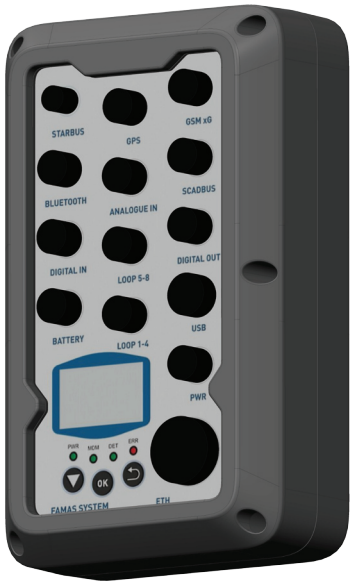
MOBILITY

TRAFFIC



MROAD 500

MULTIFUNCTION LOCAL CONTROL UNIT

GENERAL CHARACTERISTICS

The **MRoad 500** multifunction unit is a local traffic controller which generates a complete overview of traffic, weather and road conditions, using the sensors connected to it.

Advanced signal processing algorithms provide detailed and precise data, regardless of the sensing technology employed (traffic sensors: inductive, sunk into the road, or microwave, installed above the road; videocameras: numberplate recognition and CCTV; weather sensors, etc.).

The **MRoad 500** provides real time diagnostics data for each passing vehicle and runs a first layer of processing on the data.

MRoad 500 has optional functions using an advanced Bluetooth® tracking system to detect active Bluetooth® devices on passing vehicles and read their MAC codes, which are unique for each device. The traffic tracking data makes it possible to characterise the traffic flow.
The controller transmits all data automatically to the central unit via Ethernet or the 3G/4G cellular network.
The controller's flexible interface means that it can be accessed both locally and remotely.
Data collection, including diagnostics, firmware updates and configuration, can all be done remotely or locally using an internet browser, thanks to the unit's on-board web server.
The unit also has a USB interface which allows the user to download data saved to an SD card (high capacity memory) to a USB key.
Local diagnostics can be run using indicator leds and the LCD display. The unit can be configured with its keypad.

The **MRoad 500** has a very low power draw, so that it can be powered both off the mains (230V / 50Hz) and with a photovoltaic panel.

PRINCIPAL CHARACTERISTICS

- Traffic, weather and road condition monitoring
- Real time and statistical data
- Advanced diagnostics
- Low power consumption
- Compact sealed enclosure

TECHNICAL SPECIFICATIONS

OUTPUT DATA

- Per individual vehicle: date, time, lane, direction, speed, length, headway, gap, class
- Aggregated: mean speed, vehicle class according to the scheme in use, aggregation by date and time period, etc.
- Meteorological: depends on the weather sensors to which the unit is connected
- Video data: context images, hazardous goods plates - Kemler, number plates
- Road conditions: temperature at the surface and at -4 cm, condition of road surface, dissolved salt concentration
- Optional: MAC codes, context images

ELECTRONICS

- Low power CMOS
- Integrated real-time clock and watchdog

OPERATING CONDITIONS

- Temperature: -40 °C ... +80 °C
- Humidity: 0 % ... 100 %, without condensation

POWER AND CONSUMPTION

- 12 V_{DC} ... 24 V_{DC}
- 1 W approx. (with communications modules and display OFF)

OPERATING SYSTEM

- Embedded Linux

ENCLOSURE DIMENSIONS

- 285.5 X 171.5 X 96.5 mm (H X W X D)

ENCLOSURE MATERIAL

- ABS, with aluminium front panel

PROTECTION RATING

- IP67

DATA MEMORY

- 2GB with SD Card (optionally expandable)

COMMUNICATIONS

- Web Server on board
- 4 diagnostics leds
- 3 keys and LCD display
- 1 Ethernet 10/100T interface - data transmission every 60 seconds
- TCP/IP protocol
- 1 USB interface
- 1 GSM/GPRS/UMTS internal modem (optional) - data transmission every 3 minutes

SERIAL INTERFACES

- RS485 interface with power line (SCAD-BUS and STAR-BUS)

SENSOR INTERFACES

- 8 / 16 inductive sensor inputs
- 8 analogue inputs for weather sensors (A/D converter resolution: 12 bit)
- 1 input for precipitation/visibility and road sensors, SCAD-BUS
- 1 input for STAR sensors, STAR-BUS

INPUTS/OUTPUTS

- 4 or 8 digital inputs (1 reserved for the enclosure door contact)
- 4 relay contacts (2 switching, 2 NO)

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Vers. 16/01