

AIM Infotech

AIM loggers ECU connection

EFI Euro 2 V006-V009

Release 1.00

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## EFI Euro 2 V006-V009

### Release 1.00

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This documents describes how to connect AIM Loggers with EFI Euro 2 V006-V009 as well as the channels received by AIM loggers.

AIM loggers come with Race Studio 2 software.

Once the ECU is connected to the logger this last one needs a specific configuration where these parameters are to be set:

**ECU Manufacturer: EFI**

**ECU Model: EURO\_2\_V006 or EURO\_2\_V009**

according to the ECU firmware version.

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

# 1

## Technical communication notes

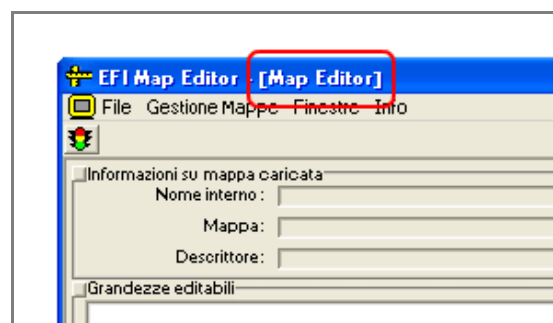
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EFI Euro 2 V006-V009 ECU is an ECU developed for car application that can communicate with AIM loggers through the CAN bus.

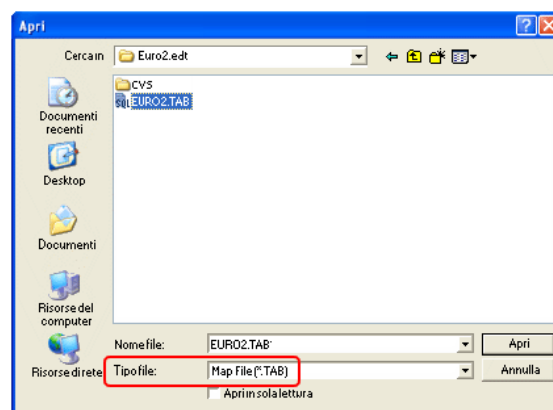
### 1.1

#### Software check

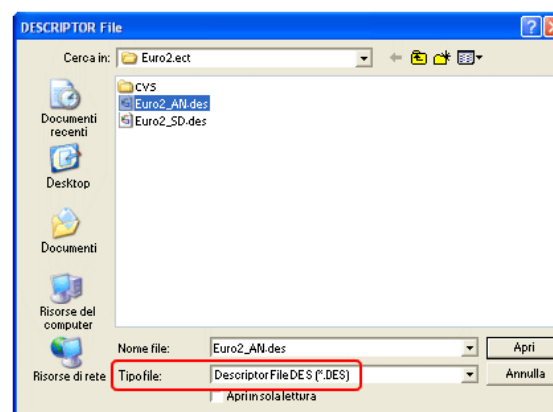
EFI ECU comes with a dedicated software – ECT\_MOD – that is to be set for ECU to correctly communicate with AIM loggers. Run it and open Map Editor as shown here below.



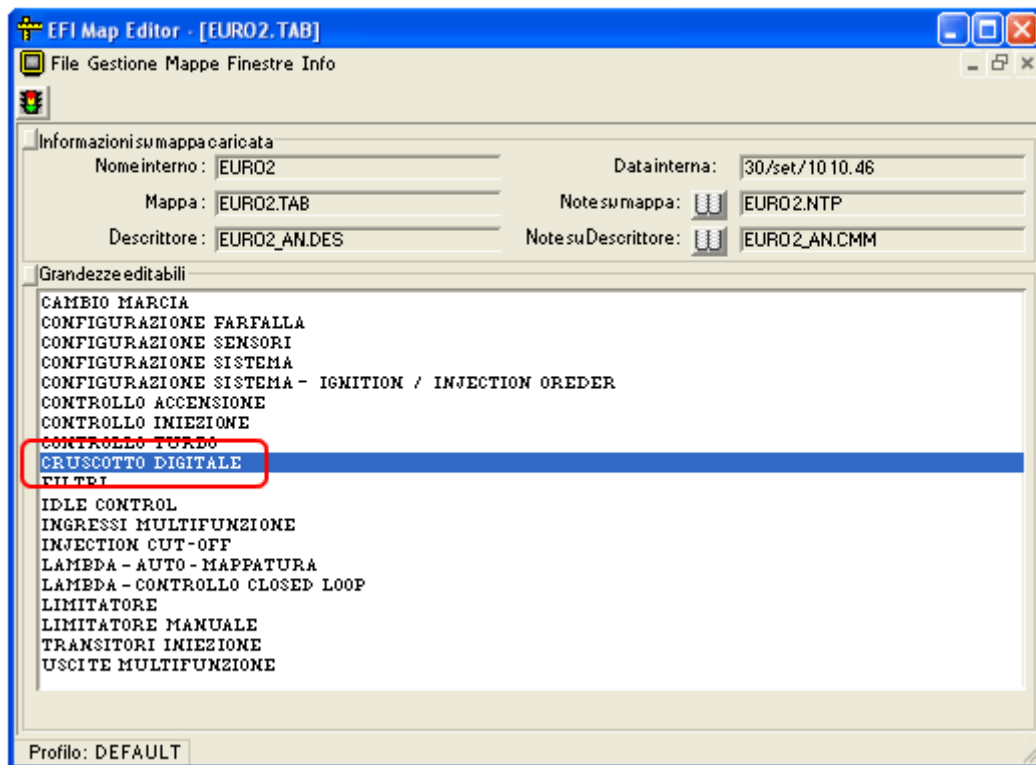
Load "Map File:



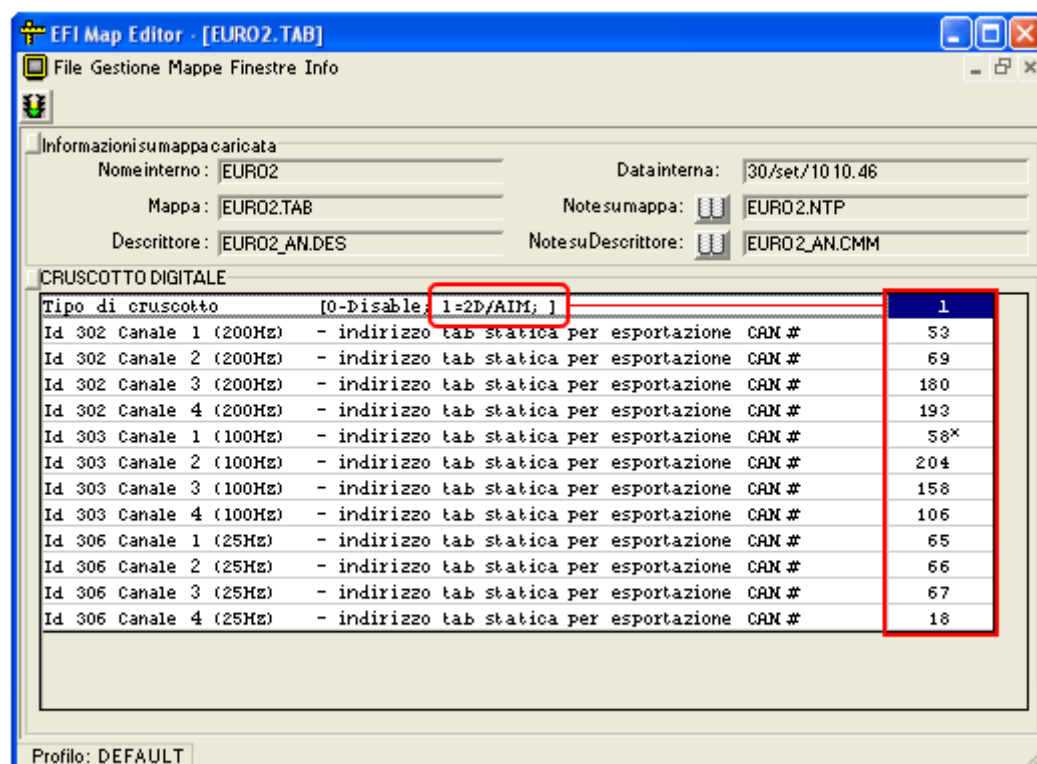
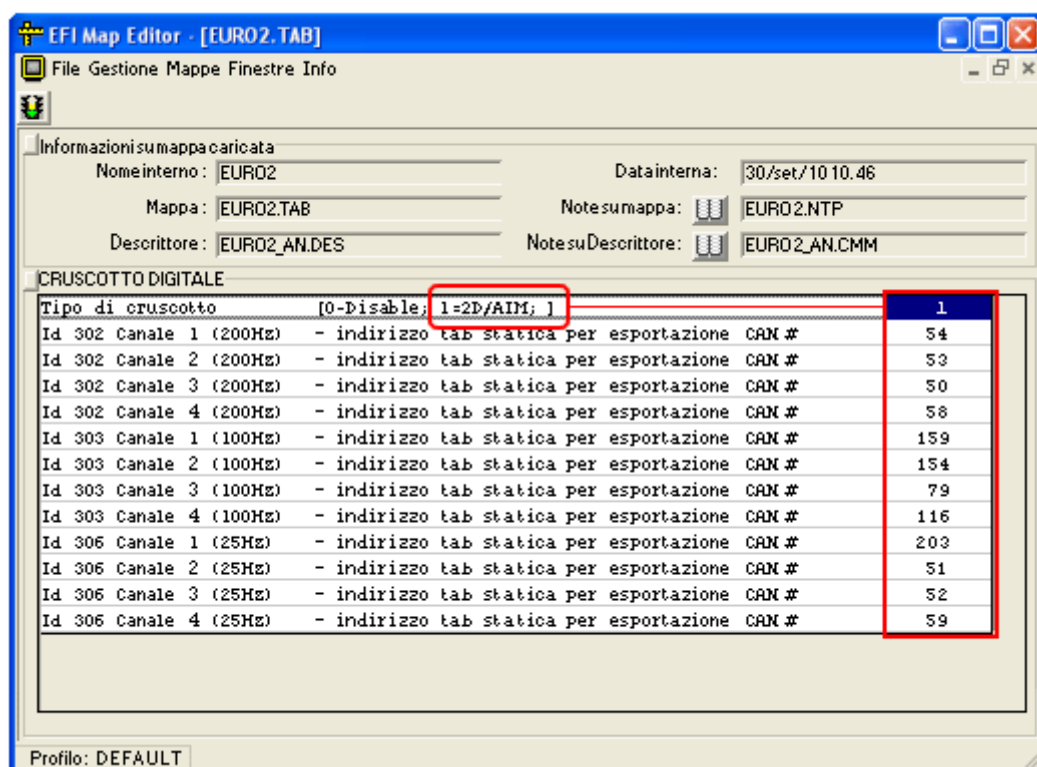
Load the relative "File Descriptor"



Open "Digital Dashboard" Table (please note the image here below is only available in Italian).



To enable "2D/AIM" protocol set the first row of the right column on digit "1" and then insert the Address codes in the following rows of the same column as shown here below. The top image refers to EURO 2\_V006 while the following refers to EURO\_2\_V009.



x=gauge boost (1bar gauge = 200mbar)

The table here below shows description of the “Address Codes” of EFI Euro 2\_V006.

<b>CODE</b>	<b>Channel description</b>
<b>54</b>	RPM
<b>53</b>	AFRNGK – Lambda
<b>50</b>	Throttle Position Sensor
<b>58</b>	Manifold Air Pressure
<b>159</b>	CLC1
<b>154</b>	LRN – Linear
<b>79</b>	SA – Spark Advance
<b>116</b>	TEROG – Injection Time
<b>203</b>	Shift
<b>51</b>	Water Temperature
<b>52</b>	AIR Temperature
<b>59</b>	Barometric Pressure

The table here below shows description of the “Address Codes” of EFI Euro 2\_V009.

<b>CODE</b>	<b>Channel description</b>
<b>53</b>	AFRNGK – Lambda
<b>69</b>	SMOT
<b>180</b>	DC Boost Base
<b>193</b>	DC Boost
<b>58</b>	Gauge Boost (1 bar Gauge = 2000 mbar)
<b>204</b>	Shift
<b>158</b>	Cloose loop flag
<b>106</b>	Injection phase
<b>65</b>	Output 3
<b>66</b>	Output 4
<b>67</b>	Output 5
<b>18</b>	TAB

## 2

# ECU Pinout

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EFI Euro 2 V006 is equipped with a 35 pins male connector. For the ECU to correctly communicate with AIM loggers connect

- Pin 22 of ECU connector with AIM CAN High
- Pin 6 of ECU connector with AIM CAN Low.

## 3

# Communication protocol

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Channels received by AIM Loggers connected to **EFI EURO 2\_V006** are:

Please note: according to this configuration only EFI EURO 2 customizable channels are available. This is why channels list is so short.

ID	CHANNEL NAME	FUNCTION
ECU_1	E2_RPM	RPM
ECU_2	E2_LAMBDA	Lambda sensor
ECU_3	E2_TPS	Throttle Position sensor
ECU_4	E2_MAP	Manifold Air pressure
ECU_5	E2_CLC	Closed Loop Control
ECU_6	E2_LEARN	Linear
ECU_7	E2_SPARK_ADV	Spark Advance
ECU_8	E2_TEROG	Erogation time
ECU_9	E2_SHIFT	Shift
ECU_10	E2_T_H2O	Water temperature
ECU_11	E2_T_AIR	Air Temperature
ECU_12	E2_BARO	Air Pressure

Please note: this Race Studio 2 configuration works only with EFI Euro 2 V006 customizable channels. This is why the channels list is so poor. To have more channels V009 ECU version is needed.

Channels received by AIM Loggers connected to **EFI EURO 2\_V009** are:

<b>ID</b>	<b>CHANNEL NAME</b>	<b>FUNCTION</b>
ECU_1	E2_RPM	RPM
ECU_2	E2_TPS	Throttle Position Sensor
ECU_4	E2_MAP	Manifold Air Pressure
ECU_5	E2_LNR1L	Analogic linear input 1
ECU_6	E2_DWARF	Throttle derivative
ECU_9	E2_AE	Fuel enrichment for positive TPS transient
ECU_10	E2_LNR2L	Analogic linear input 2
ECU_11	E2_AFRNGK	Lambda sensor
ECU_12	E2_SMOT	Smot
ECU_13	E2_DC_BOOST_BA	DC Boost Base
ECU_14	E2_DC_BOOST	DC Boost
ECU_15	E2_BOOST	Boost Gauge
ECU_16	E2_SHIFT	Shift
ECU_17	E2_CLOSE_LOOP	Close Loop
ECU_18	E2_INJ_PHASE	Angle sensor
ECU_19	E2_TEROG_BASE	Injection table - injection time
ECU_20	E2_TEROG	Real Injection Time
ECU_21	E2_SA_BASE	Ignition table - spark advance
ECU_22	E2_SA	Real spark advance
ECU_23	E2_AFRNGK1_LOG	AFRNGK1_LOG
ECU_25	E2_KFUEL_LEARN	Fuel correction coefficient for auto mapping
ECU_26	E2_CLC1	Closed loop control 1 (injection)
ECU_27	E2_TH2O	Water Temperature
ECU_28	E2_TAIR	Air Temperature
ECU_29	E2_OUT3	Output 3
ECU_30	E2_OUT4	Output 4
ECU_31	E2_OUT5	Output 5
ECU_32	E2_TAB	TAB
ECU_33	E2_BARO	Air pressure
ECU_34	E2_LNR3L	Analogic linear input 3
ECU_35	E2_LNR4L	Analogic linear input 4
ECU_38	E2_VBATT_DIR	Direct battery supply
ECU_39	E2_VBATT_KEY	ECU voltage supply