BlueTOAD® is the most advanced traffic-monitoring system on the market, directly measuring travel times using cost-effective, non-intrusive roadside technology.

BlueTOAD Spectra Detector

Now, advancements have been developed to increase the number of Detects and Matches, introducing BlueTOAD Spectra, which enables detection of “Non-Discoverable” (Paired) segments of Bluetooth signals along side BlueTOAD’s industry leading detection of “Discoverable” (unpaired) Bluetooth devices. With the combination of discoverable and non-discoverable Bluetooth detection, testing has shown significant increases in detection and matches.

When a phone pairs up to a vehicle it is rendered “undiscoverable” and undetectable by a standard Bluetooth detector. However, BlueTOAD Spectra is able to detect that paired device adding significantly to detection density.

Spectra only detects 6 characters of the non-discoverable MAC address further enhancing privacy, not the usual 12 characters. With the number of States legislating use of “hands-free” mode, this new detector, coupled with the existing Bluetooth detector offers a greater amount of data, and significant increases in Origin/Destination metrics.

BlueARGUS — BlueTOAD Travel-Time-Based Performance Software

BlueARGUS is the most comprehensive database manipulation software, now optimized for travel-time data and dashboard-based visualization with BlueTOAD Spectra. Get richer insight to changing traffic patterns and trends. BlueARGUS/Spectra combined is optimized for any agency’s need - city traffic department, county, state, MPO or engineering service provider.
BlueTOAD Spectra

Technical Specifications

### BlueTOAD Spectra Ethernet

**Power Specifications**
- Power over Ethernet (PoE)
- IEEE 802.3af standard
- PoE Voltage: 48 VDC
- 110/230 VAC supply to injector

**DC Power**
- DC Supply Current: @ 12V - Typical 150 mA
  - Maximum 250 mA
- DC Supply Voltage: 9.5 VDC
  - Maximum - 50 VDC

**AC Power**
- 100/230 VAC 50 Hz to 60 Hz

**Operating Range**
- -40° C to +85° C

**Processor**
- Real Time Microcontroller

**Connectivity**
- PoE - Ethernet 10 BASE-T / 100 BASE-T
  - Static or DHCP IP Addressing
  - (Only one Ethernet connection needed per unit)
- Bluetooth
  - Non-Discoverable 2.4 GHz Demodulator
  - Discoverable CSR Bluecore 4 Class 1
- Bluetooth Radio (adjustable) Transmit
  - Power Range: -90 dBm to +20 dBm

**Antennae**
- Bluetooth: (2) - 2 dBi Omni

**NEMA 4X Enclosure**
- 10 in. x 3.0 in. x 3.0 in.
- Weight: < 5 lbs.

### BlueTOAD Spectra Cellular

**Power Specifications**
- Solar Power SOW, 17.5 Vmp
- Solar: 33 in x 21 in x 2 in, Weight: 17.3 lbs.
- Solar Power 85 W, 17.9 Vmp
- Solar: 47 in x 21 in x 2 in, Weight: 17.6 lbs.
- Battery: 60/20 Ah Gel Sealed

**DC Power**
- DC Supply Current: @ 12V - Typical 250 mA
  - Maximum 500 mA
- DC Supply Voltage: 9.5 VDC
  - Maximum - 50 VDC

**Power over Ethernet (PoE)**
- IEEE 802.3af standard
- PoE Voltage: 48 VDC
- 110/230 VAC supply to injector

**AC Power**
- 100/230 VAC 50 Hz to 60 Hz

**Operating Range**
- -40° C to +85° C

**Processor**
- Real Time Microcontroller

**Connectivity**
- 4G LTE CAT4
  - Supports all legacy non-4G technologies
- Bluetooth
  - Non-Discoverable 2.4 GHz Demodulator
  - Discoverable CSR Bluecore 4 Class 1
- Bluetooth Radio (adjustable) Transmit
  - Power Range: -90 dBm to +20 dBm

**Antennae**
- Bluetooth: (2) - 2 dBi Omni
  - LTE: MIMO Receive Diversity
  - GPS: Passive Ceramic

**NEMA 4X Enclosure**
- 12.14 in x 10.26 in x 7.15 in
- Weight (with battery & mounting brackets): 48 lbs.

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**BlueARGUS**

Interactive, Real Time Speed Maps & XML

The BlueARGUS system provides an interactive and real-time speed map that allows the user to quickly access every link and all the corresponding information, such as travel-time, average speed and 48-hour performance graph. The real-time map can be viewed independently of the software via an encrypted link that the user can view the data compared to the speed limit or historical average to quickly see if there is reoccurring or non-reoccurring congestion - a great operational tool!

Enhanced Origin & Destination Studies

With the Origin & Destination Studies created in BlueARGUS users are able to determine the amount of through movements for a study area (Zones) or corridor, and monitor prevailing traffic patterns to assist on decisions related to route planning and congestion mitigation. With the new O/D Reports, a user can create as many traffic routes and zones as they wish, to compare number of matches and review trip details.

Travel Time Reliability

TTR measures the travel-time index (TTI), buffer-time index (BTI) and planning-time index (PTI) of a driver’s travel to best show the variability in their commute. In addition to average travel-time, TTR is a great performance tool that can be measured weekly, monthly, quarterly and/or annually by time of day and day of week.

Report Scheduler and Historical Reporting

With the use of historical reports, the user can aggregate and compare data in virtually any combination of days, weeks, months or years. This is an extremely beneficial tool to measure the before and after travel-times of a new traffic signal software, the impact of a special event or incident or seasonal effects on travel-times and speeds. Now, the user can automate ALL performance measurement Reports with the NEW Report Scheduler.