

## RDL

Racing Data Logger  
Up to 32 Mbyte internal memory

### Description

RDL is a data logger developed by Magneti Marelli for racing applications which includes a very high speed Ethernet line to download data.

Interconnection with the box can be obtained using 2 CAN lines and an asynchronous current loop serial line.

On the box are present a high performance RISC microcontroller and a FPGA for diagnostic purposes.

RDL is provided with analogue inputs including: Single-ended, temperatures, K-type thermocouple and linear Lambda.

Furthermore the device provides lap trigger and wheel speed inputs.



### Main Features

- 12 Single ended
- 3 Pick-ups or Hall effect
- 3 Hall effect
- 2 Linear Lambda sensor inputs
- Up to 32 Mbyte internal data logger
- Up to 256 logged channels
- Up to 40 kbyte/s logging rate
- Sampling rates up to 1000 Hz
- 2 CAN communication buses
- 1 Ethernet line

### Benefits

- Extremely reduce data download time by means of Ethernet link
- SW selectable NTC/PT1000 temperature sensor
- Floating point data management
- Direct management of Marelli dashboard display
- Pick-ups inputs for wheel speed and distance measurement
- Requires Wintax3 analysis software (compatible Win2K/XP)
- Requires Axon logging setup tool
- Robust design, easy to install

### Typical Applications

Professional circuit and rally applications

One make race series

Formula series

# DATA LOGGER

## RDL

Racing Data Logger  
Up to 32 Mbyte internal memory

### Technical Characteristics

#### Inputs

Analogue Single-ended .....	12
Linear Lambda sensor .....	2
K-type thermocouple .....	2
NTC/PT1000 temperature sensor (selectable) .....	3
NTC internal temperature sensor .....	1
VR Pick-ups or Hall effect .....	3
Hall effect .....	3
Lap trigger .....	1
“Code Load” enable pin .....	1
Syncro (Iso9141) .....	1

#### Outputs

Outputs (for indicator LEDs) .....	2
Lambda heater drivers .....	2
Voltage references .....	3

#### Communications

CAN line (1 Mbit/s (*)) .....	2
Ethernet line (100 Mbit/s) .....	1
Serial current loop .....	1

(\*) Configurable on request

#### Logic Core

Microcontroller (80 MIPS RISC) .....	1
FPGA (50k gates) .....	1
Flash E2PROM (microcontroller) .....	1 Mbyte
RAM memory (microcontroller) .....	48 Kbyte
RAM memory .....	512 Kbyte
E2PROM .....	64 Kbyte
Time keeper .....	1

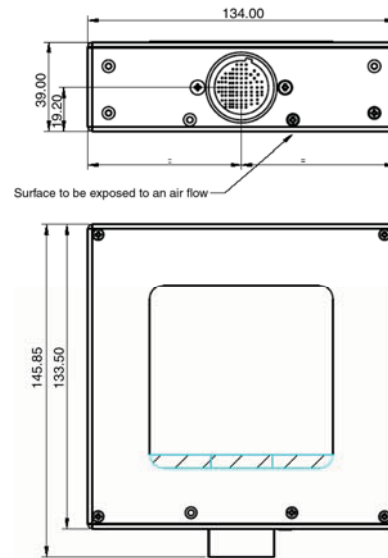
#### Logging

Flash disk memory .....	16 or 32 Mbyte
Logged channels .....	up to 256
Logging rate .....	up to 40 Kbyte/s
Sampling rate .....	up to 1000 Hz

#### Other Characteristics

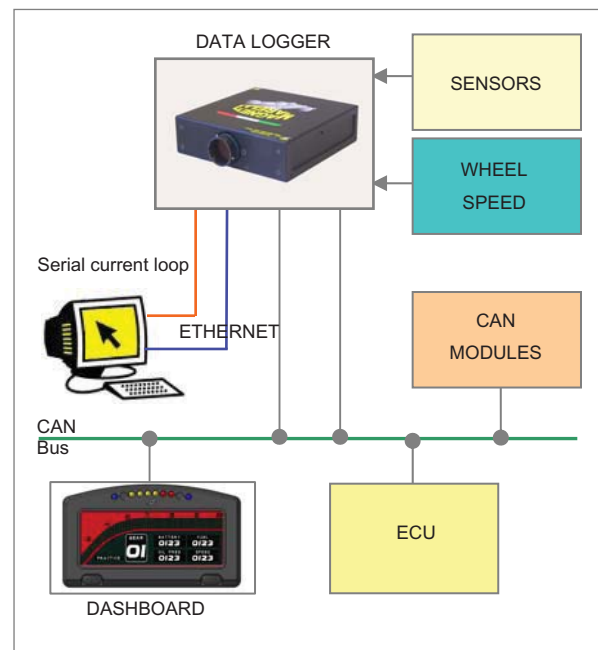
Power supply .....	7 to 16 V
Operating temperature range (internal) .....	-20 to 85 °C
Protection class .....	IP 54
Dimensions	
without connectors .....	134 x 133.5 x 39 mm
Weight (approx.) .....	680 g

### Dimensions



Dimensions in millimetres

### Application Schematics



For further information, please contact: