NIRA EDC/CR

Racing Data Power

INTRODUCTION

AIM has developed special applications for many of the most popular 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 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…

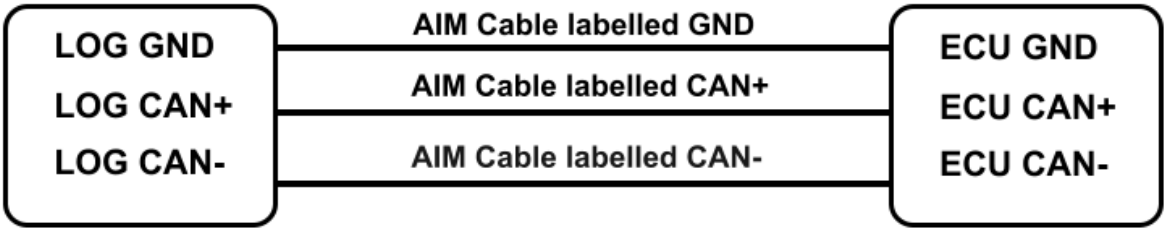
All AIM loggers include – free of charge – **Race Studio 2** software, a powerful tool to configure the system and analyze recorded data on your PC.

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 "NIRA" Model "EDC/CR".
Refer to Race Studio Configuration user manual for further information concerning the loggers configuration.

Warning: it is always suggested to verify if the ECU needs any software/firmware setting or upgrade to export data to an external logger.

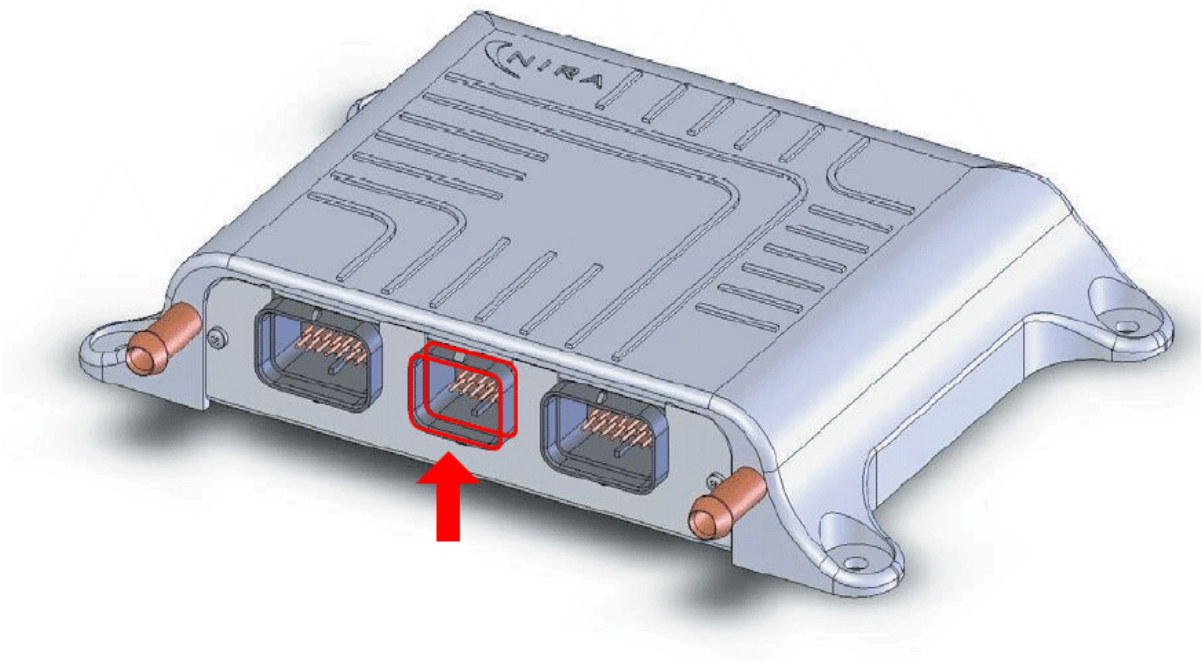
1 – Communication setup and connections

NIRA EDC/ CR ECU is equipped with three connectors used to communicate parameters to the logger or to configure the ECU itself. CAN communication setup is shown here below:



With reference to image below, please connect the logger to NIRA EDC/CR as follow:

- Connect cable labelled CAN+ of the logger to pin 23 of B the connector;
- Connect cable labelled CAN- of the logger to B24 of B the connector.



2 – Communication protocol

Channels received by AIM loggers connected to NIRA EDC/CR are:

ID	CHANNEL NAME	FUNCTION
ECU_1	RPM	RPM
ECU_2	ENG_TORQUE	Engine torque
ECU_3	FUEL_PRESS	Injector metering rail 1 pressure
ECU_4	FUEL_TEMP	Fuel temperature
ECU_5	ENG_COOL_TEMP	Engine cooling temperature
ECU_6	ENG_OIL_PRESS	Oil pressure
ECU_7	THROTTLE_POS	Throttle position sensor
ECU_8	INT_MANIF_TEMP	Intake Manifold temperature
ECU_9	BOOST_PRESS	Boost pressure
ECU_10	BT_PRESS_DEM	Boost pressure demand
ECU_11	BT_PR_A_DUTY1	Boost pressure actuator duty 1
ECU_12	BT_PR_A_DUTY2	Boost pressure actuator duty 2
ECU_13	AFR_RATIO	Calculated Air /fuel ratio
ECU_14	FUEL_CTRL_MODE	Fuel control mode
ECU_15	PWM_VCV_DUTY1	va_PWM_VCV_duty
ECU_16	PWM_PCV_DUTY1	va_PWM_PCV_duty
ECU_17	MAIN_INJ_TIME	Main injection time
ECU_18	POST_INJ_TIME	Post injection time
ECU_19	MAIN_INJ_ANGLE	Main injection angle
ECU_20	POST_INJ_ANGLE	Post injection angle
ECU_21	PWM_DEC_DUTY1	Va Flx PWM DEC Duty 1
ECU_22	PWM_DEC_PRD1	Va Flx PWM DEC Period 1
ECU_23	PWM_DEC_DUTY2	Va Flx PWM DEC Duty 2
ECU_24	PWM_DEC_PRD2	Va Flx PWM DEC Period 2