

AiM Infotech

Lotus Elise, Exige, 2-Eleven  
from 2004 ECU

Release 1.02

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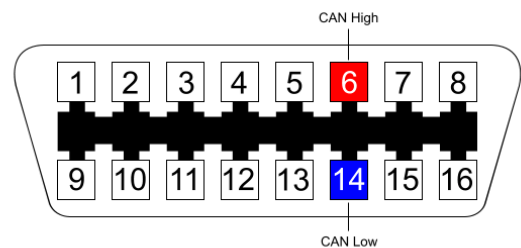
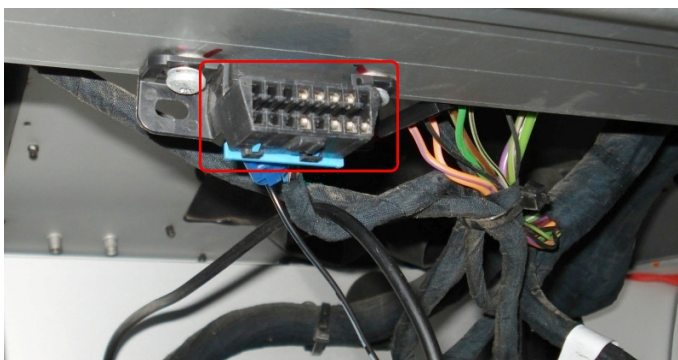
# 1 Supported years and models

This tutorial explains how to connect Lotus cars to AiM devices. Supported years and models are:

- |   |            |           |
|---|------------|-----------|
| • Elise S2 192 CV EFIB120E 29F            |            | 2004      |
| • Exige S2 240R                           |            | 2005      |
| • Elise S2/Exige S2/2-Eleven (white dash) | all models | 2004-2007 |
| • EliseS2/Exige S2/2-Eleven (black dash)  | all models | 2008-2011 |
| • Elise S3                                | all models | from 2011 |

# 2 Wiring connection

Lotus cars feature a bus communication protocol based on CAN on the OBDII plug placed under the stock dash as shown here below on the left. On the right is OBDII connector pinout and bottom is connection table



**OBDII Pin**

6  
14

**Pin function**

CAN High  
CAN Low

**AiM cable**

CAN+  
CAN-

### 3

## AiM device configuration

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Before connecting the device to the ECU set this up using AiM Race Studio software. The parameters to select in the device configuration are:

- ECU manufacturer "Lotus" and, according to your vehicle characteristics
- ECU Model
  - "Elise" for Lotus Elise S2 192 CV EFI B120E 29F and Exige S2 240R
  - "Clusters 04-07" for Lotus Elise S2/Exige S2/2-Eleven all models (white dash) 2004-2007
  - "Clusters 08-09" for Lotus Elise S2/Exige S2/2-Eleven all models (black dash) 2008-2011
  - "Clusters 11\_Exige Cup R" for Lotus Elise S3 from 2011

## 4

### Available channels

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Channels received by AiM devices connected to Lotus vehicles changes according to the selected protocol.

#### 4.1

#### "Lotus" "Elise"

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Channels received by AiM devices connected to "Lotus" "Elise" protocol are:

ID	CHANNEL NAME	FUNCTION
ECU_1	LOTUS_RPM	RPM
ECU_2	LOTUS_SPEED	Vehicle 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	Intake air temperature

**Technical note:** not all data channels outlined in the ECU template are validated for each manufacturer model or variant; some of the outlined channels are model and year specific, and therefore may not be applicable.

## 4.2 "Lotus" "Clusters 04-07"

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Channels received by AiM devices connected to "Lotus" "Clusters 04-07" protocol are:

ID	CHANNEL NAME	FUNCTION
ECU_1	CU_SPEED	Vehicle speed
ECU_3	CU_RPM	RPM
ECU_4	CU_FUEL_IST	Instant fuel consumption
ECU_5	CU_FUEL_AVE	Average fuel consumption
ECU_6	CU_ENGT	Engine temperature
ECU_7	CU_SF_LIGHT	Shift light
ECU_8	CU_MIL_LIGHT	Malfunctioning indication light
ECU_9	CU_OIL_LIGHT	Oil low pressure light
ECU_10	CU_TC_LIGHT	Traction control light

**Technical note:** not all data channels outlined in the ECU template are validated for each manufacturer model or variant; some of the outlined channels are model and year specific, and therefore may not be applicable.

## 4.3

### "Lotus" "Clusters 08-09"

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Channels received by AiM devices connected to "Lotus" "Clusters 08-09" protocol are:

ID	CHANNEL NAME	FUNCTION
ECU_1	CU_SPEED	Vehicle speed
ECU_3	CU_RPM	RPM
ECU_4	CU_FUEL_IST	Instant fuel consumption
ECU_5	CU_FUEL_AVE	Average fuel consumption
ECU_6	CU_ENGT	Engine temperature
ECU_7	CU_SF_LIGHT1	Shift light 1
ECU_8	CU_SF_LIGHT2	Shift light 2
ECU_9	CU_SF_LIGHT3	Shift light 3
ECU_10	CU_MIL_LIGHT	Malfunctioning indication light
ECU_11	CU_OIL_LIGHT	Oil low pressure light
ECU_12	CU_TC_LIGHT	Traction control light
ECU_15	CU_SERV_LIGHT	Service light
ECU_19	CU_TH2O_LIGHT	Engine coolant temperature light
ECU_23	CU_SEL_LTC	Ten steps Lotus traction control
ECU_24	OBD2_PPS	Pedal position sensor via OBDII
ECU_25	OBD2_TPS	Throttle position sensor via OBDII
ECU_26	OBD2_IAT	Intake air temperature via OBDII
ECU_27	OBD2_MAF	Manifold air flow via OBDII

**Technical note:** not all data channels outlined in the ECU template are validated for each manufacturer model or variant; some of the outlined channels are model and year specific, and therefore may not be applicable.

## 4.4

### "Lotus" "Clusters 11"

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Channels received by AiM devices connected to "Lotus" "Clusters 11\_Exige Cup R" protocol are:

<b>ID</b>	<b>CHANNEL NAME</b>	<b>FUNCTION</b>
ECU_1	ECU_RPM	RPM
ECU_2	ECU_PPS	Pedal position sensor
ECU_3	ECU_CLUTCH_SW	Clutch switch
ECU_4	ECU_SPORT_SW	Sport switch
ECU_5	ECU_BRK_SW	Brake switch
ECU_6	ECU_STEER_ANG	Steering angle
ECU_7	ECU_STEER_SPD	Steering speed
ECU_8	ECU_VEH_SPEED	Vehicle speed
ECU_9	ECU_WS_FL	Front left wheel speed
ECU_10	ECU_WS_FR	Front right wheel speed
ECU_11	ECU_WS_RL	Rear left wheel speed
ECU_12	ECU_WS_RR	Rear right wheel speed
ECU_13	ECU_YAW	Yaw rate
ECU_14	ECU_ACC_Y	Vertical acceleration
ECU_15	ECU_YAW_ACC	Yaw acceleration
ECU_16	ECU_ACC_X	Horizontal acceleration
ECU_17	ECU_ABS_INTV	ABS intervention
ECU_18	ECU_ASR_INTV	Anti slip regulation intervention
ECU_19	ECU_ESP_INTV	ESP Intervention
ECU_20	ECU_TRQ_RED	Engine torque reduction
ECU_21	ECU_TRQ_INCR	Engine torque increasing
ECU_22	ECU_TRQ	Engine torque
ECU_23	ECU_APPLY_TRQ	Engine applied torque
ECU_24	ECU_FUEL_LAMP	Fuel lamp
ECU_25	ECU_FUEL_LEV	Fuel level



ECU_26	ECU_MIL	Malfunctioning indication lamp
ECU_27	ECU_P_BRAKE	Brake pressure
ECU_28	ECU_INT_AIR_T	Intake air temperature
ECU_29	ECU_ENG_TMP	Engine temperature
ECU_30	ECU_BARO_P	Barometric pressure
ECU_31	ECU_OIL_T	Oil temperature
ECU_32	ECU_CAM_I_B1	Cam in bank 1 angle
ECU_33	ECU_CAM_I_B2	Cam in bank 2 angle
ECU_34	ECU_CAM_O_B1	Cam out bank 1 angle
ECU_35	ECU_CAM_O_B2	Cam out bank 2 angle
ECU_36	ECU_TC_PERC	Traction control percentage
ECU_37	ECU_TC_TARG	Traction control target
ECU_38	ECU_MAFg/s	Mass air flow g/second
ECU_39	ECU_TPS	Throttle position sensor
ECU_40	ECU_OIL_P	Oil pressure
ECU_41	ECU_CLC1	Closing Loop circle 1
ECU_42	ECU_CLC2	Closing Loop circle 2
ECU_43	ECU_LAMBDA1	Lambda 1
ECU_44	ECU_LAMBDA2	Lambda 2
ECU_45	ECU_BATTERY	Battery supply
ECU_46	ECU_GEAR	Engaged gear

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