

The systems required must meet the following minimum requirements:

ATCF460

CAMERA

- Cameras shall include the following:
 - Shatterproof lenses
 - Omni Position
 - Anti-Glare Glass
 - Scratch resistant
 - High Impact
 - Microphones with built-in Noise Gate Omni Direction
 - Moisture Proof
 - Temperature resistant
- 520 TV Line Resolution
- Cameras must be fixed in cast metal vandal proof housing
- Peri-optic Wide Dynamic Lens
- CX3 Sony Chip Set Only
- Identify appropriate camera and lenses to have full view of bus areas (front, back, driver, stairwell section, and stop arm)
- Day/Night camera shall have built-in Infrared LEDs.
- Input image to DVR shall be Clear, Stable and Free of Vibration.
- Shall be mounted without brackets to Ceiling, Surface, Wall, or Side.
- Shall be available in various lens sizes range of 2.1mm to 25mm
- The cameras must have 6PIN DIN waterproof connection with screw on connectors that include Audio, Video, Power and Ground with Water Resistant connectors

SOLID STATE COMPACT FLASH MOBILE DVR

- Footprint not to exceed (Width x Height x Depth) 4" x 1.5" x 7" and Weight not to exceed 1.45 lbs.
- The DVR shall have the capability to be installed at any angle, in an easily accessible location.
- The system supplied must offer 1 to 4 Channel Video and a minimum of 4 Channel Audio with simultaneous recording.
- The system is to include up to 4 camera inputs, with simultaneous recording on individual channels, with independent audio.
- The system must have easy marking capabilities with a Push Button Event button.
- The system should have protection from access of unauthorized personnel by not having any accessible controls/buttons on the DVR face and should offer a wireless remote control for easy set up and programming by any authorized personnel.
- The Optional Compact Flash Card shall be available in the storage capacity of 4GB, 16gb and 32gb and must be "hot swappable", removable, tamper proof and lockable .
- The DVR must operate from direct 10-36 VDC power source connected with 18 gauge wire or larger, with inline fuse and be internally and continually protected from power surges, spikes and reverse polarity.
- The DVR must offer Lithium ION back-up battery that will save setting for up to 30 years.
- The DVR must be equipped with an RS-232 Serial Port for future expansions. This port must be able to interface with any device that accepts serial communications.
- The DVR must include optional LAN connection for wireless capability..
- The DVR must offer High and Low Temperature Protection
- The DVR must offer Video compression technology that must be user selectable for both MPEG4 and JPEG.
- The DVR must offer crisp Video at 720 x 584 resolutions for DVD quality playback.
- The DVR recording modes must be user selectable for Continuous, Motion or Alarm. In continuous mode, the storage capacity must not be impacted by motion.
- The DVR must automatically record over data files once the hours of audio/video capacity has been reached, beginning with the oldest data first..

- On-board real time clock that operates independently of main power supply. Must adjust automatically for daylight savings time.
- The DVR must have 8 sensor inputs for marking events that include left turn, right turn, front door, rear door, reverse, stop arm and amber lights and record this data when activated onto the recorded video.
- The DVR must have a Driver event marker button.
- The DVR display resolution must have full support for NTSC and PAL and be user selectable.
- The DVR must have delay start, of not more than 10 seconds, for the system to boot up and begin recording upon activation of bus engine run switch to allow for voltage stabilization.
- The DVR must have a delay stop to allow continued recording after the bus is turned off; and be user selectable for 0, 5, 10, 20, 40 or 60 minutes delay.
- The DVR must be capable of accepting a minimum of four independent channels of audio as well as record and playback all channels of user defined mixed audio.
- The DVR must be capable of setting and recording real time images and sound from 1 to 30 frames per second (fps) per channel.
- The DVR must offer User Password protection; and offer defined security levels.
- The system must have integrated OPTIONAL Passive GPS DATA LOGGER Module, with no outside subscription service requirement. OPTIONAL LOGGER must store up to 6 months of data. Must display heading and speed on screen during playback.
- OPTIONAL GPS must be compatible with software that can extract .gpx, .kml and .gps data for TeleAtlas Map Overlay.
- The on-screen data of OPTIONAL GPS coordinates, Direction, and Speed must be imprinted on recorded video, synchronized with the camera(s).

Video Retrieval PC Playback Software and Archiving

- Video review shall be accomplished with a PC and supplied software and requires the optional CF Reader.
- The Compact Flash card must be a non-proprietary CF Flash Card
- The software must offer retrieval of the latest MPEG4 and MJPEG compression technology (user selectable) providing motion picture quality, while offering greater storage capacity.
- The hard drive must offer a built-in reader and be able to be connected to the computer through a USB connection. The Video review shall be accomplished through this USB connection with the DVR Hard Drive and utilizing the supplied software. The USB connection from the PC must power the DVR Hard Drive.
- The software must be able to retrieve events downloaded directly on an USB drive via USB 2.0 connections/port or direct connection to a laptop or desktop PC.
- The system must be capable of wireless connectivity to the owners' network.
- Video review will require no other office hardware.
- The video transfer rates must be less than 1:1. The Bidder shall supply the transfer rate proposed with their system.
- The Video retrieval or review must be secured through the use of proprietary software. The software must require user name and password entry and must offer court ready video files.
- The Video Review software must be user-friendly. It must allow for one screen viewing of all cameras, with options to select any single camera view. It must be able to copy video to a PC (user selectable by time frame). It must be able to create a JPEG, WMV or AVI files. The software must offer the capability to easily forward and view video and audio clips/frames as an attachment to an email. It must include options to play, stop, forward, reverse, pause, frame by frame forward, frame by frame reverse, beginning of video file, end of video file and volume control for audio. It must include camera selection buttons and a time slider.
- The video retrieval capability must be Plug N Play reading for fast file transfer, utilizing PC based file formats (with no additional hardware).
- The software must easily retrieve the "tag/mark" on the hard drive, search, pause/freeze and download captured events to a PC, USB flash drive or direct to a DVD burner, or print frame by frame.
- All Video and Data must be able to be saved on the PC's hard drive, and/or transferred or copied to DVD, CD, VHS, and other forms of archiving.

- The supplied software must have the capability of tracking, with playback selections of inquiry by alarm, date, time and camera number.
- The software must have the following Video Quality settings: 16 Settings: four adjustment levels with four quality settings for each adjustment level
- The software must offer Display Modes of Single camera, QUAD, and 4x zoom
- The playback software must be User Password protected, and have defined security levels
- Fail safe, "System On" protection that includes a record light that will flash during the recording, a power light and camera light that will flash to indicate the unit functioning properly, and finally an audible alarm that will sound if there is a CF Card failure.

Maintenance and Software Upgrades

- The manufacturer will provide automatic software upgrades at no additional cost for two (2) Years.
- The bidder will provide contact(s) information for technical support.
- The DVR system must not require any additional Maintenance Support other than periodic testing for proper operation.

Installation

- The Bidder will supply the installation of all hardware (including accessories, cables, harnesses, etc.) and software to guarantee systems are fully functional and operational prior to acceptance of payment.
- The Bidder will provide a timeline for installation, testing and start-up.
- The Bidder will provide the number of dedicated technical support and/or installers for this project.
- The Bidder will include the training of Staff employees on the use of the system and certification on the installation.
- The System must be designed and supported by the manufacturer. The bidder must have experience installing and servicing Mobile Video Surveillance Systems on School Buses.

Warranty

- The bidder must offer a Five (5) Year Limited Parts and Labor warranty on the DVR.
- The bidder must offer a Three (3) Year Limited Parts and Labor warranty on the Cameras.
- The bidder must offer a Three (3) Year Limited Parts and Labor warranty on the Hard Drives.
- The bidder must supply extended warranty options.
- The bidder must supply all warranty information on the system in their bid response.
- The bidder must be authorized by the manufacturer to repair the equipment during the warranty period, if the warranty repairs are to be performed by the bidder.

Training and Technical Support

- The bidder shall supply complete user training on the system and its installation, including online and current manufacturer user manuals.
- The bidder will provide a toll free engineering support line and offer technical support at no charge, during the warranty period.

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