

EPIQ RADAR™

EPIQ RADAR Detection System

The Ultimate in Smart Traffic Detection

Say hello to the future of intersection intelligence. Econolite's EPIQ RADAR™ isn't just another sensor—it's a powerhouse of precision, performance, and simplicity. With cutting-edge FMCW radar technology with a long range and super-wide field of view as well as a built-in 1080p camera streaming at 30 FPS for visual validation, EPIQ RADAR delivers unmatched accuracy and reliability for every traffic scenario.

Whether it's stop bar, advance, departure, bicycle, or pedestrian detection, or safety-critical applications like mitigation of dilemma zone and red-light running—EPIQ RADAR handles it all with ease. Designed to cover two approaches and up to 900 feet (275 m) with a single sensor, it's the smart solution for complex intersections, reducing congestion and enhancing safety for everyone on the road.

Key features

- Long-range and wide-angle FMCW radar sensor with true presence detection
- Built-in 1080p Camera (30 FPS) with low light sensitivity and latency of less than one second for visual validation
- Stop bar, advance, and departure detection up to 900 feet (275 m)
- Lane-by-lane detection across a wide 110° field of view
- Only two sensors needed for full coverage at a typical intersection
- Pedestrian and bicycle detection, vehicle classification, and ETA data
- 128 tracked objects from 512 unique detections
- Power Line Communications (PLC) up to 1,000 feet (300 m)
- Consistent performance in all weather conditions
- Quick setup and intuitive operation
- Cloud-based analytics via Centracs® +Detect

EPIQ RADAR System: Power meets precision

Welcome to the next level of traffic detection. The EPIQ RADAR detection system is engineered for performance, flexibility, and seamless integration—built to handle the demands of modern intersections with ease.

What's included in the system

- EPIQ RADAR™ Sensor – The eyes of the operation, delivering ultra-accurate detection across multiple traffic scenarios
- EPIQ RADAR™ Hub – The brain behind the scenes, packed with serious processing muscle

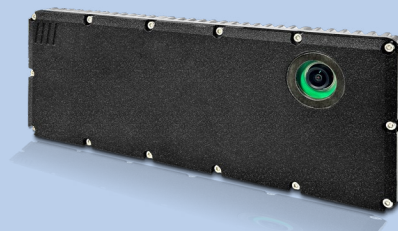
Plus: A sleek web interface and remote access management give you full control from anywhere.

EPIQ RADAR Hub highlights

- Intel quad-core 1.7GHz i7 processor – Lightning-fast data crunching for real-time responsiveness
- Intuitive LCD Touchscreen Display – For real-time system feedback
- Plug-and-Play Integration – Supports NEMA TS2 SDLC, ATC/ITS SDLC, and NEMA TS1
- Built-in Ethernet and Power Supply – Streamlined setup, no extra hardware needed
- Future-Ready Connectivity – Designed to work with today's infrastructure and tomorrow's upgrades

Whether you're upgrading legacy systems or deploying new intersections, the EPIQ RADAR delivers unmatched intelligence and simplicity in one powerful package.

EPIQ RADAR Sensor



EPIQ RADAR Hub



Radar System Communications: Fast, flexible, and future-ready

Say goodbye to complex wiring and hello to streamlined connectivity. The EPIQ RADAR detection system harnesses the power of Power Line Communications (PLC) to deliver blazing-fast 10/100 Ethernet data transmission—up to 1,000 feet (300 m) from the Hub using a simple shielded AWG 14/2 cable.

EPIQ RADAR sensors continuously detect vehicles and pedestrians, then transmit that data to the Hub via PLC. The Hub works its magic by converting this rich detection data into NEMA TS2 and ATC SDLC messages—ensuring compatibility across the board. EPIQ RADAR offers:

- Up to 88 Mbps data rate for real-time responsiveness
- High-resolution logging for deep traffic insights
- Built-in configuration interface for easy setup and tuning

Whether you're modernizing infrastructure or bridging old and new technologies, EPIQ RADAR's communication system delivers speed, simplicity, and total control.



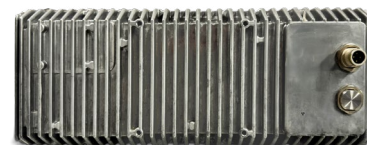
EPIQ RADAR Sensor key components

Specifications	EPIQ RADAR Sensor
Compliance	FCC part 15, IP67, ETSI EN 300-440, RSS- 310, RSS-210
Dimensions	12.1" L x 2.81" W x 5.4" H (308 mm x 71 mm x 136 mm)
Frequency Band	24.05 to 24.25 GHz (K band)
Horizontal Field of View Angle	110°
IEC/EN	61000 (2, 4, 5)
Installation	14-2 grounded cable
Interface	100BaseT Ethernet
Max Angle to Traffic Flow	60°
Mounting Height Requirement	17 ft to 24 ft (5.18 m to 7.3 m)
Operating Temperature	-40° to +165°F (-40° to +74°C)
Output Power	20 dBm PK / <108dBμV/m AVG*
Power Supply	20 to 28 VDC 36 W @ 20°C
Range	700 ft (215 m) for light vehicles and 900 ft (275 m) for larger vehicle
Warranty	Three years
Weight (approximate)	5.5 lbs. (2.49 kg)

EPIQ RADAR Sensor (front)



EPIQ RADAR Sensor (back)



EPIQ RADAR Hub key components

- Eight PLC channel connectors (two per PLC channel), with four in the front and four in the back
- Intel quad-core 1.7GHz i7 processor module, plus a separate 300 MHz I/O processor
- One 25-pin ATC-compatible C12S connector provided for NEMA Port 1 and ATC SDLC interfaces
- LCD touchscreen display with a graphical user interface for easy configuration and status monitoring
- Ethernet connectivity and built-in 48VDC @ 600W and 12VDC @ 150W power supplies
- One 10/100 Ethernet port (LAN), one 1G Ethernet port (WAN), two USB ports, and one SD card slot
- One micro-USB port for serial communication

EPIQ RADAR Hub (front)



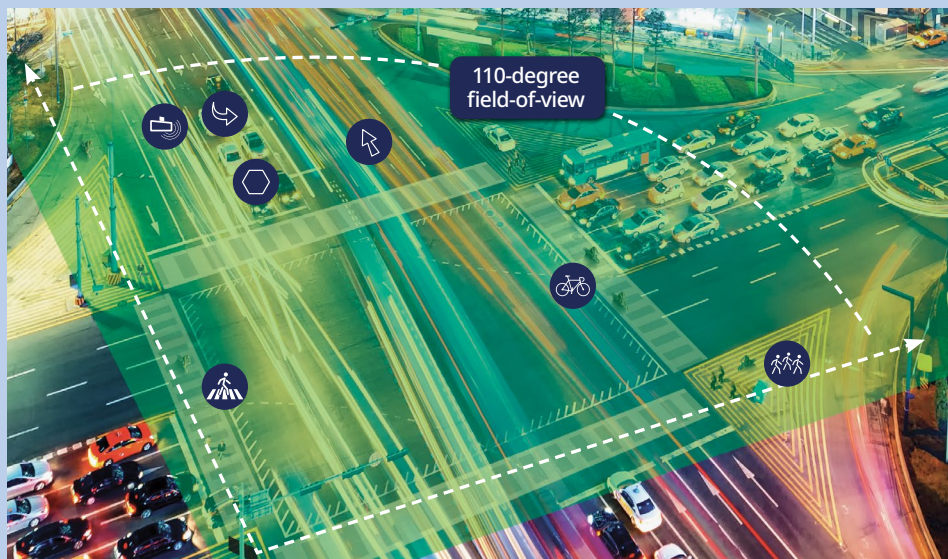
EPIQ RADAR Hub (back)



Specifications	EPIQ RADAR Hub
Compliance	• FCC Part 15 Subpart B, Class A • NEMA TS2: Compliant for temperature range, voltage, transients, vibration and stock
Dimensions	9.0" L x 4.25" W x 9.5" H (229 mm x 108 mm x 241 mm)
Mounting Information	Shelfmount
Operating Temperature	-34.6°F to +165.2°F (-37°C to +74°C)
Operating Voltage	85 VAC to 265 VAC
Weight	8.5 lbs. (3.855 kg)

EPIQ RADAR Sensor: Areas of detection

EPIQ



- Stop-bar through and left turn
- Bicycle detection
- Pedestrian detection
- Pedestrian cross-walk
- Advance detection
- Left-turn advance
- Departure

Primary and side street approaches detect equally at 99.91% accuracy. Based on evaluation over n= 44,940 vehicles.

Supercharge EPIQ RADAR™ with Centracs® +Detect

Take your traffic detection to the next level with Centracs +Detect—the cloud-powered analytics engine that transforms raw data into actionable insights. Seamlessly integrated with your EPIQ RADAR system, +Detect unlocks a whole new dimension of performance monitoring, without the need for extra hardware or installation.

What Centracs +Detect Delivers

- Real-time traffic conditions
- Road user classifications and volumes
- Turning movements and speed analytics
- Signal performance metrics
- All automatically reported, all virtually accessible—anytime, anywhere.

As a powerful extension of the Centracs® Mobility Platform, +Detect brings the full force of Econolite's industry-leading ATMS to your fingertips. From smarter signal timing to deeper operational insights, it's the ultimate upgrade for agencies ready to embrace intelligent mobility.

