



RTMS ECHO

PREMIUM ACCURACY RADAR DETECTION
FOR MODERN HIGHWAYS

RTMS Echo

Meet the next generation radar, RTMS Echo. The RTMS Echo has been built on years of experience and offers transportation engineers an easy to use, highly accurate radar that provides sophisticated traffic data.

The RTMS Echo is a side fire radar mounted on the roadside. Simultaneously, the sensor provides per vehicle data including volume, occupancy, speed and classification information in up to 12 detection zones. The installation of RTMS has never been easier with built-in aiming guidance, auto configuration of the sensor, and wireless configuration via mobile device or tablet. The data collected by the RTMS Echo is highly accurate and can be formatted to fit the needs of your organization or agency's objectives.

The RTMS technology provides meaningful and reliable data that maximizes the full potential of existing infrastructure and optimizes the safety and efficiency of every city.



Powerful IoT-ready
device



Radar designed for
traffic data collection



Secure wireless
configuration



Built-in aiming
guidance



Specifications

Average Coverage (Radar)

The Echo detection field of view covers the area defined by:

- Effective Elevation Angle: Up to 78 degrees
- Range: 0 to 76m (0 to 250 ft)
- Effective Azimuth Angle: As narrow as 5 degrees

Measurement Resolution

- Radar transceiver: Dual receive antennas using speed trap algorithms for high accuracy per-vehicle speed and direction detection
- Zone width: 1.8 to 5.5 m (6 to 18 ft)
- Detection zones: Configurable up to 12 detection zones

Frequency Bands

- Kband, model Echo operates at high resolution in the 24 GHz band

Electrical

- Voltage: 12-24 Volts DC
- Power: 7.3 Watts
- Passive Power over Ethernet (PoE)
- Transient resistance: Tested per NEMA 2.8.1.3

Interface

- 10/100 Base T-Ethernet
- WiFi access point for wireless configuration with mobile device
- Wired per TIA568B
- Supports Transport Layer Security (TLS) 1.2 for secure communication

Data Storage

- 1,000,000 individual vehicle records
- 10,000 interval records
- All device data retained in nonvolatile memory

Data Retrieval

Echo API:

- Volume and Occupancy
- Vehicle speed bins (8)
- Per-vehicle records
- Classification counts
- Average speed
- Sensor voltage
- Gap and Headway
- 85th percentile speed
- Length-based classification bins (8)

Per-vehicle records: Speed, Length, Vehicle direction

- Supports retrieval of interval data using Sx-300 protocol and Wavetronix protocol

Maintainability

- Ultra reliable: MTBF (mean time between failures) designed for 90,000 hours (10 years)
- System event log
- No scheduled maintenance

Mechanical

Universal mounting bracket mountable on any structure. Tilts on three axes and is lockable.

- Size: 32 x 18 x 7 cm (12.5 x 7.25 x 2.5 in)
- Weight: 1.5 kg (4.5 lbs) with bracket
- Effective projected area: 100 in²

Environmental Conditions

- Temperature range: -40° to +74°C (-40° to 165°F)
- Vibration resonance: Tested per NEMA TS2 2.2.8.3
- Vibration endurance: Tested per NEMA TS2 2.2.8.4
- Shock: Tested per NEMA TS2 2.2.9.2
- Wind load: Tested up to 150 mph (241 km/h)
- Water-tight housing: Tested per IP67 standard

Regulatory

- FCC Title 47, Part 15
- Canadian CSA C108.0-M1983
- CE EN300 440, EN301 498-51, EN301 489-17, EN301 489-19, EN303 413
- UKCA

Warranty

- Three-year warranty

