



M210 Logging Stud

Simple, solar powered, self contained vehicle counter

Clearview Traffic offer a unique and innovative solution for traffic planners looking for a low-cost vehicle counter solution in both permanent and occasional surveys. The M210 solar powered logging stud provides count information in a simple, self-contained unit.

INFORMATION TRENDS

Traffic planners regularly need high levels of information to help accurately manage the roads within their network. Gathering details such as long term trends can be difficult where the only solution is to install a wide network of loop based traffic counters, but this is often not economically practical due to installation and maintenance costs.

SIMPLE SOLUTION

The M210 solar powered logging stud can provide a solution to this problem, by combining our extensive expertise with a range of technologies including solar power, radio communications and magnetometer based vehicle detection.

This self-contained traffic counter is installed into a 13cm diameter hole in the centre of the lane. Once installed it will continuously count passing vehicles, recording volumetric data in one minute intervals, storing it within the unit. An integrated solar panel stores power in a high efficiency rechargeable battery to ensure continuous operation for many years without the need for any form of routine maintenance.

EASY DATA COLLECTION

Data collection is straightforward by utilising the specially designed USB radio dongle and the simple download application.

TYPICAL USES

Data can be used for a wide range of applications including:

- Local authorities - for providing additional granularity to the comprehensive data generated by other traffic monitoring infrastructure.
- Retail environments - to provide a clear historic record of vehicle movements in and out of car parks and surrounding road traffic flows.
- Country parks - to give an indication of visitor numbers.
- Car park entrance and exits - to give clarity on the number of vehicles entering and leaving the car park, and to provide peak flow information.
- Monitor seasonal traffic patterns especially in the roads surrounding event locations including show grounds, sporting events, air shows, and exhibition centres.



KEY BENEFITS

- Fast, cost effective installation
- Minimal data collection trips required saving time, money and carbon emissions
- Renewable energy source reduces environmental impact
- No maintenance required, increasing efficiency
- Unobtrusive and less likely to sustain damage from road use
- Roadside wireless connection enables safe data collection
- More cost-effective than inductive loops or pneumatic tubes

KEY FEATURES

- Solar powered for permanent deployment
- Binned vehicle count in one minute intervals
- 1 year data storage capacity
- 13cm diameter
- Self contained with no roadside cabinet or loops required
- Simple installation
- Almost "invisible" once installed
- Supports both free flowing and slow moving traffic
- Quick wireless data retrieval via USB dongle
- Flexible roadside configuration software application



BATTERY SPECIFICATION

BATTERY TECHNOLOGY

3.6V 1900mAh Nickel Metal Hydride (NiMH) battery pack

BATTERY OPERATION

Continuous operation for at least 4 weeks from full charge without any solar input

BATTERY CHARGE TIME

2 hours from flat to operating charge (@100 klux - sunny day)
50 hours from flat to full charge (@100 klux - sunny day)

DATA SPECIFICATION

COUNT ACCURACY

5 to 30mph	97%
30 to 70mph	98%+

DATA STORAGE

16Mb internal memory, each event being 1 byte

DATA RETRIEVAL

Binary survey data is downloaded from the stud via the MLINK or MLINK S software, using the M211 USB dongle connected to laptop to communicate with the M210 stud.

MLINK enables the retrieval of all data held on the stud or just the new data that has been recorded since the last time data was retrieved.

MLINK S simply retrieves all data held on the stud.

Retrieving one week's data takes approximately 20 seconds; retrieving one month's data will take approximately one minute.

DATA ANALYSIS

MLINK S provides basic graphical and tabular event output capability, enabling the user to plot data retrieved between any two dates and display with granularity of 1min, 5 min, 15 min, hourly or daily.

Both MLINK and MLINK S export of this data to '.csv' format for additional manipulation and analysis in packages such as Microsoft Excel.

COMPANION PRODUCTS

MLINK – Windows based configuration and data retrieval software.

MLINK S – Windows based data retrieval and analysis software.

M211 – USB dongle providing low power radio communications to enable downloading of data from the studs.

SPECIFICATIONS

OPERATING TEMPERATURE RANGE

-20°C to 60°C (-4°F to 140°F)

DETECTOR TECHNOLOGY

Magnetometer

DETECTION CAPABILITY

All major types of motorised vehicles, including motorcycles, cars, vans, articulated lorries

DETECTION ZONE

For optimal accuracy, some part of the metal chassis must pass directly above sensor

DIMENSIONS

Ø112 x 52mm

WEIGHT

740g

HOUSING

Polycarbonate and polyester compound

SOLAR PANEL CAPACITY

305mW

RECORDING INTERVALS

1 minute bins

SPEED RANGE

5mph to 70mph+

POWER CONSUMPTION

1mA during normal operation
35mA during download

ENVIRONMENTAL PROTECTION

IP68

RADIO FREQUENCY/RANGE

2.4GHz band using Zigbee communications between stud and dongle
Range up to 15m between stud and dongle