AiM Infotech

Porsche 911 (996) MK2 OBDII, dashboard or ECU connection

Release 1.02

This tutorial explains how to connect Porsche cars to AiM devices. The connection can be made through the OBDII plug, the dashboard connector 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:

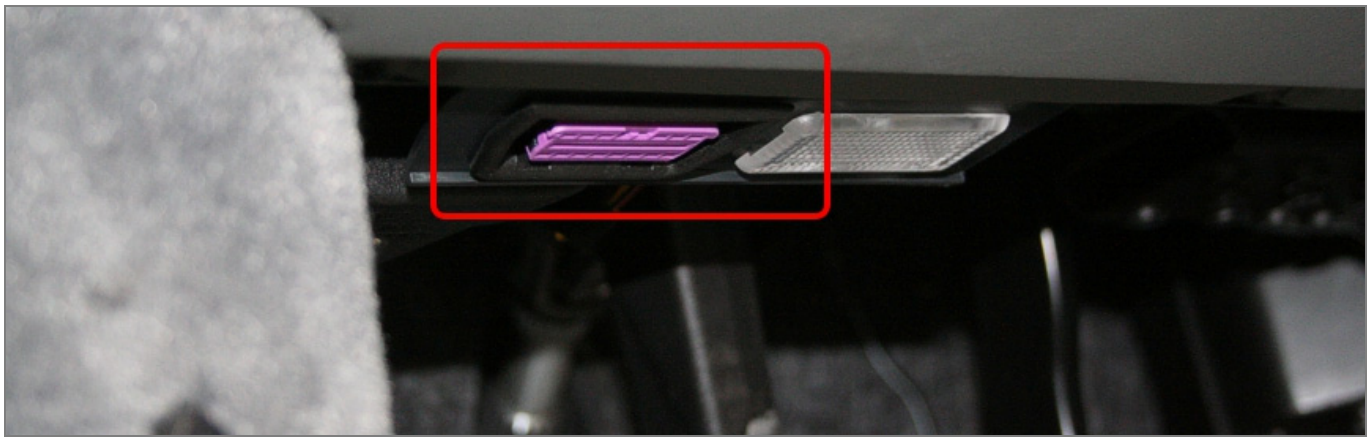
- Porsche 911 (996 MK2) all models 2002-2005

2 Available connections

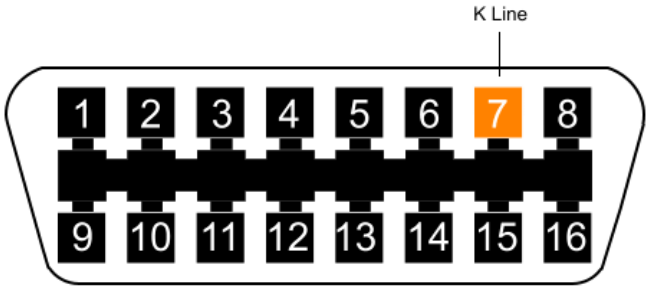
These cars communicate with AiM devices using: the K line on the OBDII plug or the CAN bus on the dashboard connector or on the ECU. All connections are shown below.

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



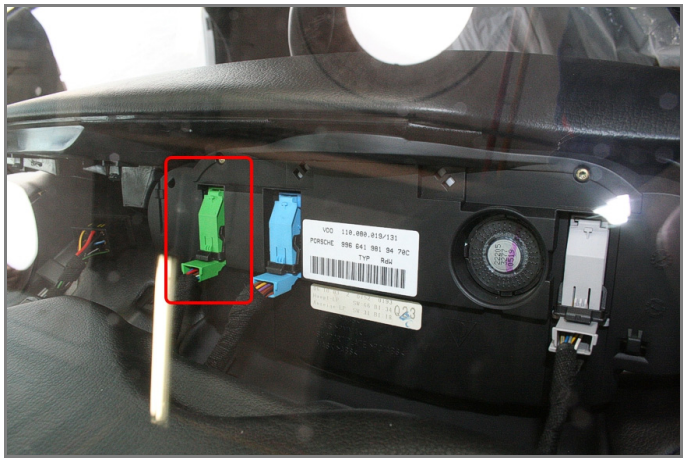
OBDII connector pin	Pin function	AiM cable
7	K Line	K line

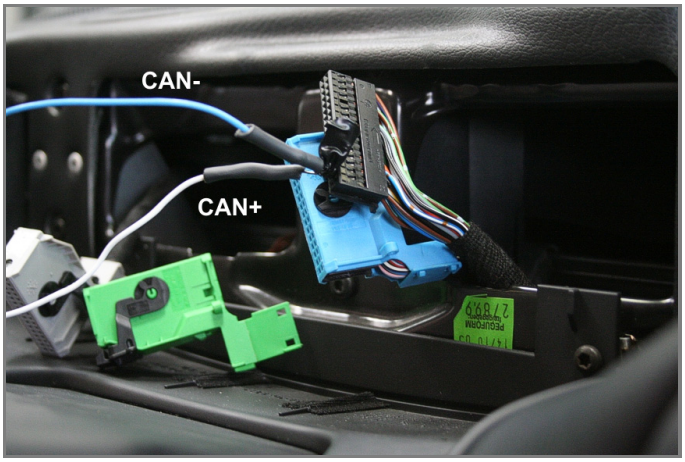
Please note: if you choose this connection we recommend you to use AiM cables to connect AiM devices. Their part number are:

• ECU Bridge with OBDII plug	X90BGCK12MA
• EVO4 cable (to be plugged in EVO4 connector labelled RPM)	V02563050
• SoloDL cable with OBDII plug	V02569010 (2m length) or V02569090 (1,2m length)
• MXG	37 pins standard cable
• MXL2	37 pins standard cable

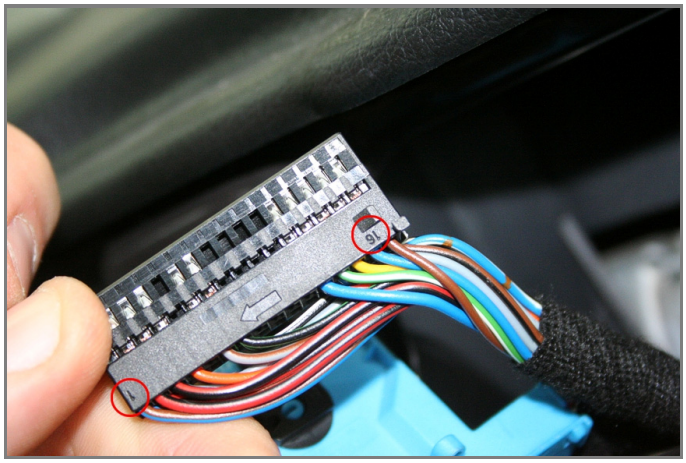
2.2
Dashboard connector

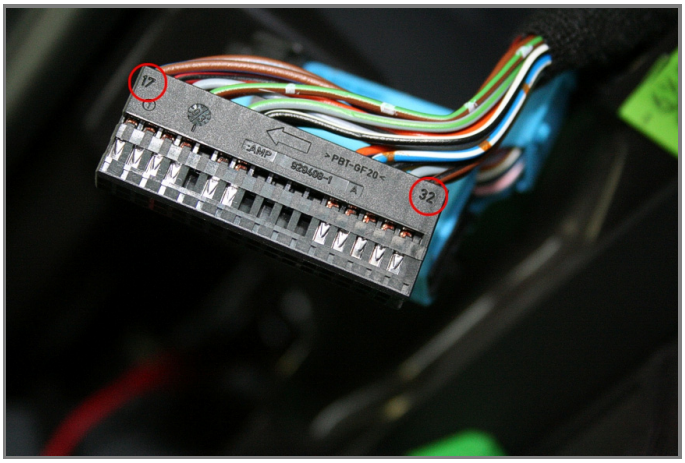
A second option is to use the dashboard connector. As on all cars, these Porsche cars have the dashboard connector behind the dashboard. Remove it and remove the green cover that protects the connector as shown here below on the left. The image on the right shows AiM cables connected.





The dashboard connector is an AMP 32 pins female and, as you can see in the images here below, pins number are indicated.





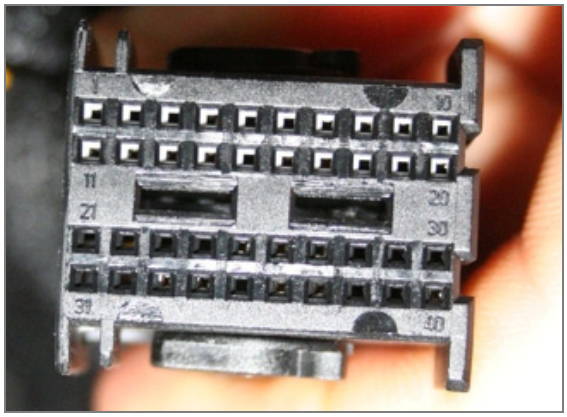
Here below connector pinout and connection table are shown.

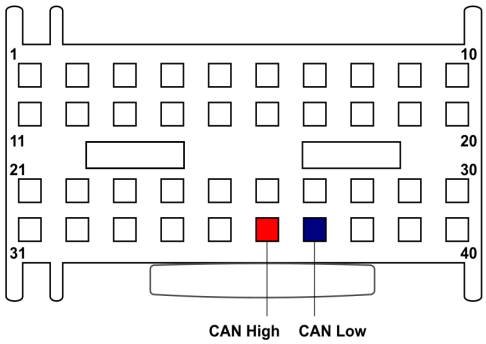
AMP connector pin	Pin function	Cable colour	AiM cable
15	Can High	Light blue/white twisted	CAN+
31	CAN Low	Grey white twisted	CAN-

2.3 ECU connection

The third option is to connect AiM device to these Porsche cars going to the car ECU, a Bosch Motronic 7.8.1 placed under the rear seat 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	Light blue/white twisted	CAN High	CAN+
37	Grey/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 "Porsche 911 996" if you are using the dashboard connector or 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-Porsche 911 (996)" available channels

Channels received by AiM devices connected to "Bosch" "Porsche 911(996) " protocol are:

ID	CHANNEL NAME	FUNCTION
ECU_1	P911_RPM	RPM
ECU_2	P911_SPEED1	Speed 1
ECU_3	P911_PPS	Pedal position sensor
ECU_4	P911_ENGINEMOMENT	Engine moment
ECU_5	P911_WATERTEMP	Engine coolant temperature
ECU_6	P911_AIRTEMP	Intake air temperature
ECU_7	P911_BRAKE	Brake switch

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.