AiM Infotech

Porsche 997-987
OBDII or ECU connection

Release 1.07

1 Models and years

This document explains how to connect AiM devices to the vehicle Engine Control Unit (ECU) data stream.
Supported 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

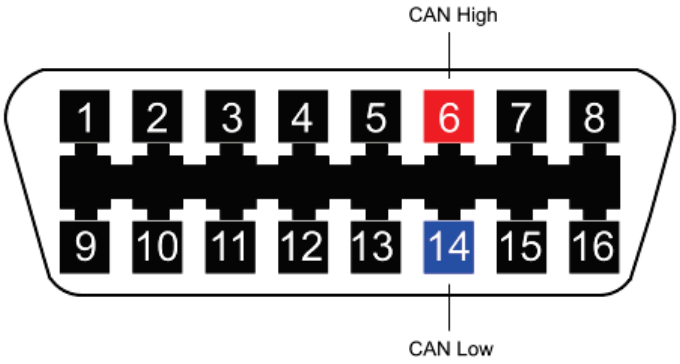
Please note: these connections will not apply to GT3 and GT3 RS models.

2 Connection and configuration

AiM devices can be connected to these models in two different ways:
- through the OBD II plug, using a standard OBD II protocol (easy connection, basic parameters)
- through a direct connection to the ECU CAN wires, using a specific manufacturer CAN protocol.

2.1
OBDII connection

These models feature a standard diagnostic protocol based on CAN, accessible through the OBDII plug placed on the car driver side, left of the steering column near to the pedal. For this installation refer to the following pinout of the OBDII plug (vehicle side – front view) and connection table.



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

2.2
OBDII – Race Studio configuration

Before connecting the AiM device to the OBD II plug, set all functions using AiM software Race Studio. The parameters to set in the device configuration are:

- ECU manufacturer: **PORSCHE**
- ECU Model: **997 987 MK2 OBDII**

2.3
ECU CAN connection

These models feature a CAN data bus accessible through the ECU main connector (Siemens – EMS SDI 3.1 ECU; following images). It is strongly recommended to refer to a skilled technician to perform this kind of installation. For this installation refer to the following pinout of the car's ECU connector (vehicle side – front view) and connection table.

ECU connector pin	Cable colour	Pin function	AiM cable
54	Yellow/white twisted	CAN High	CAN+
41	Black/white twisted	CAN Low	CAN-

2.4
ECU CAN – Race Studio configuration

Before connecting the AiM device to the ECU, set all functions using AiM software Race Studio. The parameters to set in the device configuration are:

- ECU manufacturer: **PORSCHE**
- ECU Model: **EMS SDI 3.1 Siemens**

3
Protocols

Channels received by AiM devices change according to the selected protocol.

3.1
"Porsche – 997-987_MK2_OBDII" protocol

Channels received by AiM devices configured with "Porsche – 997-987_MK2_OBDII" protocol are:

CHANNEL NAME	FUNCTION
RPM	RPM
SpeedFL	Front left wheel speed
SpeedFR	Front right wheel speed
SpeedRL	Rear left wheel speed
SpeedRR	Rear right wheel speed
WaterTemp	Water temperature
IntakeAirTemp	Intake air temperature
BrakePress	Brake pressure
MAP	Manifold air pressure
SteerAngle	Steering angle
TPS	Throttle position sensor
PedalPos	Acceleration position

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.

3.2
"Porsche – EMS SDI 3.1 Siemens" protocol

Channels received by AiM devices configured with “Porsche – EMS SDI 3.1 Siemens" protocol are:

CHANNEL NAME	FUNCTION
SM_RPM	RPM
SM_PPS	Pedal position sensor
SM_PEDAL_ANGLE	Throttle position sensor
SM_WHSPD_FL	Front left wheel speed
SM_WHSPD_FR	Front right wheel speed
RL SPD WHEEL	Rear left wheel speed
RR SPD WHEEL	Rear right wheel speed
SM_VEH_SPEED	Vehicle speed
SM_ECT	Engine coolant temperature
SM_OIL_T	Oil temperature
SM_OIL_P	Oil pressure
SM_STEERANGLE	Steering angle
SM_STEERSPEED	Steering speed
SM_BRAKE_SW	Brake switch
SM_GEAR	Engaged gear
SM_FUEL_LEVEL	Fuel level
SM_KICKDOWN	Kick down sensor
SM_ATM_PRESS	Atmospheric sensor
SM_FUEL_TEMP	Fuel temperature
SM_ENGINE_TEMP	Engine temperature
SM_BRAKE_SW2	Brake switch 2
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.