COUNTY DEPARTMENT AGENDA REQUEST

Department:	Sheriff's Office	Presenter(s):	Major Bryan Woodie
Meeting Date:	Thursday, August 13, 2009	Type of Request:	New Business

Wording for the Agenda:

Consideration of a request from the Fayette County Sheriff's Office for assistance in applying for a grant from the United States Justice Department's Edward Byrne Memorial Justice Assistance Grant (JAG) Formula Program in the amount of $17,367.

Background/History/Details:

The Fayette County Sheriff's Office is seeking a grant from the Edward Byrne Memorial Justice Assistance Grant (JAG) Formula Program to provide additional funding for an automatic license plate recognition system. This system will allow the Sheriff's Office to more efficiently locate stolen/wanted motor vehicles which may be traveling through Fayette County.

Terms of this grant program require that the governing authority (Board of Commissioners) be the applicant for the grant and agree to be the financial agent for administration of the grant funds. This grant does not require matching funding on the part of Fayette County, however the total cost of the program exceeds the grant award amount. The balance of the funding for this project will be paid for with Federal Asset Forfeiture Funds.

Another requirement of this particular grant program is that the public be given an opportunity to comment on the intended use of the funds, should the grant be awarded to Fayette County. The Sheriff's Office will advertise and hold a public hearing to meet that requirement.

What action are you seeking from the Board of Commissioners?

Vote to allow Fayette County to act as the applicant for the requested grant and to agree to be the financial agent for administration of the funds.

If this item requires funding, please describe:

Has this issue come before the Commissioners in the past?	No	If so, when?	
Do you need audio-visual for the presentation?	No	Back-up Material Submitted?	Yes

STAFF USE ONLY

Approved by Finance	Yes	Reviewed by Legal	Yes
Approved by Purchasing	Yes	Approved by County Clerk	Yes
Administrator's Approval	Yes		

Staff Notes:

Fayette County Sheriff's Office

WAYNE HANNAH
SHERIFF

Randall Johnson Law
Enforcement Center
155 Johnson Avenue
Fayetteville, Georgia 30214
(770) 461-6353
EMERGENCY: 9-1-1

July 16, 2009

Honorable Jack Smith, Chairman
Fayette County Board of Commissioners
Fayetteville, Georgia 30214

Dear Chairman Smith,

The Fayette County Sheriff's Office has applied for a grant from the United States Department of Justice Edward Byrne Memorial Justice Assistance Grant (JAG) Formula Program. This grant, when awarded, will be in the amount of $17,367.00. This is a non-matching grant that must be used for law enforcement technology. I have the authority under the terms of this grant program to seek and receive the award of this grant. As the fiscal authority which provides funding for the operation of my office, the Fayette County Board of Commissioners is required to endorse this grant application in order to provide a mechanism for the disbursement of the grant award.

The funding provided by the award of this grant will be used to purchase computer equipment for use in conjunction with an Automatic License Plate Recognition System. This system has a cost in excess of the grant award amount. I will be using Federal Asset Forfeiture Funding to implement this program as a whole, including the amount not covered by this award. The project will require no Fayette County taxpayer funding to implement.

Automatic License Plate Recognition Systems (ALPR) are fully automated camera/video surveillance systems that are installed in motor vehicles. In our case, we will be deploying two such systems. These systems work by automatically and constantly scanning motor vehicle license plates that fall into the viewing area of the system's camera.

The ALPR computer system takes the scanned images of license plates and converts them into computer characters. The converted characters are then searched through a database of stolen vehicles in milliseconds. If the system finds a match with the converted characters and the computer database, the vehicle operator is alerted and appropriate law enforcement measures are undertaken. All of this activity is constantly in motion without the active involvement of the vehicle operator.

I have attached additional information of the operation of ALPR systems for your review.

In addition to requiring a public vote by the Board of Commissioners to endorse this request, the Edward Byrne Memorial Justice Assistance Grant (JAG) Formula Program

has a program requirement that public comment be solicited concerning this grant request. I am therefore asking that the Fayette County Board of Commissioners consider this request and vote to endorse this grant application and allow public comment during a scheduled public meeting. I will arrange for necessary legal publications prior to the scheduled public meeting to provide an opportunity for the public to comment should anyone feel so inclined.

Major Bryan Woodie is the project manager for the Automatic License Plate Recognition Program. We will be available to answer any questions that the Board of Commissioners or the Public may have.

Thank you for your consideration in this matter. If you have any questions concerning this matter, please don't hesitate to let me know.

Sincerely,

Wayne Hannah
Sheriff of Fayette County

Attachments

cc: Honorable Herb Frady, Vice Chairman
Commissioner Robert Horgan
Commissioner Eric Maxwell
Commissioner Lee Hearn
Mr. Jack Krakeel
Ms. Carol Chandler

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Case Study

Long Beach Police Department
Long Beach, California

Mobile License Plate Recognition System

Following an extensive evaluation process, Long Beach Police Department acquired four (4) PIPS' mobile automated license plate recognition (ALPR) systems in December 2005. Despite other crime rates decreasing in Long Beach, auto theft rates have been on the rise for the past three years. The ALPR systems were acquired primarily to combat this trend.

Through August 2007, the PIPS system has achieved remarkable results, resulting in 708 vehicle recoveries and 126 arrests.

"The ALPR system does not discriminate," states Sergeant Chris Morgan. "It almost eliminates any problems with profiling. The camera doesn't distinguish the color of a driver's skin or the condition of the car."

LBPD Sergeant Chris Morgan

To see a video demonstration by Sergeant Morgan, visit: http://www.pipstechnology.com/alpr/demonstrations/

Stolen Vehicles

An LBPD officer received a stolen vehicle alert from the ALPR system. The Night Auto Theft Detail set up surveillance on the stolen vehicle until the suspects arrived. An arrest was made and five high value cars were recovered.

Drug and Identity Theft

A stolen vehicle alert notified an LBPD officer that the suspect traveling in the vehicle should be considered armed and dangerous. Surveillance was established on the vehicle, the suspect was followed to an apartment where an arrest was made. Large amounts of methamphetamine, marijuana, and identity theft profiles were recovered.

Carjacking

An off-duty officer was the victim of a carjacking with limited information on suspects. After the ALPR system identified another stolen vehicle, surveillance led the LBPD Career Criminal Apprehension Team to identify the suspect as the perpetrator of the carjacking. An arrest was made.

For additional information about this and our complete range of ALPR products and traffic technology solutions, call or visit us on-line.

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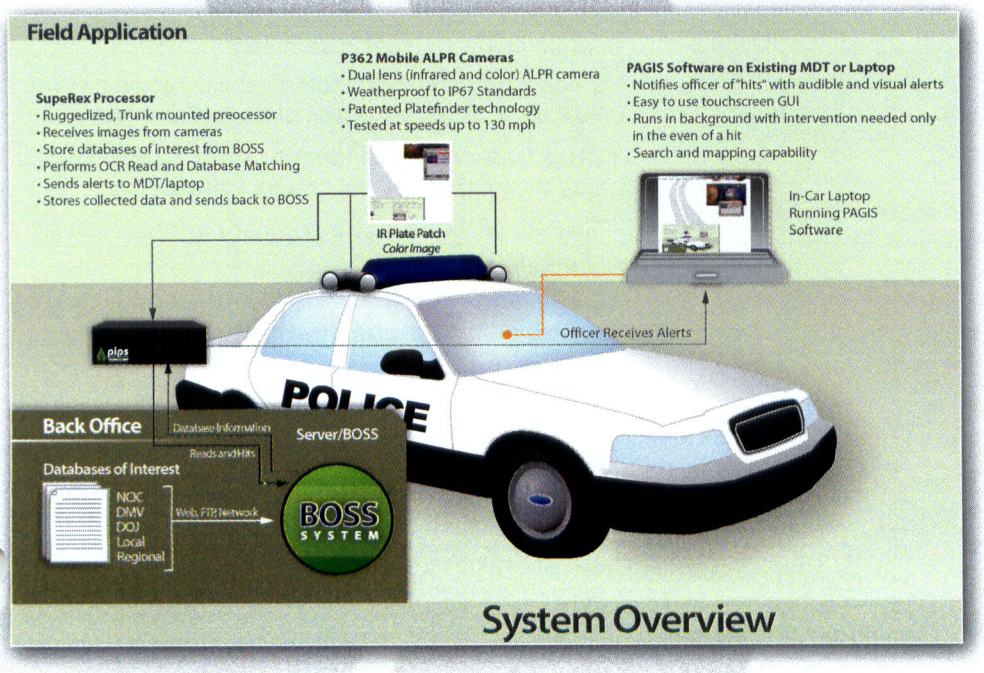
PAGIS®
Police ALPR Graphical Interface System

- PAGIS packages PIPS' industry leading ALPR technology and superior performance into a complete mobile law enforcement solution
- High volume, accurate, license plate capture at speeds of up to 160 mph
- Instant plate check against any number of specified databases, (NCIC Stolen, Felony Warrants, Amber Alerts, local hot lists, etc) with immediate alerts to the officer of any "hits"
- Seamless operation with PIPS' Back Office System Software (BOSS) for data management, querying and mining, mapping, and networking with other agencies.

PIPS is the only ALPR provider in North or South America to design, manufacture, and support a complete range of ALPR equipment, software, and services – the result is a unique engineered solution designed to provide superior performance even in the harsh environments of a patrol application.



The PAGIS system consists of up to four PIPS P362 dual-channel (color and infrared) cameras connected to a PIPS SupeRex trunk-mounted processor, and the PAGIS in-car officer software interface.

Patented PIPS Platefinder and Triple Flash technologies, along with proprietary PIPS advanced OCR engines tailored to the state or region of interest, complete the package. PAGIS is the only solution to offer seamless integration with PIPS Back Office System Software (BOSS).

Features of PAGIS® include:

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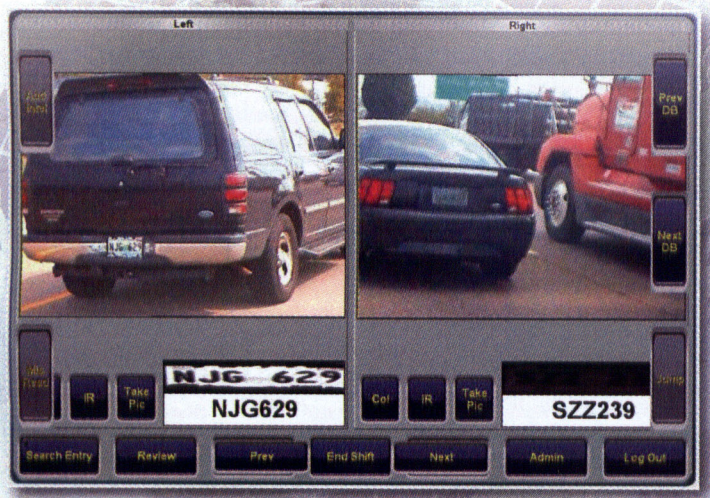
- Simultaneous monitoring of up to four dual-lens cameras
- Vehicle record contains infrared image of plate with corresponding OCR translation, color image of vehicle, date and time stamp, GPS coordinate, and relevant information from the database (in the event of a hit)
- User configurable audio and visual alarms
- Integration with existing MDT / laptop, or touch screen monitor with on screen keyboard



User Interface: Plate Capture

- Support of wireless data transfer to/from BOSS for more frequently updated hotlists, and to offload captured data for immediate intelligence usage
- Ability to prioritize databases such that simultaneous hits are displayed by order of priority
- Data encryption to eliminate possibility of evidence tampering
- Ability to manually enter data allows for immediate use of new intelligence

P362 Camera Installation

Primary Benefits:

Officer Efficiency – exponential productivity improvement as the system can capture up to 3,600 plates per hour

Officer Safety – providing officers with better awareness of their surroundings and of vehicles they are approaching

Intelligence – through BOSS the intelligence possibilities are expanded as multiple patrol deployments, fixed site cameras, and other agencies are networked

Elimination of Profiling Claims – the system looks at every vehicle regardless of the condition or the driver

Improved Enforcement – better enforcement results due to identification of more suspect vehicles

Sample results (actual customers):

- 2 agencies combined stolen vehicle recoveries of 901 vehicles for a total of almost $7.8 million
- Drug Trafficking and Identity Theft arrests made due to surveillance on suspect vehicles
- Suspect of robbery at a popular national coffee chain apprehended
- Suspects in triple homicide identified prior to officer making routine traffic stop, prompting backup call

For additional information about this and our complete range of ALPR products and traffic technology solutions, call or visit us on-line.

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PIPS Technology
the most advanced license plate recognition systems in the world

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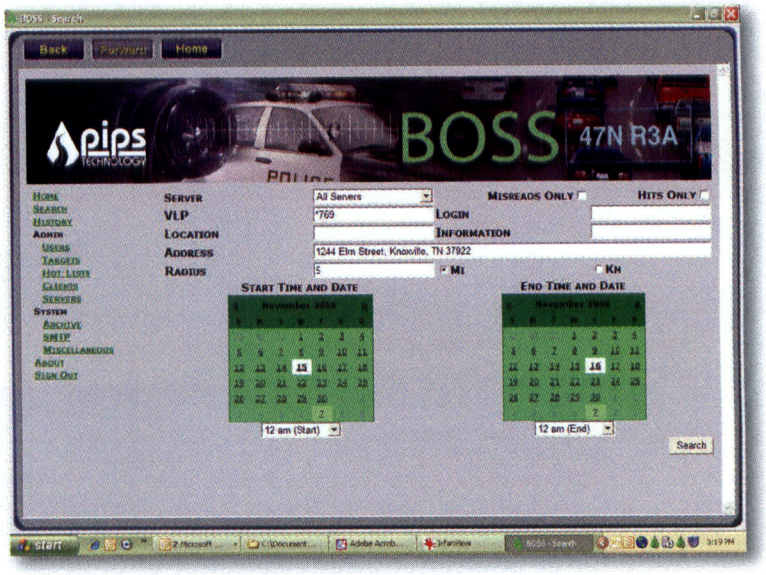
BOSS®
Back Office System Server

- Manage users and data from both Mobile and Fixed AutomatedLicense Plate Recognition (ALPR) deployments

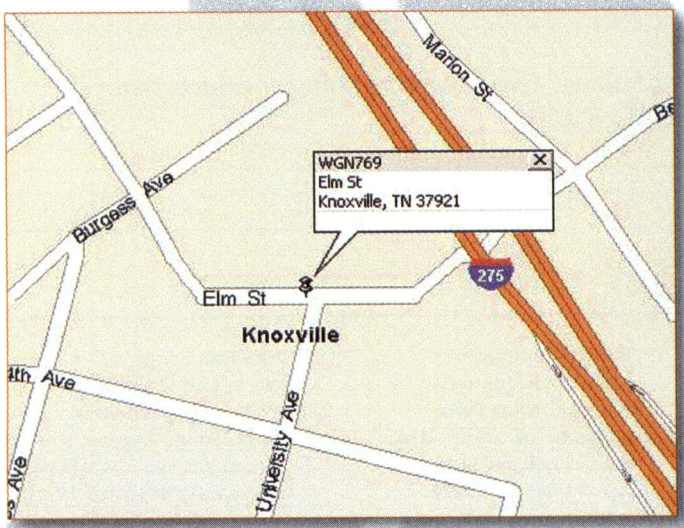
- Provides a central repository for all captured license plate data as well as the tools to support data analysis, data queries and reporting (inter- or intra-agency)



System Query Screenshot

Features

- Search across multiple BOSS deployments (inter- and intra-agency), using basic parameters such as time and date, plate number (full or partial), or search a radius around a known address to identify potential suspects



Data Mapping Screenshot

- Add, delete, or modify user privileges for security reasons
- Add databases of interest and synchronize data across deployments
- Allow data sharing privileges with other agencies
- Setup instant remote notifications of database hits via email or text messaging
- Mapping of reads and hits based on GPS coordinates
- Data networking and dispatch client

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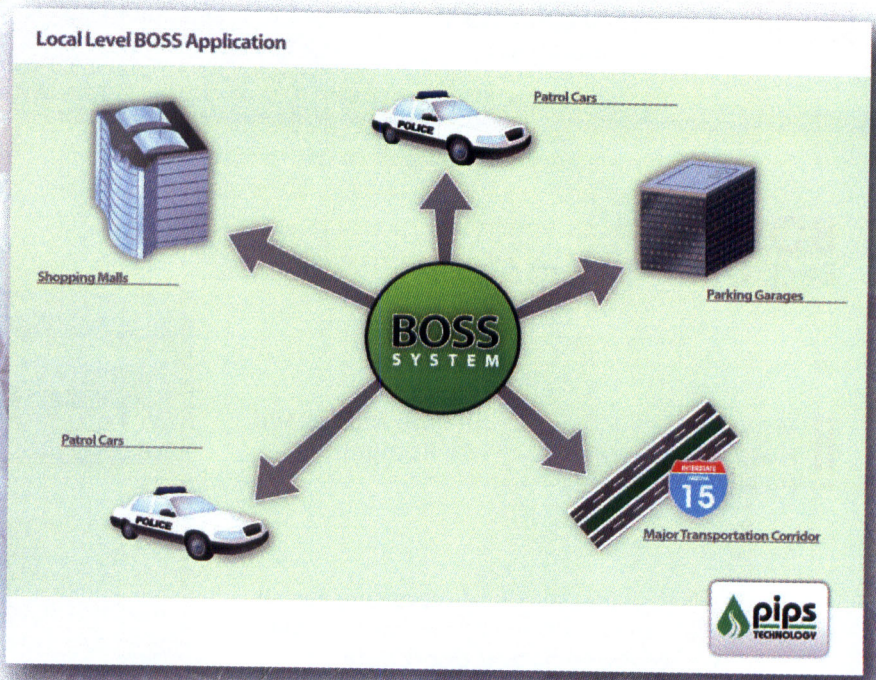
BOSS

Back Office System Server

ALPR systems can generate vast amounts of data. BOSS is designed to enable law enforcement agencies to organize and archive data collected from multiple mobile and fixed site ALPR deployments.

In fixed site applications, license plate data is fed directly into BOSS. If a database match occurs, alerts are sent out via the BOSS dispatch client to others in agency as authorized by the system administrator.

Data synchronization between a mobile system and BOSS normally takes place at the beginning and the ending of a shift via a USB memory stick or wireless LAN is available.



BOSS Schematic showing numerous Mobile and Fixed Deployment Possibilities

BOSS also includes user and database management. The user administration functions allow the administrator to set different system access levels based on user responsibility. Within BOSS, new users can be created and existing users can be deleted or modified. Additionally, BOSS is used to import, update and create databases.

Within BOSS, users can query the data against multiple search parameters including time, date, full or partial plate, location and user. BOSS can also map all locations related to a single plate to track vehicle movements. The BOSS web interface allows data to be easily shared across multiple locations and agencies.

Contact PIPS for additional information about PAGIS or Spike+, two award winning products from PIPS with applications in law enforcement and homeland security.

For additional information about this and our complete range of ALPR products and traffic technology solutions, call or visit us on-line.

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P362
Compact ALPR Image Capture System

- Complete image-capture system designed for use with automatic license plate recognition (ALPR)
- Patented filter and flash techniques provide excellent suppression of headlights and bright
- Small size coupled with high performance makes it suitable for many applications

The P362 is a complete image-capture system designed for use with automatic license plate recognition (ALPR) systems. Although primarily designed for mobile or portable applications, its small size coupled to high performance makes it suitable for many other applications, such as parking, law enforcement and access control.

The unit consists of a monochrome CCD camera with high infra-red sensitivity, surrounded by an illuminator consisting of a ring of eye-safe, infra-red light-emitting diodes (LEDs). The rugged metal housing is completely waterproof, and the unit has no moving parts for high reliability. The built-in controller, 12V operation, and single connecting cable allow easy mobile or fixed system configuration and installation.

Patented filter and flash techniques provide excellent suppression of headlights, bright sunlight, etc.

Field-by-field control of camera parameters allows the use of PIPS Technology's patented 'triple-flash' technique to reduce problems of plate-to-plate variation.

As an option, the P362 can be supplied with an integrated overview camera (color or monochrome), set either to the same focal length as the IR camera, or for a wider view. Thus an ALPR system using the P362 can always capture from the monochrome camera and, when suitable lighting conditions are available, a color overview image of the vehicle can be associated with the captured license plate image.

The overview camera can be a separate video feed, or the built-in multiplexer can send two signals on a single output. An integrated photocell can automatically activate separate night settings for the overview camera especially for high speed traffic.

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P362 Mobile ALPR Capture System
Summary Specification

Dimensions	112mm (4.4 inches) long, 107mm (4.2 inches) diameter, excluding hood.
Weight	<1.5 kg (3.31 pounds).
Power	8.5-15V d.c.,12 to 20 Watts.
Mechanics	Longitudinally-extruded finned case for excellent heat dissipation. Sealed end-caps provide totally-sealed enclosure. Casing nitrogen purged.
Optics	Clear IR-transmissive front window. Integral band-pass filter (IR camera). Integral IR-cut filter (color camera). 25, 12, 8, 7, 6, 4.9, 4mm and 2.9mm lenses available.
Illumination	High-power IR pulsed illuminator. PIPS Technology triple-flash illumination (patented). Flash table can include a position for the color overview camera with LEDs turned off. The illuminator flash table runs locally and autonomously on power-up and can be set via an interactive PC graphical utility or via a simple command-line text interface. Effective viewing range: up to 50 feet (15 meters).
Monochrome IR camera	Hi-sensitivity IR CCD 752 x 582 (CCIR) or 768 x 494 (EIA) ¼-inch format.
Color camera (optional)	Exview-HADTM Colour CCD 752x582 (PAL) or 768 x 494 (NTSC) ¼-inch format. Separate day / night settings (for high speed applications) with changeover from built-in photo sensor.
Video output	Separate 75 ohm standard video output for infra-red monochrome and for color. Both cameras can be multiplexed to one output controlled by the flash table.
Synchronization	External video sync input; otherwise crystal-controlled internal sync (both cameras locked together).
Control	No external controller required; graphical or command-line interface control of:video-field table; flash (8 settings); gain (8 settings); shutter (4 settings); camera selection (2 settings) under RS 232 control; table depth, up to 8 Manual/auto-table(On/Off), plus engineering-only access to camera DSP internal settings, e.g. horizontal and vertical aperture correction, Gamma, etc.
Communications	RS232 & RS485, Rx, Tx, Gnd, 19.2kB, 8 bits, no-parity, 1 stop-bitFlash-table index encoded in top left-hand corner of image.
Cable	Twisted-pair with overall screen, standard length 16.4 feet (5 meters). Greater lengths achievable; including optional use of cable incorporating coaxial video.
Connectors	Metal IP67-sealed connectors.
Connections	75ohm standard video (infra-red monochrome and color); power supply (+ve/-ve); RS 232/RS485 communications; camera and overall screens; external sync, flash gnd and flash pulse.
Mounting	Integral 'T'-slot with captive floating retainer tapped for ¼-inch UNC (standard tripod mount), or two M4 fixing holes for standard pan & tilt mounting.
Sun shield	The use of a sun-shield is recommended where the unit is deployed externally. PIPS will supply a short sunshield. A long sunshild may be supplied as an alternative for permanent installations where it is required to keep contamination from the faceplate.

For additional information about this and our complete range of ALPR products and traffic technology solutions, call or visit us on-line.

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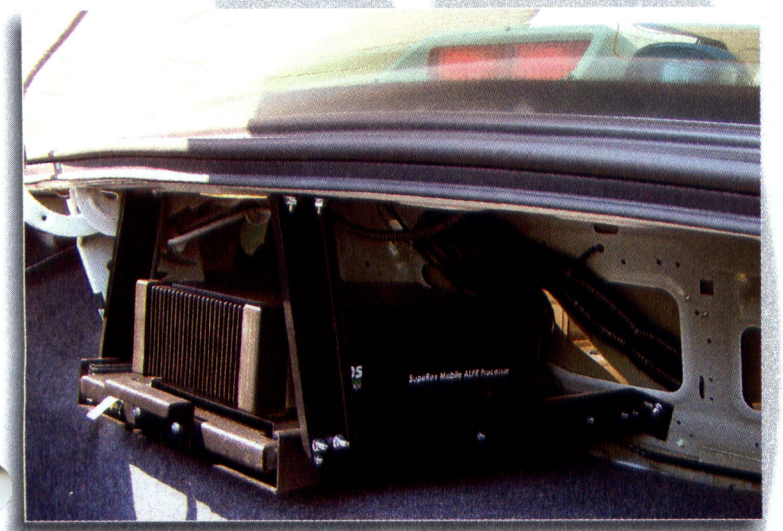
SupeRex™

- Dedicated Processor Engineered Specifically for the vehicle environment
- Functionality to benefit mobile or fixed applications
- Provides Simple Interface and Control for up to Four PIPS P362 Dual Lens ALPR Cameras

Features of SupeRex:

- 1.5 GHz Processor with 4-channel, 120 fps video capture ability
- Intelligent Power Supply Unit with Integrated Surge Protection tied to vehicle ignition to provide safe, programmed, shut-down of system
- Ruggedized, shock-mounted internal hard drive (20GB)
- Recessed Connections to avoid crimping or binding of connections
- Microsoft Windows® XPe embedded operating system
- General Purpose I/O for easy interface with other devices (i.e. barriers)
- Industrial Temperature Range Computing Components and Efficient Heat Management
- GPS input
- Combined serial and power cable
- Fanless system for improved reliability



SupeRex mounting in vehicle trunk

Benefits:

- Versatility for a variety of applications
- Extended processor life
- Reliable performance
- Improved System Speed
- Ease of installation and connectivity
- Powerful processing of multiple ALPR images and reads
- Durability / reliability in rugged environments

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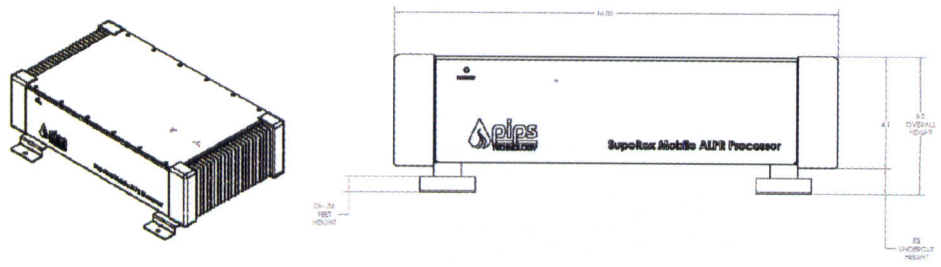
SupeRex Summary Specifications

Additional specifications may be found in the User Manual, or provided upon request

Model #	AP400HD20FS1
Dimensions	5" x 9.25" x 16" (127 x 235 x 406 mm)
Weight	15 lbs (6.8 kg)
Processor	High performance 1.2 GHz processor, 4-channel, 120 fps video capture
Hard Drive	Automotive 20GB extreme environment hard drive, -4° to 185° F (-20° to 85° C) operating environment, able to withstand harsh vibrations and shock with dual-layer shock self defense
Intelligent Power Supply	Surge protection, monitoring of automobile battery to protect against deep discharge, integration with vehicle ignition for safe, programmed startup and shutdown, supports stand-by and hibernate modes from OS
Operating System (OS)	Windows® XPe (embedded)
Interfaces	4 camera ports, GPS input, camera pan and tilt, power / serial, general purpose I/O, 12V power / ignition input, quick-change fuse, 2 PS2 ports, 2 USB ports, RJ45 port, S-Video, RCA, microphone, audio in, audio out, 1394



Applications:

Law Enforcement, Parking and Access Control

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