



Reliability Powered by Innovation

Our non-intrusive, radar-based RTMS™ G4 is the most advanced sensor for the detection and measurement of traffic on roadways. It is easy and safe to install and remove without traffic disruptions or lane closures. It is all-weather accurate and virtually maintenance-free. Best of all, RTMS™ is renowned for long-term worry-free reliability.

Compact True Presence Traffic Detection

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

The G4 is a versatile general purpose sensor. It's all-in-one concept combines a high resolution radar of unprecedented performance, an optional video camera capable of capturing the traffic scene 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

- Actuated intersection control: stop-bar and mid-block detection
- Freeway traffic management and incident detection systems
- Traveler information and travel time prediction
- Ramp metering
- Queue detection and work zone safety systems
- Permanent and mobile traffic counting stations
- Enforcement of speed violation

www.irdinc.com

1.877.747.3487



G4 Advantages

- Speedy, safe installation, typically on existing road-side poles, with no traffic disruptions
- 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
- Compatible with all EIS integrated solutions including detection station, counting, urban traffic control, event reporting, data collection
- True-presence: detects stationary and fast moving vehicles; single or dual loop emulation
- Reliable all-weather performance
- Highly flexible: suitable for any road and pole type, with various built-in power and communications options, including contact pairs, NTCIP, TCP/IP, radio modems and a video camera
- 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 and to verify by optional camera
- User upgradeable and expandable
- Backwards compatible with all previous RTMS™ radars

Specifications

Area Coverage

The RTMS field of view covers the area defined by:

- Elevation angle 50 degrees
- Azimuth 12 degrees
- Range 2 to 76 meters (7 to 250 feet)

Measurement Resolution

- | | Firmware 7.0 | Firmware 7.1 |
|---------------------------|----------------------|----------------|
| • Detection zones | up to 8 zones | 12 zones |
| • Range (increment) | 3 meters (10 feet) | 0.4 m (1.3 ft) |
| • Zone width | 2 to 7 m (7 - 20 ft) | same |
| • Time events | 10 mSec | same |

Frequency Bands

- Currently available in K band, model K4 operates at high resolution in the 24 GHz band
- DSS radio modems offered as built-in option in either 900 MHz or 2400 MHz bands

Certification

- FCC
- CE
- Canadian CSA C108.8 - M1983

Interface

- Single MS crimp multi-pin connector provides multiple options of power and output signals
- Standard USB 2.0 port with optional Bluetooth
- Standard 8Mb built-in memory for data collection
- Optional 16 built-in isolated contact pairs rated for 100mA at 350 volts AC for presence indication
- Isolated serial RS-232/RS-485 port provide per-vehicle measurement data or presence event data
- Optional second port or TCP/IP-UDP
- NTCIP 1209 protocol option
- Built-in wireless option for contact pairs or data transmission into small wireless networks:
 - DSS: Frequency Hopping Spread Spectrum
 - GPRS or CDMA
- Built-in video camera option for remote verification and event triggering with IP or wireless communications

Mechanical

- Unit is encased in a rugged, water-tight NEMA 4X 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 inches)
- Weight 1.5 Kg (3.5 lbs)

Power

- Operates on 12 - 24 volt AC or DC @ 3* Watts; 115 or 220 VAC options
- Surge protection IEC 1000-4-5 and EN 61000-4-5 built-in on all external connections

Maintainability

- Ultra reliable: MTBF (mean time between failures) designed for 90,000 hours (10 years)
- Shop repairable and expandable
- Self-test diagnostic software
- 15 minute replacement time
- User field level firmware upgrade

Environmental Conditions

- Temperature range -37° to +74°C
- Up to 95% relative humidity
- Vibration 2 g up to 200 Hz
- Shock 10 g 10 mSec half sine wave



Corporate Office

702 - 43rd Street East
Saskatoon, Saskatchewan
Canada S7K 3T9
Tel: (306) 653-6600
Fax: (306) 242-5599
Toll Free: 1-877-7IRD-ITS (747-3487)
Email: info@irdinc.com

U.S. Office

2402 Spring Ridge Drive, Suite E
Spring Grove, IL
USA 60081
Tel: (815) 675-1430
Fax: (815) 675-1530

Publicly Traded on the TSX (Symbol IRD)
Find out more about IRD on our website: www.irdinc.com
