Eastern Sierra Transit Authority
Bishop, Ca

Bus Security Camera Purchase

REQUEST FOR PRICE QUOTES
RFPQ 2018-001

December 2018

Eastern Sierra Transit Authority
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INDEX

I. INVITATION FOR QUOTES

The Eastern Sierra Transit Authority (ESTA) invites you to submit a quote for the work described below. All questions and quotes should be directed to:

> Phil Moores
> Project Manager
> 760-872-1901 x12
> pmoores@estransit.com

Quotes due January 4, 2019, 2:00pm

A. SUPPLEMENTAL PROCUREMENT DOCUMENTS

This procurement document for **RFPQ 2018-001** can be viewed and downloaded by navigating to the following Website and searching by bidding event name:

estransit.com

B. SUMMARY SCOPE OF WORK

ESTA currently operates 36 fixed route buses and 20 paratransit vehicles. This RFPQ is for up to 14 vehicle camera systems for fixed route buses (one to be installed by vehicle manufacturer in 2019 Freightliner). There is one camera system already purchased that needs to be installed making the total installations fifteen. The quote must include equipment, training, and installation. Existing video is presently downloaded by physically exchanging hard drives and downloading at a docking station attached to a PC.

ESTA requires 1080 quality recording on 6 cameras for a minimum of 30 days on each bus. The awarded camera system is required to be a full HD IP based system per industry standard. The HD quality video must have the option to downgrade to standard definition quality to maximize the use of available hard disk space and HD storage. For future system integration and replacements, cameras should be capable of live streaming and sharing the data package with other programs such as Intelligent Transportation Systems.

We require a minimum of 2 years warranty and maintenance and will consider pricing on warranty and maintenance up to 5 years. Quotes must include all expenses required for successful implementation, including but not limited to: training, travel, shipping, specialty tools (i.e. CAT6/RJ45 crimper and cable splicer), hardware (including cables, connectors, etc.), and software.

Further, we expect full training on use of all software to include but not be limited to: scheduling downloads, health status, DVR configuration, system configuration and event review.

Project Goals:
Install cameras equipment with 1080p capabilities
6 cameras per bus, 30 days recording preferred
Licensing brought into compliance
Extended maintenance
Training

Deliverables:

    Cameras, DVR and hardware
    Training for install of hardware
    Update software (if needed)
    Training (i.e. webinars, training videos, function of maintenance and support)
    Scheduling
    Bring licensing into compliance
    Maintenance contract
    Warranty

Please Note: ESTA intends to award this contract in its entirety to one vendor. Partial quotes may be deemed non-responsive.

C. SCHEDULE OF EVENTS

The following is the anticipated schedule of events for this project.

Event	Date
1. Quotes Due Date	1/4/2019
2. Selection of Vendor	1/4/2019
3. Delivery of Hardware	2/08/2019
4. Hardware Installation	3/16/2019
5. Software Training Completion Date	3/16/2019
6. Final Acceptance: Full System Install and Verification of System Functionality.	3/28/2019

II.   CAMERA VEHICLE PLACEMENT

ESTA installation will consist of fouteen (14) vehicles ranging in age from 2012-2019. The vehicles are to be equipped with two (2) interior 360-degree cameras, and four (4) exterior cameras. The interior cameras will be mounted one at front door and one midway back of interior. The exterior cameras will be forward facing, left and right-side rear facing, and one rear mounted camera.

BUS LIST

Bus #	Year/Model/Make	Size	Type
801	2012 El Dorado	40'	Fixed Route
802	2012 El Dorado	40'	Fixed Route
803	2012 El Dorado	40'	Fixed Route
804	2012 El Dorado	40'	Fixed Route
805	2012 El Dorado	40'	Fixed Route
806	2012 El Dorado	40'	Fixed Route
807	2012 El Dorado	40'	Fixed Route
808	2012 El Dorado	40'	Fixed Route
809	2013 El Dorado	40'	Fixed Route
810	2012 El Dorado	40'	Fixed Route
811	2012 El Dorado	40'	Fixed Route
812	2012 El Dorado	40'	Fixed Route
617	2016 Ford E450	24'	Fixed Route (American Bus Video equipment already owned)
716	2019 Freightliner Defender	35'	Fixed Route
717	2019 Freightliner Defender	35'	Fixed Route (vehicle scheduled for deliver summer 2019. Manufacturer will install the system)

III. TECHNICAL SPECIFICATIONS

These specifications are preferred, but not required. Selection will be partly measured against the ability to meet these specifications.

BUS HARDWARE

A. Recorder Specifications
1. The system should have a digital video imaging processor capable of recording video images for up to 6 digital (IP) cameras at real time (30fps) and 1080P resolution.
2. The system should support the ability to individually configure each camera
3. For events, the system should be capable of marking and automatically downloading a video clip (such as accelerometer).
4. The system should be capable of recording an audio channel synchronized with all IP cameras.
5. The system should be tested and found to meet or exceed industry standards for shock and vibration, electromagnetic compatibility, and FCC.
6. The system should be powered by a 12 or 24 VDC vehicle power supply and have an operational voltage range from 9 to 32 VDC. It should be self-regulating and internally protected from power surges and spikes.
7. The system shall operate within the following environmental specifications: Operating temperature of -20ºC - 55ºC and Relative humidity of 10 - 95%.
8. The system should store images on a lockable and removable hard drive.
9. All recorders should be keyed alike.
10. Removable hard drive should support SSD and HDD technologies, and include storage options of 2TB, 3TB, and 4TB.
11. The system should be capable of maintaining one month of recorded video.
12. The removable hard drive should connect to a PC through a USB port or docking station.
13. The removable hard drive should have shock and vibration dampening built-in.
14. The system should have an accessible and dedicated service gigabit Ethernet port
15. The system should provide user-configurable digital inputs (including brakes and turn signals), user-configurable analog inputs, user-configurable relay outputs that can be used to trigger events and alarms, and analog video outputs.
16. The system should incorporate a 3-axis accelerometer capable of triggering configurable alarm events.
17. The system should include a driver event switch that features a system status.
18. The system should display at minimum diagnostics information such as power and recording.
19. The system should employ a browser-based interface for full system configuration of all parameters.
20. The system should utilize configuration files to expedite the programming of the system and camera settings.
21. The system should have firmware that can be upgraded.
22. The system should be capable of recording in high definition and then downgrading the video after a configurable amount of time to maximize the length of storage (days) of recorded video.
23. The system should be capable of recording for a period of time after the ignition is turned off.

B. Cameras
1. All cameras should be high definition. Please describe camera capabilities.
2. All cameras should support bit rate settings between 64Kbps - 6Mbps
3. All cameras should be capable of being powered by power over ethernet.
4. All cameras should support an analog video output for use analog devices such as monitors.
5. All cameras should have image adjustment settings for: saturation, brightness, contrast, sharpness, exposure, and picture orientation (rotate, mirror).

6. All cameras should be day/night viewable.
7. All cameras should have infrared capabilities.
8. All cameras or mounts should have 3-axis adjustment for positioning the field of view.
9. All cameras should compensate for changing lighting conditions.
10. All cameras should have compliance to the following standards: FCC, CE, UL, and RoHS
11. Internal cameras should have a built-in microphone.
12. Internal cameras should have environmental ratings of IP66 and IK-7.
13. External cameras should be impact and tamper resistant, featuring a UV coated dome with replaceable glass lens.

C. System Connectivity
1. The system should connect to the bus to receive information such as brake, turn signal, and accelerator etc.
2. The system should have a built-in GPS receiver. GPS should track vehicle location synchronized with the video. Option to synchronize its time with GPS.
3. Should have cellular connectivity. Describe how system connects to cellular and capabilities to route to other devices and systems in the bus.
4. The system should be capable of sharing cellular connectivity with other onboard systems, such as Intelligent Transportation Systems.

SUPPORT/HARDWARE

1. Software that is capable of live viewing, playback, calendar and event searches, and administration should be provided, and shall be compatible with Windows 10 and have unlimited licenses.
2. All future software updates should be included in the Quote.
3. The software should provide various levels of user access rights that allow restricted access to various functions.
4. When equipped with GPS, the system software should be capable of connecting to pre-recorded video by selecting a point on the map or selecting a point on the speed chart to view from that speed or location.
5. To retrieve recorded video, the software should provide searches by: event, time lapse, time and date, vehicle location and vehicles speed. Software should allow for fleet-wide searches and wireless download of video based solely upon the date and a general map location.
6. The software should display the current time and date on the video.
7. The software should display bus activity on the video such as: brakes, left turn signal, right turn signal, reverse etc.
8. The system should include software with advanced capabilities for user scheduled automatic download of video clips.
9. The software should be capable of synchronizing the time of all recorders to GPS time including daylight savings.
10. Software settings should allow the system to send notification for system events including video loss, camera obstruction, inoperable camera, etc.
11. Options for archiving/retrieving video should include: Saving a video clip as a Windows Media Player (.avi) file, saving as an image (.bmp), or saving video as a self-executable format (.exe).
12. Video clips saved using the self-executable format (.exe) should be able to be watermarked, encrypted and should be viewed without the use of any software, providing the ability to easily transfer secure video evidence.
13. Video clips should include the option of viewing a single camera or any combination of cameras up to and including all cameras on a single screen.

14. Executable video clips should display GPS map location vehicle and speed upon playback and metadata from other onboard systems.
15. Video clips should provide the option of saving a portion of the video clip (shorter in length and/or reducing the number of cameras) in order to make a smaller video clip from the original.
16. The software should feature the option to archive video clips requiring a password for reviewing.

SOFTWARE & SERVER LICENSE

1. Management software should be capable of providing fleet-wide status reports, event logs, on-demand and automated video clip retrieval for easy fleet-wide video management.
2. Management software should provide access to an unlimited number of users and feature multiple user access-levels with password protection to ensure system settings are secure.
3. Software may include both client-based and web-based user interface options or combination.
4. Users should be capable of programming the software to automatically download video clips based on specific event types.
5. All data logs and video clips should be available for viewing anytime (regardless of current connection status) once the video clips have been uploaded.
6. Users should be capable of requesting download of custom video clips.
7. Users should be able to view vehicle connection status and system logs
8. Software should allow for email notification of system events.
9. Software should supply health information of the video system with error logs, reports and automatic notification for: video blind events, video loss events, disk errors, disk temperature events, fan
   a. errors, recorder errors, disk almost full and disk S.M.A.R.T (Self-monitoring, analysis and reporting technology) events.
10. Users should be capable of downloading video clips on-demand, for viewing those not scheduled for automatic download
11. Video clips scheduled or manually requested should automatically download when the vehicle connects to the network.
12. Software should provide connection status to easily determine if a vehicle has not recently connected to the network.
13. The user should be capable of requesting multiple video clips simultaneously from multiple sites.
14. Software should provide chain of custody reports with each video clip.
15. Users with granted permission rights should be able to classify reviewed video clips to save or schedule for deletion.
16. Administrative users should be able to program the software with an adjustable time period for storing logs and clips.
17. Management software should be compatible with all Recorder systems proposed.
18. Software should provide customizable categories that will allow users to classify video clips.
19. Software should support sorting of video clips based upon classification status.
20. Users should be capable of inserting and saving notes or comments regarding a specific video clip to document essential data regarding a clip.
21. Users should be able to request clips by location for upload of all vehicles in proximity of a defined section on a map.

WARRANTY, SERVICE, & SUPPORT

1. All hardware should include a minimum warranty of two (2) years parts and labor.
2. Unlimited telephone and email technical support shall be provided at no additional charge for the life of the system.
3. Additional extended warranty and support options shall be available. ESTA would like extended warranty options for up to five (5) years of coverage.