



## AiM Infotech

### BMW Mini (R56) 2007 onwards

### Release 1.03

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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

## 1

# CAN connection

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BMW Mini R56 features a bus communication protocol based on CAN on the gateway service connector, placed over the gas pedal. Below is the connection scheme.

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

AiM device can also be connected using the wires you find over the sill protector on the right side of the car.

## 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:

- select ECU manufacturer "BMW"
- ECU Model "BMW\_PT6"

## 3

# Available channels

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Channels received by AiM devices connected to "BMW" "BMW\_PT6" protocol are.

<b>ID</b>	<b>CHANNEL NAME</b>	<b>FUNCTION</b>
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_SPD_FR_LF	Front Left wheel speed
ECU_6	WHEEL_SPD_FR_RH	Front Right wheel speed
ECU_7	WHEEL_SPD_RR_LF	Rear Left wheel speed
ECU_8	WHEEL_SPD_RR_RH	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_PR_FR_LF	Front left wheel brake pressure
ECU_14	BRAKE_PR_FR_RH	Front right wheel brake pressure
ECU_15	BRAKE_PR_RR_LF	Rear left wheel brake pressure
ECU_16	BRAKE_PR_RR_RH	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
ECU_28	FUEL_INJ	Fuel injection
ECU_29	ABS_STATUS	ABS Status
ECU_30	MIL	Malfunctioning indication lamp
ECU_31	DSC_STATUS	DSC Status
ECU_32	ENG_TRQ	Engine torque
ECU_33	TPS	Throttle position sensor
ECU_34	DCT_TMP	DCT Temperature
ECU_35	DRIVE_MODE	Drive mode

**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.