



AiM User Guide

GEMS
Omex ECUs

Release 1.01



ECU



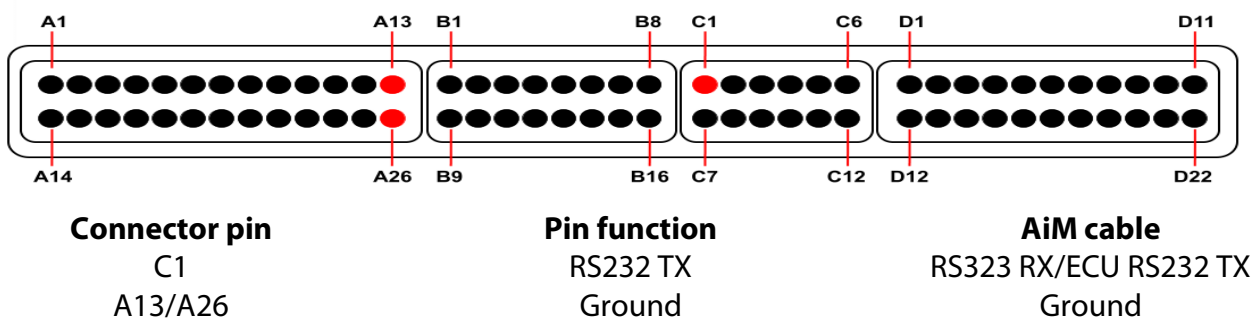
1 Supported models

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

- GEMS Omex 100
- GEMS Omex 150
- GEMS Omex 200
- GEMS Omex 500
- GEMS Omex 550

2 Wiring connection

The ECU connector is made of four sections: "A", "B", "C" and "D", is so characterised. GEMS OMEX connector is shown below:



Please note:
 AiM wiring harnesses supplied after September 2018 have the following labels:
ECU RS232TX (white) to be connected to **ECU TX** pin
ECU RS232RX (blue) to be connected to **ECU RX** pin (if indicated in the connection table above)

AiM wiring harnesses supplied before September 2018 have the following labels:
RS232RX (white) to be connected to **ECU TX** pin
RS232TX (blue) to be connected to **ECU RX** pin (if indicated in the connection table above)

3

Race Studio configuration

Before connecting AiM devices to the ECU, set all functions using AiM software Race Studio. The parameters to select in the AiM device configuration are:

- ECU manufacturer: **GEMS**
- ECU Model: **Omex** (Only RS2)

4

“GEMS – Omex” protocol

Channels received by AiM devices configured with “Gems – Omex” protocol are:

CHANNEL NAME	FUNCTION
GEMS_ENGINE_SPD	RPM
GEMS_LOAD	Engine load
GEMS_TPS	Throttle position sensor
GEMS_AIRTEMP	Intake air temperature
GEMS_COOLTEMP	Water temperature
GEMS_BATTVOLT	Battery voltage
GEMS_ACCFUEL	Acceleration fuelling
GEMS_RESULT	Gems result
GEMS_ADV2	Ignition advance#2
GEMS_ERROR	Gems error signal