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*Building critical  
traffic connections<sup>SM</sup>*



Opticom<sup>TM</sup>  
Infrared System

The proven solution for both emergency  
vehicle preemption and transit signal priority.



*Building critical  
traffic connections<sup>sm</sup>*



## Helping manage the world's traffic problems, one intersection at a time.

As the world becomes a busier and more crowded place, traffic concerns are growing everywhere.

The Opticom™ Infrared System can go a long way toward meeting these challenges. Using coded infrared transmitters mounted on your emergency and transit vehicles, the Opticom infrared system communicates securely with the intersection traffic controller to gain a temporary right of way. The system has been proven effective at thousands of installations all over the world—helping elevate safety, minimize traffic disruptions, accelerate response times, improve service reliability, reduce crashes and save lives.

So whether you work in traffic management, transit or emergency services, you now have the ability to manage intersection traffic flow. And that can make a big difference in the efficiency, reliability and safety of your roadways.

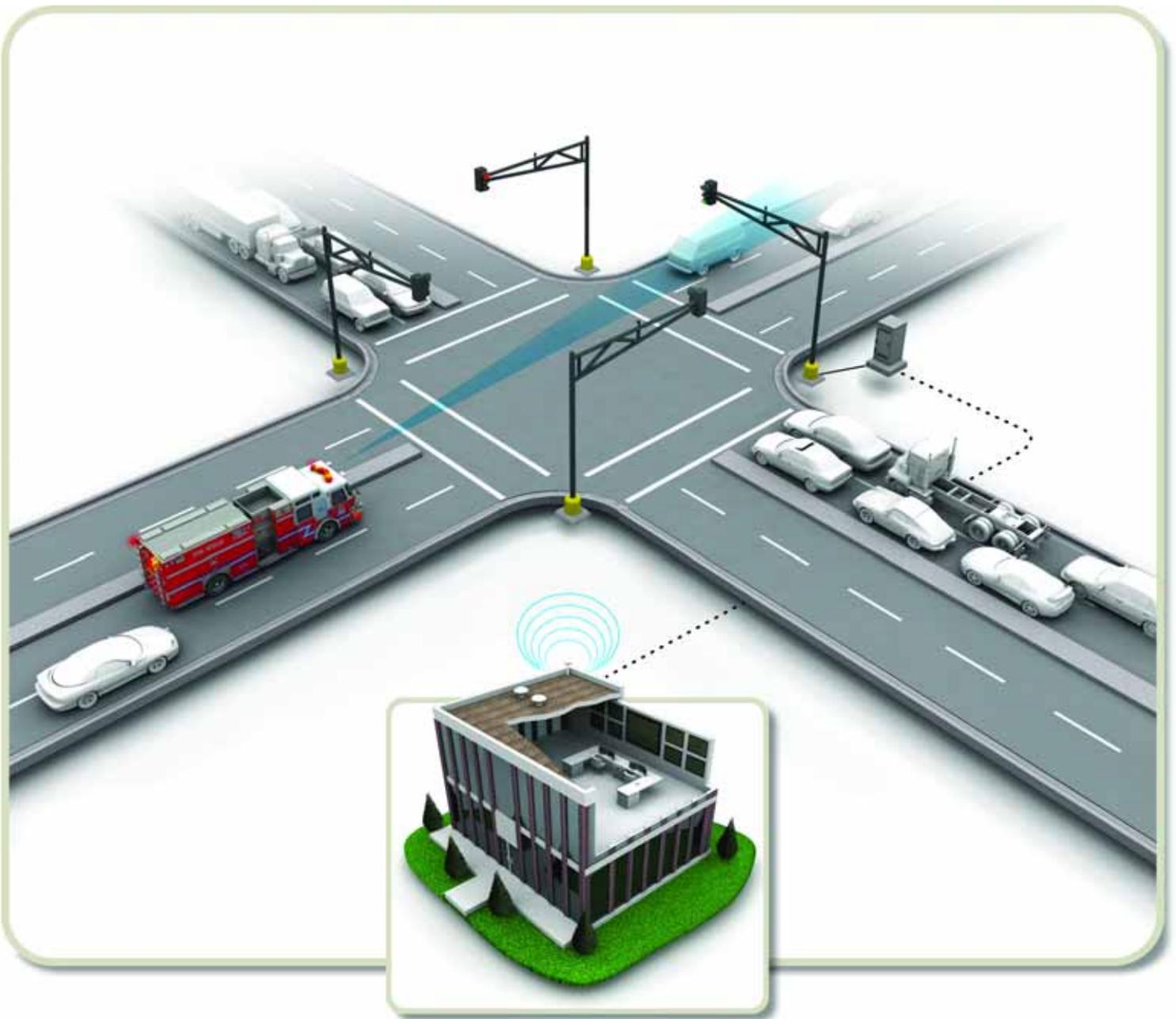
### About Global Traffic Technologies

Global Traffic Technologies was formed from 3M's pioneering intelligent transportation systems. Our mission is to use our proven technologies and innovative mindset to improve traffic management and safety all over the world.

# The intelligent intersection.

When an emergency vehicle responds to a 911 call or when a transit vehicle needs to pick up schedule time, the Opticom™ Infrared System gives equipped vehicles an advantage at intersections.

- 1** An Opticom™ Emitter mounted on the vehicle activates the system by broadcasting a secure, encoded priority request to the intersection.
- 2** An Opticom™ Detector at the intersection receives the infrared transmission and relays the request to the phase selector.
- 3** The Opticom™ Phase Selector validates the request and provides input to the traffic controller, which then provides a green light through normal operations.
- 4** In a manner that appears natural, the vehicle gains valuable time along the route without hindering overall traffic flow.





# For emergency service providers:

Faster response for a world where every second counts.

Studies show that an effective signal preemption system improves response times by an average of 20%, while simultaneously reducing crashes at controlled intersections.<sup>1</sup> And it's no secret that response times and risk mitigation are critical in the emergency service world. The Opticom infrared system provides unique, precise control that anticipates vehicle movement and helps responders get to their destinations as quickly and safely as possible.

## Improves safety by eliminating priority conflict at the intersection

- "First-come, first-served" authorization

## Validates emergency vehicle status and authorizes signal preemption

- Secure, encoded infrared communication
- Protection from unauthorized devices
- Vehicle identification with time stamp and activity log

## Provides data reporting

- Preemption logs by vehicle for liability identification and diagnostic capability



# For traffic engineers:

"Comprehensive" doesn't have to mean "complicated."

The Opticom infrared system can handle the needs of both emergency vehicle preemption and transit signal priority. What's even more impressive is that it does this without making things complicated. The system installs easily at intersections and on vehicles, integrates with existing traffic controllers, minimizes the impact on general traffic flow and helps reduce the number of crashes at intersections. Life, after all, can be complicated enough.

## Integrates easily into current cabinets

- Opticom™ Phase Selector plugs directly into CA/NY170 and most NEMA hardware
- Compatible with most traffic controllers with internal preemption and priority

## Enables conflict-free use among emergency service and transit vehicles

- "First-come, first-served" authorization
- Priority differentiation

## Minimizes disruption of traffic flow

- Adjustable activation range for optimal green time and minimal traffic disruption

## Provides complete call history log

- Confirmation of authorization, time of preemption and priority, direction, duration, and vehicle passage for up to 1,000 events



# For mass transit operations:

Lower costs, happier riders and reduced environmental impact.

Whether you're looking to improve headway, increase schedule adherence or activate queue jumping, the Opticom infrared system will serve you well. It provides a temporary advantage to individual buses, as needed, to help them catch up to schedules and maintain progression—crucial factors for maintaining a loyal rider base and attracting newcomers. Improving route timing by 10% or more may help you reduce your fleet needs.<sup>2</sup>

## Enables automated operations

- Communicates with AVL for conditional priority, enabling automated operation

## Integrates with existing systems

- Supports J1708 standard

## Provides per-vehicle identification data

- Eases creation of “before and after” effectiveness reports
- Enhances traffic signal controller reporting



<sup>1</sup> *Traffic Signal Preemption for Emergency Vehicles: A Cross-Cutting Study*. January 2006: Federal Highway Administration, et al.

<sup>2</sup> *Transit Signal Priority (TSP): A Planning and Implementation Handbook*. May 2005: Smith, Hemily, Ivanovic for Intelligent Transportation Society of America.



**Opticom™ Infrared System components: detectors (top), emitters (left), phase selectors (right).**

Contact Global Traffic Technologies to learn more about service, maintenance and turnkey solutions in emergency vehicle preemption and transit signal priority that improve the quality of life for everyone in the community. Call **1-800-258-4610**, or visit us at **gtt.com**. The method of using the components of the Opticom™ Infrared System may be covered by U.S. Patent Number 5,172,113 and Canada Patent Number 2,079,293. The use of Opticom infrared system components may be covered under one or more of the following U.S. Patent Numbers: 4,970,439; 5,187,373; 5,187,476; 5,202,683; D338165.



Global Traffic Technologies, LLC  
7800 Third Street North  
St. Paul, Minnesota USA 55128-5441  
1-800-258-4610  
651-789-7333  
www.gtt.com



ISO 9001: 2000  
PM 535303

**Global Traffic Technologies Canada, Inc.**  
157 Adelaide Street West  
Suite 448  
Toronto, ON M5H 4E7  
Canada  
1-800-258-4610

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