

# Wavetronix SmartSensor Advance™

## Model 200

Create safer, more efficient intersections through advance detection with SafeArrival™ technology and the ITS industry's only patented auto-configuring device

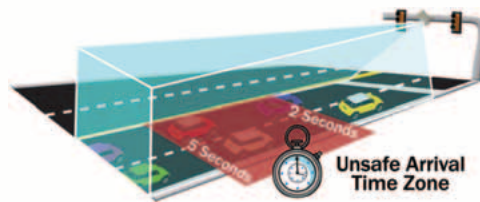


### Advantages:

- Advance detection of signal-controlled intersections
- Breakthrough SafeArrival™ Technology
- Patented Digital Wave Radar™
- Safest and most efficient dilemma zone protection
- Effective congestion management
- Cost savings due to extended 500-ft. range
- Auto-configuration and calibration software for PC and Pocket PC®
- Integrates easily with existing controllers
- Integrates with Wavetronix Click™ products
- Available in Wavetronix Certified Systems™ with extended warranties
- Consistent all-weather, all-condition performance

Safer, more efficient intersections are the goal of traffic operations professionals around the world. Many traffic engineers feel forced to sacrifice safety for efficiency, or vice-versa, especially on high-speed, high-volume intersections.

The Wavetronix SmartSensor Advance™ bridges the gap between safety and efficiency with one-of-a-kind SafeArrival™ technology. SafeArrival allows custom management of intersections based upon the estimated time of arrival (ETA), speed, and range of individual vehicles approaching the stop bar. It is built upon the reliability of patented Digital Wave Radar™, which extends the reach of advance detection to 500 feet and results in significant cost savings by eliminating the need for trenching.

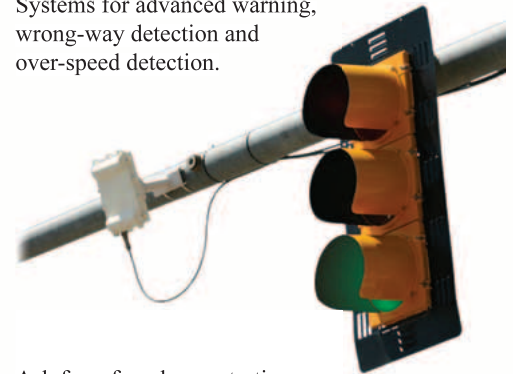


SafeArrival technology provides the safest and most efficient means of protecting motorists on high-speed signalized intersections. It determines if motorists are in an unsafe arrival time condition and efficiently extends the green light to prevent collisions and red-light running. This unsafe condition is also known as the "dilemma zone," the area 2.5 to 5.5 seconds away from the stop bar in which a driver, when faced with a yellow light, must decide whether to stop suddenly, and risk a rear-end crash with a trailing vehicle, or proceed through the intersection and risk running the red light and being involved in a right-angle crash. SafeArrival technology is the optimal form of dilemma zone protection because it individualizes protection based on the arrival times and speeds of each vehicle on the road.

Compared to loop-based dilemma zone protection, SmartSensor Advance protects a broader range of vehicle speeds and increases efficiency by avoiding unnecessary delays for vehicles that are not in a dilemma zone. In addition, SafeArrival technology effectively manages congestion by detecting queues, platoons, saturation and other traffic conditions. Since SmartSensor Advance detects traffic conditions well in advance of the stop bar, control of isolated or coordinated intersections is more efficient than when done only at the stop bar.

SmartSensor Advance installs above-ground and configures automatically. It is easy to install, requires little of no maintenance and performs accurately in all weather conditions, making it the most cost-effective advance detection sensor available.

When used in a Wavetronix Certified System™ for advance detection, SmartSensor Advance can be configured to call, and then extend, the green and red intervals of a phase dynamically. SmartSensor Advance is also used in Wavetronix Certified Systems for advanced warning, wrong-way detection and over-speed detection.



Ask for a free demonstration and let us prove to you how SmartSensor Advance with SafeArrival technology sets the standard in safe, efficient detection.

### Yearly Societal Costs of Signalized Intersections based on National Statistics:

|                            | Right-Angle & Rear-End Collisions | All Crashes | All Fatalities |
|----------------------------|-----------------------------------|-------------|----------------|
| United States              | \$30 Billion                      | 1.2 Million | 2,750          |
| Community with 100 Signals | \$10 Million                      | 400         | 1              |
| Per Intersection           | \$100,000                         | 4           | 1 per 100      |
| Per Registered Driver      | \$300                             | 1 per 160   | 1 per 68,000   |

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# WAVETRONIX™

# SmartSensor Advance™ Model 200 Specifications

SmartSensor Advance is a 10.525 GHz Frequency Modulated Continuous Wave (FMCW) radar. SmartSensor Advance rapidly configures using its unique Pocket PC® auto-configuration software and it is specifically designed for dilemma zone management.

|   |  |
|---|--|
| Measured Quantities:<br>Detection Zones:<br>Detection Range:  | Presence, speed, range and arrival time<br>Up to 8 traffic zones simultaneously<br>30 m to 152.4 m (100 to 500 feet) |
| Zone Resolution<br>Time Resolution<br>Elevation 3 dB beamwidth:<br>Azimuth 3 dB beamwidth:<br>Operating frequency | 1.524 m (5 feet)<br>2.5 msec<br>80°<br>12°<br>10.5 to 10.55 GHz (X-band)   |
| Communications<br>Power   | RS-232 and RS-485 connection<br>7.5 watts @ 9-28 VDC   |
| Ambient operating temperature:<br>Humidity:<br>Shock:   | -40°C to 75°C<br>Up to 95% RH<br>10 g 10ms half sine wave  |
| Physical dimensions (HxWxD):<br>Weight  | 32 cm x 23 cm x 7.6 cm (12.6 in x 9.0 in x 3.0 in)<br>less than 2.27 kg or 5 lbs.                                    |

Full specifications available upon request.

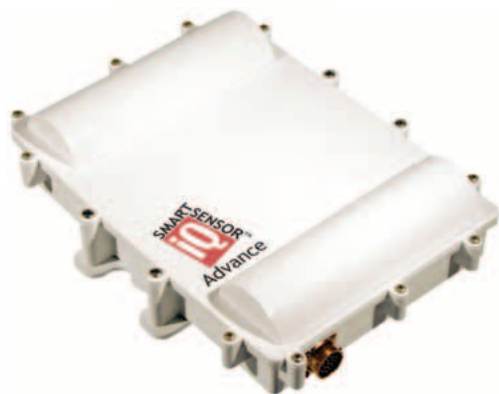
## SmartSensor Advance is fully compatible with all Wavetronix products:

- SmartSensor™, true eight lane detection of vehicle volume, occupancy and speed from the ITS industry's only patented auto-configuring and auto-calibrating traffic sensor.
- Wavetronix DataCollector™, the data management solution that easily integrates into any ATMS environment.
- Wavetronix Click!™ products: Simple connectivity solutions for contact closure, power and surge protection, data conversion and wireless & Ethernet communications.



## Wavetronix SmartSensor™

The industry's only patented auto-calibrating, auto-configuring traffic sensor.



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