



5801 West Harry St.  
Wichita, KS. 67209  
316-943-1219

Response to RFP# R1703

Project# PW 1708

GPS Traffic based Traffic Signal Preempt and Remote Monitoring System

**Point of Contact:** Mike Searle  
316-943-1219 office  
316-213-9612 cell  
[msearle@gadestraffic.com](mailto:msearle@gadestraffic.com)

**On-site Personnel-**

**Applied Information:** Kleinjan Deetlefs  
Peter Ashley  
Jeff O'Brian  
Walt Townsend

**Gades Sales Co.:** Mike Searle  
Don Kennedy  
Steve Schorr

Gades Sales Company along with Applied Information Inc. is proposing a complete turnkey solution for the city of Lawrence's GPS Traffic based Traffic Signal Preemption and Remote Monitoring System RFP R1703.

**History:**

Gades Sales Company Inc., headquartered in Wichita KS. Founded in the mid 1940's has been serving the ITS, Transportation Engineering and Traffic Signal Control markets to local and state agencies within our six-state territory.

Applied Information (AI), headquartered in Suwanee GA (Atlanta), began serving the transportation arena in 2011. Agencies around the US and several locations outside the US benefit from AI manufactured applications and cellular solutions. The Applied Information field devices provide the ability to monitor and control multiple types of devices utilizing the same core technologies. AI delivers excellence in 5 key areas: Traffic Intersections, School Beacons, Emergency and Transit/TSP Preemption, Mobile Vehicle Assets and ITS devices. The cabinet/Preemption device also provide the ability to remotely cycle power on non-safety related equipment in the traffic cabinet, which saves agency employees from driving to devices that only need the power to be cycled to get the equipment working again.

AI field devices use Intelligent Data Push technology to send field initiated communications to the server and hence bring the data contracts down to a minimum level. Glance server data is then made available to generate alarms to smartphones and email addresses, as well as a variety of detailed reports. This technology blends, by design, to lead the way with Connected Vehicle and Smart City applications with its own Travel Safely package. Travel Safely employs the information available from Glance to notify smart devices (apps, phones and cars) about important safety related message and changes. The Glance Smart City Supervisory platform and Travel Safely allows cities to manage all their traffic and ITS assets under one web based application.

**Cost:**

We are proposing two connectivity plans for the city to choose from:

**Price breakdown:**

Intersection Preemption FMU2 5yr	\$4,300.00/each
Subtotal 120 qty	\$516,000.00 subtotal
In-vehicle Preemption 5yr	\$3,800.00/each
Subtotal 40 qty	\$152,000.00 subtotal
Intersection Preemption FMU2 10yr	\$4,900.00/each
Subtotal 120 qty	\$588,000.00 subtotal
In-vehicle Preemption 10yr	\$4,600.00/each
Subtotal 40 qty	\$184,000.00 subtotal
Total 5year Preemption equipment and connectivity plan	\$668,000.00 total
Total 10year Preemption equipment and connectivity plan	\$772,000.00 total
Additional Training	
Applied Info	\$1,500.00/day – 8hour day
Gades Sales	\$800.00/day – 8hour day
(after first initial training)	

**5 or 10 connectivity plan includes:**

1. Guaranteed connectivity
2. Upgrade of cell modem when technology changes
3. Telephone and email support from AI and Gades Sales
4. Extended warranty on hardware- (if connectivity plan is active)
5. No overage charges
6. Over-the-air software updates
7. Over-the-air security updates
8. AI Connected Vehicle Service (planned 2017)
9. 4G Streaming Video (planned late 2017) Add'l cost for data
10. Escrow account as per RFP
11. Includes commission of system and 1 week training onsite while deploying units in the field.

**Time Table:**

- Delivery of the above equipment within 60-80 days ARO.
- Devices are pre-programmed from AI and will be labeled with intersection name or vehicle that it is assigned to. (Dependent on the City of Lawrence to fill out the attached configure page at time of award)
- Field staff from either or both Gades Sales Company and AI will be on hand to assist the City of Lawrence staff during installation of equipment.
- 5-6 business weeks for all field installations to be completed. (Excluding holidays, weather and dependent on city personnel for field installation)
- Provide training both on-site and classroom after successful field installation and commissioning of system.

**Client References:**

City of Marietta GA. Tim Cox, Assistant Director of Operations, phone: 770-794-5677, fax: 770-794-5675, [Tcox@mariettaga.gov](mailto:Tcox@mariettaga.gov)

Project was delivered on budget and installation was completed ahead of schedule. Deployed 30 Preemption cabinets and 5 EVP vehicles. We also installed 25 School beacons and radar feedback signs. City of Marietta is installing another 89 preemption cabinets units.

2. City of Hoover AL. Chris Reeves, PE, PTOE, Assistant City Engineer, Phone: (205) 444-7896 email: [ReevesC@ci.hoover.al.us](mailto:ReevesC@ci.hoover.al.us)

We installed 24 preemption cabinets and 4 vehicle units. Hoover placed is installing another 47 preemption cabinets and 17 vehicle unit to deploy the system throughout the entire city. The city also installed 20 school beacons and 15 high mast lighting control units.

3. City of Cullman AL. Jeff Adams, email: [wwtp@cullmancity.org](mailto:wwtp@cullmancity.org)

We installed 6 preemption cabinet and 6 emergency vehicle units

**Letter of Certification:**

Please see attached letter in Appendix A

**Specification for all equipment:**

Please see attached Cut Sheets in Appendix A

## **Appendix A**



March 20, 2017

Charles F. Soules P.E., Director of Public Works  
6 East 6th Street  
P.O. Box 708  
Lawrence, KS 66044

Dear Mr. Soules,

This letter is in regard your request for sole source and/or Letter of Certification information for the Applied Information line of systems to include the Glance Preempt and Priority Control System, cabinet monitoring, school beacon controllers and our ITS devices.

Please be advised that Gades Sales Company, Inc. is the only authorized Preferred Reseller for Applied Information Traffic products for the State of Kansas, Oklahoma, Colorado, New Mexico, Utah and Wyoming. Gades Sales Company, Inc. has been authorized for product training, technical support, sales, warranty and overall support of the products.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Ashley', with a stylized flourish at the end.

Peter Ashley  
VP Business Development  
Applied Information Inc.

## Glance Preempt & Priority System

### Overview

Traffic signal preemption requests are critical to ensuring that emergency vehicles are able to arrive on scene as fast as possible. These systems ensure that the traffic signals are prepared for the emergency vehicle and ensure safe passage through the intersection. The Glance Preempt & Priority System (GPPS) uses the latest technology to make vehicle preemption systems simple and safe!

The Glance Preempt & Priority System utilizes web and cloud based computing to ensure the operation of these complex systems are made simple. The system seamlessly combines cellular, radio transmission and GPS technology into one system.

The system is interoperable with most traffic signal controllers and supports the ability to upgrade to the latest V2I standards.



Managing all of these units and ensuring proper functionality at the right time can be challenging. The system builds on top of the intersection and vehicle monitoring functionality that provides the monitoring all your assets.

### Benefits

- ✓ Simple to deploy technology
- ✓ Easy to maintain
- ✓ Increased confidence in system performance with automated and continuous monitoring and reporting without the need for costly inspections
- ✓ Simple and easy to use web based software that requires no client software to be installed
- ✓ Self configuring communications
- ✓ Configure at Central or at the Intersection
- ✓ Enhanced GPS module for better performance in tunnels and overpasses

Call us today to get started at **678.830.2170** or email us at [sales@appinfoinc.com](mailto:sales@appinfoinc.com)!

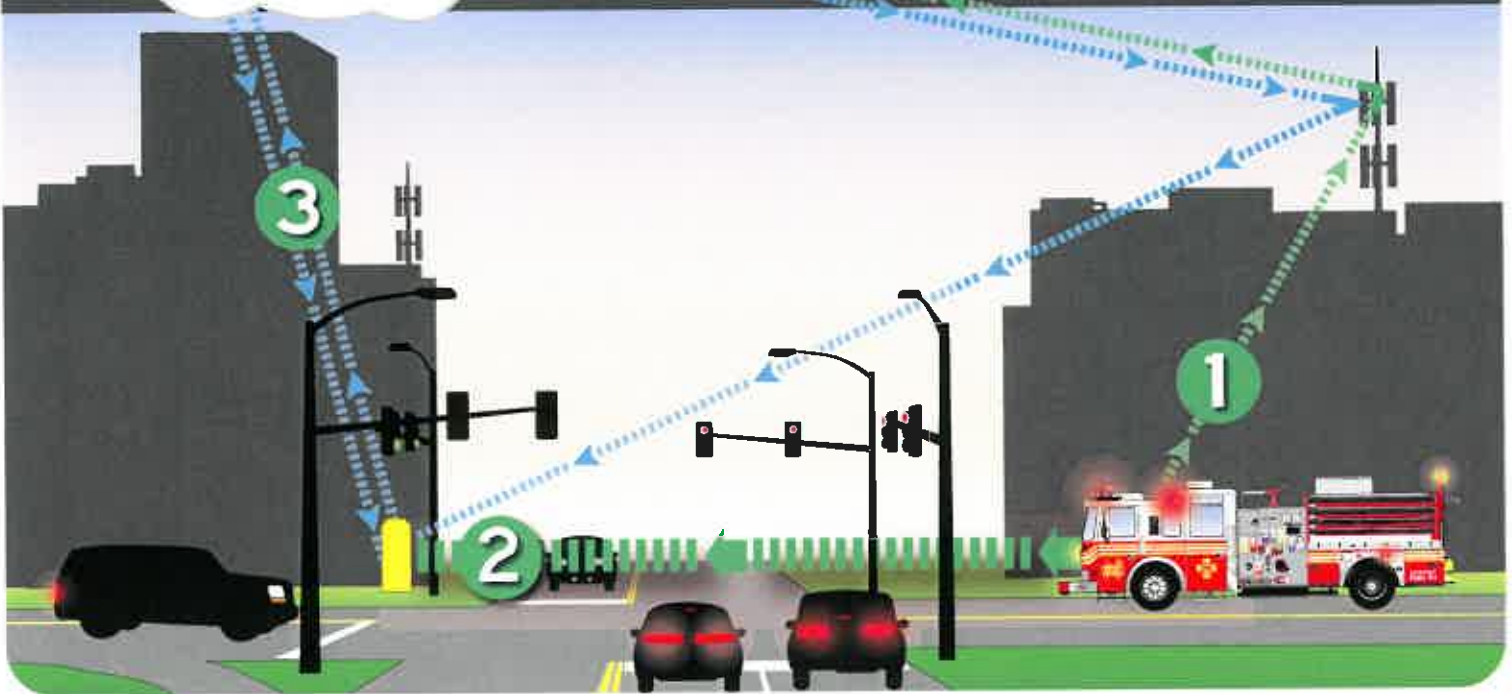


**Glance**  
(cloud)

NEXT GENERATION

# Preempt & Priority System

powered by **ai** applied  
INFORMATION



## Key Features

### Everyone Benefits

Designed for EMS, Transit & Traffic

### Redundant Communication

All data sent via cell ① and radio ②

### Enhanced GPS

Works in tunnels, overpasses,  
and between buildings

### 24/7 Supervision via Glance ③

See Emergency Vehicle Preemption  
and Transit Priority events in real time

### Intelligent Rules Engine

View simple rules on easy-to-understand  
maps on your smart device via web access





## AI-500-065 Series Glance Preempt & Priority In-Vehicle Unit

### Overview

The AI-500-065 Glance Preempt & Priority In-Vehicle series of controllers provides a cost-effective way of adding priority & preemption to your emergency and transit vehicles. The unit has a build in Cellular, GPS and 900MHz radio to make priority and preemption easy to configure and simple to set up. The in-vehicle unit monitors emergency signals, indicators and ignition switch to have the ability to automatically request priority/preemption at the traffic intersections.

The unit comes standard with a build in Ethernet, Cellular Modem, GPS and 900MHz radio. All units come with multiple digital and analog IO to monitor the vehicle status. The unit utilizes enhanced GPS module with dead reckoning. This allows the system to still track the vehicle even when the vehicle is in a tunnel or under an overpasses.

The unit works in conjunction with the Glance Platform, providing connectivity to the cloud-based Glance solution. Simply plug install into your in-vehicle unit to add Glance priority and preemption as well as monitoring of location and situation of all your vehicles.

### Features

- ✓ Low cost Internet connectivity solution
- ✓ Monitor emergency and transit vehicles in real time from a simple browser
- ✓ Cellular & 900MHz radio redundancy
- ✓ Perform priority checkin requests at any distance from the traffic controller with Cell connection
- ✓ Remote Firmware Updates Available
- ✓ Local data storage, supporting store and forward schemes when no connection
- ✓ Enhanced GPS with dead reckoning and OBD-II interface for wheel revolutions
- ✓ Easy to Install



Call us today to get started at [678.830.2170](tel:678.830.2170) or email us at [sales@appinfoinc.com](mailto:sales@appinfoinc.com)

# Hardware Specification



AI-500-065

## Connectivity

Cell Modem	Yes
900MHz Radio	Yes
Ethernet Port (10/100Base-T)	Yes
GPS	Yes
Enhanced GPS with dead reckoning	Yes

## Industrial I/O

Analog Inputs	4
Digital Inputs	6
Digital Outputs	2
OBD-II interface	1

## Miscellaneous

Operating Systems	µC/OS-II
In Service Light	Yes
Operating Temperature	-40°C to 80°C
Humidity	5-95% non-condensing
Dimensions	7.250" x 5.440" x 1.693"
Input Voltage	10-30v AC or DC
Real Time Clock	Yes
Flash Disk	Yes
Battery Backed Memory	Yes

## Also suitable for...

Bus and Light Rail Priority	Yes
Vehicle monitoring	Yes
Scheduling	Yes

\*\* Custom configurations available  
for volume orders



## AI-500-085 Series Glance Preempt & Priority Field Monitoring Unit

### Overview

The AI-500-085 Glance Preempt & Priority FMU series of controllers provides a cost-effective, easy to integrate means of adding priority & preemption as well as monitoring traffic intersections status and health. The unit has a built in Cellular, GPS and 900MHz radio to make priority and preemption easy to configure and simple to set up. The 19-inch rack mounted device is capable of remotely switching NEMA 5-15 power outlets inside the ITS cabinets. It is designed for extreme temperature applications and has low power requirements, making it suitable for solar powered applications.

The unit comes standard with a built in Ethernet, Cellular Modem, GPS and 900MHz radio. All units come with multiple digital and analog IO as well as 8 relay contacts to trigger preemption commands to the traffic signal controllers. The unit is also capable of sending priority requests directly to the traffic controller using ethernet communications.

The unit works in conjunction with the Glance Platform, providing connectivity to the cloud-based Glance solution. Simply install into your traffic intersection to add Glance priority and preemption as well as monitoring to your traffic cabinets status and health.



### Features

- ✓ Low cost Internet connectivity solution
- ✓ 19 inch rack mount 1 U high
- ✓ Controller Passthrough Communications
- ✓ Remotely switchable outlets
- ✓ Compatible with Glance platform
- ✓ GPS enabled for self-locating
- ✓ Supports transit priority capable controllers to keep signals in coordination
- ✓ Redundant communications supporting both 900MHz radio and Cellular communication
- ✓ Simple to configure priority and preemption zone using map based configurator.
- ✓ Integral battery back-up for power fail reporting

Call us today to get started at [678.830.2170](tel:678.830.2170) or email us at [sales@appinfoinc.com](mailto:sales@appinfoinc.com)!

# Hardware Specification



AI - 500-085

## Connectivity

Cell Modem	Yes
Wi-Fi	No
Ethernet Port (10/100Base-T)	Yes
900 MHz Radio	Yes
GPS	Yes

## Industrial I/O

Analog Inputs	8 (4 as 120VAC/12-28VDC selectable, 4 as 12-28VDC only)
Digital Inputs	8 (4 as 120VAC/12-28VDC selectable, 4 as 12-28VDC only)
Digital Outputs	10 (2 as NO/NC Relay, 8 as 24VDC ground true)

## Power

Outlets	NEMA 5-15 (4 x 120V, remotely switchable rated 15 amp total load)
---------	---

## Miscellaneous

Operating Systems	µC/OS-II
Manual Preempt Selector	Yes
Operating Temperature	-40°C to 80°C
Humidity	5-95% non-condensing
Dimensions	17.5" W x 1.75" H x 7.5" D
Mounting	19 inch rack mount 1U
Input Voltage	120V AC
Real Time Clock	Yes
Flash Disk	Yes
Battery Backup	Yes

## Also suitable for...

Intersection Monitoring	Yes
Scheduling	Yes

\*\* Custom configurations available  
for volume orders







5/10/2017

Applied Information Devices are in over 80 cities and agencies, representing roughly 4,000+ devices in the U.S. and several parking guidance installations in South Africa.

Highlights:

- Gwinnett County, GA – 270 x Beacons
- City of Marietta – Smart City (30 x Beacons, 120 x Preemption, 42 x Driver Feedback signs, 2 X Dynamic Message Signs)
- Manatee County, FL – 140 x Beacons
- City of Hoover, AL – Smart City (25 x Beacons, 70 X Preemption & Traffic Intersections, 15 X High Mast Lighting)
- City of Portland, OR – 160 x Beacons
- Washington County, OR – 140 x Beacons
- Fort Bend County, TX – 140 Beacons, 50 Preemption and Traffic Intersections

Below is a more comprehensive list. Agencies with 1 or 2 devices are not listed.

Georgia:

Gwinnett County – 270 Beacons

City of Marietta – Smart City (30 x Beacons, 120 x Preemption, 42 x Driver Feedback signs, 2 X Dynamic Message Signs)

City of Atlanta – Connected Vehicles (60 x preemption traffic intersections, 8 x school beacons, 5 x pedestrian crossings, 5 x emergency preemption vehicles, 2 x RWIS weather stations)

Florida:

City of Jacksonville – 140 Beacons

Manatee County – 144 Beacons

Brevard County – 54 x Beacons

City of Gainesville – 40 x Beacons

City of Ocala – 26 x Beacons

City of Tampa – 110 x Beacons

FunSpot park Orlando – 2 x rapid flashing beacons

Arkansas:

Arkansas Highway & Traffic Department – 12 x Mobile Weather Systems, 1 power generator monitor, 4 RWIS weather stations

Alabama:

Alabama DOT South West (Mobile) – 28 x Highway Advisory Radios, 3 x Congestion Ahead, 3 x DMS signs, 2 x Ferry Crossing cabinet monitors

City of Cullman – 22 x Preemption & Traffic Intersections, 6 x preempt vehicles

City of Hoover – Smart City (25 x Beacons, 70 X Preemption, 70 X Traffic Intersections, 15 X High Mast Lighting)

City of Huntsville – 38 x Beacons

City of Tuscaloosa – 85 x Connected Vehicle Preemption Traffic Intersections

Texas:

City of Sugarland – 44 x Beacons  
Fort Bend County – 140 x Beacons, 50 x Preemption traffic intersections  
City of Missouri – 40 x Beacons, 1 x Preemption and Traffic Intersections, 1 x emergency vehicle  
City of Fort Worth – 20 x Beacons and Driver Feedback Signs  
Harris County – 25 x Beacons  
The Colony – 4 x Beacons, 3 x preemption traffic intersections, 6 x emergency vehicles  
Town of Addison – 1 x Traffic Intersections  
City of Frisco – 70 x beacons  
City of New Braunfels – 2 x over-height detection devices

Tennessee:

City of Franklin – 24 x Beacons  
City of Memphis – 9 x radar speed monitors, 10 x school beacons

South Carolina:

City of Apex – 22 x Beacons  
Charlotte DOT – 2 x Mobile Weather Stations  
City of Lexington – 6 x Preemptions & Traffic Intersection, 6 x emergency vehicles

North Carolina:

Winston Salem School District – 6 x Mobile Weather Systems

Mississippi:

City of Gulfport – 7 x Intersections

Louisiana:

City of Baton Rouge – 4 x Beacons

Virginia:

Arlington County – 80 x Beacons

Oregon:

City of Portland – 160 x Beacons  
Washington County – 140 x Beacons  
Clackamas County – 40 x Beacons & Ferry Crossings  
City of Tigard – 12 x beacons

Idaho:

City of Nampa – 6 x Beacons

Washington:

Seattle DOT – 160 x Beacons, 1 x over-height detection system

Colorado:

City of Castle Rock – 44 x Beacons

City of Broomfield – 6 x preemption intersections, 1 x driver feedback sign

City of Pueblo – 10 x beacons

New Mexico:

City of Clovis – 7 x preemption intersections, 27 x Beacons

Kansas:

City of Olathe – 2 x Beacons

Missouri:

Missouri DOT Central (Jefferson City) – 55 x Beacons

Missouri DOT South East – 4 x Beacons and 2 x Traffic Intersections

Missouri DOT South West – 4 x Beacons

Massachusetts:

City of Haverhill – 5 x Beacons for Snow Removal

City of Lynn – 8 x Beacons for Snow Removal

South Africa:

Waterfront Parking Guidance: 4000 x Parking Guidance Sensor, 50 x DMS signs

OR Tambo Airport: 12000 x Parking Guidance sensors, 300 x DMS signs

City of Cape Town Airport: 15 x DMS signs

TRAC – 15 x DMS signs

ABSA Bank – 1000 x Parking Guidance Sensors, 20 DMS Signs

ABSA Capital – 1000 x Parking Guidance Sensor, 10 DMS signs

ABSA Campus – 1000 x Parking Guidance Sensors, 10 DMS signs

City of Uppington – 2 x Over-height detection systems

Telkom Headquarters – 1700 x Parking Guidance Sensors, 12 x DMS signs

Price Waterhouse Coopers – 1600 x Parking Guidance Sensors, 15 x DMS signs





To: City of Lawrence/ Mr. Mike Perkins – Mr. Todd Lohman

Re: City of Lawrence's Fire Preemption / Traffic Signal Remote Monitoring System.

Revised numbers based on using the existing communication fiber backbone for 40 traffic signal cabinet units.

Price breakdown:

Intersection Preemption Units 5yr plan-

Includes 73 units with data plan

40 units with Fiber backbone

7 spare units

120 total FMU2 units

\$448,000.00 subtotal

In-vehicle Preemption 5yr plan-

Includes 36 units with data plan

4 spare units

3 test kits

\$139,000.00 subtotal

Intersection Preemption FMU2 10yr

Includes 73 units with data plan

40 units with Fiber backbone

7 spare units

120 total FMU2 units

\$538,000.00 subtotal

In-vehicle Preemption 10yr

Includes 36 units with data plan

4 spare units

3 test kits

\$168,000.00 subtotal

1 week training/commissioning  
of system

\$5,000.00 subtotal

Total 5year Preemption equipment and connectivity plan	\$592,000.00 total
---	--------------------

Total 10year Preemption equipment and connectivity plan	\$711,000.00 total
--	--------------------

Additional Training if needed	
Applied Info	\$1,500.00/day -8 hour day
Gades Sales	\$800.00/day -8 hour day
(after first initial training)	

5 or 10 connectivity plan includes:

1. Guaranteed connectivity
2. Upgrade of cell modem when technology changes
3. Telephone and email support from AI and Gades Sales
4. Extended warranty on hardware-(as long as connectivity plan is active)
5. No overage charges
6. Over-the-air software updates
7. Over-the-air security updates
8. AI Connected Vehicle Service (planned 2017)
9. Escrow account as per RFP
10. Includes commission of system and 1 week training onsite while deploying units in the field.