

Intelligent Motorway Detection Systems

IR200



FUNCTIONALITY

Enhanced vehicle Detection:

A new generation vehicle detector with improved operating performance and enhanced fault and diagnostics capability.

Improved Traffic Data capability:

- Averaged period data – traffic volume, speed, length, headway and occupancy.
- Individual vehicle event reporting – lane ID, vehicle speed, length, and headway.
- Traffic volumes in binned speed and length categories.
- HIOCC incident detection alarms.
- Logging of historical traffic data, stored in local data files for remote or local file recovery.

Connectivity:

- Compatible with existing IR100 host protocols.
- Native Ethernet capability to extend the IR100 serial data port capability.
- Connectivity to NTP server and hardware RTC for accurate time-stamp of stored traffic logs.
- Support for Flash or external USB data storage device.

User interface:

- Web browser interface for equipment interrogation, setup, monitoring, debug and data extraction.

Maintainability:

- Extensive Loop diagnostics, fault and comms fault logging

The IR200 incorporates the latest technology to collect, traffic data by means of buried inductive loops. The all new IR200 design is based on a highly successful family of Nortech Motorway detection systems in extensive use in Australia and elsewhere.

The IR200 will collect, store and report multi-lane traffic data derived from 24 loops (or 12 lanes in speed measurement mode) at vehicle speeds to 200km/h. Traffic data comprises of individual vehicle data events or average flow data relating to traffic volume, speed, length, vehicle headway and percentage traffic occupancy.

The IR200 incorporates incident detection capability implemented at the roadside. Using the TRRL HIOCC algorithm the equipment monitors traffic occupancy per lane on a second-by-second basis and provides traffic incident alarms calculated from configurable alarm variables downloaded from the host computer.

The IR200 design philosophy is based on providing reliable state of the art hardware backed up by extensive fault diagnostics capability to ensure a reliable / accurate and fully functional installation.

New hardware additions to the IR200 include a real-time clock and local data storage capability.

A new web browser interface allows simplified interrogation of the roadside equipment, allowing rapid configuration of all operating parameters and the viewing of real-time traffic data, diagnostic information and fault logs.

RELIABLE TRAFFIC DATA

- ITS solutions depend on reliable traffic data.
- Transport strategies are costly to implement and expensive to maintain.
- Traffic monitoring equipment must be accurate, reliable and have low maintenance costs.
- NORTECH equipment has a reliable track record in Australia.

ADVANCED TD664 VEHICLE DETECTOR

The IR200 uses the latest TD664 vehicle detectors incorporating AFS (Automatic Frequency Selection). The AFS circuitry on each 4 channel card automatically evaluates numerous possible frequencies on start-up and chooses the best frequency setting based on measured loop noise and loop Q.

Using the loop diagnostic capabilities available via the web browser interface it is possible to interrogate all detector selections, view the detector operation in real-time and check, adjust and manually override the automated selection to achieve reliable operation in challenging environments.

HOST PROTOCOLS

The IR200 implements the existing IR00 data protocols on the host communication port, providing full compatibility with existing IR100 sites and systems. All existing IR100 protocols will interface transparently with the IR200.

TRAFFIC DATA OPTIONS

Traffic data comprises average data calculated over pre-determined intervals and includes traffic volume and averaged speed, vehicle length, headway and vehicle occupancy.

Optionally individual vehicle reporting can be selected which provides a record of every vehicle showing its lane number, speed, length and headway. Vehicle volumes can also be stored in five user configurable length bins and in 20 preset speed bins.

DATA LOGGING

New to the IR200 is a local data logging capability, where traffic data will be stored locally either on Flash or external USB data storage devices.

WEB BROWSER INTERFACE

The web browser interface is intended as an installer / maintenance interface for configuration of operating parameters and the viewing of real-time traffic data, diagnostic information and fault logs.

Configuration data can be readily uploaded and downloaded to similar sites, allowing rapid configuration of multiple sites from common config files.

ENHANCED HARDWARE

- Latest TD664 vehicle detectors with automatic frequency selection based on multiple frequencies and preset tuning bands
- 32 loop or 16 lane capacity in paired loop mode
- External access to individual vehicle detector outputs
- Powerful ARM-9 type processor card
- RS232 /USB and Ethernet ports.
- Simultaneous access to host and local diagnostics ports
- Real time clock for accurate time-stamp of stored traffic logs and alarms.
- Support for Flash or external USB data storage devices.
- Non-volatile memory storage of configuration data, eliminating the need for re-configuration following a power failure.



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TRAFFIC

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