Bosch MS 4.3 GA and Bosch MS 4.3 Clubsport ECU

AiM
Racing Data Power

INTRODUCTION

AIM has developed special applications for many of the most popular ECU: 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 and configuration) 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 "MS43_GA" or "MS43_Clubsport".
Refer to Race Studio Configuration user manual for further information concerning the loggers configuration.
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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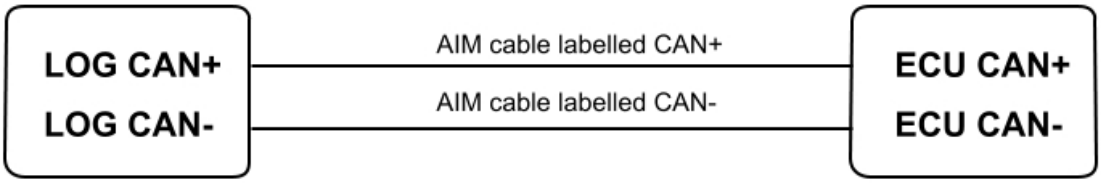
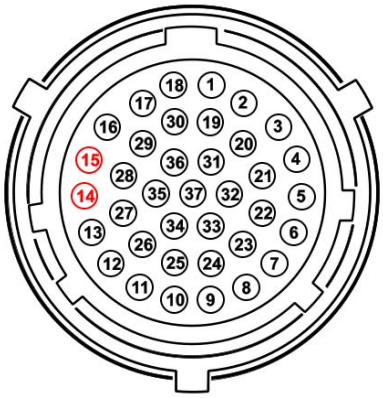
Chapter 1 – CAN communication Setup

Bosch MS4.3 GA and Bosch MS4.3 Clubsport are equipped with a CAN communication Setup used to communicate with an external logger.
The image here below shows the standard CAN communication setup.



Chapter 2 – Connection with AIM loggers

Bosch MS4.3 GA and Bosch MS4.3 Clubsport are equipped with a 37 pins Deutsch male connector shown here below.



With reference to the image here below, to connect Bosch MS 4.3 GA and MS4.3 Clubsport ECU to AIM loggers:

- connect pin 14 of 37 pins Deutsch connector to AIM cable labelled CAN+
- connect pin 15 of 37 pins Deutsch connector to AIM cable labelled CAN-

Chapter 3 – Bosch MS4.3 communication protocol

Channels received by AIM loggers connected to both Bosch MS 4.3 GA and Bosch MS4.3 Clubsport ECU are.

ID	CHANNEL NAME	FUNCTION
ECU_1	MS43_RPM	RPM
ECU_2	MS43_SPEED	Speed
ECU_3	MS43_WH_SPD_FL	Front Left wheel speed
ECU_4	MS43_WH_SPD_FR	Front rear wheel speed
ECU_5	MS43_WH_SPD_RL	Rear left wheel speed
ECU_6	MS43_WH_SPD_RR	Rear right wheel speed
ECU_7	MS43_TPS	Throttle position sensor
ECU_8	MS43_MAP_BEF_THR1	Map before Throttle 1
ECU_9	MS43_MAP_BEF_THR2	Map before Throttle 2
ECU_10	MS43_MAP_AFT_THR1	Map after throttle 1
ECU_11	MS43_MAP_AFT_THR2	Map after throttle 2
ECU_12	MS43_AIR_P	Air pressure
ECU_13	MS43_WATER_P	Water pressure
ECU_14	MS43_CRANK_P	Crank pressure
ECU_15	MS43_OIL_P	Oil pressure
ECU_16	MS43_BRAKE_F_P	Front brake pressure sensor
ECU_17	MS43_BRAKE_R_P	Rear brake pressure sensor
ECU_18	MS43_FUEL_P1	Fuel pressure 1
ECU_19	MS43_FUEL_P2	Fuel pressure 2
ECU_20	MS43_FUEL_USED	Used fuel
ECU_21	MS43_ECT	Engine cooling temperature
ECU_22	MS43_OIL_T	Oil temperature
ECU_23	MS43_FUEL_T	Fuel temperature
ECU_24	MS43_AIR_T	Air temperature
ECU_25	MS43_EXHAUST_T1	Exhaust temperature 1
ECU_26	MS43_EXHAUST_T2	Exhaust temperature 2
ECU_27	MS43_GEAR_T1	Gearbox temperature 1
ECU_28	MS43_LAMBDA_T1	Lambda temperature 1
ECU_29	MS43_LAMBDA_T2	Lambda temperature 2
ECU_30	MS43_LAMBDA1	Lambda sensor 1

ECU_31	MS43_LAMBDA2	Lambda sensor 2
ECU_32	MS43_LAMBDA_CTR1	Lambda control 1
ECU_33	MS43_LAMBDA_CTR2	Lambda control 2
ECU_34	MS43_INJ_TIME1	Injection time 1
ECU_35	MS43_INJ_TIME2	Injection time 2
ECU_36	MS43_IGN_ANG	Ignition angle
ECU_37	MS43_GEAR	Engaged gear
ECU_38	MS43_STR_WHEEL_ANG	Steering wheel angle
ECU_39	MS43_YAW_RATE	Yaw rate
ECU_40	MS43_TC_ACTIVE	
ECU_41	MS43_ACC_X	Longitudinal acceleration (X – axis)
ECU_42	MS43_ACC_Y	Lateral acceleration (Y – axis)
ECU_43	MS43_ACC_Z	Vertical acceleration (Z – axis)