

AiM Infotech

BMW Mini (R56)
2007 onwards

Release 1.01



ECU



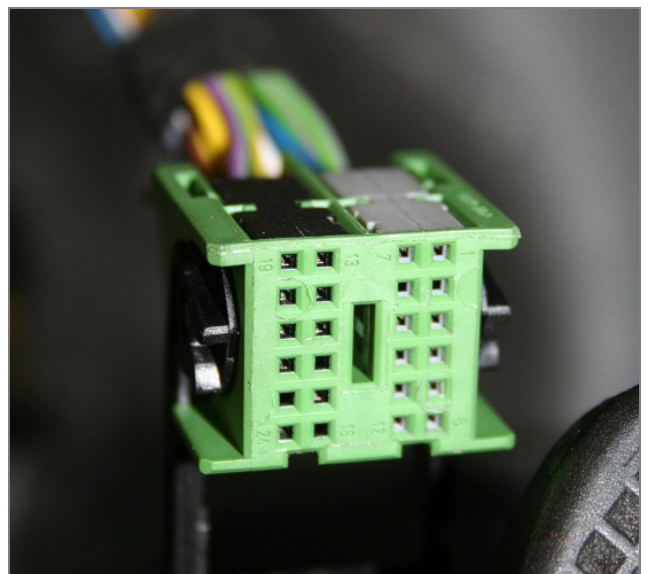
This tutorial explains how to connect BMW Mini cars to AiM devices. Supported models and years are:

- | | |
|--------------------------------------|--------------|
| • BMW Mini (R56) Cooper Coupé | 2007 onwards |
| • BMW Mini (R56) Cooper Cabrio | 2007-onwards |
| • BMW Mini (R56) One | 2007-onwards |
| • BMW Mini (R56) One D | 2007-onwards |
| • BMW Mini (R56) Cooper S Coupé | 2007-onwards |
| • BMW Mini (R56) Cooper S Cabrio | 2007-onwards |
| • BMW Mini (R56) Cooper Works Coupé | 2007-onwards |
| • BMW Mini (R56) Cooper Works Cabrio | 2007-onwards |
| • BMW Mini (R56) Cooper D | 2007-onwards |
| • BMW Mini (R56) Cooper Clubman | 2007-onwards |
| • BMW Mini (R56) Cooper D Clubman | 2007-onwards |
| • BMW Mini (R56) Cooper S Clubman | 2007-onwards |

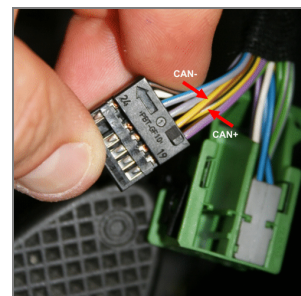
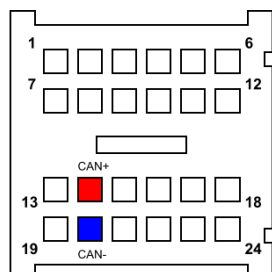
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CAN connection

BMW Mini R56 features a bus communication protocol based on CAN on the gateway service connector, placed over the gas pedal. To remove the gateway press the button highlighted below on the left and lift the cover as shown on the right.



Below connector drawing on the left, CAN cable highlighted on the right and connection scheme.



Gateway connector pin	Cable colour	Pin function	AiM cable
14	Yellow/black	CAN High	CAN+
20	Yellow/brown	CAN Low	CAN-

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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_PT6"
- 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	PEDAL_POSITION	Throttle request
ECU_3	SPEED_BMW	Vehicle Speed



ECU_4	SPEED2_BMW	Dash speed
ECU_5	WHEEL_SPEED_FRONT_LEFT	Front Left wheel speed
ECU_6	WHEEL_SPEED_FRONT_RIGHT	Front Right wheel speed
ECU_7	WHEEL_SPEED_REAR_LEFT	Rear Left wheel speed
ECU_8	WHEEL_SPEED_REAR_RIGHT	Rear Right wheel speed
ECU_9	STEER_ANGLE	Steering angle position
ECU_10	CLUTCH_SWITCH	Clutch switch
ECU_11	BRAKE_SWITCH	Brake switch
ECU_12	BRAKE_PRESS	Brake pressure
ECU_13	BRAKE_PRESS_FRONT_LEFT	Front left wheel brake pressure
ECU_14	BRAKE_PRESS_FRONT_RIGHT	Front right wheel brake pressure
ECU_15	BRAKE_PRESS_REAR_LEFT	Rear left wheel brake pressure
ECU_16	BRAKE_PRESS_REAR_RIGHT	Rear right wheel brake pressure
ECU_17	WATER_TEMP	Engine coolant Temperature
ECU_18	OIL_TEMP	Oil Temperature
ECU_19	TEMP_OUTSIDE	Ambient air temperature
ECU_20	MAP	Manifold air pressure
ECU_21	GEAR	Engaged Gear
ECU_22	ACC_LONG	Longitudinal acceleration
ECU_23	ACC_LAT	Lateral acceleration
ECU_24	GYRO	Gyroscope
ECU_25	DISTANCE_KM	Run distance in km
ECU_26	FUEL	Fuel level
ECU_27	BATTERY	Battery supply

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.