

## BMW M5 /M6 ECUS



## INTRODUCTION

AIM has developed special applications for many of the most common ECUs: by special applications we mean user-friendly systems which allow to easily connect the ECU to our hi-tech data loggers: users need only to install harness between the **logger** and the ECU unit.

Once connected, the **logger** displays (and records, depending on the logger and on the ECU data stream) 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.

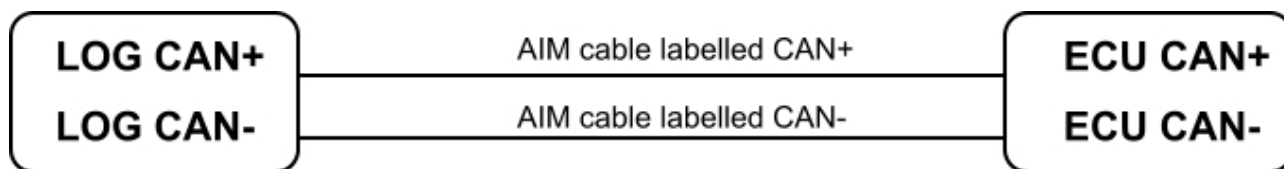
**Warning: once the ECU is connected to the logger it is necessary to set it in the logger configuration in Race Studio 2 software.**

**Select “Manufacturer” “BMW” and Model “M6”.**

**Refer to Race Studio Configuration user manual for further information concerning the logger configuration.**

## 1 – Car Models and Communication Setup

BMW M6 protocol works with M5 (E60) and M6 (E63) models: their ECU is equipped with a CAN communication setup used to communicate with the logger:



## 2 – Connection to AIM loggers

At first it is necessary to intercept the twisted Yellow/Red (CAN-) and Yellow/Brown (CAN+) wires coming from the ECU, then connect them as follows:

- connect AIM cable labelled CAN- to Yellow/Red cable of BMW ECU wiring;
- connect AIM cable labelled CAN+ to Yellow/Brown cable of BMW ECU wiring.

## 3 – BMW communication protocol

Channels received by AIM loggers are:

ID	CHANNEL NAME	FUNCTION
ECU_1	M6_RPM	RPM
ECU_2	M6_SPEED1	Speed1
ECU_3	M6_SPEED2	Speed 2
ECU_4	M6_PPS	Pedal position sensor
ECU_5	M6_BRAKE SW	Brake Switch
ECU_6	M6_GEAR_SW_MAN	Gear Switch Manual
ECU_7	M6_GEAR	Selected Gear
ECU_8	M6_OILT	Oil temperature
ECU_9	M6_ECT	Engine coolant temperature