



## M300 Wireless Vehicle Occupancy Detection System

Highly accurate detection with robust communications

The wireless occupancy detection system uses embedded in-ground sensors to detect the occupancy of vehicles parked over them. The system provides an accurate, lower cost and easier to install alternative to other occupancy detection systems, many of which are overhead mounting, therefore not suitable for surface only applications and needing costly cable ducting. Occupancy data and analysis is presented via a web based interface allowing simple integration with management information systems

### COST EFFECTIVE OCCUPANCY DETECTION FOR A WIDE RANGE OF APPLICATIONS

Featuring Tinynode™ technology inside, the Golden River M300 Occupancy Detector has been designed to accurately detect the presence of a vehicle in a defined zone including over prolonged occupancy. The M300 is suitable for a wide range of applications, such as; car parking space occupancy, dynamic parking payment schemes, lorry parking applications; through to Emergency Refuge Areas, taxi ranks and monitoring 'No Parking' zones. Output from the system can be linked to management information and control systems and or variable message signs.

### A WIRELESS ALTERNATIVE TO FIXED INFRASTRUCTURE DETECTION SYSTEMS

Unlike many occupancy systems that rely on overhead mounting, the M300 in-ground embedded sensors wirelessly transmit their detection data in real

time, via secure low power radio technology, stud to stud, to a nearby M310 Access Point which feeds the information to the system in station for analysis and display. For larger more complex installations with a larger number of detection locations or spread over a large area the M310 Access Point may be supplemented by the use of a M315 Repeater Unit.

### SECURE, RELIABLE COMMUNICATIONS AND HIGH ACCURACY DETECTION

With more than 98% accuracy in occupancy detection, it yields excellent reliability, coupled to advanced low power bi-directional communications between the detector and other components in the system that enables remote monitoring of the system and detector battery levels. The M300 occupancy system utilises the mesh protocol with self configuring, multi hop, stud to stud communications ensuring the integrity of the system information at all times.



### KEY BENEFITS

- Simple, low cost installation
- No slotting, trenching or ducting required
- Readily scalable and upgradeable solution
- Delivers real-time parking space information to drivers when linked to variable message signs
- Easy to integrate with other control systems
- Increased accuracy and reliability compared to other occupancy detection systems
- Suitable for surface, multi-story and indoor parking installations

### KEY FEATURES

- Unobtrusive, non-invasive and robust design
- 98%+ accuracy in occupancy detection
- Web based data analysis
- Battery powered with 5+ years battery life and replaceable batteries
- Wide operating temperature range (-40°C to +65°C)
- IP68 weather resistant detectors
- Multi-hop, self-configuring, self healing mesh protocol
- Integrated Uninterruptable Power Supply (UPS) ensures continued operation for up to 15 days during a power failure.



## GENERAL SPECIFICATIONS

### M300 IN ROAD OCCUPANCY SENSOR

Detection:	3-Axis magnetic field sensing	Installation core size:	Ø128mm x 55mm
Frequency band:	868MHz ISM band (EU Certified licence free)	Ingress protection rating:	IP68
Power supply:	Lithium Thionyl Chloride LiSoCl <sub>2</sub> battery (3.6V) (user replaceable)	Operating temperature:	-40°C to +65°C (-40° to +149°F)
Battery life:	5 Years	Range to another M300 sensor:	30m
Dimensions:	Ø116mm x 50mm	Range to M315 Repeater unit:	100m
Weight:	500g	Range to M310 Access point:	200m

### M310 ACCESS POINT

Components:	Antenna Node; with integrated UPS, connects antenna to Alix processor Alix processor; processes the detection data for onward connectivity.	Alix Processor:	110mm x 163mm x 30mm
		Node:weight:	1.5kg
		Alix Processor weight:	500g
		Antenna weight:	200g
Dimensions:		Power supply:	240V AC
Antenna:	230mm x 150mm	Power consumption:	10W
Node:	165mm x 240mm x 52mm	Antenna frequency band:	868MHz ISM band (EU Certified licence free)

### M315 REPEATER UNIT

Frequency band:	868MHz ISM band (EU Certified licence free)	Ingress protection rating:	IP68
Power supply:	Lithium Thionyl Chloride LiSoCl <sub>2</sub> battery (3.6V) (user replaceable)	Operating temperature:	-40°C to +85°C (-40°F to +185°F)
Battery life:	7 Years	Range to M300 sensor:	100m
Dimensions:	230mm x 80mm x 65mm	Range to another M315 Repeater:	200m
Weight:	200g	Range to M310 Access point:	300m