AiM InfoTech

CANEMS ECU

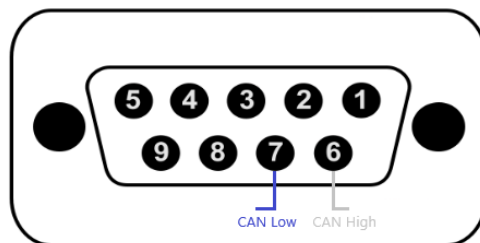## Release 1.00

ECU

1
Supported models

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

- CANEMS ECU

2
Wiring connection

CANEMS ECU features a CAN data bus communication through the DB9 front connector here below DB9 female connector pinout – front view and connection table are shown.

DB9 Connector pinout	Pin Function	AiM cable
6	CAN High	White
7	CAN Low	Blue

3
RaceStudio 3 configuration

Before connecting the AiM device to the ECU, set all functions using AiM software RaceStudio 3. The parameters to set in the device configuration are:

- ECU manufacturer: **AIM**
- ECU Model: **CAN_500kbits** (Only RS3)

4
"AIM – CAN_500kbits" protocol.

Channels received by AiM devices configured with "AIM – CAN_500kbits" protocol are:

CHANNEL NAME	FUNCTION
ECU RPM	Engine RPM
ECU TPS	Throttle position sensor
ECU PPS	Pedal position sensor
ECU VEH SPD	Vehicle speed
ECU WS FR	Front right heel speed
ECU WS FL	Front left wheel speed
ECU WS RR	Rear right wheel speed
ECU WS RL	Rear left wheel speed
ECU INT AIR T	Intake air temperature
ECU ENG T	Engine temperature
ECU FUEL T	Fuel temperature
ECU OIL T	Oil temperature
ECU MAN AIR P	Manifold air pressure
ECU BARO	Barometric pressure
ECU OIL P	Oil pressure
ECU FEUL P	Fuel pressure

ECU BOOST	Boost pressure
ECU V BATT	Voltage pressure
ECU FUEL USE	Fuel used
ECU GEAR	Engaged gear
ECU SHIFT FLAG	Shift flag
ECU GEAR TIME	Gear time
ECU THRT VOLT	Throttle voltage
ECU FUEL LEV	Fuel level
ECU LAMBDA1	Lambda 1
ECU LAMBDA2	Lambda 2
ECU LAMB T1	Lambda temperature 1
ECU LAMB T2	Lambda temperature 2
ECU LAMB1 ERR	Lambda 1 error
ECU LAMB2 ERR	Lambda 2 error
ECU STEER POS	Steering wheel position
ECU STEER SPD	Sterring wheel speed
ECU BRK P	Brake pressure
ECU CLUTCH P	Clutch pressure
ECU BRK P FR	Front right brake pressure
ECU BRK P FL	Front left brake pressure
ECU BRK P RR	Rear right brake pressure
ECU BRK P RL	Rear left brake pressure
ECU ACC LAT	Lateral acceleration
ECU ACC LONG	Longitudinal acceleration
ECU GYRO	Gyroscope
ECU GEAR BOX T	Gear box time
ECU ENG TORQ	Engine torque
ECU SLIP ANG	Alip angle
ECU IGN ANG1	Ignition angle 1
ECU IGN ANG2	Ignition angle 2
ECU INJ TIME1	Injection time 1
ECU INJ TIME2	Injection time 2

ECU INJ P1	Injection pressure 1
ECU INJ P2	Injection pressure 2
ECU SPARK ANG1	Spark angle 1
ECU SPARK ANG2	Spark angle 2
ECU SPARK ADV1	Spark advance 1
ECU SPARK ADV2	Spark advance 2
ECU USER01	User channel 01
ECU USER02	User channel 02
ECU USER03	User channel 03
ECU USER04	User channel 04
ECU USER05	User channel 05
ECU USER06	User channel 06
ECU USER07	User channel 07
ECU USER08	User channel 08

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