Siemens EMS SDI 3.1 ECU for Porsche 987 MK2 Boxster S and Cayman S

Racing Data Power

*For more details concerning the car models refer to “Car Models” chapter

INTRODUCTION

AIM has developed special applications for many of the most common ECUs: by special applications we mean user-friendly systems which allow to easily connect your ECU to our high tech data loggers: user needs only to install harness between the **logger** and the ECU.

Once connected, the logger displays (and/or records, depending on the logger and on the ECU data stream) values like RPM, engine load, throttle position (TPS), air and water temperatures, battery voltage, speed, gear, lambda value (air/fuel ratio) analog channels…

All AIM loggers include – free of charge – **Race Studio 2** software, a powerful tool to configure the system and analyze recorded data on your PC.

Warning: once the ECU is connected to the logger, it is necessary to set it in the logger configuration in Race Studio 2 software.
Select Manufacturer "Porsche" and Model "EMS SDI 3.1 SIEMENS**".**
Refer to Race Studio Configuration user manual for further information concerning the loggers configuration.

Warning: for any further information concerning ECU firmware/software settings and/or upgrading it is always recommended to address to the ECU dealer.

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Chapter 1 – Car Models

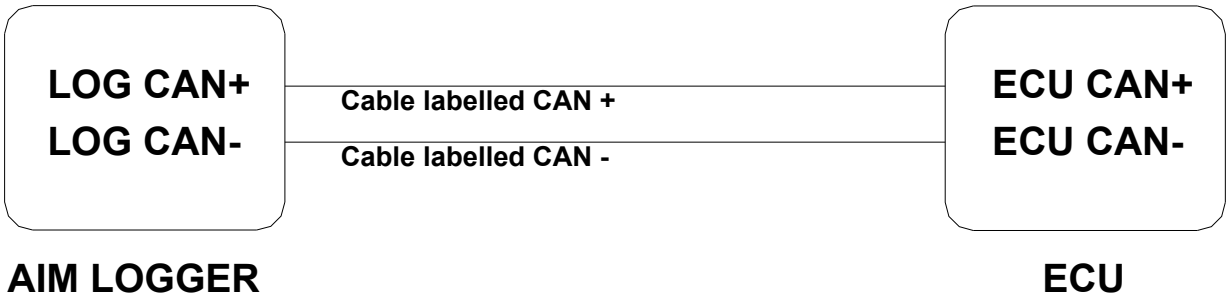
Siemens EMS SDI 3.1 ECU is installed as a stock on the following car models:

- Cayman S (987) MK2
- Boxster S (987) MK2

Chapter 2 – CAN communication Setup

Siemens EMS SDI 3.1 ECU is equipped CAN communication protocol used to communicate parameters to a data logger.

The CAN bus communication is available connecting the ECU to AIM loggers.



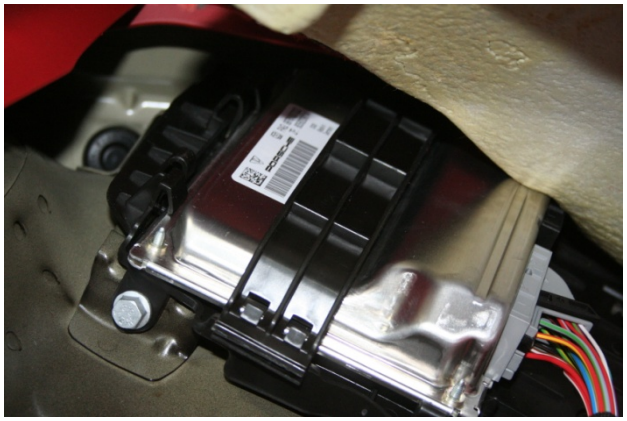
Chapter 3 – Connection with AIM loggers

There are two ways to connect ECU to AIM logger:

- Connection to ECU
- Connection to the service connector

3.1 – Connection to ECU

The ECU communicates with external logger using a 58 pins connectors - (see below).



To connect AIM logger to Siemens EMS SDI 3.1 ECU connectors, please connect cable labelled CAN+ of the logger with the yellow/white cable (pin 54 – A connector) – of the ECU connector, and cable labelled CAN - with the black/white (pin 41 – A connector) cable of the ECU connector.

Pin Number	Cables colour	Function
54	Yellow / White	Connect to AIM cable labelled CAN+
41	Black / White	Connect to AIM cable labelled CAN-

Note: ECU is situated in the boot (on the left), under the cover– see below.

3.2 – Connection to the service connection

The service connector is situated on the left of the ECU – see image below:

To connect AIM Logger to service connector, please connect cable labelled CAN+ of the logger with yellow/white cable (pin 28) of the service connector and cable labelled CAN- with black/white(pin 29) cable of the ECU connector.

Pin Number	Cables colour	Function
28	Yellow / White	Connect to AIM cable labelled CAN+
29	Black / White	Connect to AIM cable labelled CAN-

Chapter 4 – ECU communication protocol.

Channels received by AIM loggers connected to Porsche Cayman S and Boxster S 987 MK2 – Siemens EMS SDI 3.1 ECU – 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	Water 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	Kickdown
ECU_18	SM_ATM_PRESS	Atmospheric pressure
ECU_19	Enable SM_FUEL_TEMP	Fuel Temperatue
ECU_21	SM_ENGINE_TEMP	Engine Temperature