



M830 Traffic Monitoring System

Simple, non intrusive, cost effective Bluetooth traffic monitoring system

Golden River's M830 Bluetooth traffic monitoring system is designed to integrate with existing physical infrastructure and provide a cost-effective alternative to ANPR installations for monitoring the flow of traffic at permanent or temporary locations.

A SIMPLE SOLUTION

At around one tenth of the cost of an equivalent traditional Automatic Number Plate recognition based solution, the M830 journey time system provides a low cost, simple to deploy solution to record and analyse journey time, origin and destination and speed traffic data.

The M830 units detects the unique MAC address of Bluetooth devices, such as mobile phones, car hand-free kits, satellite navigation systems and laptops that are in vehicles passing the defined detection zones (up to 500m in both directions) and uses this data to monitor their entry and exit times through the zones.

NON INVASIVE, NON INTRUSIVE DATA

The encrypted MAC address data (fully Data Protection Act compliant) can then be transmitted from the M830 detectors via GPRS or cabled ethernet TCP/IP connection to a central server and its database.

The MAC addresses from the M830

detectors at known locations and distances apart are then matched enabling key traffic flow information including: true queue detection, journey times and flow characterisation.

Using this entry and exit time data, the system can provide users with key outputs such as: link-link journey tracking, average speed/journey time, UTMCI journey time input, route discovery and journey trend data and built in message sign control / VAS control.

The M830's instation provides user friendly graphical tools to simplify the interpretation and monitoring of prevailing traffic flow conditions reported by the outstation(s) and is able to differentiate between static, very slow, slow, moderately free flowing and free flowing traffic and well as occupancy for each speed category.

QUEUE DETECTION

Utilising only one M830 detector extremely low cost slow vehicle detection / queuing vehicle detection is available

KEY BENEFITS

- Quick and easy installation
- Cost effective approx. 10% of the cost of equivalent ANPR systems
- Non invasive
- No dedicated structures required
- Easy to interpret, aggregated graphical visual output
- Ready remote configuration by the instation
- Low bandwidth roadside GPRS wireless connection
- Differentiates between stationary and slow moving traffic
- Ideal for delay signing or very low cost traffic congestion monitoring

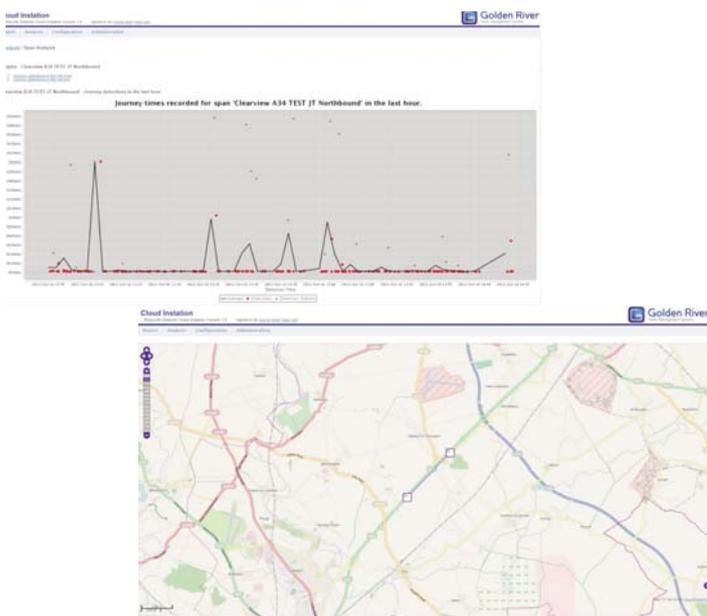
KEY FEATURES

- Queue detection from one unit possible
- Mains powered
- IP66 rated
- GPRS/GSM or Ethernet wired communications
- Detects up to 153,000 events/hour
- Can generate SMS or email alert messages
- Can automate variable message sign setting on queue detection
- Long detection range - up to 500m in both directions



SOFTWARE

The M830 includes a web-based instation, which gives the operator comprehensive views of both the collected traffic data and the status of the detection sites. Displays are map-oriented, giving clear visualisation of the traffic routes and associated data. The instation processes speed and flow data to detect the formation of queues or the occurrence of a traffic incident, relaying alerts and control signals to multiple destinations including VMS infrastructure.



SPECIFICATIONS

PHYSICAL SPECIFICATION

ANTENNA

Size 100mmØ x200mm (variable by application)
Weight 650g

DETECTOR

Unit Size 285 x 225 x 90 mm (H x W x D)
Weight 4200g
Ambient Temp. -20°C to +40°C (-4°F to +104°F)
Enclosure Rating IP66

DATA TELEMETRY

Wireless http over GPRS
Wired http over Ethernet

ELECTRICAL REQUIREMENTS

Supply Voltage 24VDC
Power
Consumption 5W

OPERATING MODES

Traffic flow and queue detection

Method Vehicle detection within speed bands. Queue formation algorithm based on volume within speed bands
No. of Sensors One per direction (carriageway) covers all lanes
Speed Bands 5, configurable
Speed Resolution (Banding) ± 10%
Detection Zone 1-4 lanes x 240 metres
Outputs Site ID, timestamp, vehicle count per band

JOURNEY TIME

Method Vehicle identification by Bluetooth signature (anon) at each site, timed between sites. A single sensor detects both directions
No. of Sensors One per site covers all directions and lanes
Journey Time Accuracy ± 30 seconds
Detection Zone Up to 8 lanes, up to 500 metres along carriageway
Outputs Site ID, Bluetooth device ID, timestamp