

Lotus ECU for 240R, Elise 192 CV, Exige 192 CV



INTRODUCTION

AIM has developed special applications for many of the most common ECUs: by special applications we mean user-friendly systems which allow to easily connect your ECU to our hi-tech data loggers: user need only to install harness between the **logger** and the ECU.

Once connected, the logger displays (and/or records, depending on the logger and on the ECU data stream) values like RPM, engine load, throttle position (TPS), air and water temperatures, battery voltage, speed, gear, lambda value (air/fuel ratio), analog channels.

All AIM loggers include – free of charge – **Race Studio 2** software, a powerful tool to configure the system and analyze recorded data on your PC.

Warning: once the ECU is connected to the logger, it is necessary to set it in the logger configuration in Race Studio 2 software.

Select Manufacturer “Lotus” Model “ELISE”

Refer to Race Studio Configuration user manual for further information concerning the loggers configuration.

Chapter 1 – Car Models

Lotus ECU is installed as a stock on the following car models:

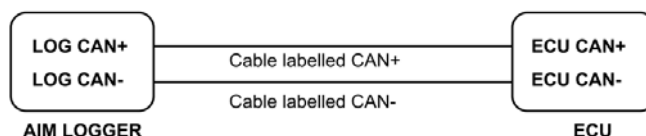
- 240R
- Elise 192 CV EFI B120E0029F
- Exige 192 CV EFI B120E0029F

Chapter 2 – CAN communication Setup

Lotus ECU is equipped with a CAN communication protocol used to communicate parameters to a data logger.

The CAN bus is available on OBDII diagnosis connector, on the 12 pins connector placed back on the stock dashboard or on the ECU.

The image here below shows the standard CAN communication setup used to connect the ECU with AIM loggers.



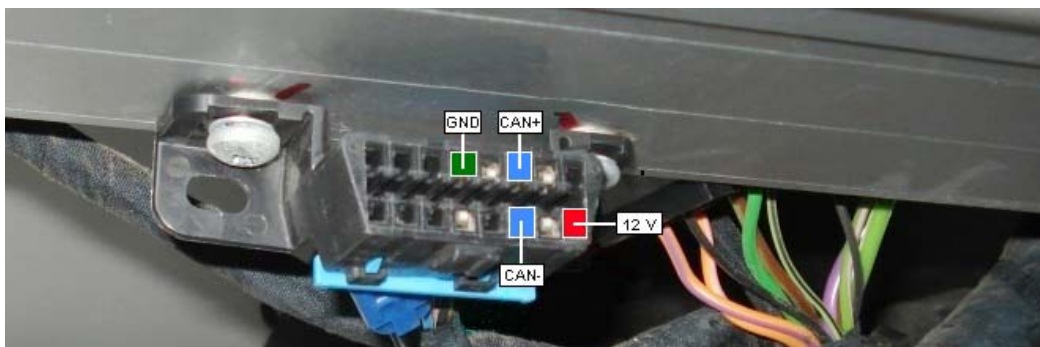
Chapter 3 – Connection to AIM loggers

3.1 – Connection through the OBDII plug

To connect OBDII with AIM loggers connect AIM cable labelled CAN+ to pin 6 and cable labelled CAN- to pin 14 of the OBDII connector. OBDII supplies also external power to the logger. VBatt (+12V) is on pin 16 and chassis GND on pin 4.

OBD is not powered by the vehicle master switch, so if AIM logger is connected to OBD for a long time the battery runs down.

The CAN communications works only if the dashboard is switched on.



3.2 – Connection through the stock dashboard

To receive data coming from Lotus 240R, Elise and Exige 192 CV ECU through the stock dashboard connect AIM cable labelled CAN+ with pin 1 (red wiring) and AIM cable labelled CAN- with pin 7 (blue wiring) of the 12 pins connector back on the stock dashboard.

The power supply of MXL can be obtained through the other connector placed always back of the original dashboard.



In case of permanent installation it is necessary to check which cable of the second connector is powered by the master switch. With reference to the below image the cables to check are the green and the purple one.



Chapter 4 – Communication protocol

Channels received by AIM loggers connected to Lotus 240, Elise and Exige 192 CV EFI B120E0029F ECU are:

ID	CHANNEL NAME	FUNCTION
ECU_1	LOTUS_RPM	RPM
ECU_2	LOTUS_SPEED	SPEED
ECU_3	LOTUS_TPS	Throttle position sensor
ECU_4	LOTUS_PPS	Pedal position sensor
ECU_5	LOTUS_MAF	Manifold air flow
ECU_6	LOTUS_ENG_TEMP	Engine temperature
ECU_7	LOTUS_AIR_TEMP	Air Temperature