# Acyclica

## Maximum Data Collection
## Superior Information

**CONGESTION MANAGEMENT**
is more than just travel-times. Acyclica augments this data by measuring intersection delay by phase, providing tools for traffic engineers to mitigate congestion.

**PERFORMANCE METRICS**
are integrated into the fabric of Acyclica's analytics software. Ranging from Purdue Coordination Diagrams to the LA Route Intersection Coordination Metric, Acyclica brings numerous Measures of Effectiveness to hand

**INTEROPERABILITY**
Acyclica complies with both NTCIP Center-to-Center and the TMDD v3.0 protocol as a means of supporting inter-operability into a range of ATMS systems.

**BY THE NUMBERS**
How does RoadTrend stack up to the competition?

| | |
|---|---|
| Records per Hour | 240,000 |
| Sampling Rate | 28%-45% |
| Data Latency | 35s |
| Accuracy | +98% |

### External USB
USB port for external data storage or qualified peripherals including GPS and certain cellular modems.

## RoadTrend™

This is the workhorse of congestion data collection. Designed to optimize the collection process, RoadTrend can collect over 240,000 records per hour, providing a new benchmark in performance. By collecting exclusively Wifi data, RoadTrend passively collects MAC addresses with signal strength - allowing determination of relative proximity and the ability to actually measure intersection queueing. The compact data collection device needs only power, communication and a 2.4 GHz antenna and the rest is plug and play.

## Wifi

The ubiquity of Wifi-enabled devices makes RoadTrend the perfect solution for real-time, operations-oriented data. Higher sample rates translate to more accurate origin - destination, more reliable travel-times and higher quality information. With RoadTrend, you can accurately manage congestion in real-time.

## Intersection Delay

RoadTrend makes it possible to measure congestion, not just travel-times. Along with Wifi comes the ability to detect intersection delay at all approaches with a single sensor at distances of up to 1/8 of a mile. Together with the Acyclica Analyzer software, delay can be analyzed for each phase.

## Passive Data Collection

Unlike Bluetooth, which relies on an interrogation and response for collecting data, Wifi is completely passive meaning that the sensor only listens. Passive data collection eliminates the possibility of interference with other 2.4Ghz equipment such as wireless radios or other access points.

## Features

**Dedicated Scanning**
The RoadTrend maximizes data capture by scanning for only Wifi devices.

**Signal Strength Filtering**
Scanning sensitivity can be dynamically adjusted by limiting the signal strength of detection.

**Anonymity**
MAC address hashing can take place on RoadTrend to maintain privacy.

**Simple Integration**
An advanced API is available for users interested in integrating with existing systems

**Web Interface**
Built in web server for device management

# Technical Specifications

| | |
|---|---|
| Temperature range | -20° to 75° C (industrial option: -40° to 85° C) |
| Relative humidity | 10% to 90% non-condensing |
| Dimensions | 1.77 H X 4.27 W X 6.30 L |
| Power requirements | 5VDC |
| Power consumption | < 5 Watts |
| CPU | 1 GHz Cortex ARM7 |
| Connectivity (wired) | 10/100BaseT |
| Data Capture Rate | Up to 250,000 records per hour |
| Wifi | 1 Watt 2.4Ghz Radio |
| Data Interface | NTCIP Center-to-Center XML |
| MTBF | > 100,000 hours |
| Data Latency | 35 Seconds |
| Data Storage Capacity | 100MB (internal) / 32GB (USB storage) |