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AiM Infotech

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

Release 1.02



ECU



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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

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

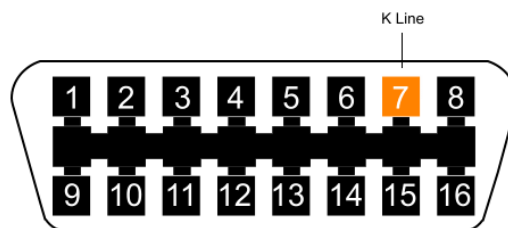
These cars communicate with AiM devices using: the K line on the OBDII plug or the CAN bus on the ECU connector. All connections are shown below.

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



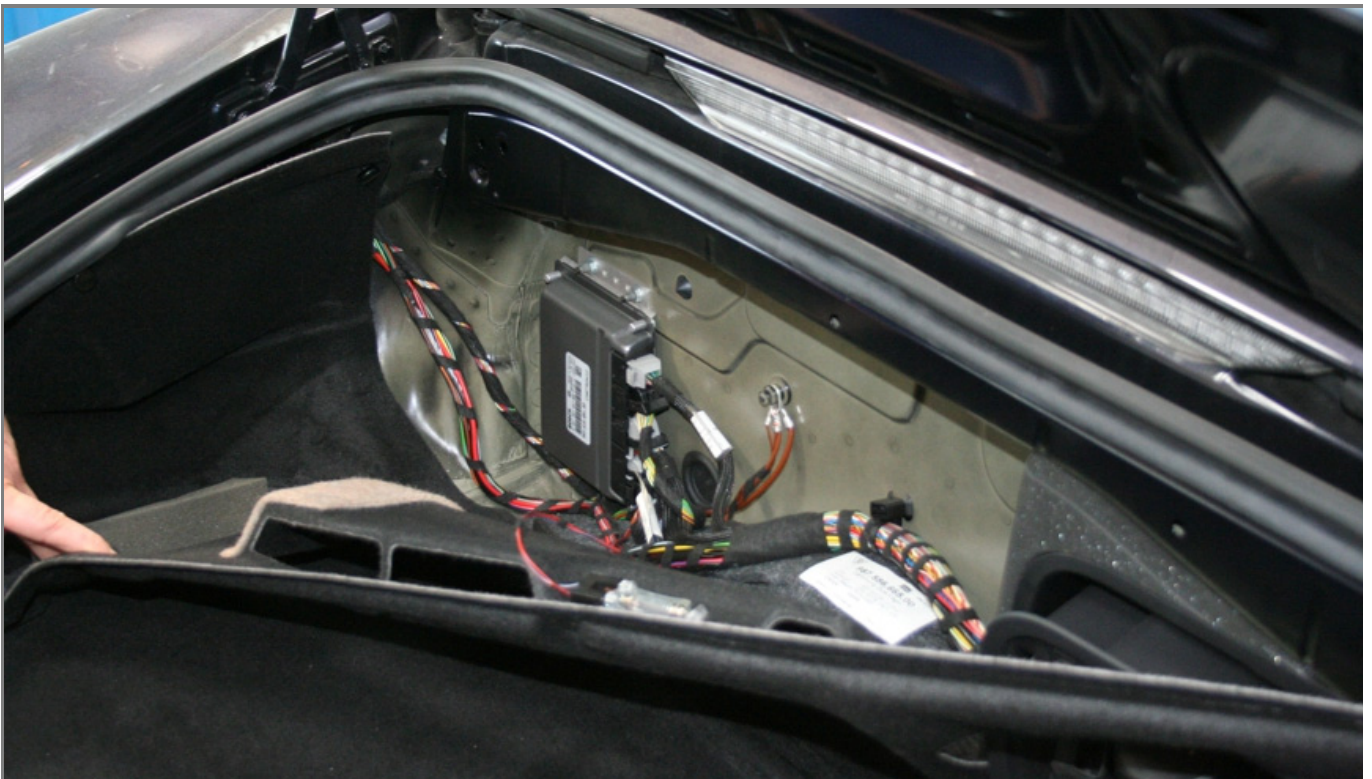
OBDII connector pin	Pin function	AiM cable
7	K Line	K line

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

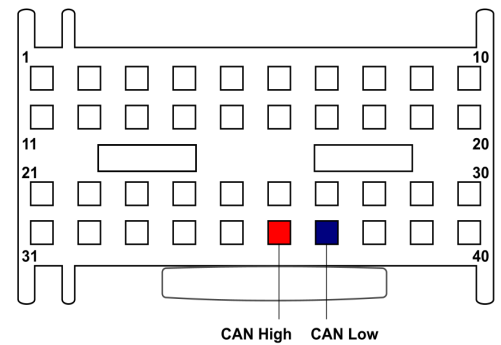
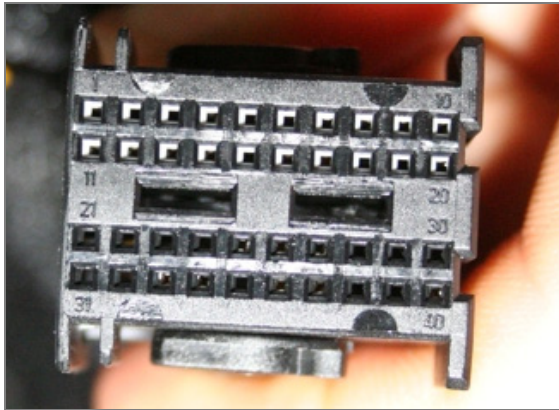
- | | |
|---|--|
| <ul style="list-style-type: none"> • ECU Bridge with OBDII plug • EVO4 cable (to be plugged in EVO4 connector labelled RPM) • SoloDL cable with OBDII plug | <ul style="list-style-type: none"> • X90BGCK12MA • V02563050 • V02569010 (2m length) or V02569090 (1,2m length) • 37 pins standard cable • 37 pins standard cable |
| <ul style="list-style-type: none"> • MXG • MXL2 | |

2.2 ECU connection

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

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

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

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.