



## AiM Infotech

BMW Mini (R53)  
2001-2006

Release 1.06

---



ECU



# 1

## Models and years

---

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

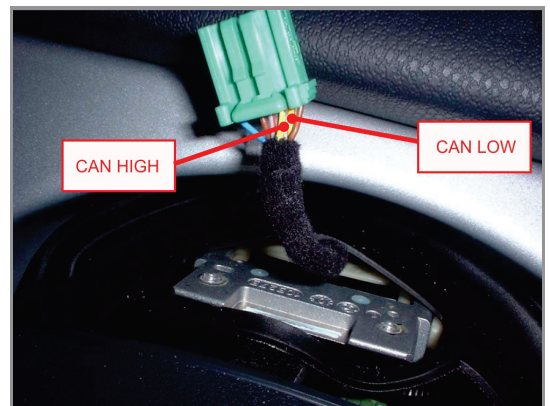
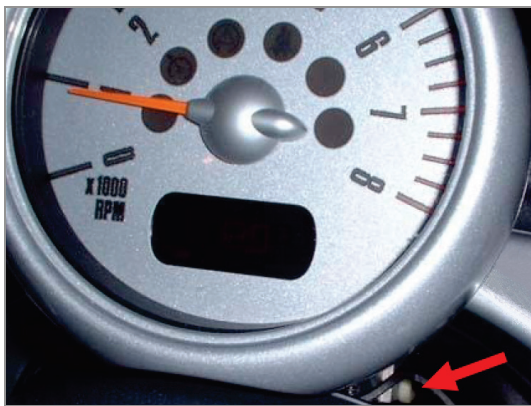
Supported models and years are:

- BMW Mini (R53) Cooper Coupé 2001-2006
- BMW Mini (R53) Cooper Cabrio 2001-2006
- BMW Mini (R53) One 2001-2006
- BMW Mini (R53) One D 2001-2006
- BMW Mini (R53) Cooper S Coupé 2001-2006
- BMW Mini (R53) Cooper S Cabrio 2001-2006
- BMW Mini (R53) Cooper Works Coupé 2001-2006
- BMW Mini (R53) Cooper Works Cabrio 2001-2006

## 2 ECU CAN connection

---

These models feature a CAN data bus accessible through the “Service “plastic connector, placed over the vehicle rev counter (see following picture). It is strongly recommended to refer to a skilled technician to perform this kind of installation. For this installation refer to the following connection table of the car’s Service connector (vehicle side – front view).



Cable colour	Pin function	AiM cable
Yellow/black	CAN High	CAN+
Yellow/brown	CAN Low	CAN-

## 3 ECU CAN – Race Studio configuration

---

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: **BMW**
- ECU Model: **BMW\_MINI**

## 4

# “BMW – BMW\_MINI” protocol

---

Channels received by AiM devices configured with " BMW – BMW\_MINI " protocol are.

<b>CHANNEL NAME</b>	<b>FUNCTION</b>
RPM	RPM
SPEED_BMW	Speed
PEDAL_POSITION	Pedal position
BRAKE_SWITCH	Brake switch
BRAKE_PRESSURE	Brake pressure
CLUTCH_SWITCH	Clutch switch
STEER_ANGLE	Steering angle
WATER_TEMP	Engine coolant temperature
ENGINE_OIL_TEMP	Oil temperature
GEARBOX_OILT	Gearbox oil temperature
TEMP_OUTSIDE	Ambient air temperature
FUEL	Fuel level
RPM_TURBO	Turbo RPM
ENGINE_MOMENT	Engine moment
TORQUE	Torque value
ELECTROVALVE_STATE	Electro valve state
FULL_LOAD_ALTERNATOR	Full load alternator
WHEEL_SPEED_FRONT_LEFT	Front left wheel speed
WHEEL_SPEED_FRONT_RIGHT	Front right wheel speed
WHEEL_SPEED_REAR_LEFT	Rear left wheel speed
WHEEL_SPEED_REAR_RIGHT	Rear right wheel speed
ASC_REG	ASC Switch
MIL_CHK_ENG	Malfunction indication lamp
DSC_REG	DSC switch



ABS\_FAIL

ABS Failure

GEAR

Active gear

STEER ANG2

Steering angle 2

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