activation of either 1 or 2 (2 is an option) wireless microphones
    e. Exceeding of a predetermined GPS speed threshold

23. The DVR shall provide a means to tag an incident at the time it is recorded with a priority designation. There shall be five priority levels available and they shall be able to be defined/assigned by the agency upon system set-up.
24. Activation of the DVR's STOP mode shall be accomplished only by pressing the backlit STOP button on the face of the DVR.
25. When the DVR's backlit PLAY button is pressed a list of all prior recordings shall appear on the LCD monitor screen. The user may select any recording to view using function keys on the face of the DVR.
26. It shall be impossible to edit or delete recordings from within the vehicle.
27. The DVR shall be capable of recording the agency's choice of the following as
    a. Position – longitude and latitude
    b. Speed
    c. Officer name – always displayed
    d. Date
    e. Siren
    f. Lights
    g. Brake
    h. Mic 1, Mic 2, Mic 3
    i. Auxiliary 1
    j. Auxiliary 2 / Collision Sensor
    k. RECORD trigger reason
    l. Vehicle Speed Sensor (VSS)
    m. Voltage, measured in DVR
    n. Temperature, measured at DVR processing IC.
    o. Auxiliary interface (RADAR)
    p. Recording time remaining/storage available – always displayed
    q. metadata and/or on screen display:

28. When in the STOP mode, the system's LCD monitor shall display the remaining storage capacity in bytes. When in the RECORD mode, the system's LCD monitor shall display the remaining storage capacity in an HH:MM format. An audible beep shall warn the operator once each minute when there is thirty minutes, or less, time remaining.
29. The DVR shall be housed in an extruded aluminum case and utilize die cast front and rear panels for maximum strength and to provide full RFI/EMI shielding and immunity.
30. The rear panel of the DVR shall have connectors for:
    a. Camera 1
    b. Camera 2
    c. Wireless microphone 1
    d. Wireless microphone 2
    e. Backseat microphone input
    f. Remote input
    g. GPS antenna
    h. Wireless LAN antenna
    i. Ethernet
    j. Power/lights/siren/auxiliary 1/auxiliary 2/brake - inputs
    k. Radar (RS232)

31. The DVR shall not exceed 7" X 6.25" X 2.5" (W x D x H).

32. The DVR shall operate on 9 VDC to 18 VDC. Maximum current shall not exceed 1.5 amperes.
33. The DVR shall be manufactured in a factory that is IS0-9000 certified.
34. The DVR shall be FCC Part 15 accepted.
35. The DVR will provide a minimum resolution of 720x480
36. Systems utilizing a Windows Operating System (non-embedded) will not be considered.
37. Systems that require mounting of any component in the trunk will not be considered.

C. Compact Low-Light CCD Color Camera

1. The compact low-light CCD color camera shall use a Sony EXview® HAD CCD image sensor to provide high quality nighttime images while minimizing blooming and glaring from bright sources of light.
2. The compact low-light CCD color camera shall have a normal low-light sensitivity of 0.5 lux and uses frame accumulation technology to extend its low-light capabilities to 0.03 lux.
3. Frame accumulation shall be user selectable via a pushbutton on the rear of the camera housing allowing the user to choose four progressively higher ranges of sensitivity.
4. An auto-zoom feature shall be provided to allow the camera to zoom in to a factor of 8X, pause, and then return to its widest angle position by pressing and releasing a single push button.
5. The low-light CCD color camera shall provide these controls on the back of the camera:
    a. Zoom-in
    b. Zoom-out
    c. Focus
    d. Back Light
    e. low-light frame accumulation

6. All of the camera's user controls shall be backlit and mounted on the rear panel for easy single-handed operation. A switch shall be provided to turn off the back light feature for covert operation.
7. The compact low-light color CCD camera shall include a 12X optical zoom lens enhanced by12X of digital zoom and shall provide a total 144X zoom capability.
8. The compact low-light color CCD camera shall be fitted with an auto-iris, auto-focus lens. Automatic white balance shall also be provided.
9. The compact low-light color CCD camera shall not exceed 2.0" x 2.0" x 3.7" (W x H x L) or weigh more than 9.7 ounces.
10. The compact low-light color CCD camera shall operate on 12 volts DC provided by its own power supply within the DVR. All connections to the camera, for power and video, shall be made by a single cable that attaches using a quick release connector.
11. The compact low-light color CCD camera shall mount to the vehicle windshield via an easy-to-remove (without tools) mount, containing two joints that allow for 360° of rotation. This shall permit the camera to aim through the windshield, left or right side windows, or on the back seat area. It shall be mounted in the neutral area between the dual airbag deployment zones.
12. The compact low-light color CCD camera shall be manufactured in a factory that is ISO-9000 certified.

D. Compact Color LCD Monitor

1. A compact color LCD monitor shall use a full color, LCD Active Matrix (TFT) screen that measures 3.5 inches diagonally. Monitors larger than 3.5” or monitors utilizing touch screens will not be accepted.
2. The compact color LCD monitor shall have full audio capability and shall include a 1-inch internal speaker.
3. The compact color LCD monitor shall provide backlit operational controls mimicking those on the DVR so it can be secured in remote locations. The universal monitor console controls shall include:
    a. Brightness
    b. Volume
    c. Record
    d. Play/Pause
    e. Stop
    f. Rewind
    g. Forward Search
    h. Reverse Search
    i. AUTO button/indicator – allows the user to set the LCD display to Auto mode which disables the display when the system in standby
    j. TRACE - used to mark a position in a recording for later instant retrieval
    k. menu – to access programming options

4. The compact color LCD monitor shall operate on 12 volts DC provided by a dedicated power supply within the DVR. All connections for video, audio and power shall be provided via a single cable fitted with a quick release connector.
5. The compact color LCD monitor shall not exceed 5.625” x 1.625” x 3.75” (W x D x H). It shall not weigh more than 11.4 ounces.
6. The compact color LCD monitor shall operate on 12 volts DC provided by a dedicated power supply within the DVR. All connections for video, audio and power shall be provided via a single cable fitted with a quick release connector.
7. The compact color LCD monitor shall be provided with an adjustable mounting bracket that will allow it to be mounted in a variety of locations within the law enforcement vehicle.
8. The compact color LCD monitor/control panel shall include an AUTO Mode Screen Control. This control will allow the monitor to automatically turn on when the DVR RECORD or PLAYBACK mode is activated and automatically turn off when the DVR STOP mode is activated.
9. The LCD monitor/control panel shall display the approximate amount of storage remaining on the compact flash in an HH:MM format. An audible beep shall warn operator once each minute when there is thirty minutes, or less, time remaining.
10. The compact color LCD monitor shall be manufactured in an ISO9000 certified facility.

E. 2.4GHz Digital Wireless Microphone

1. The 2.4GHz wireless microphone shall utilize bi-directional digital spread spectrum communications between itself and its associated transceiver, hereafter referred to as base unit, in order to send clear audio from the user back to the DVR, while providing a patented (Patent No. 7,119,832) bi-directional data and control path from the DVR to the wireless microphone.

2. The 2.4GHz wireless microphone shall allow the operator to remotely activate the DVR's RECORD mode by pressing a button on the wireless microphone transmitter.
3. The DVR shall automatically activate the 2.4GHz wireless microphone's transmit mode whenever the DVR is placed into the RECORD mode by any method of activation.
4. Once the wireless microphone transmitter is activated, it shall only be deactivated by stopping the RECORD function manually via the STOP button on the DVR.
5. When inserted into the charging receptacle of its base unit, the wireless microphone transmitter shall synchronize with its base through the exchange of any one of more than sixteen million, randomly selectable, digital spreading codes. Any other wireless microphone transmitter that may have been previously synchronized with that base shall become unsynchronized.
6. The wireless microphone system must allow for any 2 wireless microphones to be synced to a single vehicle via the method described in 1.5.5.
7. Any 2.4GHz wireless microphone transmitter shall operate exclusively with any vehicle with which it is synchronized.
8. Each 2.4GHz wireless microphone shall automatically detect other systems, or RF (radio frequency) noise, on the same frequency and change to a clear channel, as required, so that multiple vehicles can operate in very close proximity without cross talk or serious degradation of audio performance.
9. The wireless microphone transmitter shall be supplied with two lavaliere microphones, one with a 40-inch cable to allow the transmitter to be worn on an officer's duty belt, and one with a 9-inch cable to allow the transmitter to be worn in a shirt pocket. The cable shall be connected to the transmitter via a miniature right angle connector.
10. The wireless microphone must include an "Emergency" button. This feature may allow the wireless microphone to sync with the vehicle's Communications System to allow the officer to signal an emergency when the officer is away from the vehicle. Activating the emergency button will also initiate recording from the DVR.
11. The wireless microphone transmitter shall utilize an internal antenna. It shall not be permitted to rely on the lavaliere microphone cable as an antenna. Systems utilizing Diversity based antennas will not be acceptable.
12. The wireless microphone transmitter shall have an internal microphone to allow audio pick-up in the event that the lavaliere microphone becomes damaged or is disconnected.
13. The wireless microphone shall utilize an integrated, removable, stainless steel belt style clip.
14. The wireless microphone must utilize an internal vibrating mechanism to notify the officer of the microphones status. Systems utilizing an audible notification system will not be acceptable
15. The in-car base unit shall function as a transceiver to communicate with the 2.4GHz wireless transmitter and as a charger to charge the lithium-ion battery within the wireless transmitter. A tri-color LED shall be provided on this base unit to indicate the progress of the charging process. A second LED shall be provided to verify synchronization between the base unit and the wireless transmitter each time the transmitter is inserted into the base unit and to confirm that communication is established whenever the transmitter is activated.
16. One separate desk charger shall also be provided for each wireless microphone supplied to allow charging away from vehicle.
17. The 2.4GHz wireless transmitter shall include a lithium ion polymer battery that shall provide up to 10 hours of continuous transmit time, and 20 days of standby time. It shall be

able to fully recharge within 90 minutes. Wireless microphones using non-polymer lithium ion batteries will not function.

18. The RF power output of both the base unit and the wireless transmitter shall automatically adjust to maintain reliable communications. This will assure that communication is always accomplished at the minimum necessary power levels to extend battery life while minimizing unnecessary RF radiation.
19. The wireless microphone transmitter shall provide a 2 LED display that will indicate the following information to the operator:
    a. Link Status / Mute
    b. Error
20. The wireless microphone shall utilize a vibrate only alert. Systems utilizing an audible beep shall not be acceptable.
21. The 2.4GHz wireless microphone shall clearly transmit audio and data signals for distances up to 1000 feet.
22. The 2.4GHz wireless microphone system shall be FCC type accepted and shall be manufactured in a factory that is ISO-9000 certified.
23. The wireless microphone shall not be larger than:
    1.77”W x .87”D x 2.36”H
24. The base unit for the wireless microphone must not be larger than:
    2.75”W x 2.36”D x 2.95”H

F. Optional Configurations for the DVR

1. **DVR configuration for Motorcycles;** All of the specifications described in section 1.2 for the DVR and section 1.5 for the 900 MHz wireless microphone shall be applicable. The motorcycle configuration shall utilize the following weatherproofed components:
    a. **Weatherproof Compact Color LCD Monitor:** The weatherproof compact color LCD monitor shall include all of the specifications described in section 1.4 for the compact color LCD monitor. The monitor shall include weatherproofing for moisture resistance and a sunshield for optimal outdoor visibility.
    b. **Weatherproof Compact Color Camera:** The weatherproof compact color camera shall use a 1/3 inch Sony Super HAD CCD image sensor with 0.1 lux and a 3.8mm wide-angle lens. The camera shall be equipped with a sunshield for glare reduction and weatherproofing for moisture resistance.
    c. Vendors must be able to provide a reference list of at least 5 agencies that are using the motorcycle solution. Vendors unable to provide evidence where this solution is in full operation will not be considered.

G. Miscellaneous

1. The in-car digital video recording system shall be provided with all necessary cables, fuse holders and mounting brackets.
2. Each in-car digital video recording system shall be supplied with a comprehensive Installation/Programming/
   Operations manual.
3. Server must be able to automatically and wirelessly send software updates to vehicles/DVRs without human intervention. Systems unable to do this will not be considered.

H. Warranty

1. Each in-car digital video recording system shall be warranted by the factory to be free of defects in material and workmanship for a period of one year from the date of delivery. Service, if required, shall be provided by any of the manufacturer's factory service centers. During the one-year warranty period, the successful vendor shall pay shipping costs at the UPS Ground rate.
2. Extended Maintenance Agreements shall be offered to extend coverage after the one-year warranty expires.

I. Optional Equipment (The following options are required to be available)

1. **Infrared Rear Seat Camera:** An infrared rear seat camera shall be available for recording rear seat activity, even in total darkness. The 1/3 inch Sony Super HAD CCD camera shall have a 2.9mm fixed lens, include built-in audio and shall be automatically detected by the DVR to record simultaneously with the forward view. The rear seat camera shall also be equipped with IR LEDs and a CDS sensor to provide a color image in daylight, and an infrared enhanced black & white image at night.
2. **Radar Interface Capability:** An optional radar interface shall be available to integrate directly with all major radar manufacturers' products. Collected information shall include speed of the target, the "locked" target speed and the patrol vehicle speed. All information shall be displayed at the lower left of the monitor screen and recorded as part of the evidentiary record.
3. **Vehicle Impact Sensor with Battery Backup:** The vehicle impact sensor shall acknowledge significant vehicle impact and shall activate the RECORD mode on the DVR to capture the incident through the pre-event record function. In the case of a vehicle battery failure, the module shall also provide auxiliary power to the DVR for up to 10 minutes to maintain recording capability.
4. **Interview Room System:** The Interview Room System shall allow for the recording of interviews conducted. This system must interface with the video management system.

Additional Information

The bidder shall include all charges, including taxes, fees, and shipping (if applicable)

The bidder needs to include an anticipated delivery date. (if applicable)

In submitting this bid, it is understood by the undersigned bidder that the right is reserved by the City of Conway to reject any and all bids:

Contact Information: Ralph Screeton
Ralph.screeton@cityofconway.org
City of Conway Police Department
(501)450-6120

Bid Specifications can be obtained from our website:
www.cityofconway.org

****Please be sure to mark envelope:**
Bid Number 2010-09
Bid Opening Date: Wednesday, January 20th, 2010

City of Conway
2010-09 Digital Video Recording System
Bid Opening Date: Wednesday, January 20th, 2010
City Hall - Downstairs Conference Room @ 10:00am
www.cityofconway.org

Total Cost of In-Car Digital Video Recording System

$ _____

Unsigned bids will be rejected:

Authorized Agent Bidding on this project:

_____
Company Name

_____
Company Representative Name

_____
Representative's Signature

_____
Address Email Address

_____
City State Zip

_____
Telephone Number Fax Number

_____
Date

Please feel free to submit additional information on this bid on a separate piece of paper; however this sheet should be included & signed with any bid submitted.

City of Conway

TERMS AND CONDITIONS

Important – Read Carefully

By Submission of bid, bidder certifies that he has read all terms and conditions and that bid is submitted in accordance therewith.

1. Prices quoted will be considered to be net prices unless otherwise stated by the bidder. Cash discounts requiring payments in less than 30 days will not be considered in making awards.

2. Prices quoted shall be FOB Conway unless otherwise specifically stated on proposal. In either case, delivery charges must be prepaid.

3. All fees and taxes shall be included in prices quoted.

4. Bidder certifies that he will make delivery of items for which he bids within 10 days after receipt of award – unless otherwise specifically stated. Time of delivery in excess of 10 days may be considered a factor in making awards.

5. In case of default of contractor in making deliveries as per contract, the City may procure the articles or services from other sources and hold the contractor responsible for all excess costs occasioned thereby. Bidder's record as to satisfactory performance under previous contracts will be considered a factor in making awards and retention on bid lists.

6. The City reserves the right to reject any or all bids, in part or in whole and to waive information in bids received.

7. If not otherwise specified, bidder must furnish brand names with catalog number, if any, on items which are offered as "equal." In all such cases the burden of establishing equality is upon the bidder and failure to do so within a reasonable time may result in rejection. Alternative bids will not be considered unless no other type bid for the item is received.

8. In the case of equal or tie bids, preference will be given to Arkansas bidders. Other than as stated in the first sentence, awards on tie bids will be made at the discretion of the purchasing official. In such cases, "splitting" will be avoided and awards of previous contract(s) to one or more of the bidders will not be a factor.

9. In the event that bidder is unable to furnish all of an item, bids on portions thereof may be considered.

10. Final inspections and acceptance or rejection will be made after delivery. Items rejected because of non-conformance shall be removed and replaced immediately with those which meet specifications, all at the expense of the contractor. In the event that necessity requires the use of non-conforming items, payment therefore will be made at a proper reduction in price which shall be not greater than contractor's actual cost by purchase, fabrication, manufacture or other production method plus transportation paid to carriers. All costs in connection with testing items that do not meet specifications shall be paid by contractor.

11. 11. Quality, time of performance, probability of performance, and location of bidder will be factors in awards of all contracts.

12. The City reserves the right to purchase any, all or none of the items listed, in combinations thereof that may be in the best interest of the City of Conway.

13. The City reserves the right to change any specifications, terms and/or conditions at any time, with adequate notice in writing to bid invitees of those changes, if any.

14. The City is qualified for "GSA" pricing schedules, if available and applicable.

15. The City reserves the right to waive any informalities or minor defects, but this shall not be construed to indicate waiver of any specification, term and/or condition unless in the best interest of the City in the judgment of the City.

16. **CONSTRUCTION/INSTALLATION:** Any construction work that is worth $20,000 or more must comply with Arkansas Code Annotated § 22-9-204.

17. **PROHIBITED INTEREST CONDITION:** No official of the City authorized on behalf of the City to specify, plan, design, negotiate, make, accept or approve, or take part in specifying, planning, negotiating, making, accepting or approving any construction or material purchase contract or any subcontract in connection with any purchase made by the City of Conway shall become directly or indirectly interested personally in the purchase in the purchase or any part thereof.

18. **EQUAL OPPORTUNITY IN EMPLOYMENT:** All qualified bidders will receive consideration without regard to race, color, religion, sex, age, disability or national origin.