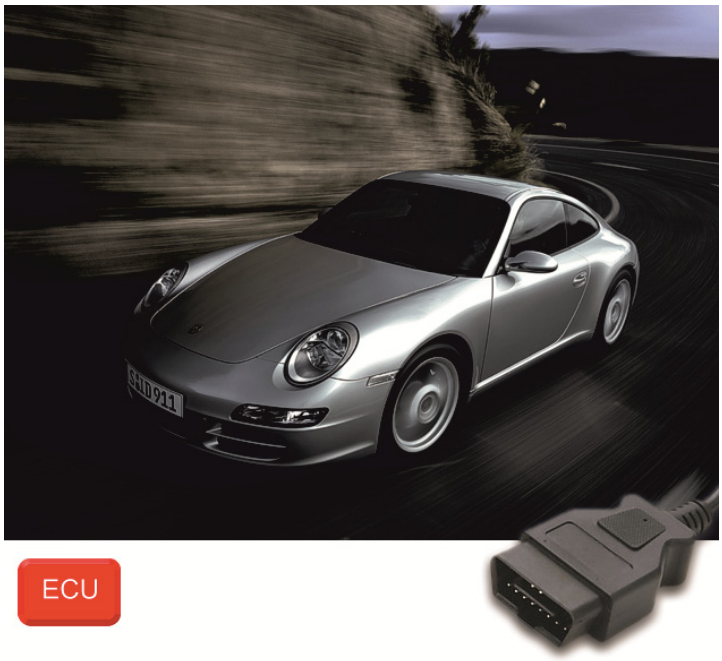
AiM Infotech

Porsche 997-987
OBDII or ECU connection

Release 1.05



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 two 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 Mk2)	Carrera models	2008-2011
• Porsche 911 (997 Mk2)	Turbo, GT2 and GT2 RS	2010-2012
• Porsche (987 MK2)	Boxster S	2009-2012
• Porsche (987 MK2)	Cayman S and R	2009-2012

Please note: these connections will not apply to GT3 and GT3 RS models.

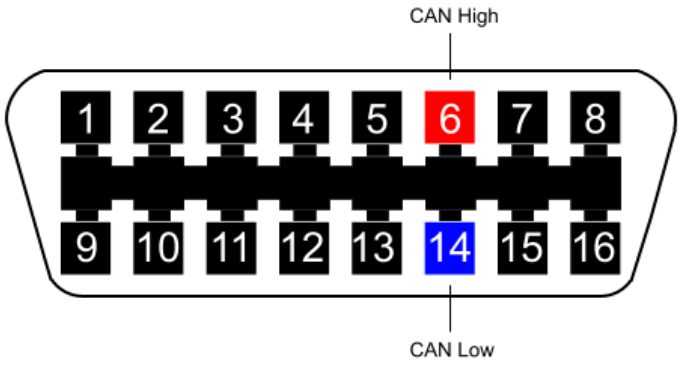
2
Available connections

These Porsche cars can communicate with AiM devices using the diagnostic CAN bus on the OBDII plug or using the engine CAN bus on the car ECU. As already said, these connections implies different communication protocols to be selected when setting up AiM devices and also the available channels changes.

2.1
OBDII connection

These Porsche cars feature a bus communication protocol based on CAN for diagnostic purposes on the OBDII plug placed on the car driver side, left of the steering column near to the pedal. This connection is faster and easier though sampled channels are less.

Connector pinout as well as connection table are shown here below



OBDII connector pin	Pin function	AiM cable
6	CAN High	CAN+
14	CAN Low	CAN-

2.2
ECU connection

These Porsche cars are equipped with a Siemens EMS SDI 3.1 ECU placed under the rear seat as shown here below. This connection is more difficult but allows you to sample more channels.

The image below shows the ECU connectors pinout.

Here below is connection table. Please note: some pin numbers are indicated on the ECU.

ECU connector pin	Cable colour	Pin function	AiM cable
54	Yellow/white twisted	CAN High	CAN+
41	Black/white twisted	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 “Porsche” and
- ECU Model:
    - “997_987_MK2_OBDII” if you are using the OBDII plug;
    - "EMS SDI 3.1 Siemens" if you are going to the ECU

4
Available channels

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

4.1
"Porsche " "997-987_MK2_OBDII" protocol

Channels received by AiM devices connected to "Porsche" "997-987_MK"_OBDII" protocol are:

ID	CHANNEL NAME	FUNCTION
ECU_1	RPM	RPM
ECU_2	WHEEL_SP_FL	Front left wheel speed
ECU_3	WHEEL_SP_FR	Front right wheel speed
ECU_4	WHEEL_SP_RL	Rear left wheel speed
ECU_5	WHEEL_SP_RR	Rear right wheel speed
ECU_6	THROTTLE_POS	Throttle position sensor
ECU_7	ACCEL_POS	Acceleration position
ECU_8	COOLANT_TEMP	Engine cooling temperature
ECU_9	INTK_AIR_TEMP	Intake air temperature
ECU_10	MANIFOLD_PRESS	Manifold air pressure
ECU_11	FUEL_LEVEL	Fuel level
ECU_12	STEER_ANGLE	Steering angle
ECU_13	BRAKE_PRESS	Brake pressure

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
"EMS SDI 3.1 Siemens" available channels

Channels received by AiM devices connected to Porsche "EMS SDI 3.1 Siemens" protocol are:

ID	CHANNEL NAME	FUNCTION
ECU_1	SM_RPM	RPM
ECU_2	SM_PPS	Pedal position sensor
ECU_3	SM_PEDAL_ANGLE	Throttle position sensor
ECU_4	SM_WHSPD_FL	Front left wheel speed
ECU_5	SM_WHSPD_FR	Front right wheel speed
ECU_6	SM_WHSPD_RL	Rear left wheel speed
ECU_7	SM_WHSPD_RR	Rear right wheel speed
ECU_8	SM_VEH_SPEED	Vehicle speed
ECU_9	SM_ECT	Engine coolant temperature
ECU_10	SM_OIL_T	Oil temperature
ECU_11	SM_OIL_P	Oil pressure
ECU_12	SM_STEERANGLE	Steering angle
ECU_13	SM_STEERSPEED	Steering speed
ECU_14	SM_BRAKE_SW	Brake switch
ECU_15	SM_GEAR	Engaged gear
ECU_16	SM_FUEL_LEVEL	Fuel level
ECU_17	SM_KICKDOWN	Kick down sensor
ECU_18	SM_ATM_PRESS	Atmospheric sensor
ECU_19	SM_FUEL_TEMP	Fuel temperature
ECU_21	SM_ENGINE_TEMP	Engine temperature
ECU_23	SM_BRAKE_SW2	Brake switch 2
ECU_24	SM_BRAKE_PRESS	Brake pressure

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.