AiM InfoTech

E-RACE BLACK

Release 1.00

ECU

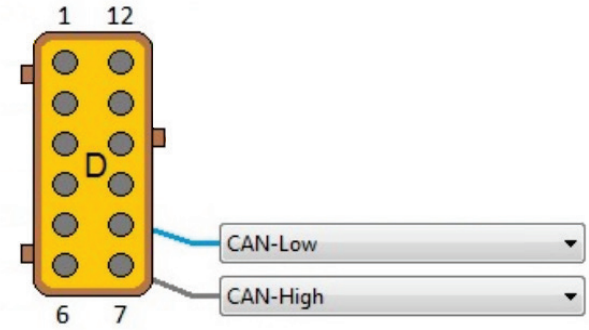
1 Models and years

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

- E-RACE BLACK
- E-RACE BLACK PRO

2 Wiring connection

This model is equipped with a specific manufacturer protocol based on CAN, accessible through the brown 12 pin male connector, highlighted below. For this installation refer to the following connection table.



Female Deutsch 12 Pin	Function	AiM Cable	AiM Cable color
7	CAN High	CAN +	White
8	CAN Low	CAN -	Blue

3
Race Studio connection

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: **E-RACE**
- ECU Model: **BLACK BLACKPRO** (RS3 Only)

4
"E-RACE - BLACK BLACKPRO" protocol

Channels received by AiM devices configured with "E-RACE - BLACK BLACKPRO" protocol are:

CHANNEL NAME	FUNCTION
RPM	Engine RPM
Speed	Vehicle speed
Gear	Engaged gear
TPS	Throttle position sensor
Pedal	Pedal position sensor
TurboSpeed	Turbo speed
WaterTemp	Water temperature
OilTemp	Oil temperature
AirTemp	Air temperature
GearTemp	Gearbox temperature
ExhaustTemp	Exhaust temperature
ECU Temp	ECU temperature
OilPress	Oil pressure
IntakePress	Intake air pressure
BaroPress	Barometric pressure
FuelPres	Fuel pressure
VBattery	Battery voltage

FuelLevel	Fuel level
Dwell	Dwell angle
Advance	Advance angle
Richness	Richness percentual
InjAngle	Injection angle
Inj1Time	Injection 1 time
Inj2Time	Injection 2 time
Cam1Position	Camshaft 1 position
Cam1SetPoint	Camshaft 1 set point
Cam1PWM	Camshaft 1 PWM
BoostSetPoint	Boost set point
TurboPWM	Turbo PWM
DBW1SetPoint	Drive by wire set point
DBWPWM	Drive by wire PWM
DiagStateInput1	Diagnostic state input 1
DiagStateInput2	Diagnostic state input 2
DiagStateInput3	Diagnostic state input 3
DiagStateInput4	Diagnostic state input 4
DiagStateOutpu1t	Diagnostic state output 1
DiagStateOutpu2	Diagnostic state output 2
DiagStateOutpu3	Diagnostic state output 3
DiagStateOutpu4	Diagnostic state output 4
Mode	Mode
Cam1Corr	Camshaft correction
DBW1Corr	Drive by wire correction 1
TurboCorr	Turbo correction
TurbineSpeed	Turbine speed
Adv	Advance angle

Technical note: not all data channels outlined in the ECU template are validated for each manufacture's model or variant; some of the outlined channels are model and year specific, and therefore may not be applicable.