



INTERNATIONAL
ROAD DYNAMICS INC.

Autoscope® RTMS G4



The non-intrusive, radar-based Autoscope G4™ is an advanced sensor for the detection and measurement of traffic on roadways. It is all-weather accurate and virtually maintenance-free. Best of all, G4 is renowned for long-term worry-free reliability.

The Autoscope G4 is a small roadside pole-mounted radar, operating in the microwave band. Simultaneously, the sensor provides per-lane presence as well as volume, occupancy, speed and classification information in up to 12 user-defined detection zones. Output information is provided to existing controllers via contact closure and to other computing systems by serial or IP communication port or by an optional radio modem. A single radar can replace multiple inductive loop detectors and the attendant controller.

The G4's all-in-one concept combines a high resolution radar and a variety of communications options including wireless solutions all in a single enclosure. This sleek cabinet free detection station is simple to integrate into any system whether urban signal control or highway traffic management.

APPLICATIONS

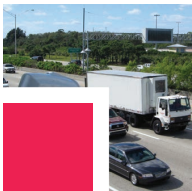
- Mid-block detection for intersections (advance detection)
- Freeway traffic management and incident detection
- Traveler information and journey time prediction
- Ramp metering
- Queue detection
- Work zone safety systems
- Permanent and mobile traffic counting stations
- Enforcement of speed violation
- Loop replacement (single or dual loop emulation)

FEATURES

- Supports up to 8 Autoscope G4 sensors
- Provides presence indication and accurate measurements of volume, occupancy, speed and classification in up to 12 separate zones (lanes) up to 76 meters (250 feet) away
- Fully programmable to support multiple applications using simple intuitive software on a Notebook PC
- True-presence: detects stationary and fast moving vehicles; single or dual loop emulation
- Reliable all-weather performance
- Low life-cycle cost with no routine maintenance procedures and high reliability. Typical MTBF – 13 years
- Easy to calibrate by fast, automatic set-up wizard
- User upgradeable and expandable

BENEFITS

- Fast, safe installation, on existing road-side poles, with no traffic disruptions
- Compatible with all RTMS integrated solutions including detection station, counting, urban traffic control, event reporting, data collection
- Highly flexible: suitable for any road and pole type, with various built-in power and communications options, including contact pairs, TCP/IP and radio modems
- Zero setback requirement means any pole is suitable
- Low power requirement allows solar power operation



Autoscope G4

SPECIFICATION

Average Coverage (Radar)

The G4 detection field of view covers the area defined by:

- Elevation angle
- 50 degrees
- Azimuth
- 12 degrees
- Range
- 0 to 76 m (0 to 250 ft)

Measurement Resolution

- Detection zones
 - up to 12 zones
- Detection range (increment)
 - 0.4 m (1.3 ft)
- Zone width
 - 2 to 7 m (7 - 20 ft)
- Time events
 - 1.3 msec

Frequency Bands

- K band, model G4 operates at high resolution in the 24 GHz band

Regulatory

- FCC
- CE EN 60215, EN 301 489-1, EN 301 489-3, EN 300 440-1, EN 300 440-2, EN61000-4-4
- Canadian CSA C108.8 - M1983

Interface

- Single MS type connector provides multiple options of power and output signals
- Data: volume, occupancy, speed, gap or headway, six vehicle classes, 85th percentile
- 8MB built-in memory for data collection
- Optically isolated configurable RS232/RS-485 port provides vehicle presence, per vehicle and statistical data
- Bluetooth communication for setup, calibration and data access

Configuration Options

- Base unit (as configured above)
- Option 1: Base unit plus second serial port (RS-232/422)
- Option 2: Base unit plus DSS radio modem (900 MHz band)
- Option 3: Base unit plus IP Camera with TCP/IP

Mechanical

- Unit is encased in a rugged, water-tight NEMA 4X IP-67 polycarbonate enclosure
- Mounted on a universal bracket, enabling securing of unit to poles, tilting in both axes, and quick locking
- Size
 - 21 x 21 x 16 cm (8 x 8 x 6 in)
- Weight
 - 1.5 kg (3.5 lbs)

Power

- Operates on 12 - 24 VAC or VDC
 - 3W max standard
 - 12W max with IP camera option
- EN 61000-4-5

Maintainability

- Ultra reliable: MTBF (mean time between failures) designed for 114,000 hours (13 years)
- Shop repairable and expandable
- Self-test diagnostic software
- 15 minute replacement time
- Firmware field upgradable

Environmental Conditions

- Temperature range
 - 40° to +74°C (-40° to 165°F)
- Vibration
 - 0.5 g up to 300 Hz
- Shock
 - 10 g 11 msec half sine wave
- Wind
 - Up to 161 km/hr (100 mph)
- IP 67 compliant

Warranty

- Two-year warranty

CONTACTS

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*Note: All 3 options include 8 optically isolated output pairs rated for 100;mA and 350V for presence indication and speed

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