

AiM Infotech

BMW Mini (R53)  
2001-2006

Release 1.04

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ECU



This tutorial explains how to connect BMW Mini cars to AiM devices. Supported models and years are:

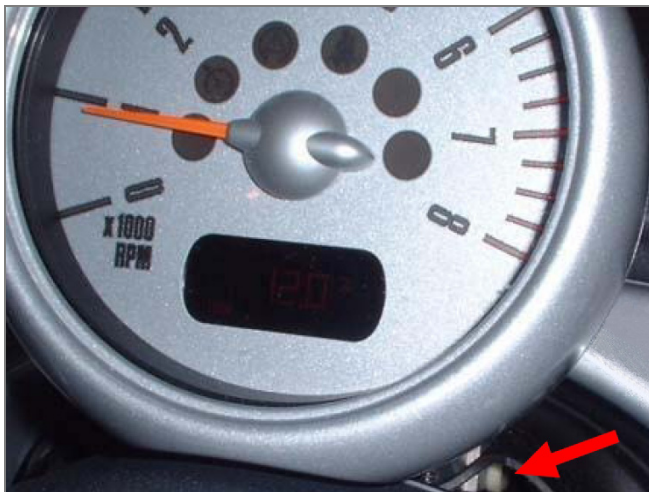
- BMW Mini (R53) Cooper Coupé 2001-2006
- BMW Mini (R53) Cooper Cabrio 2001-2006
- BMW Mini (R53) One 2001-2006
- BMW Mini (R53) One D 2001-2006
- BMW Mini (R53) Cooper S Coupé 2001-2006
- BMW Mini (R53) Cooper S Cabrio 2001-2006
- BMW Mini (R53) Cooper Works Coupé 2001-2006
- BMW Mini (R53) Cooper Works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

# 1

## CAN connection

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BMW Mini R53 features a bus communication protocol based on CAN on the plastic service connector placed over the vehicle rev counter. To remove the rev counter unscrew the 2 Torx screws on top of the brackets as shown here below, together with the connection scheme.



**Cable colour**

Yellow/black  
Yellow/brown

**Pin function**

CAN High  
CAN Low

**AiM cable**

CAN+  
CAN-

## 2

# AiM device configuration

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Before connecting the ECU to AiM device set this up using AiM Race Studio Software. The parameters to select in the device configuration are:

- ECU manufacturer "BMW"
- ECU Model "BMW\_MINI"

## 3

# Available channels

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Channels received by AiM devices connected to "BMW" "BMW\_MINI" protocol are.

<b>ID</b>	<b>CHANNEL NAME</b>	<b>FUNCTION</b>
ECU_1	RPM	RPM
ECU_2	SPEED_BMW	Speed
ECU_3	PEDAL_POSITION	Pedal position
ECU_4	BRAKE_SWITCH	Brake switch
ECU_5	BRAKE_PRESSURE	Brake pressure
ECU_6	CLUTCH_SWITCH	Clutch switch
ECU_7	STEER_ANGLE	Steering angle
ECU_8	WATER_TEMP	Engine coolant temperature
ECU_9	ENGINE_OIL_TEMP	Oil temperature
ECU_10	GEARBOX_OILT	Gearbox oil temperature
ECU_11	TEMP_OUTSIDE	Ambient air temperature
ECU_12	FUEL	Fuel level
ECU_13	RPM_TURBO	Turbo RPM
ECU_14	ENGINE_MOMENT	Engine moment
ECU_15	TORQUE	Torque value
ECU_16	ELECTROVALVE_STATE	Electro valve state



ECU_17	FULL_LOAD_ALTERNATOR	Full load alternator
ECU_18	WHEEL_SPEED_FRONT_LEFT	Front left wheel speed
ECU_19	WHEEL_SPEED_FRONT_RIGHT	Front right wheel speed
ECU_20	WHEEL_SPEED_REAR_LEFT	Rear left wheel speed
ECU_21	WHEEL_SPEED_REAR_RIGHT	Rear right wheel speed
ECU_22	ASC_REG	ASC Switch
ECU_23	MIL_CHK_ENG	Malfunction indication lamp
ECU_24	DSC_REG	DSC switch
ECU_25	ABS_FAIL	ABS Failure

**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.