AiM Infotech

Audi R8 LMS ECU

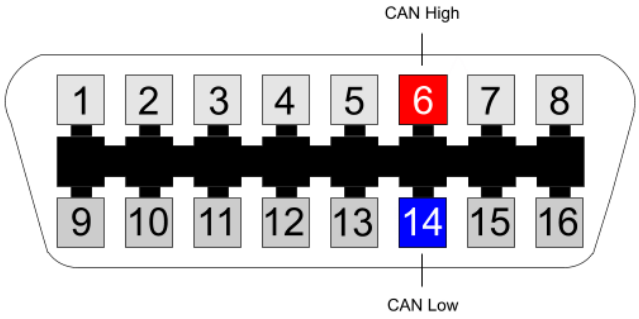
Release 1.04

This tutorial explains how to connect AiM devices to Audi R8 LMS ECU.

1 Wiring connection

Audi R8 LMS ECU features a data transmission bus based on CAN on the OBDII plug. This socket is placed in the cockpit area, that means near the ashtray or the steering column or in the central console. Some manufacturer use covers to protect the OBDII connector.

Here follows OBDII connector pinout as well as connection table.



OBDII pin	Pin function	AIM cable
6	CAN High	CAN+
14	CAN Low	CAN-

2 AiM device configuration

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 “Audi”
- ECU Model “R8_LMS”

3 Available channels

Channels received by AiM loggers connected to "Audi" "R8_LMS" protocol are:

ID	CHANNEL NAME	FUNCTION
ECU_1	R8_RPM	RPM
ECU_2	R8_SPEED	Speed
ECU_3	R8_WH_SP_FL	Front left wheel speed
ECU_4	R8_WH_SP_FR	Front right wheel speed
ECU_5	R8_WH_SP_RL	Rear left wheel speed
ECU_6	R8_WH_SP_RR	Rear right wheel speed
ECU_7	R8_PPS	Pedal position sensor
ECU_8	R8_ENG_TQ	Engine torque
ECU_9	R8_ENG_TQ_WINT	Mechanical motor torque loss
ECU_10	R8_ENG_TQ_LOSS	Engine torque loss
ECU_11	R8_DRV_TQ	Drive torque
ECU_12	R8_PED_NA_M1	Driving pedal not accurate Motor1
ECU_13	R8_MOM_NA	Moment data not accurate
ECU_14	R8_WATER_TEMP	Water temperature
ECU_15	R8_BRK_SW	Brake switch
ECU_16	R8_ST_NORM_OPE	State normal operativity

ECU_17	R8_SPEED_LIM	Speed limiter
ECU_18	R8_PED_NA_M3	Driving pedal not accurate Motor3
ECU_19	R8_INTK_AIR_T	Intake air temperature
ECU_20	R8_TPS_RAW	TPW Raw
ECU_21	R8_TPS_MASTER	TPS Master
ECU_22	R8_TPS	Throttle position sensor
ECU_23	R8_GEAR	Engaged gear
ECU_24	R8_HOT_LIGHT	Hot light
ECU_25	R8_FUEL_CONS	Fuel consumption
ECU_26	R8_ENG_OIL_WARN	Engine oil warning
ECU_27	R8_BRK_PRESS	Brake pressure
ECU_28	R8_OIL_TEMP	Oil temperature
ECU_29	R8_BOOST	Boost
ECU_30	R8_LAMBDA_LEFT	Left lambda value
ECU_31	R8_LAMBDA_RIGH	Right lambda value

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.