

Digital Video Capture & Retrieval System

SPECIFICATIONS



Alabama Department of Public Safety

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**Alabama Department of Public Safety
Digital Video Capture & Retrieval System
Specifications**

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Section 1 - General Information

1.1 Purpose

The Alabama Department of Public Safety (DPS) identifies these technical requirements and specifications for the procurement and installation of a digital in-car video capture and retrieval system as described in this Invitation to Bid (ITB). DPS currently operates sixteen Trooper Posts throughout the state, with five Posts currently using a legacy digital in-car video system.

The primary goal of this ITB will be to place a bidder on contract with the State of Alabama, to begin acquiring systems for the DPS Trooper Posts that currently are not operating a digital in-car video capture and retrieval system. The secondary goal of this ITB is the future upgrade of the five DPS Trooper Posts that are currently using another system. The upgrade will not be the primary award bid criteria and will be listed as a separate line item for future consideration. All State agencies, local government and schools may also elect to use this contract to purchase a video capture and retrieval system in the future.

A successful bid package will consist of an all inclusive system for one Post installation. The bid must include all components; hardware, software, cables and cabinets required for the installation of a fully operational Trooper Post system with no additional charges or options to complete and meet the specifications and requirements described in this document.

Each successful bid package must include the following items:

1. Vehicle equipment package as defined in section 2 of this document.
2. Server, server storage, wired and wireless video transfer network and two video viewer workstation equipment packages.
3. Video Viewer and Management Software.
4. Installation of the entire system including the in-car equipment, server, server storage, wired and wireless video transfer network, video viewer workstation hardware and all software.
5. Training
6. Warranty and Maintenance/Support package.

Any and all costs incurred in the preparation of a bid in response to this ITB will be the responsibility of the bidder. The State of Alabama is not responsible for any costs associated with responding to this ITB.

News releases pertaining to this acquisition may be made only with prior written consent and approval of the specific text by the Department of Public Safety.

1.2 Required References

The digital in-car video system shall have a proven, reliable record in actual vehicular use under a variety of conditions. The vendor must have a record of long term use by other law enforcement agencies of at least 2 years.

- Bidders must possess, at a minimum, the following experience: 2 years in-field operational experience with digital video systems prior to this ITB. Bidders without this experience and demonstrated record of accomplishment shall not be considered responsive to this ITB. The bidder shall also provide business and financial history upon request. Bidders must provide, with their bid, a minimum of three (3) written professional references. Two (2) written references must be from law enforcement agencies that have a current customer relationship with the vendor. This list will include the following information for each customer:
 - 1) Firm or agency name
 - 2) Firm or agency address
 - 3) Name of contact person
 - 4) Position Title of contact person
 - 5) Telephone number for contact person

* Failure to provide complete and/or accurate information will be cause for bid rejection. DPS reserves the right to contact any customer reference, whether or not furnished by the bidder. DPS may investigate past performance of the bidder in respect to its successful performance of similar projects, compliance with specifications and contractual obligations. The vendor's ability to deliver a product or service on schedule, its timely payment of suppliers, subcontractors, and employees will also be used to evaluate its qualifications, and will be criteria to eliminate a bidder from the process.

1.3 Definitions

“Recommended, Should, May;” state preferred practices that DPS “may” deviate from.

“Will, Shall, Must;” indicate mandatory key specifications or items that DPS requires a vendor to not deviate from to meet the requirements of the ITB.

1.3.1 Archival Storage: A storage location or device which videos are moved from the server storage location after a designated amount of time or that can be used as a form of backup.

1.3.2 Chain Of Custody: The chronological documentation of the movement, location and possession of evidence.

1.3.3 Data integrity: The accuracy of data in that the data is identically maintained during transfer, storage and retrieval.

1.3.4 Digital Asset: Recorded video, audio and associated metadata.

1.3.5 Download: The transfer of the digital asset from the DVR to server storage.

1.3.6 Force Majeure: Acts of God, strikes, or lockout; acts of public enemies; insurrection; riots; epidemics; earthquakes; fire; floods; civil disturbances and explosions.

1.3.7 Image Capture: Making a photographic or electronic copy of a single frame of video which can be exported from the viewer software.

1.3.8 Large Post: A Post that has between 41 and 85 vehicles.

1.3.9 Log File: A record of actions, events and related data.

1.3.10 Lux: A measure of the apparent intensity of light hitting or passing through a surface.

1.3.11 Medium Post: A Post that has between 21 and 40 vehicles.

1.3.12 Metadata: Data, embedded within the video file. This may include but is not limited to the locations where the content is stored, dates and times, application specific information, and permissions.

1.3.13 Native file format: The original form of a file.

1.3.14 Pinch Points: Points at which it is possible to be caught between moving parts, or between moving and stationary parts of a piece of equipment.

1.3.15 Removable Media: Storage media that can be removed from the DVR.

1.3.16 Retention Policy: The number of days video remains on the server storage location based on the date that the video is made and the video's classification.

1.3.17 Server Storage: A storage location on or attached to the server which digital video data is transferred to, from the in-vehicle (DVR) recorder storage location using a wireless or wired network connection.

1.3.18 Small Post: A Post that has between 1 and 20 vehicles.

1.4 Acronyms

DPS	Alabama Department of Public Safety
DVD	Digital Versatile Disc
DVD +/- RW	Digital Versatile Disc +/- Re-Write
DVR	Digital Video Recorder
DHCP	Dynamic Host Configuration Protocol
GHz	Gigahertz
GPS	Global Positioning System
HP	Alabama Department of Public Safety's Highway Patrol Division
IT	Information Technologies
IP	Internet Protocol
ITB	Invitation to Bid
LAN	Local Area Network
LCD	Liquid Crystal Display
MDT	Mobile Data Terminal
NIC	Network Interface Card
PC	Personal Computer
POE	Power over Ethernet
SDRAM	Synchronous Dynamic Random Access Memory
UPS	Uninterruptible Power Supply

1.5 Bid Criteria

Each bid package must contain the following information: price in the format shown below, a completed bid specification check list (see attachment A) and references as defined in this ITB. This bid is to be an all-inclusive system. The proposed hardware and software licensing agreements, extended warranties, and any other forms, contracts or documents that the bidder desires to be included as part of the contract must be submitted with the bid. The bid will be awarded to the bidder that meets all of the ITB specifications with the lowest sum of lines 1-19. However, warranty lines must be bid on or the bid will be rejected.

1. Vehicle Equipment package priced as one complete unit to comply with this ITB specifications. DPS will order multiples of the in-car package depending on each POST size.
2. Server equipment.
3. Online Data Storage package for a small sized post.
4. Online Data Storage package for a medium sized post.
5. Online Data Storage package for a large sized post.
6. Rack package including the rack, mount monitor, keyboard, and mouse.
7. Uninterrupted Power Source (UPS) for a small site.
8. Uninterrupted Power Source (UPS) for a medium and large site.
9. Networking equipment including the wireless access points, switch and wired docking stations.
10. Two viewing workstations for one post installation. (ie: 1 pair per post)
11. Viewing Software Package to complete one post installation.
12. Database Video Management Software package to complete one post installation.
- 13-16 Training packages as defined in this ITB.
17. Installation cost price per car.
18. Additional installation cost for hardware or software costs to finish one complete post installation.
19. Additional training cost.
 - Conversion cost per Terra byte per site if bidding (bidding is not required per section 5.7)
 - Second year extended warranty cost per car, server and software.
 - Third year extended warranty cost per car, server and software.
 - Fourth year extended warranty cost per car, server and software.
 - Fifth year extended warranty cost per car, server and software.

Section 2 -Vehicle Equipment Specifications

The standard vehicle equipment package shall consist of an in-vehicle embedded system, DVR, monitor, including embedded Global Positioning System (GPS), wiring harness, connectors, front facing and in-car cameras, wireless and wired in-car microphone, crash sensor, wired and wireless file transfer system. The in-vehicle DVR shall also support remote previewing of video, unit (vehicle) number, date, time, unit identification information, direction and global positioning coordinates.

2.1 Camera

- The forward facing camera shall have a minimum color resolution of 720x480 at a minimum frame rate of 30 frames per second. The camera shall be rated at 1.0 Lux or better.
- At a minimum, the forward facing camera shall capture a forty (40) degree horizontal field of view at twenty-four feet.
- At a minimum, the recorded image shall provide a clearly defined image of a license plate at eighteen feet.
- At a minimum, the recorded image shall provide a clearly defined image of a handgun at eighteen feet.
- The forward facing camera must have a minimum optical zoom capability of 10X.
- The in-car camera will have the ability to be configured for triggered or manual activation.
- The in-car camera can be color or monochrome. The in-car camera shall be able to record at a lower resolution from the forward facing camera.
- The in-car camera must have built-in infrared (IR) allowing for low-light operation.
- The in-car camera must have a wide area field of view.
- Both forward facing and in-car cameras must be configurable to default to auto focus. The manufacturer may provide an auto focus override system for manual focus mode.
- The DVR must be configurable for different recording modes for the forward facing and in-car camera allowing the in-car camera to record all of the time or programmed for manual activation.

2.2 Microphone

- Wireless microphone/transmitter system to capture audio outside of the vehicle. Wireless microphone must be capable of transmitting at the 900 MHz or 2.4 GHz frequency.
- The wireless microphone shall be able to be synchronized to the receiver in the vehicle.
- The wireless microphone shall have a built in microphone.
- The wireless microphone shall have a wired microphone input.
- The wireless microphone battery shall be recharged when docked in the wireless receiver.
- The wireless microphone battery must be capable of operating for a minimum of 10 hours continuously on a single charge.
- The wireless microphone shall have a minimum range of 1000 feet.
- Each installation will include a hard-wired microphone to capture audio from inside the patrol vehicle.

2.3 DVR

- The DVR must be capable of handling a minimum of two camera inputs.
- The DVR must have the ability to record from both cameras, both video and audio simultaneously.
- The storage medium must be lockable inside the DVR.
- The DVR must record pre-event video.
- The DVR must offer pre-event recording time, and must be configurable from 1-30 seconds.
- DVR internal storage must be, solid state memory, solid state hard drive, or automotive grade hard drive capable of storing video redundantly to both storage locations.

- The DVR must provide a minimum of 25 hours storage capacity recording at D1 resolution, at 30 frames per second.
- The DVR must provide at least three different recording resolutions of D1, VGA, and CIF.
- Video recorded at D1 resolution will not exceed more than 1.5 GB per hour.
- The DVR must be capable of being triggered (start recording) by a minimum of four different triggers. The triggers must be: activation of emergency lights, remote start from wireless microphone, activation from crash sensor, and manual start of recording from monitor.
- The DVR must be configurable for the input of patrol data for the classification of each incident from the monitor or control center.
- The DVR must use MPEG-4 compression of video.
- The DVR must be configurable for automatic logon in the car. No logon or user intervention in the car should be required.
- The DVR must have the ability to be programmed for all configuration parameters and updated from a remote location using the wireless and wired video transfer network.
- The DVR must be programmable for a unique identifier number which will be a minimum of 6 digits long. The vehicle number must be configurable from the back end server or viewer workstation.
- The DVR shall be a stand alone unit, not requiring the use of an external device such as a MDT, but shall be capable of interfacing with such as device.

2.4 Monitor

- The monitor must be a minimum of 3.5" diagonal, 640x480 color LCD minimum.
- The monitor must have the ability to be turned off or dimmed, without stopping the recording ability of the DVR.
- The monitor shall display a live picture while the system is on.
- The monitor shall display either camera forward facing, or rear on demand.
- The Control Center and Monitor shall have backlit controls for use in low light.
- The system must allow an officer the ability to view video while in their vehicle.
- The system shall not allow an officer to change or delete the video or audio before it is downloaded.
- The monitor console must include a built-in speaker.

2.5 GPS

- The DVR shall have an embedded GPS, with internal or external antenna.
- The DVR will use the GPS for the location metadata.
- The time and date shall be set for the DVR through GPS synchronization.

2.6 Video Transfer Network

- The Digital in-car video system shall have the ability to automatically transfer video from the vehicle once connected to the fiscal network or once in range of the wireless network.
- The bidder will provide both a wireless and wired network for the transfer of video to the server. The wireless network will be the primary connection method for most vehicles.

All vehicles must be able to use either the wired or wireless network for either a backup or primary connection.

- The wired network shall be Gigabit from DVR to server.
- The vendor will provide both the wireless access points as well as the wired docking stations.
- The video transfer network and the DPS LAN will be connected to different network adapters on the server. The video transfer network will be totally isolated from the DPS LAN.
- The hard wired and wireless connections will use at a minimum 128 bit encryption to create a secure connection for the transfer of video.
- An integrity check shall be used to validate the copy of video before being deleted from the DVR storage after the transfer from the DVR storage to server storage is complete.
- The DVR IP address shall be set by DHCP running on the storage server whether connected thru the wired or wireless network. The DHCP services must be set to serve only the network card that is connected to the video transfer network.
- If a video transfer is interrupted, the system shall have the ability to automatically resume the transfer from the last successful download once the vehicle comes back into range of the wireless network or is plugged into the wired network.

2.7 Battery Backup

- The DVR will be powered by a battery backup. The battery backup shall be capable of operating the system for a minimum of (10) ten minutes.

2.8 Crash Sensor

- The DVR will include a crash sensor independent of the vehicle, which can be activated from a 360 angle.
- The crash sensor will be mounted (not above a rear wheel) in such a way as to not activate accidentally.

Section 3 – Server and Storage

A standard equipment package including server, storage, video transfer network and viewing workstations will be provided with each Post installation. A Post installation size will be defined as small, medium or large. The Post size will be determined by the number of patrol vehicles assigned to the Post.

3.1 Server

- The bidder will provide with each post installation a Dell PowerEdge R710 server with Chassis for up to six 3.5” hard drives (224-4846).
- Server will have 5 year extended warranty, GOLD level coverage.
- The server will be configured for a minimum 40 GB operating system partition.
- The server will be rack mountable.
- At a minimum, the processor will have dual processor Intel Xeon processors, 2.8 GHz, 8M cache

- At a minimum, the SDRAM memory shall be 12 GB 1333 MHz memory or greater.
- At a minimum, there must be two (2) Gigabit Ethernet NIC's.

3.2 Storage

- The bidder will provide with each post installation Dell power vault storage.
- Server storage and database location must be configured as RAID 5 minimum with one dedicated hot spare drive provided per RAID.
- The system must have the ability to move video to archival storage: DPS does not use archival storage based on our current retention policy. DPS requires an archival option in the event our current retention policy is modified or to be used as a backup alternative in the future.
- The vendor must provide adequate server storage for each post to maintain a minimum of two (2) years storage of D1 resolution recorded video.
- DPS will provide the number of units per post at time of order.

3.3 Rack

- The bidder will provide with each post installation a Dell 2410 Server Rack Cabinet.

3.4 UPS

- The bidder will provide with each post installation a UPS. American Power Conversion (APC) UPS Model SUA2200RM2U for a small Post. American Power Conversion (APC) UPS Model SUA3000RM2U for a medium or large Post.

3.5 Monitor, Keyboard and Mouse

- The bidder will provide with each post installation a Rack Mounted LCD Monitor with integrated keyboard, mouse.

3.6 Network Equipment

- The bidder will provide with each post installation a Gigabit Power over Ethernet switch provided with 8 ports.
- The bidder will provide with each post installation a minimum of two (2) wireless access points.
- The bidder will provide with each post installation a minimum of two wired docking stations.
- The wireless access points and docking stations will be installed using CAT 6 Ethernet cable and patch cords.
- The wireless access points must have web based management software package to allow for remote configuration and troubleshooting.
- The wireless access points must at least meet or exceed being compliant with the Institution of Electrical and Electronics Engineers Draft 2 of the 802.11 N specifications.

3.7 Viewing Workstation

- Each post installation small, medium or large post will include two (2) viewing PC workstations provided by the vendor.
- The viewing workstations must be attached and joined to the DPS domain.
- The viewing workstations will run Windows XP.
- The viewing workstations will have DVD +/- RW drives that have the ability to write to both DVD +R and DVD -R media.
- The viewing workstations will meet or exceed the vendor minimum specifications for video card, processor and memory to run their version of the viewer software.

Section 4 – Video Viewer and Management Software

4.1 Video Viewer Software

- The viewer software should be active directory compliant for the user login with the agencies active directory domain.
- The viewer software will have the ability to define or configure several different types of users for access to video. User types should include but not be limited to: display only, full administrative rights and view or burn one's own video.
- The viewer software shall have the ability to make an image capture.
- The viewer software must provide the ability to burn DVD's, copy the video to external media and to the local PC hard drive from within the viewer software. No third party DVD burning software will be allowed.
- At a minimum, the viewer software must have the ability to search for video based on the following data: Date, time, car, officer, incident type, location.
- If the vendors viewer software outputs video in a proprietary format it must also have the ability to output files in a format compatible with Windows Media Player for playback without the need of the vendors viewer client.
- The viewer software must be compatible with both Microsoft Windows XP and Windows Vista.

4.2 Video Management Software

- The video management system shall maintain a chain of custody audit log of all video including the following information: Date and time video was downloaded, number of copies made of video and who made the copies.
- The video management system shall have a configurable retention policy based on incident type.
- Video must be retained for a configurable period of time from 1 day up to 760 days.
- The video management system will automatically remove video from the storage location based upon the Department's retention policy.

Section 5 - Requirements

5.1 Performance Guarantee and Liability Insurance

Performance Guarantee: Vendor will furnish within ten state working days after notification of award, a performance guarantee in the amount specified below as a guarantee to provide goods or services specified in the bid. It shall be made payable to the State of Alabama and can be a cashier's check, other type bank certified check (Personal/Company checks are not acceptable), banks or postal money order or surety bond issued by a company authorized to do business within the State of Alabama. Irrevocable letter of credit and certain U.S. notes and bonds may be accepted when approved by Division of Purchasing at least 24 hours prior to bid opening. Reference the bid number on the guarantee. The Division of Purchasing will be the custodian of the Performance Guarantee. The Performance Guarantee will be returned upon completion of the contract.

PERFORMANCE GUARANTEE AMOUNT: **\$1,500,000.00**

Liability Insurance: Awarded Vendor shall provide proof of general liability insurance to be kept on file with the Department of Public Safety and the State of Alabama Finance Department Division of Purchasing.

5.2 Training priced with initial installation and additional training

The vendor shall be responsible for conducting the training and all associated costs including but not limited to: staffing, training materials and equipment, travel expenses, lodging expenses, and meals.

- Officer training shall consist of the operation and use of the forward facing and in-car cameras, monitor and wireless microphone. The officers shall also be trained on the basic use of the viewer including finding video and the export of video to DVD or external storage. One (1) hour per officer.
- Installation training shall consist of a complete typical installation of all in car components. The training should enable DPS radio shop technicians to troubleshoot all in-car components, install and remove the in-car components and include an installation manual with part numbers, wiring diagrams and installation guidelines. Ten (10) technicians, four (4) hours per radio technician.
- Level one IT support personnel training shall consist of the basic officer training plus basic troubleshooting of in-car components. One (1) hour per technician.
- Level two IT support personnel training shall consist of the Level one IT training and adding users, adding cars, programming the DVR's remotely, troubleshooting network and server related issues. Eight (8) hours per level two support person.
- Additional training – Each bidder must include costs for additional follow-up training for officers, installation personnel, level one and level two IT support personnel as a separate line item. This additional training will not be primary bid criteria and will be an

optional purchase. The optional training could be used to train new personnel in the future.

5.3 Warranty

- The awarded vendor will provide a 1 year warranty for all software and in-car hardware installed in the original purchase price. The warranty will begin after the entire system is fully operational and accepted by the Department of Public Safety.
- It will be the responsibility of the vendor to provide updates and repairs for the in-car equipment, server hardware, server and viewer software including all parts and labor, at no additional cost to DPS during the term of the warranty contract.
- The vendor will provide all software upgrades during the contract period at no additional cost to DPS.
- The Dell Server, storage and network switch must all have 5 year extended warranty, GOLD level coverage from Dell.

5.4 Software Escrow

- The vendor shall place in an escrow account with the State of Alabama Finance Department Information Service Division the source code for software and escrow any updates, improvements, enhancements or modifications to the Source Code, within 15 business days of the source code change. The vendor shall service the software in a professional manner with qualified personnel. The vendor shall provide updated software documentation upon delivery of updated software releases at no charge. The vendor shall also provide training to enable DPS personnel to operate effectively and will insure that the updated software release is compatible with the application software originally installed and accepted by DPS.

5.5 Installation

- The bidder will be responsible for the installation of all equipment purchased by the DPS for the in-car system, server, server storage, docking stations and video transfer network.
- The vendor will provide a single point of contact (Project Manager or service coordinator) for DPS to coordinate all installations and service requests.
- Contract installers must be factory certified, provide written proof and be approved by DPS prior to work being performed.
- Once a purchase order has been approved and issued the vendor will have 45 days to deliver all equipment to the installation site.
- Installation of server and in-car equipment will begin within 10 business days from delivery of equipment.
- If the vendor fails to complete installation of equipment to the point of the equipment being fully operational and accepted by DPS within 45 days after delivery of equipment the vendor shall rebate to DPS \$3,000.00 per day deducted from the original purchase order.
- These deductions (rebate) shall be considered as liquidated damages, the intent of which is to compensate DPS for loss of productivity.
- The vendor shall be responsible for non performance by its subcontractors or other third parties outside its immediate control.
- All controls and components will be located and designed to minimize driver distraction.

- All equipment shall be installed to minimize interference with the view of the driver.
- Equipment shall be located in compliance with the manufacturers installation guide.
- No equipment will be installed in any original vehicle manufacturer's designated air bag deployment zone. If the equipment is installed in the air bag deployment zone the air bag must be turned off.
- The in-car equipment must be installed where it does not obstruct or interfere with any standard dash controls or vents.
- All equipment shall be installed to minimize the possibility of pinch points.
- A standard in-car installation package must be available for; but not limited to current models of the Dodge Charger, Ford Crown Victoria and Chevrolet Tahoe.
- Vendor must notify DPS two (2) days in advance of shipment arrival so that appropriate personnel can be on-site to receive shipment.

5.6 Support and Extended Warranty

- The vendor will provide a toll free 24 hour-a-day 365 days a year support number.
- Vendors shall have an initial response within 2 hours of a call for warranty service or equipment repair.
- Vendors will provide onsite response within 2 business days for will call warranty service or equipment repair.
- The vendor will provide full onsite replacement of defective or broken equipment within 5 business days of the time that DPS places a call with the vendor.
- Any drop shipment or shipments to be made directly to the post should be done under the vendors UPS, Federal Express or other shipping vendor's contract account. Any COD charges shall be paid by the vendor for shipping or receiving.
- The vendor will provide extra parts to DPS. The parts will consist of two complete sets of equipment for one vehicle installation, plus two additional wireless microphones and receivers.
- On-site remedial and preventive maintenance shall be available between 8:00 AM and 5:00 PM Central Standard Time, Monday through Friday, except State holidays, for the term of the contract.
- Preventive or scheduled maintenance shall be performed at mutually agreeable intervals. The vendor shall specify in their bid the number of hours of preventive maintenance required for each DVR, server and software per year.
- The travel time and expenses related to remedial and preventive maintenance shall not be considered billable. Except when adversely affected by reason of force majeure, on-site remedial maintenance by the vendor shall be completed within the before mentioned two (2) business day and five business day (5) timeframe, unless DPS and the vendor mutually agree in writing to another period of time. If on-site remedial maintenance is not completed within the prescribed times, the vendor shall be deemed in default of standards of performance. In such an instance, the vendor will rebate \$1000.00 per work week for the inability to use the product for its intended purpose. Notice of the failure to perform will be identified by DPS to the vendor by means of certified mail.
- The Department of Public Safety may or may not elect to purchase extended yearly maintenance contract for the in-car equipment. Vendors must provide pricing for four (4) additional 12-month periods of yearly maintenance on all in-car equipment, server, server software and viewing software. Pricing must be made available to DPS separately for each year for in-car units, docking stations, and software.

- In the event a part, software, equipment change or improvement causes the obsolescence of a piece or all of the digital video system the part, software, equipment or improvement shall be supplied to DPS at no additional charge.

5.7 Current System Conversion

The Alabama Department of Public Safety currently has five (5) Posts that are operating on a legacy digital in-car video system. The initial phase of the purchase will be to equip our current Posts that do not have systems. The second phase of the project will be to replace or upgrade the existing five locations with new systems. Indicate in your bid response if your company can provide upgrade services to convert the current video on our legacy system to your system and a cost per Terra byte of data to be converted. A vendors bid will not be rejected if they can not provide the conversion services and the conversion services are not a primary bid criteria.

Montgomery Post: Post size: Large

Server: Power Edge 2800 Server

Processor: Dual Core 2.8 Ghz.

Memory: 1 Gig

Storage: 15 Tera byte

Dothan Post: Post size: Medium

Server: Power Edge 2900 Server

Processor: Quad Core 3 Ghz.

Memory: 1 Gig

Storage: 13 Tera byte

Hamilton Post: Post size: Small

Server: Power Edge 2900 Server

Processor: Dual Core 1.6 Ghz.

Memory: 1 Gig

Storage: 8 Tera byte

Jacksonville Post: Post size: Medium

Server: Power Edge 2900 Server

Processor: Dual Core 1.6 Ghz.

Memory: 1 Gig

Storage: 17 Tera byte

Quad Cities Post: Post size: Small

Server: Power Edge 2900 Server

Processor: Dual Core 1.6 Ghz.

Memory: 1 Gig

Storage: 17 Tera byte

Attachment A

SPECIFICATIONS	YES	NO
2.1 Camera		
The forward facing camera shall have a minimum color resolution of 720x480 at a minimum frame rate of 30 frames per second. The camera shall be rated at 1.0 Lux or better.		
At a minimum, the forward facing camera shall capture a forty (40) degree horizontal field of view at twenty-four feet.		
At a minimum, the recorded image shall provide a clearly defined image of a license plate at eighteen feet.		
At a minimum, the recorded image shall provide a clearly defined image of a handgun at eighteen feet.		
The forward facing camera must have a minimum optical zoom capability of 10X		
The in-car camera will have the ability to be configured for triggered or manual activation.		
The forward facing camera shall have a minimum color resolution of 640x480 at minimum frame rate of 30 frames per second. The camera shall be rated at 1.0 Lux or better.		
The in-car camera can be color or monochrome. The in-car camera shall be able to record at a lower resolution from the forward facing camera.		
The in-car camera must have built-in infrared (IR) allowing for low-light operation.		

The in-car camera must have a wide area field of view.		
Both forward facing and in-car cameras must be configurable to default to auto focus. The manufacturer may provide an auto focus override system for manual focus mode.		
The DVR must be configurable for different recording modes for the forward facing and in-car camera allowing the in-car camera to record all of the time or programmed for manual activation.		
SPECIFICATIONS	YES	NO
2.2 Microphone		
Wireless microphone/transmitter system to capture audio outside of the vehicle. Wireless microphone must be capable of transmitting at the 900 MHz or 2.4 GHz frequency.		
The wireless microphone shall be able to be synchronized to the receiver in the vehicle.		
The wireless microphone shall have a built in microphone.		
The wireless microphone shall have a wired microphone input.		
The wireless microphone battery shall be recharged when docked in the wireless receiver.		
The wireless microphone battery must be capable of operating for a minimum of 10 hours continuously on a single charge.		
The wireless microphone shall have a minimum range of 1000 feet.		
Each installation will include a hard-wired microphone to capture audio from inside the patrol vehicle.		
2.3 DVR		
The DVR must be capable of handling a minimum of two camera inputs.		

The DVR must have the ability to record from both cameras, both video and audio simultaneously.		
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SPECIFICATIONS	YES	NO
The storage medium must be lockable inside the DVR.		
The DVR must record pre-event video.		
The DVR must offer pre-event recording time, and must be configurable from 1-30 seconds.		
DVR internal storage must be, solid state memory, solid state hard drive, or automotive grade hard drive capable of storing video redundantly to both storage locations.		
The DVR must provide a minimum of 25 hours storage capacity recording at D1 resolution, at 30 frames per second.		
The DVR must provide at least three different recording resolutions of D1, VGA, and CIF.		
Video recorded at D1 resolution will not exceed more than 1.5 GB per hour.		
The DVR must be capable of being triggered (start recording) by at least four different triggers. The triggers must be: activation of emergency lights, remote start from wireless microphone, activation from crash sensor, and manual start of recording from monitor.		
The DVR must be configurable for the input of patrol data for the classification of each incident from the monitor or control center.		
The DVR must use MPEG-4 compression of video.		

The DVR must be configurable for automatic logon in the car. No logon or user intervention in the car should be required.		
The DVR must have the ability to be programmed for all configuration parameters and updated from a remote location using the wireless and wired video transfer network.		
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SPECIFICATIONS	YES	NO
The DVR must be programmable for a unique identifier number which will be a minimum of 6 digits long. The vehicle number must be configurable from the back end server or viewer workstation.		
The DVR shall be a stand alone unit, not requiring the use of an external device such as a MDT, but shall be capable of interfacing with such as device.		
2.4 Monitor		
The monitor must be a minimum of 3.5" diagonal, 640x480 color LCD minimum.		
The monitor must have the ability to be turned off or dimmed, without stopping the recording ability of the DVR.		
The monitor shall display a live picture while the system is on.		
The monitor shall display either camera forward facing, or rear on demand.		
The Control Center and Monitor shall have backlit controls for use in low light.		
The system must allow an officer the ability to view video while in their vehicle.		
The system shall not allow an officer to change or delete the video or audio before it is downloaded.		

The monitor console must include a built-in speaker.		
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SPECIFICATIONS	YES	NO
2.5 GPS		
The DVR shall have an embedded GPS, with internal or external antenna.		
The DVR will use the GPS for the location metadata.		
The time and date shall be set for the DVR through GPS synchronization.		
2.6 Video Transfer Network		
The Digital in-car video system shall have the ability to automatically transfer video from the vehicle once connected to the fiscal network or once in range of the wireless network.		
The bidder will provide both a wireless and wired network for the transfer of video to the server. The wireless network will be the primary connection method for most vehicles. All vehicles must be able to use either the wired or wireless network for either a backup or primary connection.		
The wired network shall be Gigabit from DVR to server.		
The vendor will provide both the wireless access points as well as the wired docking stations.		
The video transfer network and the DPS LAN will be connected to different network adapters on the server. The video transfer network will be totally isolated from the DPS LAN.		
The hard wired and wireless connections will use at a minimum 128 bit encryption to create a secure connection for the transfer of video.		

An integrity check shall be used to validate the copy of video before being deleted from the DVR storage after the transfer from the DVR storage to server storage is complete.		
The DVR IP address shall be set by DHCP running on the storage server whether connected thru the wired or wireless network. The DHCP services must be set to serve only the network card that is connected to the video transfer network.		
If a video transfer is interrupted, the system shall have the ability to automatically resume the transfer from the last successful download once the vehicle comes back into range of the wireless network or is plugged into the wired network.		
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SPECIFICATIONS	YES	NO
2.7 Battery Backup		
The DVR will be powered by a battery backup. The battery backup shall be capable of operating the system for a minimum of (10) ten minutes.		
2.8 Crash Sensor		
The DVR will include a crash sensor independent of the vehicle, which can be activated from a 360 angle.		
The crash sensor will be mounted (not above a rear wheel) in such a way as to not activate accidentally.		
Section 3 – Server and Storage		
A standard equipment package including server, storage, video transfer network and viewing workstations will be provided with each Post installation. A Post installation size will be defined as small, medium or large. The Post size will be determined by the number of patrol vehicles assigned to the Post.		
3.1 Server		
The bidder will provide with each post installation a Dell server.		
Server will have 5 year extended warranty, GOLD level coverage.		

The server will be configured for a minimum 40 Gigabit operating system partition.		
The server will be rack mountable.		
At a minimum, the processor will have dual processor Intel Xeon processors, 2.8 GHz, 8M cache		
SPECIFICATIONS	YES	NO
At a minimum, the SDRAM memory shall be 12 GB 1333 MHz memory or greater		
At a minimum, there must be two (2) Gigabit Ethernet NIC's.		
3.2 Storage		
The bidder will provide with each post installation Dell power vault storage.		
Server storage and database location must be configured as RAID 5 minimum with one dedicated hot spare drive provided per RAID.		
The system must have the ability to move video to archival storage: DPS does not use archival storage based on our current retention policy. DPS requires an archival option in the event our current retention policy is modified or to be used as a backup alternative in the future.		
It will be the vendor responsibility to determine and insure that adequate server storage is provided for each post to maintain a minimum of two (2) years storage of D1 resolution recorded video.		
3.3 Rack		

The bidder will provide with each post installation a Dell 2410 Server Rack Cabinet.		
3.4 UPS		
The bidder will provide with each post installation a UPS. American Power Conversion (APC) UPS Model SUA2200RM2U for a small Post. American Power Conversion (APC) UPS Model SUA3000RM2U for a medium or large Post.		
INTENTIONALY LEFT BLANK		
SPECIFICATIONS	YES	NO
3.5 Monitor, Keyboard and Mouse		
The bidder will provide with each post installation a Rack Mounted LCD Monitor with integrated keyboard, mouse.		
3.6 Network Equipment		
The bidder will provide with each post installation a Gigabit Power over Ethernet switch provided with 8 ports.		
The bidder will provide with each post installation a minimum of two (2) wireless access points. The wireless access points must at least meet or exceed being compliant with the Institution of Electrical and Electronics Engineers Draft 2 of the 802.11 N specifications.		
The bidder will provide with each post installation a minimum of two wired docking stations.		
The wireless access points and docking stations will be installed using CAT 6 Ethernet cable and patch cords.		
The wireless access points must have web based management software package to allow for remote configuration and troubleshooting.		
3.7 Viewing Workstation		
Each post installation small, medium or large post will include two (2) viewing PC workstations provided by the vendor.		

The viewing workstations must be attached and joined to the DPS domain.		
The viewing workstations will run Windows XP.		
The viewing workstations will have DVD +/- RW drives that have the ability to write to both DVD +R and DVD -R media.		
The viewing workstations will meet or exceed the vendor minimum specifications for video card, processor and memory to run their version of the viewer software.		
SPECIFICATIONS	YES	NO
Section 4 – Video Viewer and Management Software		
4.1 Video Viewer		
The viewer software should be active directory compliant for the user login with the agencies active directory domain.		
The viewer software will have the ability to define or configure several different types of users for access to video. User types should include but not be limited to: display only, full administrative rights and view or burn one's own video.		
The viewer software shall have the ability to make an image capture.		
The viewer software must provide the ability to burn DVD's, copy the video to external media and to the local PC hard drive from within the viewer software. No third party DVD burning software will be allowed.		
At a minimum, the viewer software must have the ability to search for video based on the following data: Date, time, car, officer, incident type, location.		
If the vendors viewer software outputs video in a proprietary format it must also have the ability to output files in a format compatible with Windows Media Player for playback without the need of the vendors viewer client.		
The viewer software must be compatible with both Microsoft Windows XP and Windows Vista.		

4.2 Video Management		
The video management system shall maintain a chain of custody audit log of all video including the following information: Date and time video was downloaded, number of copies made of video and who made the copies.		
The video management system shall have a configurable retention policy based on incident type.		
SPECIFICATIONS	YES	NO
Video must be retained for a configurable period of time from 1 day up to 760 days.		
The video management system will automatically remove video from the storage location based upon the Department's retention policy.		
Section 5 - Requirements		
5.1 Performance Guarantee and Liability Insurance		
Performance Guarantee: Vendor will furnish within ten state working days after notification of award, a performance guarantee in the amount specified below as a guarantee to provide goods or services specified in the bid. It shall be made payable to the State of Alabama and can be a cashier's check, other type bank certified check (Personal/Company checks are not acceptable), banks or postal money order or surety bond issued by a company authorized to do business within the State of Alabama. Irrevocable letter of credit and certain U.S. notes and bonds may be accepted when approved by Division of Purchasing at least 24 hours prior to bid opening. Reference the bid number on the guarantee. The Division of Purchasing will be the custodian of the Performance Guarantee. The Performance Guarantee will be returned upon completion of the contract.		
PERFORMANCE GUARANTEE AMOUNT: \$1,500,000.00		
5.2 Training priced with initial installation and additional training		

Officer training shall consist of the operation and use of the forward facing and in-car cameras, monitor and wireless microphone. The officers shall also be trained on the basic use of the viewer including finding video and the export of video to DVD or external storage. 30 minutes per officer.		
Installation training shall consist of a complete typical installation of all in car components. The training should enable DPS radio shop technicians to troubleshoot all in-car components, install and remove the in-car components and include an installation manual with part numbers, wiring diagrams and installation guidelines. Ten (10) technicians, 4 hours per radio technician.		
SPECIFICATIONS	YES	NO
Level one IT support personnel training shall consist of the basic officer training plus basic troubleshooting of in-car components. 1hour per technician.		
Level two IT support personnel training shall consist of the Level one IT training and adding users, adding cars, programming the DVR's remotely, troubleshooting network and server related issues. 8 hours per level two support person.		
The vendor shall be responsible for conducting the training and all associated costs including but not limited to: staffing, training materials and equipment, travel expenses, lodging expenses, and meals.		
Additional training – Each bidder must include costs for additional follow-up training for officers, installation personnel, level one and level two IT support personnel as a separate line item. This additional training will not be primary bid criteria and will be an optional purchase. The optional training could be used to train new personnel in the future.		
5.3 Warranty		
The awarded vendor will provide a 1 year warranty for all software and in- car hardware installed in the original purchase price. The warranty will begin after the entire system is fully operational and accepted by the Department of Public Safety.		
It will be the responsibility of the vendor to provide preventative maintenance for the in-car equipment, server hardware, server and viewer software including all parts and labor, at no additional cost to DPS during the term of the warranty contract.		
The vendor will provide all software upgrades during the contract period at no additional cost to DPS.		

<p>The Department of Public Safety may or may not elect to purchase extended yearly maintenance contract for the in-car equipment. Vendors must provide pricing for four (4) additional 12-month periods of yearly maintenance on all in-car equipment, server, server software and viewing software. Pricing must be made available to DPS separately for each year for in-car units, docking stations, and software.</p>		
<p>The Dell Server, storage and network switch must all have 5 year extended warranty, GOLD level coverage from Dell.</p>		
<p>SPECIFICATIONS</p>	<p>YES</p>	<p>NO</p>
<p>5.4 Software Escrow</p>		
<p>The vendor shall place in an escrow account with the State of Alabama Finance Department Information Service Division the source code for software and escrow any updates, improvements, enhancements or modifications to the Source Code, within 15 business days of the source code change. The vendor shall service the software in a professional manner with qualified personnel. The vendor shall provide updated software documentation upon delivery of updated software releases at no charge. The vendor shall also provide training to enable DPS personnel to operate effectively and will insure that the updated software release is compatible with the application software originally installed and accepted by DPS.</p>		
<p>5.5 Installation</p>		
<p>The bidder will be responsible for the installation of all equipment purchased by the DPS for the in-car system, server, server storage, docking stations and video transfer network.</p>		
<p>The vendor will provide a single point of contact (Project Manager or service coordinator) for DPS to coordinate all installations and service requests.</p>		
<p>Contract installers must be factory certified and approved by DPS.</p>		
<p>Once a purchase order has been approved and issued the vendor will have 45 days to deliver all equipment to the installation site.</p>		

Installation of server and in-car equipment will begin within 10 business days from delivery of equipment.		
If the vendor fails to complete installation of equipment to the point of the equipment being fully operational and accepted by DPS within 45 days after delivery of equipment the vendor shall rebate to DPS \$3,000.00 per day deducted from the original purchase order.		
These deductions (rebate) shall be considered as liquidated damages, the intent of which is to compensate DPS for loss of productivity due to substandard performance by the vendor or its subcontractors.		
SPECIFICATIONS	YES	NO
The vendor shall be responsible for non performance by its subcontractors or other third parties outside its immediate control.		
All Controls and Components will be located and designed to minimize driver distraction.		
All equipment shall be installed to minimize interference with the view of the driver.		
Equipment shall be located in compliance with the manufacturers installation guide.		
No equipment will be installed in any original vehicle manufacturer's designated air bag deployment zone. If the equipment is installed in the air bag deployment zone the air bag must be turned off.		
The in-car equipment must be installed where it does not obstruct or interfere with any standard dash controls or vents.		
All equipment shall be installed to minimize the possibility of pinch points.		
A standard in-car installation package must be available for; but not limited to current models of the Dodge Charger, Ford Crown Victoria and Chevrolet Tahoe.		
5.6 Support		

The vendor will provide a toll free 24 hour-a-day 365 days a year support number.		
Vendors shall have an initial response within 2 hours of a call for warranty service or equipment repair.		
Vendors will provide onsite response within 2 business days for will call warranty service or equipment repair.		
The vendor will provide full onsite replacement of defective or broken equipment within 5 business days of the time that DPS places a call with the vendor.		
SPECIFICATIONS	YES	NO
The vendor will provide extra parts to DPS. The parts will consist of two complete sets of equipment for one vehicle installation, plus two additional wireless microphones and receivers.		
On-site remedial and preventive maintenance shall be available between 8:00 AM and 5:00 PM Central Standard Time, Monday through Friday, except State holidays, for the term of the contract.		
Preventive or scheduled maintenance shall be performed at mutually agreeable intervals. The vendor shall specify in their bid the number of hours of preventive maintenance required for each DVR, server and software per year.		
The travel time and expenses related to remedial and preventive maintenance shall not be considered billable. Except when adversely affected by reason of force majeure, on-site remedial maintenance by the vendor shall be completed within the before mentioned two (2) business day and five business day (5) timeframe, unless DPS and the vendor mutually agree in writing to another period of time. If on-site remedial maintenance is not completed within the prescribed times, the vendor shall be deemed in default of standards of performance. In such an instance, the vendor will rebate \$1000.00 per work week for the inability to use the product for its intended purpose. Notice of the failure to perform will be identified by DPS to the vendor by means of certified mail.		
In the event a part, software, equipment change or improvement causes the obsolescence of a piece or all or the digital video system the part, software, equipment or improvement shall be supplied to DPS at no additional charge.		

Vendor Name: _____

I certify the answers provided on attachment A are true and accurate.

Signature: _____

