

Traffic Management Solutions

TF 800.661.7346 E info@atstraffic.ca
atstraffic.ca | Since 1966



Traffic Management Solutions



INTRODUCTION

Traffic detection devices are used for the detection of vehicles, bicycles and pedestrians at signalized Intersections. These devices then affect light signals so that the detected vehicle, bicycle, or pedestrian can get where they want to go.

Traffic Detection Solutions help to maximize the efficiency and capacity of existing transportation networks. With the continued increase in traffic volume and the limited construction of new highway facilities in urban, intercity, and rural areas, traffic detection is a vital component in keeping roadways running smoothly.

The other key component to a Traffic Detection solution is the ability to collect data. Data helps you to understand the volume of traffic on roadways and paths, and determine maintenance requirements and future growth needs in particular areas.

There are three main components to Traffic Detection: **Intersection Control**, **Overheight Vehicle Detection**, and **Data Collection**.



No matter how low a city's traffic injury and fatality rates might be, not even one death is acceptable. That's why we're working with Vision Zero Canada to bring your community's number down to zero.

Through our Vision-Zero-certified products, initiatives, and Advocacy Program, we'll understand your needs and identify opportunities to reduce injuries and deaths in problem areas. If we work together, we can make it happen not just for your community, but for communities everywhere.

Value Matrix

Using a matrix system, we've identified seven value categories that relate to Traffic Detection, so that you have a better idea of how each product and system can help you find the right solution for your Traffic Detection needs.

- 1 Reporting Capabilities**

Most of our solutions have software that collects data for reports and vehicle classification. This means you will have the ability to see how many vehicles/pedestrian/bicycles are using a roadway. Create custom reports based on time of day, total number of vehicle etc.
- 2 Congestion Management**

As roads get busier every year, traffic management departments are looking for ways improve traffic signal performance and modify or adapt signal timing to improve the flow of traffic at a given time during the day. For example in the morning rush hour longer green times on the major routes but not forgetting that side streets still need to allow for vehicle to enter the major routes. Travel time information allows drivers to make informed decisions about the route they take.
- 3 Maintenance Management**

There are two components to maintenance, ongoing firmware updates to improve equipment performance and physical repairs to equipment. With communications to the signalized intersections the firmware updates can be remotely applied to the equipment saving time and traffic disruptions. Some of the newer technologies have very low ongoing maintenance while older technology like inductive loops can be subject to the Canadian weather where freezing and thaw can cause the equipment to stop working.
- 4 Funding Management**

By determining the volume of traffic on roadways, whether they are city street or highways or secondary roads, this information can be used to apply to government bodies for additional funding to maintain or improve the road.
- 5 Scalable (more Products/Features available)**

The goal for any public department is to move traffic efficiently and safely on city streets and highways. This can be accomplished a number of different ways by controlling signalized intersections, providing warning lights to oversized vehicles to ensure they do not impact overhead structures or moving emergency vehicles through congested streets.
- 6 Improves Overall Safety**

The safety of all road users is the primary concern for any municipality or organization who is responsible for implementing traffic systems. Traffic Detection products and solutions help to improve the overall safety of road users by utilizing data to make more informed decisions about traffic management.

Value Matrix



7

Remote Data Download

The ability to remotely access information from equipment in the field saves time and money for the organization.

8

Non-Intrusive

These systems are installed above the roadway. Types of non-intrusive detections includes microwave, video, radar, acoustic, infrared detectors. These types of systems cause less impact to traffic during the initial installation and if repairs are required.

9

Intrusive

These systems are installed in the roadway and include magnetic, magnetometers, pressure and inductive loops detectors. These systems will typically require lane shut downs during initial installation and during any repairs.

Intersection Control

POD System	1	2	3	4	5	6	7	9
Smartmicro	1	2	3	4	5	6	7	8
Inductive Loops	2	6	9					

Data Collection

Houston Radar	1	3	4	6	7	8		
DataCollect	1	3	4	6	7	8		
TrafX	1	3	4	6	8	9		

Over Height Vehicle Detection

TRIGG	6	8						
-------	---	---	--	--	--	--	--	--

Intersection Management Solutions

TRAFFICWARE

Traffic Cabinets

NEMA CABINETS

Trafficware offers a full line of NEMA standard cabinets that can be custom designed to suit your exact needs. The multitude of convenience and safety features found in our wired cabinets make installation and maintenance a snap.

Trafficware's wired cabinet assemblies provide for 8 phase, 4 pedestrian, 4 overlap operation. Detector racks are available in a number of configurations including but not limited to 6, 8, 10 and 12 positions. The TS2 version also includes one position for a Bus Interface Unit (BIU) per detector rack. The load bay comes standard with 12 or 16 load switch positions and a 2 position BIU rack expandable up to 4.

Trafficware's wired NEMA cabinet assemblies also feature a one piece body wrap with no seams, a divided exhaust plenum for dual fan operation to prevent backflow. Our standard cabinets are painted white on the inside with white terminal designations on a black anodized main panel for superior visibility. Hot-swappable modular MOVs can be added to the field termination strip for an added layer of surge protection.

The power panel is designed for up to 4 circuit breakers, any type of surge protection, a solid state relay and safety cover. Detector panels are available with optional surge protection. The main panel swings down without having to remove any cabinet modules. A swing out technician's panel, laptop shelf, cabinet print drawer or pouch as well as an auxiliary panel are all available in a number of configurations.

All Trafficware cabinets undergo an intensive testing procedure for a minimum of 24 hours prior to shipment to ensure operational and safety "peace of mind" for decades to come.



FEATURES



- Meets NEMA standards
- Base mounted
- Constructed of 0.125" thick aluminum
- "C" mounting channels on side and back walls for mounting shelves and panels
- 3-point latching mechanism of zinc plated steel
- Stainless steel door handle designed for padlock
- Stainless steel door hinge
- Optional Lifting Ears
- Front and Rear Doors

SPECIFICATIONS

- Mounting Pattern: 40.50" W x 18.50" D
- Material: Aluminum (.125" thick)
- Finish: Bare or Painted
- Mounting: Base Mounted
- Door Stops: Three position bar stop at bottom of door
- Ventilation: Pleated fiber filter in door, fan with thermostatic control
- Light: Incandescent or optional fluorescent, door switch activated

DIMENSION OPTIONS

(rounded to the nearest inch)

OUTSIDE	OPENING
54" H 44" W x 26" D	42" H x 41" W
68" H 44" W x 26" D	56" H x 41" W
77" H 44" W x 26" D	63" H x 41" W

CUSTOMIZED

... H x 44" W x 26" D

FEATURES



- Meets NEMA standards
- Base mounted
- Constructed of 0.125" thick aluminum
- "C" mounting channels on side and back walls for mounting shelves and panels
- 3-point latching mechanism of zinc plated steel
- Stainless steel door handle designed for padlock
- Stainless steel door hinge, continuous, or optional three (3) hinge arrangement
- Optional Lifting Ears

SPECIFICATIONS

- Outside Dimensi: 50" H 30" W x 18" D
- Material: Aluminum (.125" thick)
- Finish: Bare or Painted, inside/out
- Mounting: Base Mounted
- Locking System: 3-point locking system with Corbin #2 lock
- Door Stops: Bar stop at top of door
- Ventilation: Pleated fiber filter in door, fan with thermostatic control
- Light: Door switch activated LED (Incandescent or fluorescent available)

TRAFFICWARE

Traffic Controllers



SERIES 900

The Series 900 ATC Traffic Signal Controller is designed using state of the art electronics to ensure reliability, a long life, and superb performance in all signal control applications. Design of the Series 900 ATC Controller is based on the ATC and NEMA TS2 standards and includes advanced functionality for complex phasing, detector processing, coordination, preemption, communications, adaptive timing, and systems operation as a master or a secondary controller. The advanced LCD display and menu-driven software provide a user-friendly approach to programming and access. Built-in diagnostics permit rapid evaluation of operational status. The on-board Flash File System allows software upgrades without PROM replacements. The front panel mounted USB port facilitates the upgrade process and file access with ease and the Ethernet-enabled controller allows communication across a TCP/IP network.

Many Options available!

SERIES 2070

Introducing the new Trafficware 2070E Traffic Controller based on the Advanced Transportation Controller (ATC) standard specification and the California DOT Transportation Electrical Equipment Specifications (TEES). This state of the art traffic controller is completely compatible with the Type 332 and 336 traffic cabinet currently utilizing CALTRANS 170/179 controllers. The 2070E can be loaded with factory-provided traffic controller software or is capable of operating using other available software code.



ATC CONTROLLER

The Trafficware ATC is compliant with ATC Standard Version 5.2b and considers Draft ATC Standard Version 6.0. The controller is TS2 shelf mount configurations and uses a processor rated at more than eight times the performance that is required by the ATC standard.

TRAFFIC SYSTEM SOFTWARE

ATMS.Now

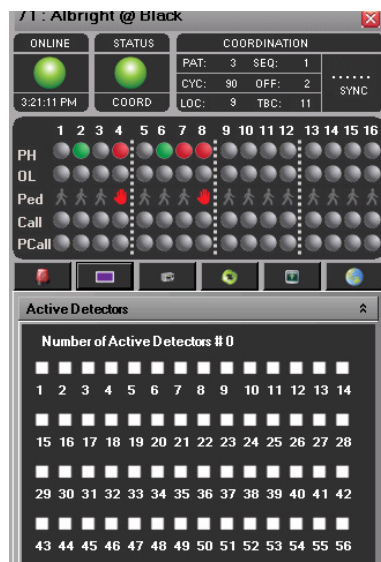
ATMS.NOW

ATMS.now builds upon the legacy of Trafficware's flagship central transportation management platform and delivers a powerful tool for monitoring and controlling an agency's traffic control and ITS infrastructure. ATMS.now provides a modern graphical user interface (GUI), intuitive controls and new feature sets that maximize agency productivity and resources. Like previous versions of ATMS.now, this newest installment implements standards such as NTCIP and NEMA and is designed to specifications published by FHWA, ITE, IMSA, Caltrans and other industry leaders. ATMS.now provides a level of integration with other manufacturers and devices that is unparalleled and offers unmatched flexibility in order for the agency to maximize and leverage current infrastructure investments.

While ATMS.now interoperates with other manufacturers, there are numerous advantages to operate the system with other Trafficware products and leveraging Trafficware's vertical depth of ITS products. All Trafficware systems ship fully integrated and tested - both hardware and software. This ensures that Trafficware products can be deployed quickly with minimal integration costs. Trafficware is the only company in the industry that provides such a broad spectrum of ITS products with seamless integration.

SIGNAL CONTROLLER SCANS

The updated Signal Controller Scan improves upon Trafficware's pioneering concept from previous versions of ATMS.now. The new Signal Controller Scan provides an intuitive interface and modern graphics that illustrate real time signal status. The Signal Controller Scan is designed to be a "heads-up-display" for all traffic signal activity.

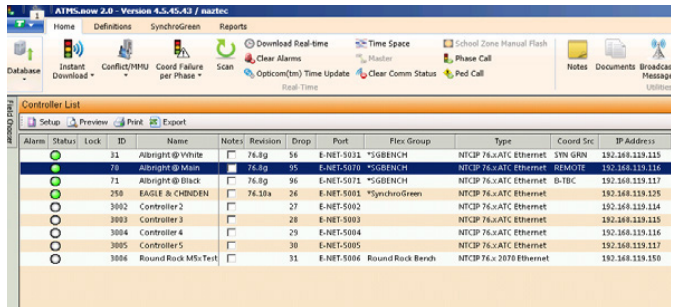


"ATMS.now is another example of Traffic-ware investing in product development to provide the most cutting edge offerings to their customers."

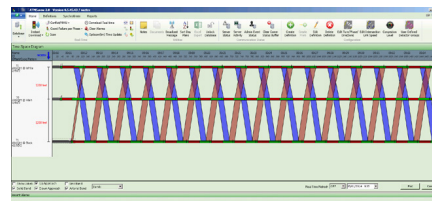
— Greg Heldreth
City of Victorville, CA Traffic Engineering Specialist

MODERN INTERFACE

Trafficware has created a modern, intuitive interface for our customers. ATMS.now is based on Microsoft standards and is immediately familiar to new users. ATMS.now comes standard with several configuration templates, but also has an array of customization options for power users. ATMS.now comes standard with "ribbon" controls featuring intuitive icons for all system commands and functions.

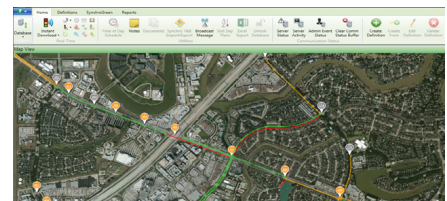


TIME-SPACE DIAGRAMS



The new ATMS.now time-space diagram has the same look and feel as the time-space diagram within Trafficware's flagship simulation software, Synchro™ and has been a trusted tool for traffic engineers throughout the world for nearly two decades. The new ATMS.now time-space diagram allows the user to plot real time signal controller data by selecting a group of intersections in order to optimize traffic signal coordination.

MAP VIEW



ATMS.now features the Map View as the default status view. The Map View graphically illustrates system status, activity, devices and performance. The Map View not only indicates traffic signal status, but also shows congestion levels (MOEs), live camera feeds, dynamic message signs (DMS), roadway closures and more. The Map View features Bing™ Maps and allows the user to view system status on roadway or aerial backgrounds.

ADAPTIVE TRAFFIC CONTROL

SynchroGreen

What is SynchroGreen?

SynchroGreen optimizes signal timing for the mainline, side streets, and pedestrians through real-time adaptive traffic control. This field-proven solution is designed to reduce motorist travel time, delays, and stops. SynchroGreen maximizes the use of available roadway capacity, while also decreasing fuel consumption and emissions.

REAL-TIME ADAPTIVE TRAFFIC CONTROL

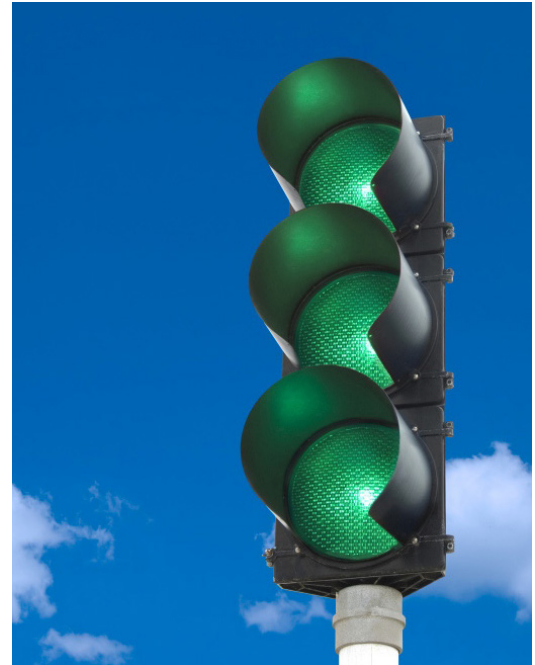
1. Adjusts traffic signal timing plans in real time based on current traffic characteristics
2. Optimizes signal timing (cycle, offset and split) for normal traffic flow or un-characteristic surges due to accidents or road closures

SMART SYSTEM AND EASY SETUP

1. Designed for easy startup and reliability
2. Accessible from a web-based interface or Windows application
3. Returns traffic controllers to normal time-of-day operation if the system is shut down

INTEGRATES WITH SYNCHRO AND SIMTRAFFIC

1. Models adaptive traffic control and provides simulation capabilities
2. Calibrates adaptive settings using actual field data
3. Allows users to preview expected results before implementation



Up to
70%

Reduction in Intersection Delay

Up to
60%

Reduction in Total System Delay

Up to
80%

Reduction in Arterial Delay

Up to
70%

Reduction in Arterial Travel Time

SynchroGreen is Available in Three Levels

SYNCHROGREEN LEAN

includes the Local Intersection Software and Central Server Software, and provides a web-based interface for monitoring and controlling the system. This option is an economical way for a city to experience the benefits of adaptive traffic control.

SYNCHROGREEN PREMIUM

includes the Local Intersection Software and Enhanced Central Server Software. It provides agencies with the ability to analyze real-time system performance, create detailed reports, log system calculations, and much more. This solution is designed to be easily integrated as part of federally funded adaptive traffic control projects.

SYNCHROGREEN INTEGRATES

integrates directly with your ATMS.now central management system and also qualifies for federal funding. It allows agencies to operate any number of adaptive intersections and up to 9,999 total intersections.

Connected Vehicles

CONNECTED VEHICLE MODULE

Trafficware’s new Connected Vehicle module allows transportation agencies to selectively publish traffic intersection data to the public or 3rd-party developers for the growing number of Connected Vehicle applications like “Talking Intersections”, which provide valuable intersection data to the driver, improve safety, reduce emissions, and more.

Data provided by Trafficware’s signal controllers, sensors, and central management software, ATMS.now, are used to provide the state of the traffic signal, so auto manufacturers can incorporate it into telematics and in-vehicle information systems.

A growing number of communities are exploring these applications while select auto manufacturers are launching Connected Vehicle systems in 2017 and later model cars.

The subscription-based module is installed on the ATMS.now server or a dedicated server and broadcasts the data. This provides more security and flexibility to the agency and provides the ability to transmit data in a common format to all users.

Product Features & Capabilities

CAPABILITIES

- Securely broadcasts real-time traffic signal data in a non-proprietary format to the public or 3rd party vendors.
- Installs on the ATMS.now server or on a separate, dedicated server.
- Requires ATMS.now 2.5 or higher.
- Allows the agency to issue subscriptions to data users through a new Subscriber control under the Definitions tab of the ATMS.now system.
- Exports data in Javascript Object Notation (JSON) format, a standard format that transmits data objects and is commonly utilized for modern browser/server applications.

POTENTIAL USES

- Reducing Fuel Consumption
- Improving Driver Awareness
- Improving Public Access to Information
- Improving Logistical Operations
- Engine start/stop, ideal speed
- Notifications/warnings on signal changes
- Congestion reporting, routing
- Access to historical data

Information Content				
Signal	Times	Detects	Events	Sync
Red	Max	Ped	Preempt	Cycle
Yellow	Min	Veh	Bus	Pattern
Green	Ped	Bike	Train	Sequence
Walk	Split			
Ped Clear				
Don't Walk				

DEPLOYMENT HIGHLIGHT



Trafficware and the City of Palo Alto’s Connected Vehicle deployment was a Finalist for the 2016 Best in ITS Awards.

Signal Performance Measures

CLLOUD-BASED SPM

Trafficware’s SPM in the Trafficware Cloud Service is an out of the box cloud-based solution to store and analyse high-resolution data collected from traffic signals, providing access to the information at any time, 24/7/365. Make better and more timely decisions based upon automated data collection and analysis to improve public service.

The SPM Cloud Service allows an agency to quickly and easily identify potential signal timing issues before they are noticed by the public. Save time and money by pinpointing problems immediately and minimizing the need to contract out analysis.

The SPM Cloud Service provides the same reports developed by leading DOTs including INDOT, UDOT and Purdue University along with ones developed by Trafficware. The SPM in the Trafficware Cloud Service is a fundamental building block in the Smart Cities initiative and lays the groundwork for “Smart Traffic Signals”.

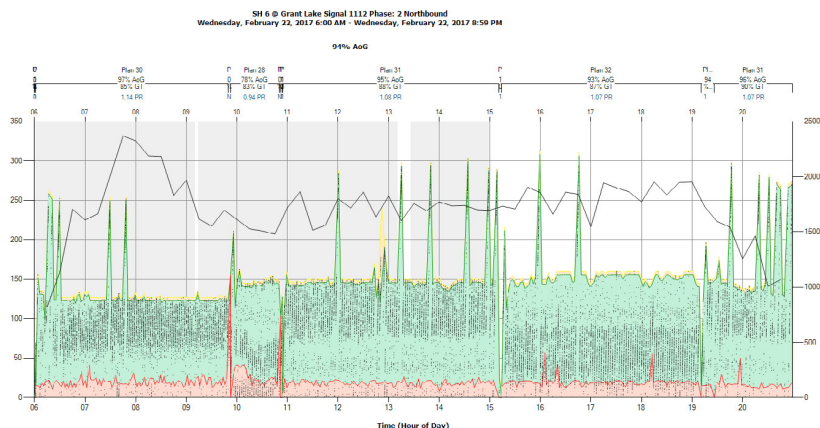
Product Features & Capabilities

CAPABILITIES

- Traffic analysis tool - makes it easier for the agency to identify problems and resolve traffic signal timing issues sooner
- Cloud Based Service - No Capital cost to agency
- Easily share data with neighboring agencies – No client software required
- 24/7/365 access - data collection, monitoring, analysis and reporting whenever you need it
- 11 Different Reports - refinements and the addition of new ones are performed automatically in the background
- Secure access to encrypted data - Multiple users through commonly supported web browsers
- Access data from any vendor controller with Purdue data collection enabled
- Service Scales automatically – add intersections as agency grows
- No need to procure server hardware
- No software installation or configuration required
- Updates to the service and reporting are performed automatically
- ATMS.now Transportation Management System (version 2.6 & higher) offers integration with SPM service
- Minimize demands on IT department for support

REPORTS

- Approach Delay
- Approach Volume
- Arrivals on Red
- Pedestrian Delay
- Preemption Details
- Purdue Coordination Diagram
- Purdue Phase Termination
- Purdue Split Failure
- Split Monitor
- Turning Movement Counts
- Yellow and Red Actuations



Detection & Data Collection Solutions

Non-Intrusive Solutions

MIOVISION

VIDEO DETECTION & ANALYSIS

Improve traffic using a single camera and the world's most advanced traffic AI.



Vehicle detection

Improve traffic control with actuation on all approaches.



Complete streets

Build complete streets strategies by understanding pedestrian and cyclist mobility.



Engineering studies

Optimize engineering work with Turning Movement Count studies.



Traffic classification

Improve planning with traffic counts and classifications of vehicle types.



Event detection

Detect parking violations, safety hazards, traffic incidents, and more.



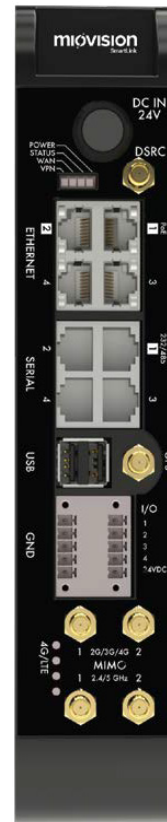
Actionable insight

Improve traffic flow and create safer streets

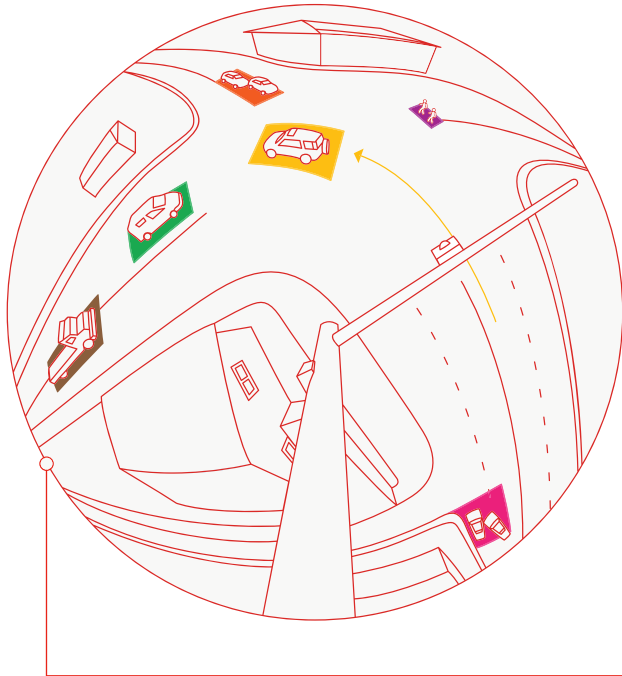


Improved planning

Make better decisions with in-depth analytics



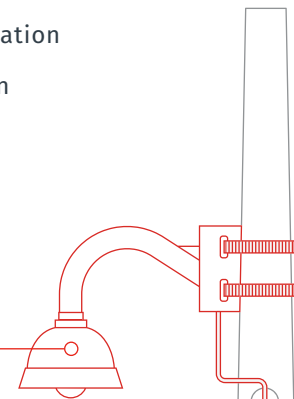
Non-Intrusive Solutions



MIOVISION TRAFFICLINK

High-resolution intersection monitoring with Miovision

- Vehicle detection
- Complete streets
- Engineering studies
- Traffic classification
- Event detection



Miovision Smartview 360 camera

Our AI has counted and classified over 2.5 billion vehicles – let us put it to work for you.

Proven Performance

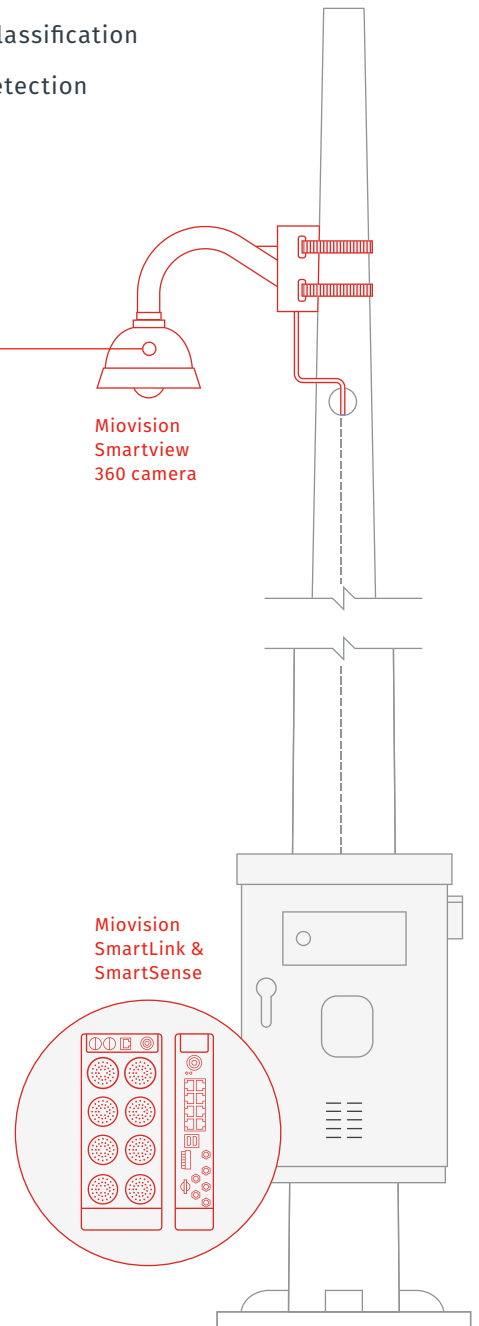
Our AI has processed more video-based traffic studies than any other system in the industry. Its ability to adapt in real time to any condition ensures consistent, high-quality performance at scale.

Multiple applications

TrafficLink allows cities to access a full suite of video-based applications from a single platform. In addition to detection, TrafficLink provides traffic studies, event detection, and pedestrian analysis.

Engineering studies

Beyond counting and tracking vehicle movements, TrafficLink can differentiate between types of vehicles, bicycles, and pedestrians, providing city planners and engineers with a complete picture of their traffic network.



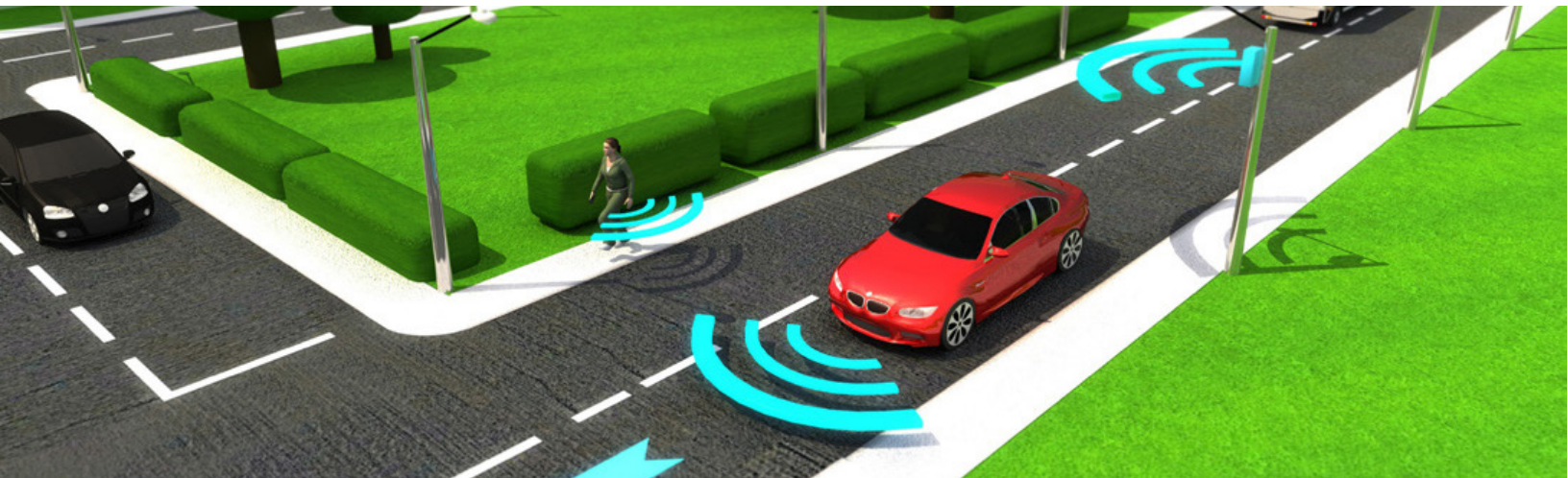
Miovision SmartLink & SmartSense

Non-Intrusive Solutions

HI-TRAC BLUE2

Journey Time Monitoring System

- Accurate detection of Bluetooth and Wi-Fi devices
- Transmits data via GPRS with real-time view of route performance
- Easy to install and rotate for temporary surveys



Overview

The HI-TRAC® BLUE2 is the most advanced journey time monitoring system on the market. It directly and accurately measures vehicle and pedestrian journey times using low-cost, low-power, non-intrusive technology in a sealed IP68 enclosure suitable for roadside operation with easy and quick set-up.

The HI-TRAC® BLUE2 detects anonymous Bluetooth signals transmitted by visible Bluetooth devices located inside vehicles and carried by pedestrians. This data is then used to calculate traffic journey times and movements. Its robust and reliable design, ultra-low power consumption and extended battery life make it the preferred Bluetooth traffic survey tool for the leading traffic survey companies.

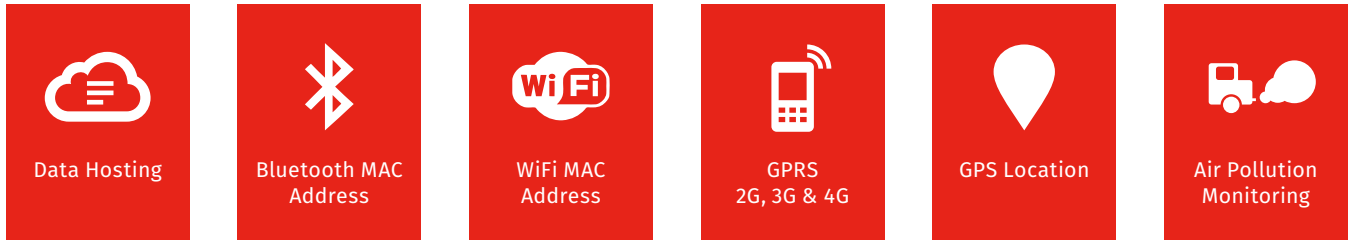
The new-look HI-TRAC® BLUE2 is designed, manufactured and developed exclusively by Q-Free. New features include increased processing power, increased storage and integration and compatibility with other applications.

WIFI DETECTION

The HI-TRAC® BLUE2 is the most advanced journey time monitoring system on the market. It directly and accurately measures vehicle and pedestrian journey times using low-cost, low-power, non-intrusive technology in a sealed IP68 enclosure suitable for roadside operation with easy and quick set-up.

The HI-TRAC® BLUE2 detects anonymous Bluetooth signals transmitted by visible Bluetooth devices located inside vehicles and carried by pedestrians. This data is then used to calculate traffic journey times and movements. Its robust and reliable design, ultra-low power consumption and extended battery life make it the preferred Bluetooth traffic survey tool for the leading traffic survey companies.

Non-Intrusive Solutions



BENEFITS

- Journey times for short and long distance
- Measurements of the time taken to pass through toll plaza
- Origin and destination traffic matrix
- Reduce traffic congestion
- Plan future urban models
- Reduce CO2 emissions by optimizing traffic signals
- Online traffic information
- Alternative route planning
- Queue warning

INSTALLATION

- Installation on existing roadside infrastructure such as traffic signal heads, or street lighting columns or sign poles
- Overhead gantries
- One unit covers up to six lanes at 70mph
- Maintenance and installation non-intrusive

DIMENSIONS & WEIGHT

- 165 x 90 x 205mm (W x D x H)
- Weight: 1.5kg with batteries



FEATURES

- All-new design
- Bespoke injection-moulded enclosure
- Integrated internal antenna as standard
- Ultra-low power consumption for extended temporary surveys
- 2G/3G/GPRS/GSM & Ethernet TCP/IP communications (or both)
- Supports NTCIP/UTMC protocols
- Sealed IP68 unit suitable for roadside operation

OPTIONAL FEATURES

- Incorporates DUST Mesh networking
- Expandable to up to four antennae for improved capture zone
- Integration with Bluetooth TAG systems for bus prioritisation
- Integration with Q-Free MOTE air-quality sensors and particle monitor (PM10, PM2.5) – Wi-Fi antenna (mains power required)
- Integration of up to three flush-mounted solar panels for sustainable power

SOFTWARE

- HI-COMM 100-compatible
- Data hosting and reporting services
- Android app for easy set-up and download

Non-Intrusive Solutions

ALL TRAFFIC SOLUTIONS

SHIELD RADAR SPEED DISPLAY

Our Shield family of radar speed displays is the ideal choice when portability is paramount. These incredibly compact, lightweight signs can be mounted virtually anywhere. Weighing as little as 12 pounds, including mount, Shield is the most durable, portable sign on the market.

EXTREME PORTABILITY

Built for ease of use, it's the lightest, most portable sign available anywhere, and it still meets the MUTCD minimum 12-inch digit size.

SIMPLE, UNIVERSAL MOUNTING

In less than 30 seconds, one person can mount Shield to U-channel, square channel, round poles, trailers and hitch mounts, using the integrated mounting system.

AMAZING BATTERY LIFE

Achieve up to several weeks of run time. A dedicated compartment allows all-weather battery replacement.

DURABLE CONSTRUCTION The welded aluminum enclosure, concealed mounting hardware, shatterproof Lexan and graffiti-resistant powder coating make it super tough.



PRODUCT SPECS

SHIELD 12

Digit Size: 12" (MUTCD min.)
Dimensions: 13.5" H x 15.5" W x 2.6" D
Weight: 12 lbs (incl. mount)

SHIELD 15

Digit Size: 15" (3 metric digits)
Dimensions: 17" H x 24" W x 2.6" D
Weight: 18 lbs (incl. mount)

COMMON HARDWARE UPGRADES

Datalogging, Bluetooth, Violator Alert, Pictures and Metric

Non-Intrusive Solutions

SPEEDALERT RADAR MESSAGE SIGN

By combining radar feedback with variable messages, our SpeedAlert family of radar message signs provide drivers with speed feedback, messages specific to vehicle speeds or dedicated messages. This hybrid of features makes the SpeedAlert an extremely versatile tool for both traffic calming and messaging.

SIMPLE, UNIVERSAL MOUNTING

Mount this sign almost anywhere - post, pole, trailer or vehicle - in about a minute.

MESSAGING VERSATILITY

The Go beyond basic messages with a full-matrix sign that makes it easy to display multiple screens of text, chevrons or custom images.

Plus, conditional sensor messaging allows different messages to be displayed based on live inputs, including time to destination, road surface or air temperatures, timer values, vehicle weights, high winds, and available parking spaces.

DURABLE CONSTRUCTION

The welded aluminum enclosure, concealed mounting hardware, shatterproof Lexan and graffiti-resistant powder coating make it super tough.

SPEED-DEPENDENT MESSAGING

Slow traffic by using the sign as a large speed display and show custom messages directed toward drivers at specific speeds.



PRODUCT SPECS

SPEEDALERT 18

Speed - 2 or 3 digits; 18" H
Text - 1 Line; 4 Characters; 10" H
Text - 2 Line; 6 Characters; 7"
Size: 12" (MUTCD min.)
Dimensions: 20" H x 30" W x 2.96" D
Weight: 25 lbs

SPEEDALERT 24

Speed - 2 or 3 digits; 24" H
Text - 1 Line; 4 Characters; 24" H
Text - 2 Line; 8 Characters; 11" H
Text - 3 Line; 12 Characters; 7" H
Digit Size: 15" (3 metric digits)
Dimensions: 28" H x 60" W x 1.6" D
Weight: 43 lbs

COMMON HARDWARE OPTIONS

Datalogging, Bluetooth, Pictures and Metric

Non-Intrusive Solutions

HOUSTON RADAR

Technology

With ultra-low power full-featured Doppler radars are specifically designed for traffic calming and monitoring applications. Many competing products are retrofitted from regular police radars and as such are optimized for a different market. We have designed our products from scratch with your requirements in mind.

- Ultra-low power for solar powered applications. In many cases our customers were able to double battery life by just replacing the old radar in a legacy sign with one of our models.
- Highly integrated and compact DSP based design. One of our customers was able to dramatically reduce his product's dimensions and weight due in part to the small size and low power consumption of our radars and thus established a new market segment.
- We offer wide range of products covering the needs of various applications.
- This unit is portable and can be moved from site to site.

ARMADILLO TRACKER

Armadillo Tracker™ is a fully integrated multi-lane bidirectional traffic data gathering device. Featuring small size, no hassle field setup, non-intrusive sensing technology and long range wireless connectivity Armadillo Tracker ensures operational safety during installation and data retrieval.

Ultra-low power consumption of our proprietary radar and Lithium Iron Phosphate rechargeable batteries allow over 2 weeks of run time. Optional MPPT solar charger efficiently charges the battery from a small 5 watt solar panel even in overcast conditions to keep it going year around.



- Collects individual time stamped vehicle counts, speeds and class (up to 3) per direction in up to 2+2 lanes making it a perfect fit for traffic monitoring and speed study applications
- Computes real-time, per direction average speed for incident detection applications
- Simple “point and go” installation. No measurements, no trigonometric computations, no computer required on the road
- Weatherproof security switch for turning unit on and off
- 0.4% speed accuracy and up to 97% count accuracy
- Vehicle classification in up to 3 factory set size classes
- On-board memory to store 300,000+ individual vehicles
- High performance LiFePO4 rechargeable battery pack operates in wide temperature range and allows over 2000 recharge cycles

Non-Intrusive Solutions

ARMADILLO CROSSFIRE

Houston Radar Armadillo Crossfire is a state of the art non-intrusive traffic collector designed for volume collection on the roads with up to 6 lanes of detection. It is the premier product in its class available in the world.

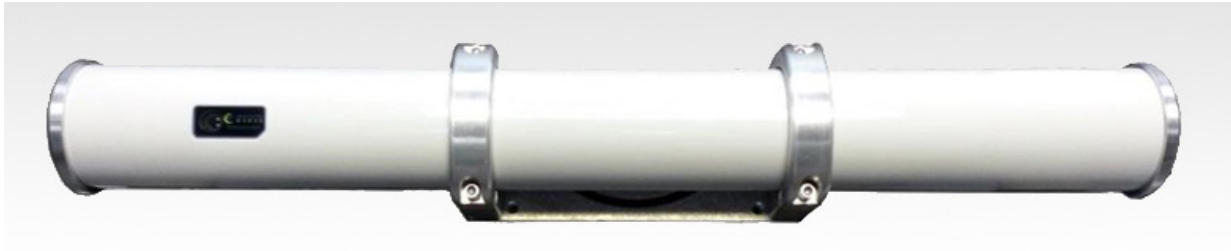


SPECIFICATIONS & RECOMMENDED OPERATING CONDITIONS

VCC	Inbuilt 9.6VDC LiFePO4 battery
ICC@9.6VDC	38 mA (0.25 Watts) Avg.
Radar RF out	5 mW maximum
Occupied Band	24.020 to 24.230 GHz
Modulation Type	Frequency with linear ramp
Operating °F (°C)	-4 (-20) min to 140 (60) max
Max Pickup Distance	128 feet (39m)
Beam Angle	20°x60°
Beam Polarization	Linear
Sample & Update Rate	160 times/sec
Included Camera	Color VGA
FCC, CE Mark	Yes
Dimensions	4.8Wx6.8Hx5.3D" (12x17x13 cm)
Weight	3 lbs (1.4Kgs) with battery

- World's smallest and lightest 6 lane non-intrusive vehicle volume collector.
- Up to 6 user-configurable lanes allows for maximum data collection flexibility.
- Companion Windows application provides intuitive GUI to ease setup on the road.
- Inbuilt color sighting camera makes alignment during setup a snap.
- Advanced LiFePO4 rechargeable battery allows over 1 week of data collection.
- Built-in statistics storage memory for stand-alone data gathering.
- Long range Class I Bluetooth wireless interface allows wireless setup and data downloads.
- USB interface allows wired data download and battery charging.
- Included Windows Statistics analyzer software produces detailed reports.
- Included PC side Class I Bluetooth adapter provides optimal Bluetooth connections.
- Included 110/240VAC hi-speed charger fully charges battery in 3.5 hours.
- Included 12VDC vehicle adapter allows convenient field charging.
- -20C to +60C operational temperature range.
- Optional high efficiency MPPT charger with 10W solar panel kit available.
- FCC pre-approved with CE mark.

Non-Intrusive Solutions



SPEEDLANE PRO DUAL BEAM RADAR

Houston Radar SpeedLane Pro™ is state of the art true dual beam, low power side-fire radar. It is designed to accurately detect lane, speed and class of individual vehicles and compute per lane volume, occupancy, gap, average speed, 85th percentile and headway parameters.



FEATURES

- Simultaneously measures all vehicles in 16 user defined lanes with a maximum detection range of 255 feet.
- Patent pending true dual beam “speed trap” technology inherently provides accurate measurements without the need for in situ calibration.
- World’s lowest power usage highly integrated multi-lane traffic measurement radar. At 0.85 Watts SpeedLane requires 10X less power than competing products.
- FCC and CE approved for full 250MHz operation to suite variety of application requirements.
- Mounts on the side of the road for non-intrusive traffic data collection and works in all weather and lighting conditions.

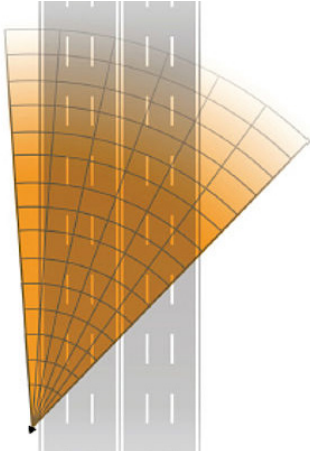
HD CAMERA & MORE

- Built-in 1.3MP HD video camera for sighting makes setup a snap and allows convenient remote monitoring of traffic.
- All traffic measurements are on per vehicle, per-lane basis, available in real-time and stored in device memory.
- Lane-by-lane vehicle counts, length based class, average and 85th percentile speeds, occupancy, headway and gap measurements.
- Companion Windows application provides intuitive GUI to set all configuration parameters, display real time plots of targets and view snapshots & streaming HD video.
- Built-in long range Class I 2.1+EDR Bluetooth, RS232/RS485 serial ports and Ethernet.
- 512 Mbytes of on-board storage plus SD card expansion slot.
- Comprehensive Houston Radar protocol, C and C# SDK.
- Powerful SQL based query interface for historical data.

Non-Intrusive Solutions

SMARTMICRO

THE MOST ADVANCED TRAFFIC RADAR TECHNOLOGY.
IN 4D/UHD ULTRA HIGH DEFINITION.



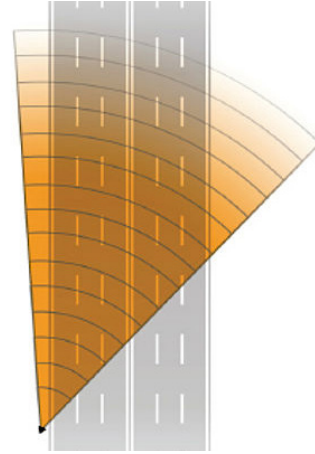
4D/UHD - Ultra-High Definition Technology

UMRR-0C is the highest performance traffic radar available today, it has a wide field of view of up to 100 degree, and at the same time a range of up to 320 m or 450 m (long-range version). It can be used for up to 8 lanes.

The multi-lane 4D object-tracking sensor provides (X, Y, Z) Cartesian coordinates or polar coordinates range, azimuth, elevation angle, as well as the speed vector simultaneously for up to 256 objects.

4D/UHD capability provides highest resolution capability in scenarios where many vehicles are closely spaced, i.e. in many lanes, dense traffic, traffic jams, stop-and-go situations. smartmicro is the only company which has this new 4D/UHD technology available in production, it outperforms any other traffic radar.

- ✓ Measurement in 4 Dimensions
- ✓ Separation Speed
- ✓ Separation in Range
- ✓ Separation in Angle



4D/HD - High Definition Traffic Radar

UMRR-11 features a range of up to 180 m and a coverage of up to 6 lanes.

By default the sensor provides (X, Y, Z) Cartesian coordinates or polar coordinates range, azimuth, elevation angle, as well as the speed vector of up to 126 objects simultaneously in the field of view.

Most other radar sensors on the market separate objects by one parameter, e.g. range or speed. smartmicro's 4D/HD technology UMRR-11 High Definition sensors separate objects by both speed and range. This leads to robust performance especially in dense traffic conditions. UMRR-11 is a very cost-efficient sensor.

- ✓ Measurement in 4 Dimensions
- ✓ Separation Speed
- ✓ Separation in Range

Non-Intrusive Solutions

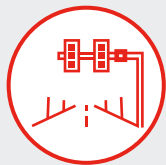


SMARTMICRO

ULTRA HIGH DEFINITION RADAR

UMRR-OC

- ✓ 4D/UHD
- ✓ Multi-lane
- ✓ Replaces Loops, outperforms video detectors
- ✓ Detects moving and stopped traffic
- ✓ Works under all conditions
- ✓ Maintenance free



Intersections

- Stop Bar+
- Stop + Advance
- Stop Bar and Advance
- Detection with one Single Sensor



Arterials

- Forward+
- Traffic Counting and Classification



Enforcement

- Red Light Enforcement
- Speed Enforcement
- Certified

Non-Intrusive Solutions

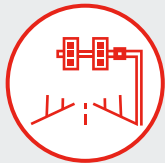


SMARTMICRO

HIGH DEFINITION TRAFFIC RADAR

UMRR-11

- ✓ 4D/HD
- ✓ Multi-lane
- ✓ Replaces Loops, outperforms video detectors
- ✓ Detects moving and stopped traffic
- ✓ Works under all conditions
- ✓ Maintenance free



Intersections

- Stop Bar+
- Stop + Advance
- Stop Bar and Advance
- Detection with one Single Sensor



Arterials

- Forward+
- Traffic Counting and Classification



Enforcement

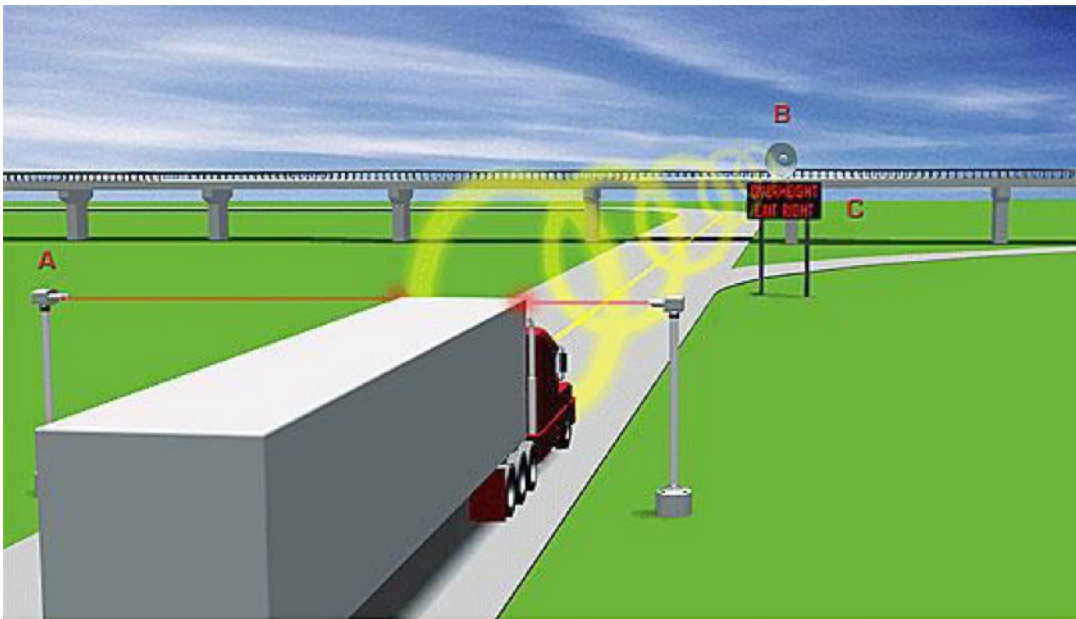
- Red Light Enforcement
- Speed Enforcement
- Certified

Non-Intrusive Solutions

TRIGG INDUSTRIES

Detects over height vehicles and activates visual and auditory warnings

- Directs driver to take appropriate action
- Can notify traffic-monitoring stations, law enforcement or IT control points via landline or wireless



A Overheight vehicle is detected by OVDS.



B Alarm Bell activates with Warning Sign. Parabolic shield focuses sound toward vehicle, drawing attention of driver to Warning Sign.



C Warning Sign activates with Alarm Bell. Sign message alerts driver of overheight hazard and provides directions for appropriate response.

APPLICATIONS

- Bridges
- Tunnels
- Overpasses
- Temporary False Work
- Weigh Stations
- Parking Structures
- Airport Overhangs/Walkways
- Corridor Management
- Railroads

Non-Intrusive Solutions

A TRAFx system consists of state-of-the-art hardware and software to collect, view and manage data.

VEHICLE COUNTER

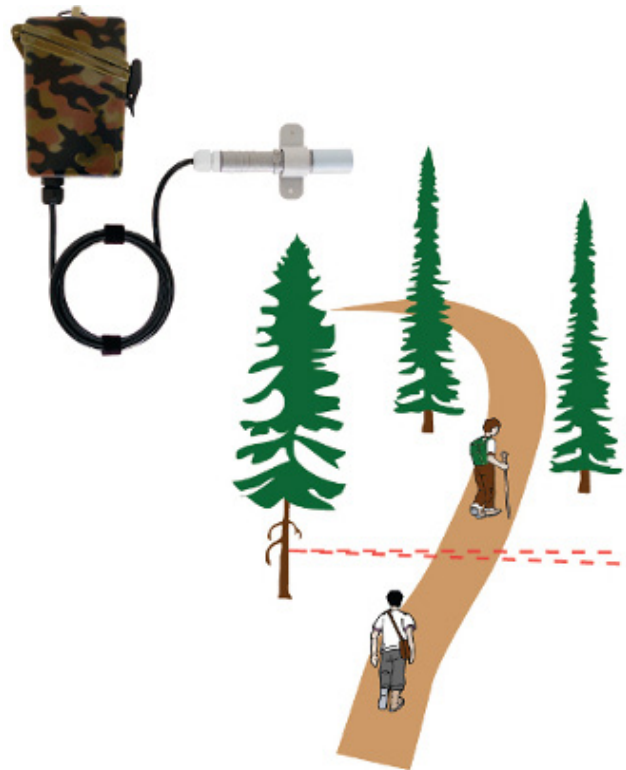


- Advanced Microelectronic Design
- Install at Roadside, Above or Below Ground
- Self-Contained Design, no External Wires or Tubes
- Ideal for Rural, Rugged and Remote Roads
- Very Small and Easy to Hide - Reduces Vandalism Risk
- Use as Permanent or Portable Counter
- Low Operating, Maintenance, and Installation Costs
- Long Battery Life (approx. 1 year)
- Large Memory Capacity (store > 400 million counts)
- Operating Temperature: -40C (-40F) to +70C (158F)
- Field-Proven, Generation III Design (>10 year history)

This innovative, reliable, compact vehicle counter uses an aerospace-quality magnetometer and advanced embedded software to detect passing vehicles. Passenger cars can be counted from up to 6 metres (20 feet) away, allowing coverage of two lanes from a roadside installation. Roadside installations are safer and easier to access than mid-lane ones. If the unit is buried at the roadside, no road cuts or special tools are required. The vehicle counter's detection range is user-programmable, and can be adjusted for single lane or two lane counting.

Non-Intrusive Solutions

INFRARED TRAIL COUNTER



- Advanced Microelectronic Design
- Detects and Counts Trail Traffic
- High-Quality Infrared Scope
- Small and Easy to Hide - Reduces Vandalism Risk
- Quick to Install
- Long Battery Life (approx. 3 years)
- Large Memory Capacity (store > 400 million counts)
- Operating Temperature: -40C (-40F) to +50C (122F)
- Field-Proven, Generation III Design (>10 year history)
- Optional Locking Steel Box

The TRAFx Infrared Trail Counter is designed to count general traffic on trails and paths. Hikers, joggers, horseback riders, snowmobiles, cyclists, etc. Unlike other infrared trail counters, it does not require a receiving unit or reflector to operate. This results in a very compact, easy-to-hide design that reduces risk of vandalism. Using a small, high-quality infrared scope mounted on a tree or post and pointed towards the trail, the TRAFx Infrared Trail Counter detects and counts the infrared signature associated with people.

A camouflage “skin” superbly hides the unit and blends it in with the forest environment. In busy, open areas (e.g., urban areas), a low-cost locking steel box can be used. The TRAFx Infrared Trail Counter also works well in winter conditions on hiking, ski, snowshoe, or snowmobile trails. It is quick and easy to install, and uses three small “AA size” alkaline batteries.

Non-Intrusive Solutions

MOUNTAIN BIKE COUNTER



- Optimized to Detect and Count Bikes on Trails
- Designed to be Buried
- Small and Easy to Hide - Reduces Vandalism Risk
- Long Battery Life
- Large Memory Capacity (store > 400 million counts)
- Field-Proven, Generation III Design (> 10 year history)

Intrusive Solutions

TRAFFICWARE: THE POD WIRELESS DETECTION SYSTEM



This is a smart and flexible detection system. By using a wireless magnetic sensor embedded in the road, the system will accurately detect vehicles. The system works by sensing the disturbances in the earth's magnetic field that occur due to the presence of a car or motorcycle. Algorithms interpret this disruption and characterize it into meaningful and reliable data.

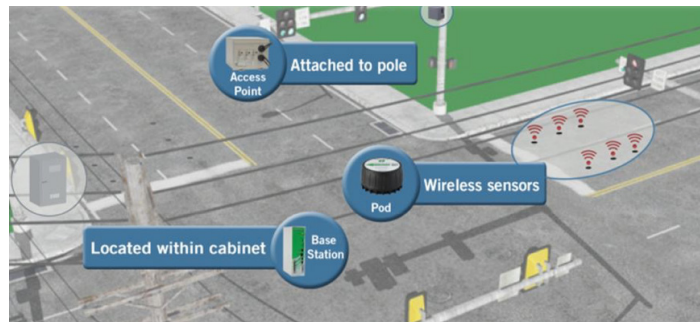
Powered by an industry-leading D-cell lithium battery, the Pod will transmit real-time data autonomously for up to 10 years, providing a solution for a broad range of transportation needs. The Pod Detection System is simple to install and easy to use, with four primary components: the Pod, Access Point, Antennas, and Base Station.

Wireless magnetometers embedded in the roadway at prescribed depths and configurations detect vehicles traveling along the roadway by measuring the magnetic field distortion caused as vehicles pass through the device's detection zone. This information is then wirelessly transmitted over external 900 MHz signal collector antennas from multiple wireless magnetometer devices to an access point. This detection information is transmitted through a base station interface located in the traffic cabinet to a traffic controller or TCP/IP network-based device/application.

SYSTEM HARDWARE

The wireless magnetometer detection system consists of four (4) primary components:

1. Wireless magnetometer and installation housing embedded in the roadway;
2. Access point mounted on a pole, mast arm or other structure within one thousand feet (1,000 ft. wired or 500ft wireless) proximity to the traffic cabinet;
3. External 900 MHz antennas connected to the access point in one or more of the following configurations:
 - a. Omni directional antenna - three hundred and sixty degree (360o) beam width
 - b. Large panel directional antenna - fifteen inch (15 in.) forty degree (40o) horizontal beam width
 - c. Small panel directional antenna - eight inch (8 in.) seventy degree (70o) horizontal beam width;
4. Base station mounted in the traffic cabinet (shelf mount or rack mount)



Intrusive Solutions

A preformed loop is an inductive vehicle detection loop, which is manufactured prior to installation.

Preformed loops come in two styles: direct burial and saw cut. Direct burial loops are designed with liquid-tight conduit for extra rigidity, and are installed prior to pouring a surface such as asphalt or concrete. If a surface is already present, the installer will need to use a saw cut loop. Some loop installers will “hand-wind” their own saw cut loops. This process is not only unreliable, but can cost the installer valuable time and resources both during and after the installation. National Loop Company eliminates much of the hassle (and guesswork) of hand-winding, by providing high quality, preformed saw cut loops.

SAWCUT



The saw cut loops consist of a non-spliced, machine-twisted lead-in, using polypropylene wrapped copper wires. These continuous-length inductive loops come in sizes 18GA PNL (1/8”), 18GA XNL (3/16”) and 14GA XNL (1/4”). All of our preformed inductive vehicle detection loops fit perfectly in a 1” deep saw cut.

BENEFITS

- One continuous wire throughout loop turns and lead-in
- Reduces guesswork of necessary turns for accurate performance
- Product flexibility allows for easy installation
- Our signature design allows sealant to fully encapsulate the loop
- Optimizes read-height, eliminates faulty signals, and minimizes callbacks
- More cost effective when compared to hand-wound installations

Intrusive Solutions

DIRECT LOOPS



The Direct Burial Preformed Loop comes fully assembled, ready to install for any project involving paving, concrete or asphalt pouring, gravel roadways and brick paving. The heavy-duty nature of the liquid tight conduit insures your most sensitive access control project from external conditions like sharp stones, heaving, chemicals and inclement weather to ensure a flawless operation in your overall installation process.

BENEFITS

- Light and compact with no assembly required
- Cost effective in time and labor
- Comes standard in flexible liquid-tight conduit
- Designed for durability against the elements
- Optimizes read-height and eliminates false signals

SURFACE MOUNTED

National Loop Company's Surface-Mounted Loops are an innovative solution for a tricky problem. When installing loops in a post-tensioned concrete structure such as a parking garage, saw cutting can be very dangerous and risky.

Perfect for concrete structures that prohibit the use of saw cut loops. Get your gate up and running fast with the Surface-Mounted Loop. It arrives assembled and ready to install, with optional adhesive and lead protection, included with each kit. It has been designed for use with automatic gates and common vehicle detection needs in the parking access revenue control industry (PARCS). Fully compatible with all loop detectors.



Traffic Signal Priority & Pre-emptive Solutions

Traffic Signal Prioritization



INTRODUCTION

Traffic signal preemption (also called traffic signal prioritization) is a type of system that allows the normal operation of traffic lights to be preempted. The most common use of these systems is to manipulate traffic signals in the path of an emergency vehicle, halting conflicting traffic and allowing the emergency vehicle right-of-way, to help reduce response times and enhance traffic safety. Signal preemption can also be used by light-rail and bus rapid transit systems to allow public transportation priority access through intersections, or by railroad systems at crossings to prevent collisions.

There are two main types of Traffic Preemption systems: **Emergency Response** or **EVP**, and **Public Transit** or **TSP**. EVP is designated for high priority vehicles, whereas TSP is specifically for lower priority vehicles such as public transit and public works vehicles such as snow plows and street cleaning vehicles.

EMERGENCY RESPONSE (EVP) **HIGH PRIORITY**

Opticom Emergency Vehicle Preemption (EVP) enables police cars, fire trucks and ambulances - even those from neighboring communities - to navigate congested intersections more effectively. As a result, agencies can improve response times while reducing the potential for costly accidents.

PUBLIC TRANSIT (TSP) **LOW PRIORITY**

Public transit services link cities with the broader communities they serve. Opticom for public transit ensures those connections remain safe, consistent and reliable.

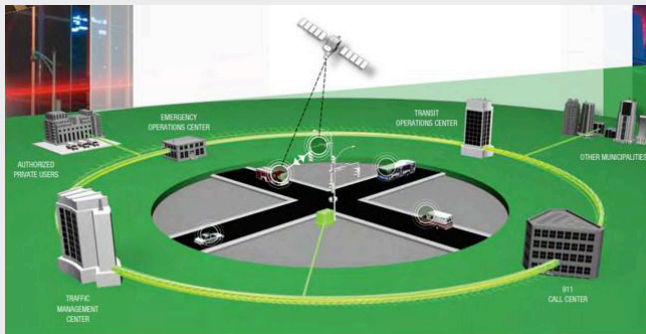
Opticom for public transit allows transit agencies to extend or truncate green cycle times at traffic signals for more accurate schedule adherence. In turn, transit vehicles - including buses, light rail trains and streetcars - are on the road less, which reduces fuel and fleet costs for more profitable operations.

Traffic Signal Prioritization

GTT OPTICOM GPS SYSTEM

The Opticom GPS System delivers reliable, accurate EVP from greater distances in a wider range of environments – including around corners and at intersections with obstructed views. It leverages GPS technology and highly secure radio communications to deliver unmatched precision and superior management to help emergency responders move through intersections more quickly and safely.

Combine Opticom GPS technology with Opticom Central Management Software (CMS) for remote, real time system management and monitoring to improve performance, and reduce maintenance costs and enhance overall traffic safety.



- Reduce intersection crash rates by up to 70%
- Improve response times by up to 25 percent
- Accommodate hills, curves and extended distances without additional detectors
- Activate signal pre-emption based on estimated time of arrival or distance
- Achieve interoperability with most traffic light controllers

HOW IT WORKS

When an emergency vehicle responds to a 911 call or a transit vehicle needs to pick up time, the Opticom GPS System is positioned to improve efficiencies:

1. Using a global network of GPS satellites, Opticom GPS System vehicle equipment calculates vehicle speed, direction, longitude and latitude information.
2. Intersection equipment is programmed with an approach map to define corridors for priority control activity.
3. As the vehicle enters the intersection's radio range, it sends updated speed, position and identification information, as well as turn signal status, every second.
4. The Opticom GPS System intersection equipment sends the priority request to the Opticom] GPS Phase Selector in the controller cabinet, which requests a green light through normal controller functions.
5. The system recognizes the activated turn signal and relays the priority call forward to the next appropriate intersection.
6. All of the activity can be tracked remotely by traffic management personnel.

Traffic Signal Prioritization

PRODUCTS



Opticom Model 3100 GPS Radio Unit

A compact, weather-resistant RF-energy-emitting unit containing a GPS receiver with antenna and a 2.4GHz spread spectrum transceiver with antenna.



Model 764 Multimode Phase Selector

A plug-in, four-channel, dual priority, multimode encoded signal device designed for use with both Opticom infrared system (IR) emitters and detectors and Opticom GPS radio/GPS intersection units and vehicle equipment.



Model 1070 GPS Installation Cable

A durable, high-quality cable that carries the appropriate power to the Opticom Radio/GPS unit from the Opticom Phase Selector and delivers the necessary quality signal to the phase selector up to 250 feet (76 m). Designed and manufactured explicitly for use with Opticom Radio/GPS units.



GPS System Vehicle Kit

Mounted on the priority vehicle, used to compute the location, speed, and direction of the vehicle and then broadcast this information using the 2.4 GHz spread spectrum transceiver.



Model 794M Multimode LED Emitter

A compact, lightweight, weather resistant encoded signal device intended for use on priority vehicles. When used in vehicles equipped with both Opticom infrared (IR) and Opticom GPS, it eliminates the need for a separate IR emitter and radio/GPS antenna modules. The Opticom GPS radio/GPS unit and vehicle control unit are still required for Opticom GPS operation.

Value Adds:

Emergency Preemption Systems (High Priority):



Transit Signal Priority (Low Priority):



Traffic Signal Prioritization

GTT OPTICOM INFRARED SYSTEM

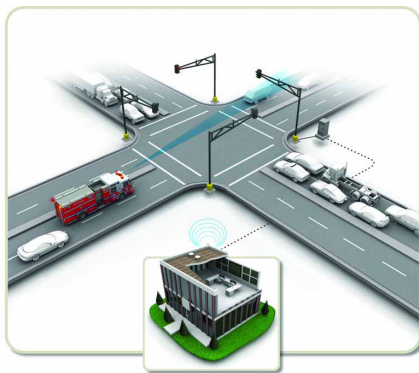
Consistent emergency vehicle preemption (EVP) performance saves time – so emergency responders can save lives. That’s why it’s no surprise that municipal agencies around the world count on Opticom Infrared (IR) System for precise and reliable traffic signal priority control when responding to emergencies.

GTT partners with communities to design and install intelligent transportation systems that keep emergency responders and traffic engineers better informed with more control. The Opticom IR System includes emitters mounted on emergency vehicles and detectors and phase selectors at the intersection. Traffic signals can be pre-empted or extended to help first responders reach an emergency scene more quickly.

Combined with Opticom Central Management Software (CMS), the Opticom IR System helps traffic engineers manage traffic signal priority control and reduce maintenance costs at intersections in real time from the desktop.

- **Reduce intersection crash rates by up to 70 percent**
- **Improve response times by up to 25 percent**
- **Eliminate priority conflict, grant right-of-way on a “first come, first served” basis**
- **Restrict access to authorized user through system coding**
- **Receive data reports logging vehicles and pre-emption activity**

HOW IT WORKS



An Opticom Emitter mounted on the vehicle activates the system by broadcasting a secure, encoded priority request to the intersection.

An Opticom Detector at the intersection receives the infrared transmission and relays the request to the phase selector.

The Opticom Phase Selector validates the request and provides input to the traffic controller, which then provides a green light through normal operations.

In a manner that appears natural, the vehicle gains valuable time along the route without hindering overall traffic flow.

Traffic Signal Prioritization

PRODUCTS



Model 762 Phase Selector

A plug-in, two-channel, dual-priority, encoded signal device designed for use with Opticom infrared system emitters and detectors.



Model 764 Multimode Phase Selector

A plug-in, four-channel, dual priority, multimode encoded signal device designed for use with both Opticom infrared system (IR) emitters and detectors and Opticom GPS radio/GPS intersection units and vehicle equipment.



700 Series Detectors

Detectors mounted at or near the intersection that permits a direct, unobstructed line-of-sight to vehicle approaches. They transform the optical energy detected from an approaching, vehicle-mounted Opticom Emitter to an electrical signal.



Model 792 Emitter

A plug-in, two-channel, dual-priority, encoded signal device designed for use with Opticom infrared system emitters and detectors.



Model 794 LED Emitter

A compact, lightweight, weather-resistant encoded signal device intended for use on priority vehicles. It consists of an LED array with an integral power supply and the required cables.



Model 138 Detector Cable

A durable, high-quality cable carries the appropriate power to the detector from the Opticom Phase Selector and delivers the necessary quality signal to the phase selector discriminator circuitry up to 1,000 feet (305 m). Designed and manufactured explicitly for use with Opticom Detectors.

Value Adds:

Emergency Preemption Systems (High Priority):



Transit Signal Priority (Low Priority):



Traffic Signal Prioritization

GTT OPTICOM INTELLIGREEN SYSTEM

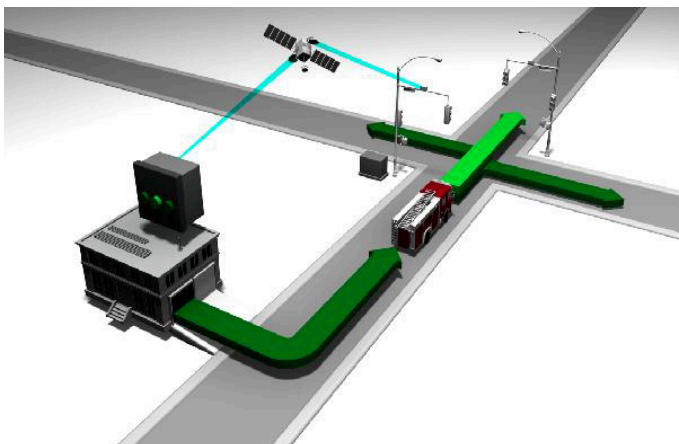
Priority control for fire stations located closely to signalized intersections. A GPS traffic signal priority control system that activates one or more Opticom equipped intersections from inside the fire station.

Used for emergency vehicles leaving the station house located very close to an Opticom™ GPS equipped signalized intersection

In the event of an emergency call, just one press of the Opticom™ IntelliGreen button and the request for preemption is initiated.

BENEFITS

- Provides a lead time advantage for emergency vehicles leaving a station due to:
- Intersection traffic outside the station house
- Idle emergency vehicles waiting to initiate a GPS signal
- Ensures safe passage through the first critical intersection
- Control intersections to the left, right or both directions from the three-button base station unit.
- Exceptional signal range — Increase performance times with a precise, unobstructed signal for any intersection up to 2,500 feet.



1. Signal triggered by emergency personnel or alarm system located in fire station (base unit offers choice for signal preemption at one or more intersections).
2. The wireless IntelliGreen signal communicates with Opticom™ GPS equipped intersection equipment.
3. Once activated, IntelliGreen quickly sends a request to provide a green light for exiting emergency vehicles and a red light for other traffic.

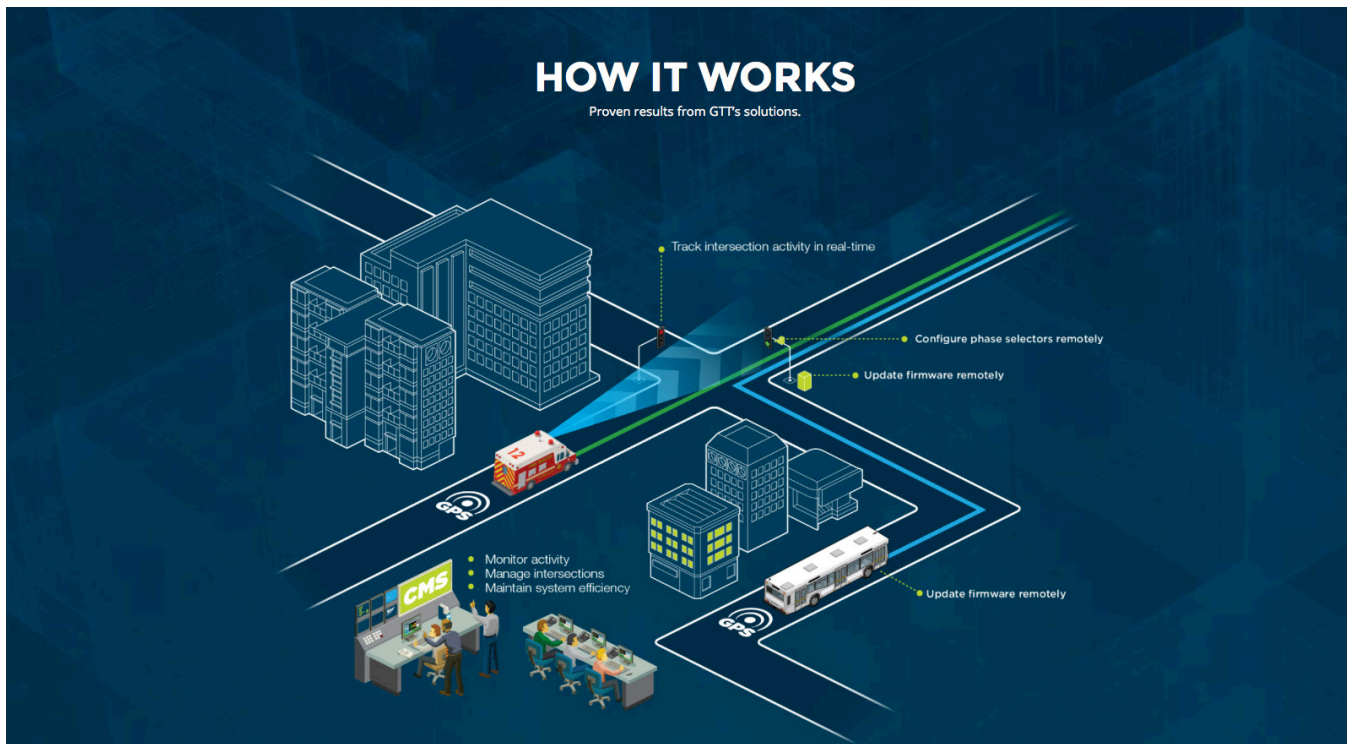
Value Adds:

Emergency Preemption Systems (High Priority):



Opticom Central Management Software

FOR TRANSIT AND EVP SYSTEMS



MANAGE YOUR OPTICOM SYSTEM FROM YOUR DESKTOP

Opticom priority control deployments can range from a few traffic signals to hundreds of intersections and Opticom Central Management Software (CMS) helps traffic engineers monitor and maintain every one of them remotely.

With built-in intelligence – including real-time alerts, customized reports and automated diagnostics – Opticom CMS offers incredible convenience from the desktop. Retrieve activity logs, manage security controls, upgrade firmware and troubleshoot equipment without sending technicians into the field.

Cities deploy traffic signal priority control to help emergency responders and transit agencies improve service levels and add value to infrastructure investments. Opticom CMS ensures it runs more efficiently, while reducing operating costs for the community.

GTT TRADE-IN TRADE UP OFFER

Dear Dealers,

Help your customers get the most out of their priority control systems by migrating to the most advanced technology available from Global Traffic Technologies.

GTT's Trade-In/Trade-Up Program is a tool that can improve emergency response and transit efficiency for your customers at a significant discount. Trade in old equipment — even qualifying competitor products — and purchase the latest generation of Opticom Infrared, GPS-enabled or multimode products at up to 25% off.

The program is designed to encourage customer retention and to help their city to get the latest technology from GTT. We offer the program as tool in the sales process, if customers are concerned about price, or are considering purchasing an inferior system, the offer can be suggested. The program should not be used as a coupon to be dropped off at the customer, or to replace broken equipment.

DETAILS

Eligible trade-in equipment

- Opticom Infrared (IR) System Series (100, 200, 400, 500 and 700)
- Opticom GPS System Series 1000
- Competitor equipment

Questions about a trade-in?

Contact GTT sales support at 800-258-4610 and select "option 1." Or send an email to sales@gtt.com.

Trade-In requirements

- All products will be traded in for like products.
- Trade in equipment must be received by GTT within 3 months of receipt of new product.
 - Trade in equipment not received within a 3-month period will initiate a billing at the difference between the program discount price and normal selling price for any purchases orders processed against the submitted Return Authorization.
 - Trade-in components will be tracked using serial numbers.
- Models 462/464 are not eligible for this program.
- Global Traffic Technologies retains the right to final approval of all trade in/trade up transactions.

Details of this program are intended for dealer use only. Do not distribute to customers.

OPTICOM™

Emergency Response

SIMPLE, FLAT-FEE PRICING

NO EQUIPMENT TO BUY. NOTHING TO MAINTAIN.

Introducing Opticom™ Priority Control as a Service (PCaaS), the world's most widely deployed priority control solution — made even easier and more affordable. Get all the benefits of an Opticom system without having to worry about the details.

Per Vehicle

\$99*

CAD Monthly

Per Intersection

\$179*

CAD Monthly

WORRY-FREE PRIORITY CONTROL

With Opticom PCaaS, you can have worry-free emergency vehicle preemption (EVP).

- ✓ All Infrastructure and Services
- ✓ Remote Monitoring and Reporting
- ✓ Help Desk Support
- ✓ Scalable as Needs Increase
- ✓ Pay For it with Operating Savings**

*Prices may vary based on volumes, regional labor rates and the specific configuration deployed.

**Savings are estimated based on national assumptions. Upon request, GTT will provide savings estimates based on particular customers' specific environments.

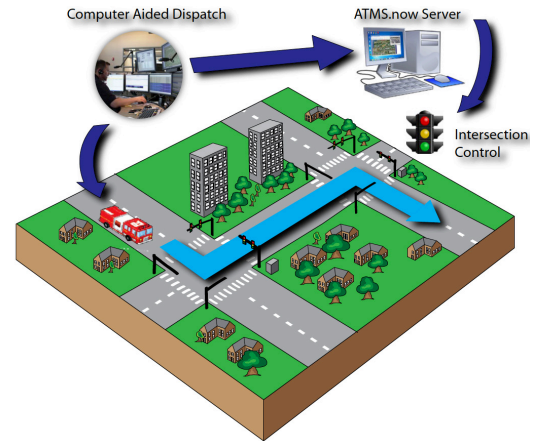
Traffic Signal Prioritization

EMERGENCY.NOW

Emergency.now is an ATMS.now (Advanced Traffic Management System) software module that integrates with your computer aided dispatch system (CAD) to provide safer and quicker response times for emergency vehicles. In Emergency.now, Trafficware pioneered the concept of utilizing dispatch data from the CAD along with GPS and Automated Vehicle Location (AVL) data interfaced with a proven ATMS system. The result is performance unmatched by any other solution available, providing priority traffic signal service during signal coordination for emergency vehicles.

Because Emergency.now is ATMS based, it has visibility of the entire response route from the moment the emergency vehicle is dispatched. At that moment, it begins clearing intersections of vehicles using priority signal operation well in advance of the arrival of the emergency vehicle. By the time the emergency vehicle reaches each intersection, it has been flushed of traffic, allowing safe and rapid progress.

In addition to safer and quicker response times, the system also maintains coordinated traffic flow on roadways along the emergency route. This minimizes the disruption to cross street traffic, even as emergency vehicles experience green signals while on route to an incident.

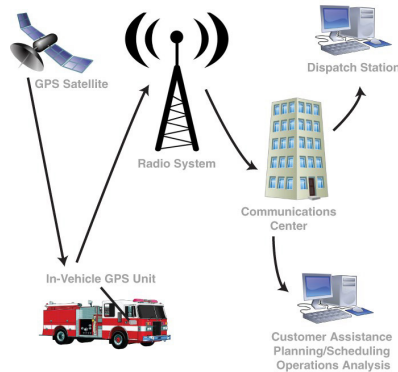


Achieve Faster Emergency Response Times

The Trafficware priority vehicle routing system gives traffic flow priority to motoring public vehicles traversing a route between an origin and an incident. By extending green and thus reducing traffic congestion on the selected route, so emergency vehicles can respond to incidents faster.

Leverage Existing Infrastructure While Planning for the Future

Trafficware's priority vehicle routing system integrates with and leverages all the available technology that an agency has invested in, including the ATMS.now, traffic signal controllers, GPS-based AVL devices, and CAD applications. This provides a holistic and effective, yet cost-efficient solution. With Emergency.now, there is no additional hardware for the vehicle or intersection to purchase, install or maintain.



Minimize Impact to Surrounding Traffic

Emergency.now works cooperatively with Trafficware's ATMS.now platform to maintain coordinated traffic flow on right-of-ways along the emergency route. Cross streets are minimally impacted by coordinating traffic flow, even as emergency vehicles experience green lights during their route. As traffic signal timing is dynamically adjusted, drivers on adjacent and oncoming right-of-ways drive normally without disruption. In contrast to Emergency.now's method of operating within a signal priority mode, traditional optical or radio frequency based preemption creates an element of chaos at the intersection. Motorists sitting at a red signal for an extended duration grow impatient, and can act unpredictably and unsafely. Emergency.now operates in the fashion motorists expect, and while they may get a shorter than normal green phase, the intersection maintains normal traffic signal sequencing. A system that operates as motorists expect reduces the risk of motorists growing impatient and responding in a way that would interfere with emergency vehicles.

Notes



A series of 20 horizontal grey lines for writing notes, spaced evenly down the page.

Safety forward.



atstraffic.ca | Since 1966