



## AiM Infotech

Porsche 911 (997) MK1,  
Boxster/Cayman 987 MK1  
OBDII or ECU connection

Release 1.02



ECU





This tutorial explains how to connect Porsche cars to AiM devices. The connection can be made through the OBDII plug or going to the ECU. These connections implies different protocols to be selected and different sampled channels.

# 1

## Car models and years

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Supported car models and years are:

- |                           |                |           |
|---------------------------|----------------|-----------|
| • Porsche 911 (997 MK1)   | Carrera models | 2004-2008 |
| • Porsche 911 (997 MK1)   | GT3, GT3 RS    | 2006-2009 |
| • Porsche Boxster 987 MK1 | all models     | 2006-2008 |
| • Porsche Cayman 987 MK1  | all models     | 2006-2008 |

**Please note:** these connections will not apply to Porsche 997 (MK1) Turbo and GT2.

# 2

## Available connections

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These cars communicate with AiM devices using: the K line on the OBDII plug or the CAN bus on the ECU connector. All connections are shown below.

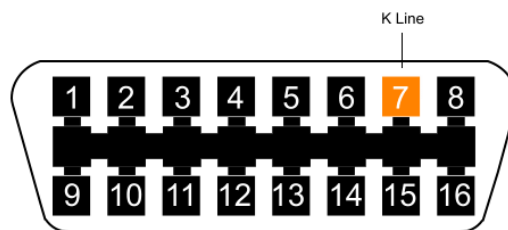
## 2.1

### OBDII connection

These Porsche cars feature a bus communication protocol based on K line on the OBDII plug placed on the car driver side, left of the steering column near to the pedal area.



Connector pinout as well as connection table are shown here below



#### OBDII connector pin

7

#### Pin function

K Line

#### AiM cable

K line

Please note: if you choose this connection we recommend you to use AiM cables to connect AiM devices. Their part number are:

- ECU Bridge with OBDII plug
- EVO4 cable (to be plugged in EVO4 connector labelled RPM)
- SoloDL cable with OBDII plug
- MXG
- MXL2

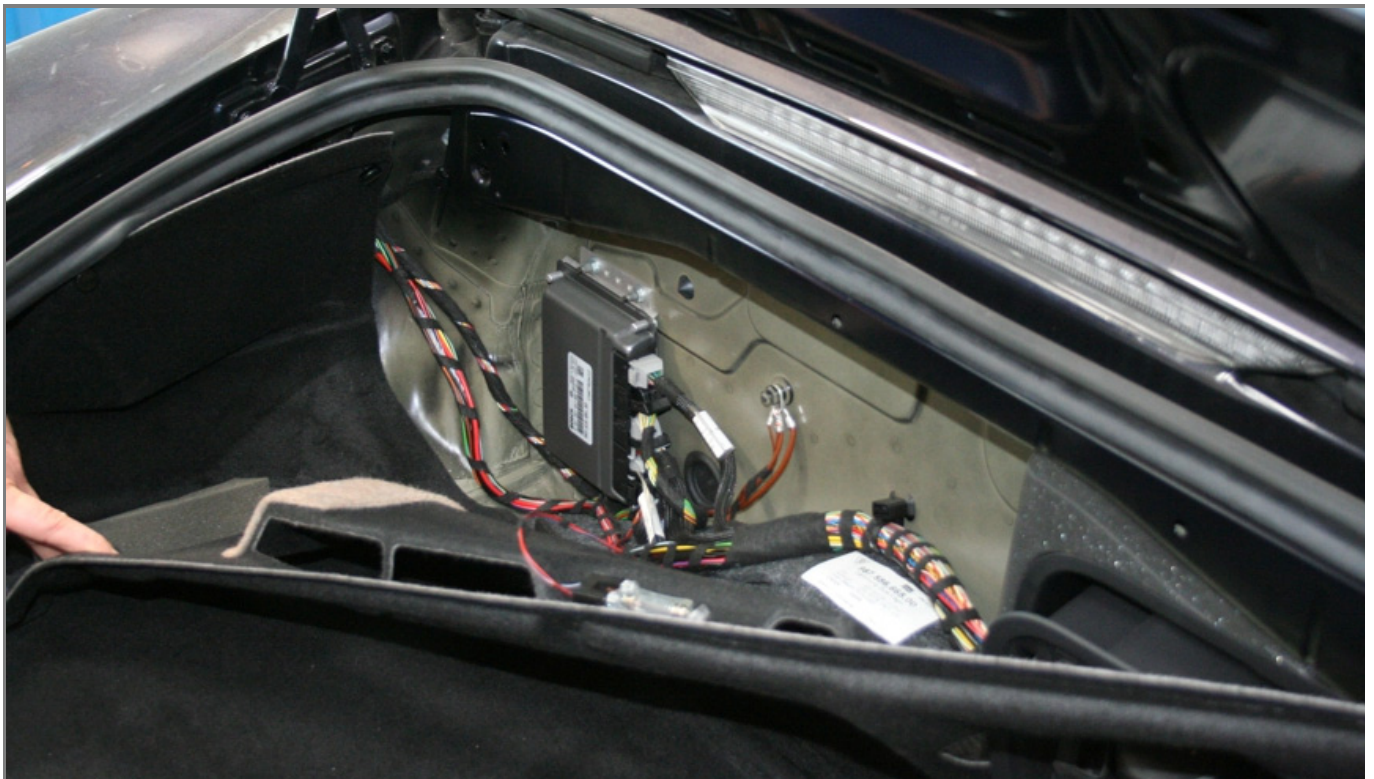
X90BGCK12MA  
V02563050  
V02569010 (2m length) or  
V02569090 (1,2m length)  
37 pins standard cable  
37 pins standard cable

## 2.2

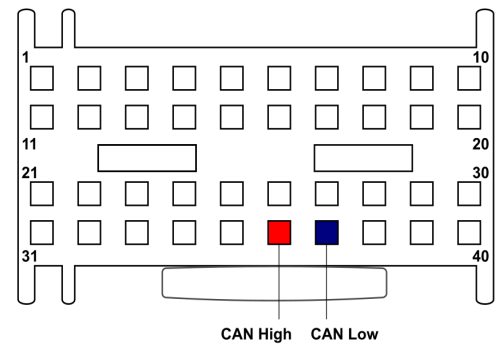
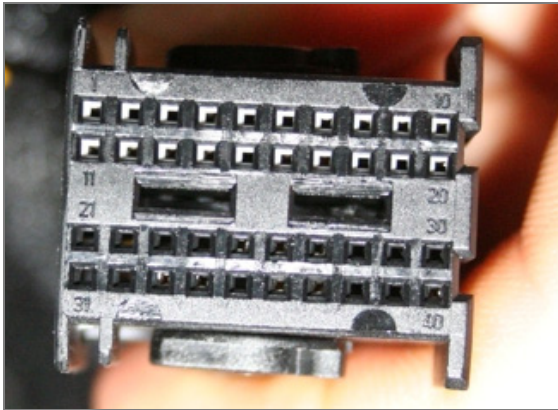
### ECU connection

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The second option is to connect AiM device to these Porsche cars going to the car ECU, a Bosch Motronic 7.8.1 placed behind the rear seat under the cover as shown here below.



The images below show the ECU connector to be used on the left and the connector pinout on the right. As you can see in the figure on the left, pins number are indicated on the connector.



Here below is connection table.

| ECU connector pin | Cable colour         | Pin function | AiM cable |
|-------------------|----------------------|--------------|-----------|
| 36                | Yellow/white twisted | CAN High     | CAN+      |
| 37                | Black/White          | CAN Low      | CAN-      |

### 3

## AiM device configuration

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

- ECU manufacturer "OBDII" and ECU Model "ISO9141\_2" if you are using the OBDII plug;
- ECU manufacturer "Bosch" and ECU Model "997\_GT3" if you are using the ECU connector;



## 4

### Available channels

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Channels received by AiM devices connected to these Porsche cars change according to the protocol you have selected.

#### 4.1

### "OBDII – ISO9141\_2" protocol available channels

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Channels received by AiM devices connected to "OBDII" "ISO9141\_2" protocol are:

| ID    | CHANNEL NAME   | FUNCTION                   |
|-------|----------------|----------------------------|
| ECU_1 | OBDII_RPM      | RPM                        |
| ECU_2 | OBDII_SPEED    | Speed                      |
| ECU_3 | OBDII_ECT      | Engine coolant temperature |
| ECU_4 | OBDII_TPS      | Throttle position sensor   |
| ECU_5 | OBDII_IAT      | Intake air temperature     |
| ECU_6 | OBDII_MAP      | Manifold air pressure      |
| ECU_7 | OBDII_MAF      | Manifold air flow          |
| ECU_8 | OBDII_FUEL_LEV | Fuel level                 |
| ECU_9 | OBDII_PPS      | Pedal position sensor      |

**Please note:** channels listed above are those polled by AiM devices. They may or may not come across in the data stream depending on models. RPM, TPS,ECT and speed are generally available.

## 4.2

### "Bosch-997\_GT3" available channels

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Channels received by AiM devices connected to "Bosch" "997\_GT3" protocol are:

| ID     | CHANNEL NAME     | FUNCTION                   |
|--------|------------------|----------------------------|
| ECU_1  | BOSCH_RPM        | RPM                        |
| ECU_2  | BOSCH_TPS        | Throttle position sensor   |
| ECU_3  | BOSCH_PPS        | Pedal position sensor      |
| ECU_4  | BOSCH_WHSPD_FL   | Front left wheel speed     |
| ECU_5  | BOSCH_WHSPD_FR   | Front right wheel speed    |
| ECU_6  | BOSCH_WHSPD_RL   | Rear left wheel speed      |
| ECU_7  | BOSCH_WHSPD_RR   | Rear right wheel speed     |
| ECU_8  | BOSCH_BOOST_P    | Boost pressure             |
| ECU_9  | BOSCH_ECT        | Engine coolant temperature |
| ECU_10 | BOSCH_OIL_T      | Oil temperature            |
| ECU_11 | BOSCH_OIL_P      | Oil pressure               |
| ECU_12 | BOSCH_STEERANGLE | Steering angle             |
| ECU_13 | BOSCH_STEERSPEED | Steering speed             |
| ECU_14 | BOSCH_BRAKE_SW   | Brake switch               |
| ECU_15 | BOSCH_GEAR       | Engaged gear               |
| ECU_16 | BOSCH_FUEL_LEV   | Fuel level                 |

**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.