Insight® from Clearview Intelligence is an integrated traffic data management solution designed to support accurate and timely decision-making by ITS professionals.

With a suite of tools focused on optimising service delivery and the effective use of the road capacity, Insight eases the burden of remote data collection, device management, data processing, reporting and analysis.

**One platform, multiple applications**
The core Insight platform is built upon a scalable server based architecture available as a hosted or self-hosted application.

Users access Insight through a modern web browser interface providing a secure solution that is accessible and easily deployed. The interface can be configured to ensure that the workspace environment is optimised for the user’s role such as an engineer or analyst.

The platform offers a set of powerful tools such as import/export, rules engine, report creator and custom dashboards that are available across a range of integrated applications.

The Insight tools are common across all applications meaning users only need to learn one interface and one set of functions. In addition, the platform’s common database offers reporting and analysis combining data from different applications in a single report.

The first application to be released with Insight is focused on Count and Classification with further areas such as Journey Time Monitoring and Parking set for future releases.

**Key Benefits**
- Automated, efficient process for remote sensor data gathering
- Readily transforms data into intelligence without human intervention
- Personalised tailored view of captured intelligence enabling operators to act promptly
- Drives intelligence sharing with other users and third party systems
- Real-time access anywhere, anytime to inform decision making
- Provides instant answers to complex questions about network or asset performance
- Facilitates more efficient resource utilisation around deployment of traffic officers and maintenance engineers

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**Count and classify**
Insight’s Count and Classify application builds on the core platform by providing support for Clearview Intelligence range of traffic counters and classifiers.

**Device Management**
- Support for Clearview Intelligence's M660, M665, M680 and M720 count classifiers
- Fault notification via web, e-mail and smartphone messaging services
- Remote download and upload of configuration files
- System and user defined filters (faults, location, type, etc.)
- Device diagnostic reports
- GSM, GPRS and wired Ethernet devices supported
- Device map overlay and status indicators

**Data processing**
- GSM Dial-Up with manual and scheduled data collection
- GPRS and wired Ethernet data collection
- Support for Interval, IVD and VBV data formats
- Import GR Format, CSV and XML data
- Export CSV, JSON and XML data
- Ability to apply user defined data manipulation/aggregation rules to incoming data
- Data validation and back-fill options

**Reporting and analysis**
- Powerful but easy to use report creator with live data view
- Comprehensive set of count and classify reports included and modifiable
- Point and click graph creation with multiple theme options
- Pre-set formulas for analysis such as the 85th percentile calculation
- Switch between Graph and Table format with one click
- Repetitive manual data manipulation tasks can be automated
- Export to PDF and Excel
- Reports can be used as data feeds for display on websites

**Custom dashboards**
Custom dashboards provide a quick and easy method of delivering information allowing informed decisions to be made with up to date and relevant data. Reports can be presented on screen where the user can easily export, print, or change allowable parameters (date, device, time).

Reports can also be configured so that the user is always presented with the most up to date information or for a set time period meaning there is no longer the need to waste time exporting, formatting and emailing reports.

**Data Processing**
Insight collects data via GSM, GPRS and wired Ethernet communications as part of both the hosted and self-hosted solutions. The integrated server based dial-up application provides for user defined schedules, manual dial-up, status updates and event logs.

As data is received it flows through a unique engine that process the data based on a set of rules. Rules can be as simple as calculating column averages or as complex as converting data to another format. The system includes a set of common rules but users have the ability to create and edit their own based on a set of templates.

Insight has been designed to enable users to analyse and report on their data from multiple sources in a single environment. It offers import and export in the industry standard formats of CSV (Comma Separated Values) and XML (Extensible Markup Language).
Unparalleled real-time business intelligence direct from the roadside

Reporting and analysis
In keeping with Insight's focus on ease of use and flexibility, the solution includes a set of the most commonly used count and classification reports.

Reports can be modified or new ones created with the user friendly, yet powerful "report wizard". As you create or modify your report, the actual data source you are working on is shown at each stage, so that you can preview the expected report output and refine it ensuring that your reports contain the information and the look and feel you need first time.

Many elements of report writing involve carrying out the same repetitive tasks with just a few minor changes. Insight contains a powerful rules engine, which can be set up to automatically perform many of these tasks, enabling the user to focus more on analysis and exploration of the data. Calculations such as the 85th Percentile using both Interval and VBV data can be added easily to aid in analysing the data.

Web browser platform independent
Insight has been designed to comply with the latest standards of cross browser compatibility and as such, the system will work across many different web browser platforms including:

- Firefox 5 or above
- Safari 5 or above
- Chrome 13 or above
- IE 9 or above
- Opera 12 or above

Key Features
- Intuitive wizard driven report creation tool
- Integrated data collection utility offering real-time, scheduled and manual collections
- Ability to data share with other systems via JSON & XML data feeds
- Secure, responsive web based user interface with real-time data analysis
- Highly customisable, user definable dashboard portal
- An extensive range of graphical contextual viewing tools
- Supports export of XML, CSV, PDF and Excel data and reports
- Powerful suite of remote device network management tools
- Interactive map facility for visual monitoring of device network and fault management
The benefits of insight

- Easy to use, powerful report wizard means novice users can create simple reports with ease and access the information they need on demand.
- Web based customisable dashboards provide a secure method to deliver both historical and real-time information direct to the desktop empowering users to make informed decisions.
- Advanced users can take advantage of a powerful rules engine that automates repetitive data manipulation and aggregation tasks significantly reducing the time spent on data processing and allowing more time for analysis.
- Extensive fault alerts provide feedback on roadside devices enabling both pro-active and re-active responses to prevent or minimise data loss.
- Customisable interface optimises the workspace for the user's role providing a more intuitive workflow and providing quick and easy access to common features and functions.

The future of insight

Insight is core to Clearview Traffic’s future product and solutions development and forms the basis of our Data as a Delivery service. Further capabilities are planned for the future and the next release is already scheduled to include such features as:

- Configurable XML schemas allowing users to export to DATEX2/UTMC or a custom scheme.
- The import/export engine will provide the ability to match data between different database table structures offering a single destination for all your count and classify data regardless of source.
- The rules engine will be adapted to provide automated processes offering the option to perform data validation, back filling or conversion into different formats.
- Device and data import support for the Clearview Intelligence M665 TMU.

Longer term, this platform will support a whole range of new sources of data and empower users to explore data in exciting new ways that builds new insights:

- Additional applications and datasets such as journey time monitoring, parking bay occupancy monitoring and environmental monitoring data.
- Cross analyses of these disparate datasets to understand possible correlations, enable scenario modelling and investigation of possible cause and effect relationships.
- The ability to bring in data from other sources including unstructured data from social media sources such as Twitter and utilise big data analytics to make sense out of seemingly random and disparate pieces of data.
- Two way feeds of data from cooperative vehicle to infrastructure systems and larger integrated smart cities management systems, providing real-time insight and decision support tools to the public and those responsible for managing city infrastructure of the future.