

AiM Infotech

BMW Mini (R53)
2001-2006

Release 1.03



ECU



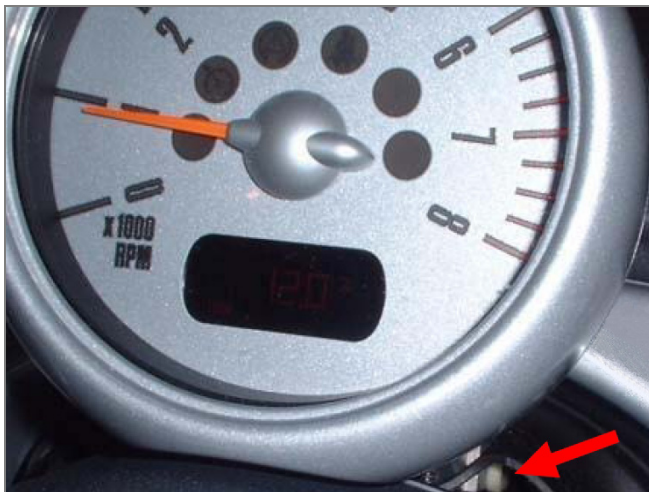
This tutorial explains how to connect BMW Mini cars to AiM devices. Supported models and years are:

- | | |
|--------------------------------------|-----------|
| • 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 |

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CAN connection

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 Logger configuration

Before connecting the ECU to AiM device set it up as follows:

Run Race Studio 2 software and select:

- Device Configuration -> Select the device you are using;
- select the configuration or press "New" to create a new one;
- select ECU manufacturer "BMW" and ECU Model "BMW_MINI"
- transmit the configuration to the device pressing "Transmit".

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Available channels

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

ID	CHANNEL NAME	FUNCTION
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.