MS4 Sport ECU for FIA GT3 Championship

Racing Data Power

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 hi-tech data loggers: user need 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.

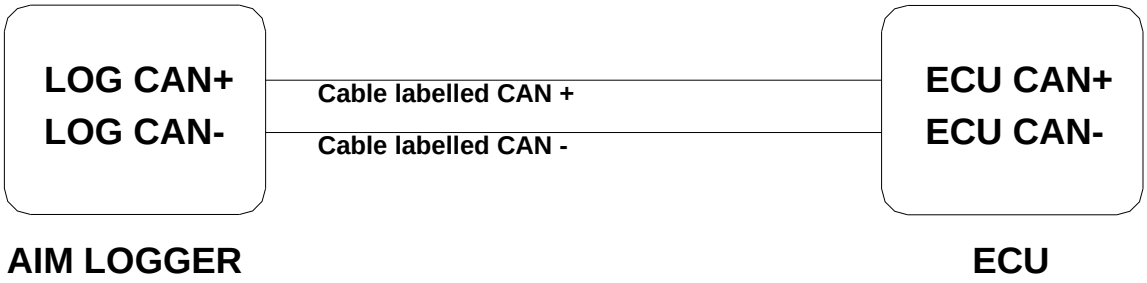
Warning: once the ECU is connected to the logger, it is necessary to set it in the logger configuration in Race Studio 2 software.
Select Manufacturer "BOSCH" and Model "MS4_SPORT_FIA_GT3".
Refer to Race Studio Configuration user manual for further information concerning the loggers configuration.

Warning: it is strongly recommended to always verify whether the ECU needs specific software settings to export data.

Chapter 1 – Can communication setup

The ECU has a CAN communication protocol used to communicate parameters to a datalogger or to configure the ECU itself.

The image here below shows the standard CAN communication to connect the ECU to AIM loggers:



Chapter 2 – Connection with AIM loggers

Due to the fact that ECU model has two different CAN outputs, it is necessary to test the two connections to find out the one that is enabled to work properly with AIM logger. The table here below shows two couples of pins: 60 (CAN+) / 58 (CAN-) and 79 (CAN+) / 77 (CAN-).

PIN	FUNCTION	COMMENTS
60/58	CAN+/CAN-	CAN1
79/77	CAN+/CAN-	CAN2

WARNING: never connect pins belonging to different couples – like pin 60 with pin 77 for example.

Chapter 3 – ECU communication protocol

Channels received by AIM loggers connected to Bosch MS4 Sport for FIA GT3 Championship ECU are:

ID	CHANNEL NAME	FUNCTION
ECU_1	MS4_RPM	RPM
ECU_2	MS4_TPS	Throttle position sensor
ECU_3	MS4_SPEED	Speed value
ECU_4	MS4_WH_SPD_FL	Wheel speed front left
ECU_5	MS4_WH_SPD_FR	Wheel speed front right
ECU_6	MS4_WH_SPD_RL	Wheel speed rear left
ECU_7	MS4_WH_SPD_RR	Wheel speed rear right
ECU_8	MS4_GEAR	Gear value
ECU_9	MS4_MAP_SEL	Manifold air pressure selection
ECU_10	MS4_OIL_T	Oil temperature
ECU_11	MS4_AIR_T	Intake air temperature
ECU_12	MS4_ECT	Engine cooling temperature
ECU_13	MS4_GEAR_TEMP	Gear temperature
ECU_14	MS4_AXLE_TEMP	Temperature
ECU_15	MS4_OIL_P	Oil pressure
ECU_16	MS4_AIR_P	Air pressure
ECU_17	MS4_FUEL_P	Fuel pressure
ECU_18	MS4_CRANK_P	Crank pressure
ECU_19	MS4_BRAKE_P_FR	Brake pressure front right
ECU_20	MS4_BRAKE_P_RR	Brake pressure rear right
ECU_21	MS4_LAMBDA1	Lambda value 1
ECU_22	MS4_LAMBDA2	Lambda value 2
ECU_23	MS4_FUEL_TANK	Fuel tank remaining
ECU_24	MS4_STEER_SPD	Steering speed
ECU_25	MS4_YAW	Yaw rate sensor
ECU_26	MS4_ACCX_FW	Forward acceleration
ECU_27	MS4_ACCY_LT	Lateral acceleration
ECU_28	MS4_TCSW	Traction Control Switch
ECU_29	MS4_SIRA_SLIP	Not available
ECU_30	MS4_GEAR_POT_V	Gear potentiometer
ECU_31	MS4_GEAR_CUT_V	Cut off
ECU_32	MS4_INJ_OFF	Injection off
ECU_33	MS4_TC_B	Traction Control
ECU_34	MS4_GEAR_CUT_B	Gear cut
ECU_35	MS4_SPEEDLIM_B	Speed limit
ECU_36	MS4_PHSOK_B	Phase OK
ECU_37	MS4_RPM_LIM_B	RPM limit