OPTICOM™

GLOBAL TRAFFIC TECHNOLOGIES

Opticom is a flexible platform that guides the movement of people and goods safely and efficiently. It prioritizes approaching vehicles, giving them the right to pass through an intersection. The result: safer and faster emergency response, reliable and efficient transit systems, and more control over how vehicles move through your city.

When agencies want priority, they ask for Opticom.

What is Priority Control?

Emergency Vehicle Preemption (EVP) and Transit Signal Priority (TSP), collectively known as priority control, give essential service providers like first responders, transit operators, and public works departments the right to pass through signalized intersections. Priority control systems empower cities to manage how vehicles navigate their streets, making operations safer, faster, and more efficient.

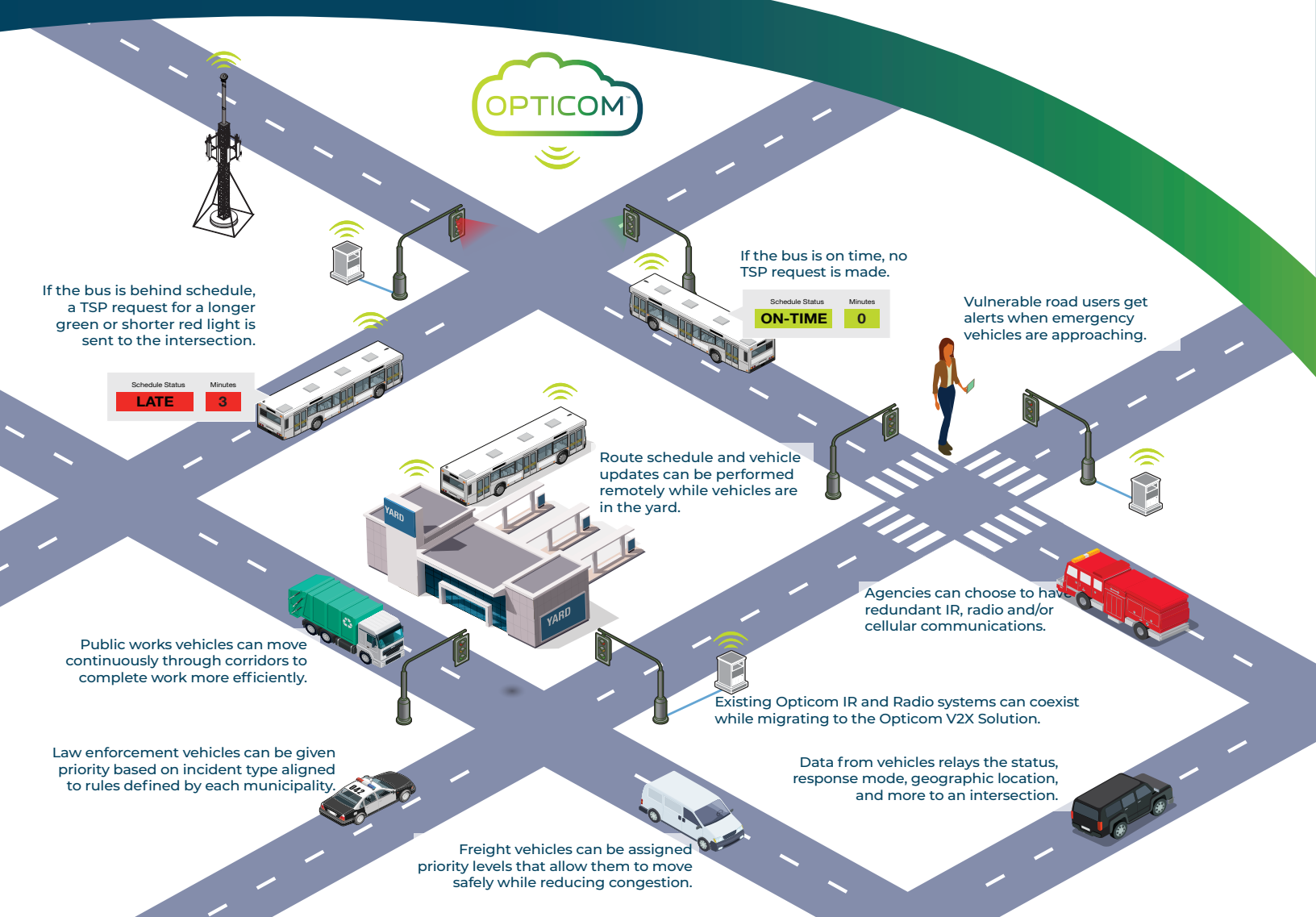## Who Benefits from Using Priority Control?

Public Safety Professionals use priority control to preempt standard traffic signal cycles, allowing emergency vehicles to quickly and safely respond to emergency requests, reducing intersection crash rates and saving lives.

Transit Agencies use priority control to improve schedule adherence for transit vehicles and provide a better rider experience with more on-time arrivals while reducing CO_2 emissions.

Fleet & Freight Managers use priority control for vehicles to quickly move through corridors, ensuring on-time arrivals, decreasing fuel consumption, emitting fewer greenhouse gasses, and reducing road maintenance costs.

Traffic Agencies use priority control through cross collaboration to improve safety and reduce incidents in their communities.

How does it Work?

OPTICOM

If the bus is behind schedule, a TSP request for a longer green or shorter red light is sent to the intersection.

Schedule Status: **LATE** Minutes: **3**

If the bus is on time, no TSP request is made.

Schedule Status: **ON-TIME** Minutes: **0**

Vulnerable road users get alerts when emergency vehicles are approaching.

Route schedule and vehicle updates can be performed remotely while vehicles are in the yard.

YARD

Agencies can choose to have redundant IR, radio and/or cellular communications.

Public works vehicles can move continuously through corridors to complete work more efficiently.

Existing Opticom IR and Radio systems can coexist while migrating to the Opticom V2X Solution.

Law enforcement vehicles can be given priority based on incident type aligned to rules defined by each municipality.

Data from vehicles relays the status, response mode, geographic location, and more to an intersection.

Freight vehicles can be assigned priority levels that allow them to move safely while reducing congestion.

Priority Control in a New Way

Opticom™ Cloud Platform

As technology improves, cities will adapt their aging infrastructures to support modern traffic patterns. The Opticom Cloud Platform is a flexible solution that can leverage a city's existing vehicle and intersection infrastructure to deliver priority control through vehicle-to-everything (V2X) platform technology.

Benefits of Cloud-Based Technology

- **Save money, time, and effort** with quick and affordable deployments. Customers using approved cloud platforms get effortless access to Opticom. And regular remote updates eliminate costly trips to the intersection or vehicle.

- **Streamline operations** by bringing together the best applications within your technology stack.

- **Improve collaboration** across teams and agencies with Opticom Cloud's extendable platform technology and easy remote access.

- **Secure your data** with advanced encrypted data processing.

Applications

Opticom Signal Core - Make more informed decisions and improve operations and the lives of all road users with Opticom Signal Core. Signal Core is a hardware platform that provides powerful processing capability at the intersection.

Opticom 360 - Monitor and maintain fleets remotely while improving safety and operations for all. Opticom 360 is a powerful telematics and mobility platform that delivers real-time fleet data and visibility.

OPTICOM™

VEHICLE DATA

CONNECTED INTERSECTION
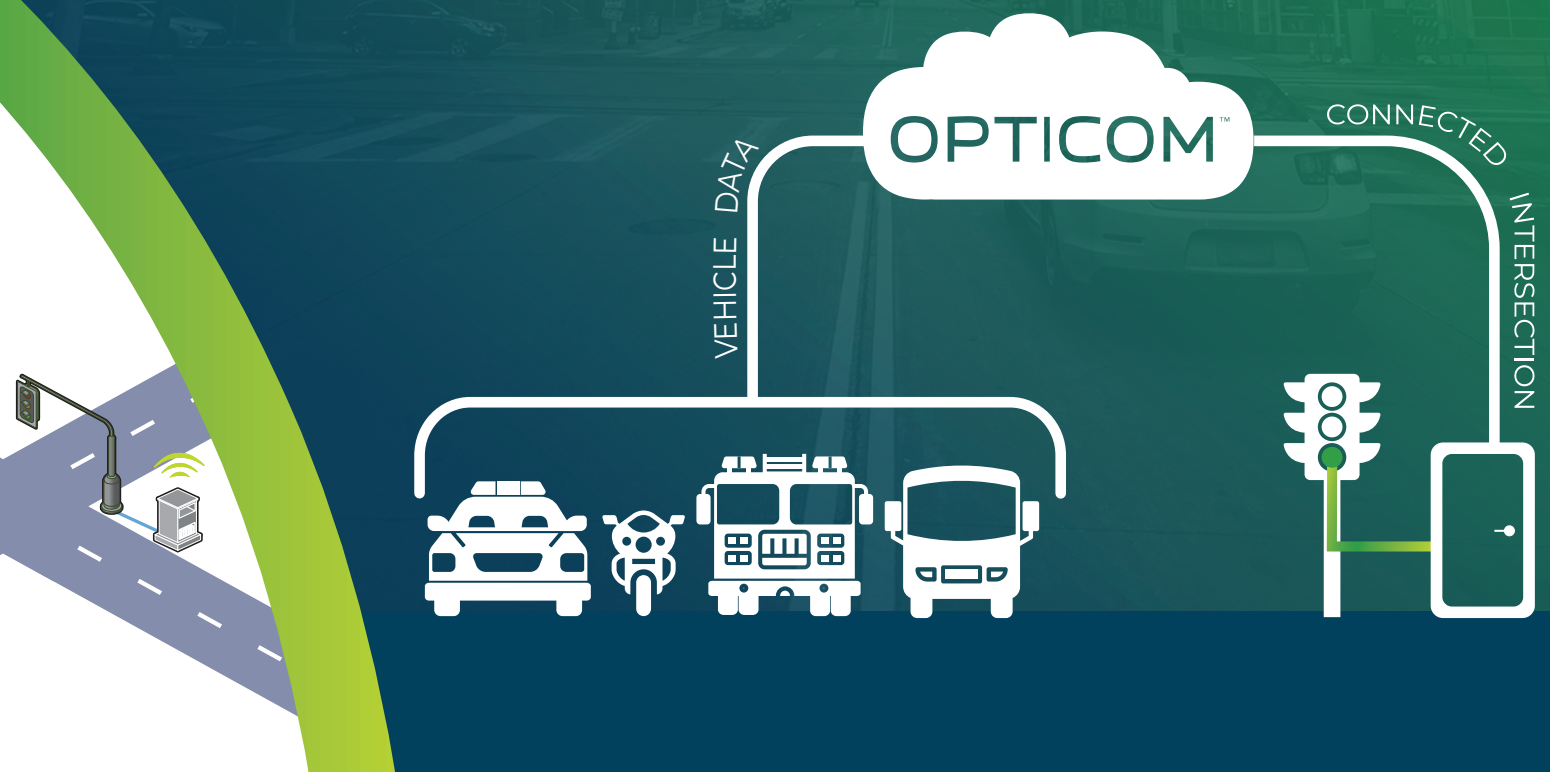
Priority Control for Public Safety

Every second counts for emergency responders; that's why they use Opticom Emergency Vehicle Preemption (EVP). EVP, a type of priority control, decreases incident response times and improves safety for first responders. Using advanced algorithms to determine vehicle status, Opticom EVP brings vehicle data to the intersection to make priority control requests, granting emergency responders the right-of-way to pass through an intersection.

Applications

Incident Priority - Incident Priority allows the Opticom System to enable preemption for vehicles dispatched only to high-priority incidents. Using Incident Priority significantly reduces the number of preemption calls in a given day, allowing responders to get to the highest priority calls as quickly and safely as possible while limiting traffic disruptions.

Mutual Aid - Through cloud-based technology, Opticom's extensibility allows the solution to extend across multiple emergency service districts to expand EVP networks and better service communities.

Relative Priority - The Opticom solution lets users grant higher priority to vehicles based on the vehicle class. When two cars with different classifications request priority simultaneously, priority is given to the vehicle with a higher classification.

Opticom & Whelen Partner for Public Safety
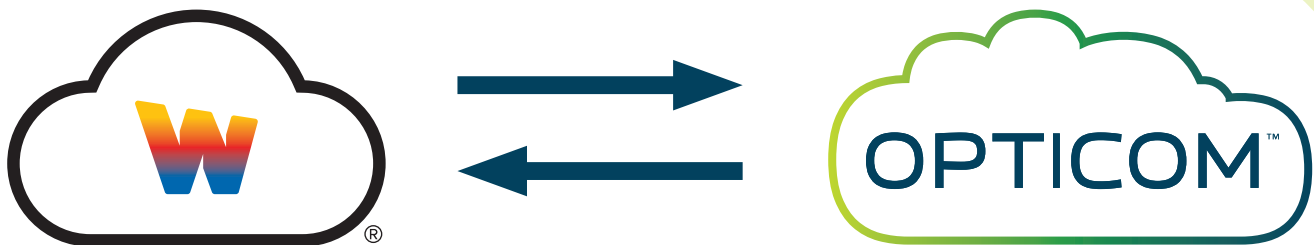
Opticom and Whelen, the most trusted names in Emergency Vehicle Preemption and vehicle lighting, have partnered through seamless cloud-to-cloud integration to enhance the safety and service for first responders everywhere. Emergency responders already using the Whelen Cloud Platform in their vehicles now have access to Opticom's legendary EVP services, allowing them to arrive at the scene of an incident quicker and safer without additional hardware.

Priority Control for Transit Agencies

As traffic congestion increases, so do delays in our public transit systems, causing a ripple effect throughout communities. Transit agencies use Opticom Transit Signal Priority (TSP) to give transit vehicles the priority to pass through an intersection for schedule adherence. With Advanced Schedule Management (ASM), conditional priority requests can be made based on the time of day, the direction of travel, passenger load, lateness, etc. Relative priority compares these factors between vehicles and gives the green to the highest priority vehicle. Together, these tools provide riders with a predictable, consistent, safe transit experience.

Increase Ridership up to
10%

Improve Travel Time up to
20%

Reduce Transit Delay up to
40%

Cut Energy Cost up to
19%

Opticom Analytics for Transit Signal Priority

Opticom Analytics for Transit Signal Priority enables transit agencies to monitor TSP system performance. Users can access and use valuable data to improve operations, save money, and better service riders in their community.

Analytics Include:

Signal Delay: The time spent waiting at signalized intersections on the route.

Dwell Time: The time transit vehicles spend serving passengers at each stop on the route.

Drive Time: The time it takes to travel between bus stops.

Travel Time: The total time traveled for a specific route.

Schedule Deviation: The performance metrics for on-time routes in accordance with the schedule.
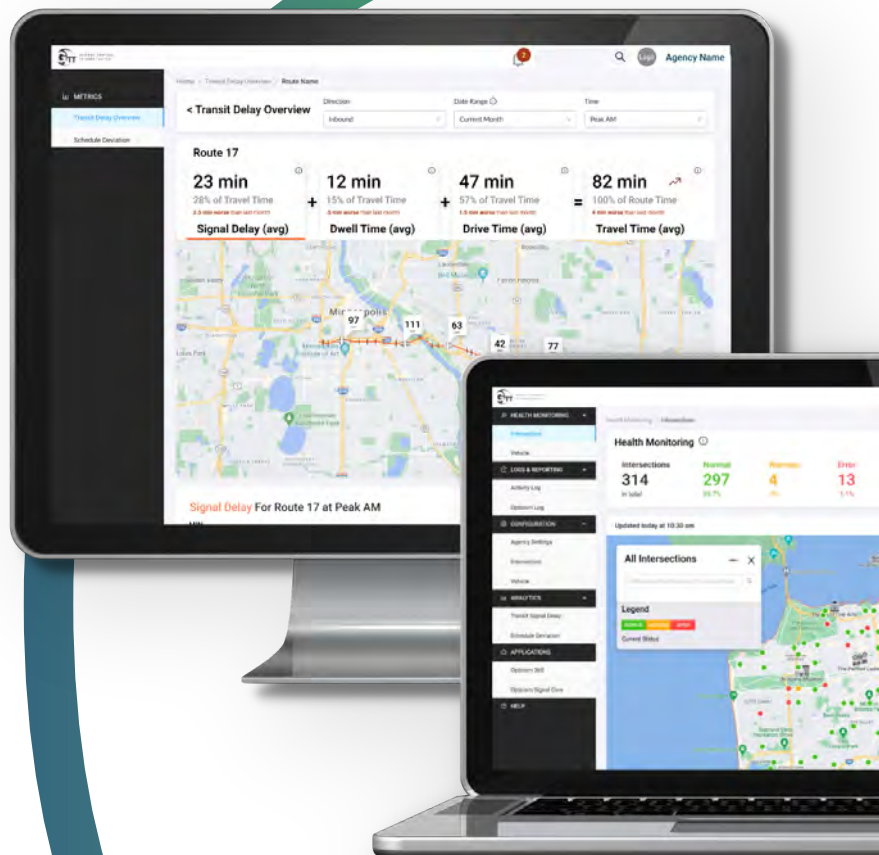
Scan the QR code to schedule a demonstration.

Priority Control for Intelligent Transportation Systems

More vehicles are on roadways today than at any other time in history—resulting in gridlock, crashes, longer commutes, and higher pollution levels. City leaders and traffic engineers face more challenges as urbanization and sprawl increase. Opticom is the premier solution for communities seeking new ways to reduce incidents, commute times, emissions, and frustrations. With our suite of Opticom ITS solutions, engineers glean valuable vehicle and roadway data to improve the lives of all road users.

Opticom Signal Core

Signal Core is a hardware platform that provides powerful processing capability at the intersection. Agencies can use Signal Core data to inform decision-making and improve roadway operations.

Extensible
Easily add new features and capabilities.

Open
Stack technologies to meet your needs.

Multi-Purpose
Perform multiple functions with one device when traffic cabinet space is limited.

Signal Core Includes:

- Cabinet alerts & monitoring (email and text notifications)
- Corridor travel time for all WiFi-enabled vehicles
- Live telemetry views
- Preemption and priority requests (discrete or NTCIP)
- Priority reports, including preemption counts
- Regular remote software updates

Priority Control as a Service (PCaaS)

Priority Control as a Service (PCaaS) is a solution for agencies that want the benefits of priority control without the burden of project management for deployment or ongoing system maintenance. PCaaS customers receive elevated service options to ensure the highest possible uptime for the system with minimal time commitment from the agency.

PCaaS Includes:

Peace of mind installation – The GTT Technical Services Team leads hardware installation on the vehicle and at the intersection and manages installation projects from beginning to end. Services include device verification, intersection and vehicle configuration, site survey, and more

.**No Hassle Hardware & Device Maintenance –** GTT owns and maintains the hardware (as applicable), eliminating the need for CapEx investment and costly system maintenance.

Repair and Replacement of Devices – If an outage occurs, GTT will remotely troubleshoot the device to resolve or coordinate with local services to repair or replace your device at no additional cost to the agency.

Hands-off Monitoring & Maintenance – GTT actively monitors the system's operational status to identify outages. If an outage occurs, our team of dedicated client services technicians will supply and coordinate the repair or replacement service.

Deployment Considerations

FEATURES	INFRARED	GPS/RADIO	CLOUD/PCAAS
Allows for priority requests, reducing delays and improving safety	●	●	●
Managed services available to keep system running optimally	●	●	●
Multimode operation for staggered upgrades and interoperability	●	●	●
Coded IR communications between vehicles and intersections	●		
Secure GPS and radio-enabled communication system		●	
Ability to transmit and receive without line-of-sight		●	●
Remote maintenance and monitoring available with network connectivity		●	●
Advanced conditional and relative priority capabilities		●	●
Hardware-lite and/or software-based solution for fast deployment			●
Powerful insights to monitor, manage and maintain functionality			●
Flexible installation options to ensure smooth integrations with complex vehicle and wayside infrastructures			●

Federal Funding Enables Opticom

The last three years have seen historical federal funding legislation by the U.S. government to make lasting investments in American infrastructure. Many programs authorized by these laws give agencies "broad latitude" to use discretionary funds to replace revenues decimated by the pandemic. Now, more than ever, state and local governments should take advantage of this incredible funding opportunity.

We've created the Federal Funding Guidebook to help municipal leaders understand how priority control can add value to their infrastructure investment planning.

Scan the QR code to download your copy of the Federal Funding Guidebook.

A Legacy from the Beginning

Opticom has humble beginnings. A young scientist and inventor named William Long identified a problem – emergency vehicle operators often had to contend with red lights and confused drivers when responding to an emergency. Long used his experience with infrared devices to develop a solution. He and his partners pounded the pavement of the southeastern united states to confirm interest in the primitive devices, and there was! But it was a bit too primitive, so they went back to the drawing board and continued innovating to create the first Opticom solution, deployed in Gardena, CA, a suburb of Los Angeles.

Nearly six decades later, the Opticom name has become the benchmark and "gold standard" for all preemption and priority control technology. We continue to innovate, paving the way for newer, better solutions that deliver more for our customers.