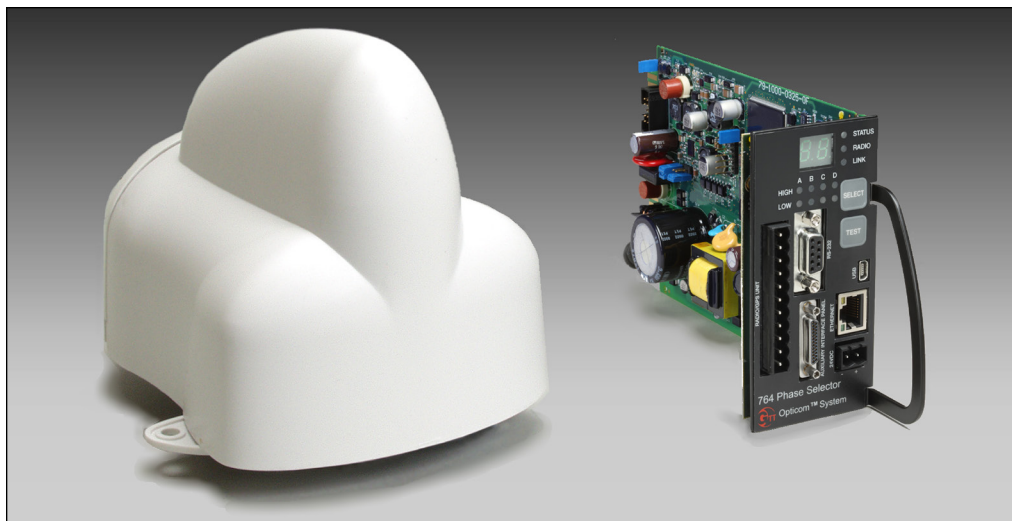


# OPTICOM™ GPS-enabled intersection equipment



## DESCRIPTION

The Opticom GPS System assists authorized vehicles through signalized intersections by providing temporary right-of-way through the use of common traffic controller functions.

The Opticom GPS system consists of the following matched components:

### Intersection Equipment

- Opticom 3100 GPS Radio Unit containing a GPS receiver with antenna and a 2.4 GHz spread spectrum transceiver with antenna

–OR–

Opticom 3101 GPS Radio Unit containing a GPS receiver and a 2.4 GHz spread spectrum transceiver, with Opticom 1050 GPS/Radio Antenna and Opticom 1072 GPS Cable Assembly

- Opticom 764 Multimode Phase Selector
- Opticom 768 Auxiliary Interface Panel
- Opticom 1040 GPS Card Rack or Opticom Model 760 Card Rack or Opticom Model 770 Card Rack
- Opticom 1070 GPS Installation Cable

### Vehicle Equipment

- Opticom 2100 High Priority Radio/GPS Control Unit

–OR–

Opticom 2101 Low Priority Radio/GPS Control Unit

- Opticom 1050 GPS/Radio Antenna
- Opticom 2171 Vehicle Interface Cable

Opticom GPS system intersection equipment consists of the compact, weather resistant RF energy-emitting Opticom 3100 GPS Radio Unit containing a GPS receiver with antenna and a 2.4 GHz spread spectrum transceiver with antenna.

The radio unit is connected to an Opticom 764 Multimode Phase Selector via an 11-conductor radio/GPS cable.

The Opticom 764 Multimode Phase Selector can be installed directly into a CA/NY Type 33X input file or most NEMA traffic controllers equipped with priority phase selection software, or into virtually any other traffic controller equipped with priority phase selection inputs and related software.

When input file space is not available, an Opticom 760 Card Rack is required. An external 120 VAC power source provides the power that is required to operate the Opticom 764 Multimode Phase Selector. The phase selector provides power to the radio unit.

The Opticom 764 Multimode Phase Selector processes the signal from the Opticom 3100 GPS Radio Unit and activates outputs, which are connected to the preemption inputs on the traffic controller. There are four channel outputs accessible on the rear connector of the Opticom 764 Multimode Phase Selector and up to 12 additional channel outputs on the Opticom 768 Auxiliary Interface Panel.

Each channel output delivers a constant output for high priority activation, and a pulsed output for low-priority activation. A high-priority signal received on a channel will override any low-priority activation.



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GLOBAL TRAFFIC TECHNOLOGIES

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In certain modes of operation, outputs may be activated that are dependent on the state of the requesting vehicle's turn signal. Another mode provides separate constant outputs for high priority and low priority. The use of an Opticom 768 Auxiliary Interface Panel is required to access these additional modes and outputs.

## FEATURES

- Four channels of detection
  - Radio range of 2,500 feet
  - User-settable range setting by ETA and/or distance
  - Call bridging
  - Precise preemption output pulse
  - Optically isolated outputs
  - Varied outputs depending on turn signal status of requesting vehicle
  - High and low priority as well as probe frequency discrimination
  - "First-come, first-served" priority within each priority level
  - Low-priority output may be configured for first-come, first-served or all-channel active
  - Priority-by-class and priority-by direction setting via the interface software
  - 10/100Mb Ethernet and USB 2.0 communication on the front panel
  - RS232 communications front port, rear backplane and Auxiliary Interface Panel
  - History log of most recent Opticom GPS system activities (10,000 entries)
  - More than 38 million agency/class/vehicle code combinations
- Customizable ID code validation
  - Two character display, LEDs and keypad to enable diagnostics and place test calls to each channel
  - Flexible programming options for priority control parameters
  - Direct installation into CA/NY Type 33X input files
  - Compatible with most traffic controllers
  - Tested to NEMA environmental and electrical test specifications
  - Meets FCC part 15 Class A specifications

## PHYSICAL DIMENSIONS

### Opticom 764 Multimode Phase Selector

Length: 7.0 in. (17.8 cm) x 8.2 in. (20.8 cm) including handle

Width: 2.3 in. (5.8 cm)

Height: 4.5 in. (11.4 cm)

Weight: 0.60 lbs. (272 g)

### Opticom 3100 GPS Radio Unit

Length: 9.0 in. (22.9 cm)

Width: 6.5 in. (16.5 cm)

Height: 6.0 in. (15.2 cm)

Weight: 1.8 lbs. (0.816 kg)

### Opticom 3101 GPS Radio Unit

Length: 8.0 in. (20.3 cm)

Width: 4.5 in. (11.4 cm)

Height: 2.7 in. (6.9 cm)

Weight: 1.7 lbs. (0.771 kg)

### Opticom 768 Auxiliary Interface Panel

Length: 7.25 in. (18.4 cm)

Width: 4.5 in. (11.4 cm)

Height: 1.0 in. (2.5 cm)

Weight with cable: 1.4 lbs. (635 g)

Cable: 12 ft (3.6 m)

### Opticom 1040 GPS Card Rack/Opticom 760 Card Rack/Opticom 770 Card Rack

Length: 8.25 in. (21.0 cm)

Width: 5.25 in. (13.3 cm)

Height: 5.1 in. (12.9 cm)

Weight: 2.3 lbs. (1.043 kg)

### Opticom 1050 GPS/Radio Antenna

Diameter: 2.85 in. (7.2 cm)

Height: 1.4 in. (3.5 cm)

Cable length: 15.0 ft. (4.6 m)

Weight with cables: 0.6 lbs. (0.30 kg)

## ELECTRICAL

### Opticom 764 Multimode Phase Selector

Voltage: 89 to 135 VAC, 60 Hz at up to 500mA or 24 VDC at up to 1 Amp

## ENVIRONMENTAL

### Opticom 764 Multimode Phase Selector

Temperature: -37°C to +74°C (-34.6°F to +165.2°F)

Humidity: 5% to 95% relative

