

AiM Infotech

Ferrari
458 Italia, 458 Speciale

Release 1.05



This tutorial explains how to connect Ferrari 458 car to AiM devices. Supported years are:

- Ferrari 458 Italia from 2010 onwards
- Ferrari 458 Speciale from 2014 onwards

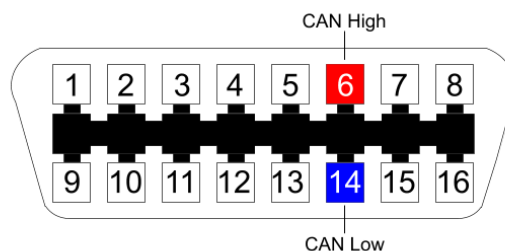
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CAN connection

Ferrari 458 Italia and Ferrari 458 Speciale feature a data communication bus based on CAN on the diagnosis OBDII plug. The plug is under the stock dash left of the steering column as shown here below.



OBDII connector pinout and connection table are shown below.



| OBDII connector pin | Pin function | AiM cable |
|---------------------|--------------|-----------|
| 6 | CAN High | CAN+ |
| 14 | CAN Low | CAN- |

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AiM device configuration

Before connecting the ECU to AiM device, set this up using AiM Race Studio software. Parameters to select in the device configuration are:

- ECU manufacturer "Ferrari"
- ECU Model "458"

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Available channels

Channels received by AiM devices connected to "Ferrari" "458" protocol are.

| ID | CHANNEL NAME | FUNCTION |
|-----------|---------------------|-------------------------|
| ECU_1 | ECU_RPM | RPM |
| ECU_2 | ECU_PPS | Pedal Position |
| ECU_3 | ECU_TPS | Throttle Position |
| ECU_4 | ECU_ECT | Water Temperature |
| ECU_5 | ECU_OUT_AIR_T | Ambient Air Temperature |
| ECU_6 | ECU_BRAKE_SW | Brake switch |
| ECU_7 | ECU_STEER_ANGLE | Steering Angle |
| ECU_8 | ECU_BRAKE_PRESS | Brake Pressure |
| ECU_9 | ECU_GEAR | Engaged Gear |
| ECU_10 | ECU_WH_SPD_RR | Rear Right Wheel Speed |
| ECU_11 | ECU_WH_SPD_RL | Rear Left Wheel Speed |
| ECU_12 | ECU_WH_SPD_FR | Front Right Wheel Speed |
| ECU_13 | ECU_WH_SPD_FL | Front Left Wheel Speed |
| ECU_14 | ECU_VEH_SPEED | Vehicle Speed |
| ECU_15 | ECU_STEER_SPD | Steering speed angle |
| ECU_16 | ECU_YAW_RATE | Yaw rate sensor |



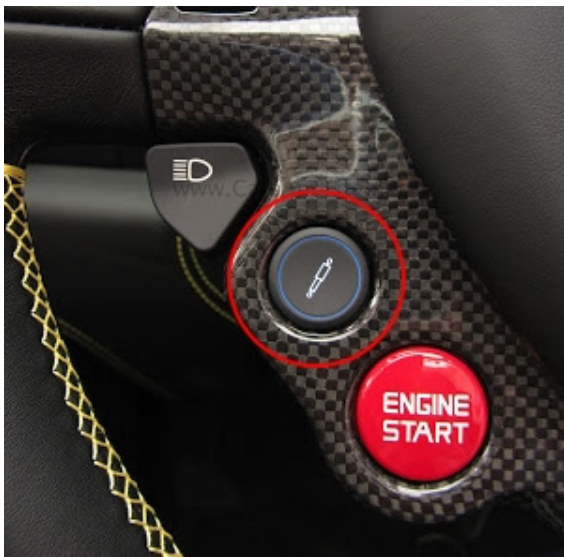
| | | |
|--------|----------------|---|
| ECU_17 | ECU_LONG_ACC | Longitudinal Accelerometer |
| ECU_18 | ECU_LAT_ACC | Lateral Accelerometer |
| ECU_19 | ECU_TC_INTERV | Traction Control (Intervention) |
| ECU_20 | ECU_VDC_INTERV | Vehicle Dynamic Control (intervention) |
| ECU_21 | ECU_CLUTCH_SW | Clutch switch (manual gear only) |
| ECU_26 | ECU_GEAR_AUTO | Automatic Gear mode |
| ECU_27 | ECU_TC_ASR_CTR | Traction and stability control disabled |
| ECU_29 | ECU_ROLL_RATE | Steering wheel speed |
| ECU_30 | ECU_LAUNCH | Performance Launch Control |
| ECU_31 | ECU_SUSP_SET | Selected suspension setting – see Appendix |
| ECU_32 | ECU_MAIN_SET | ECU Mode selector – see Appendix |
| ECU_33 | ECU_CAT1_TEMP | Catalyst Temperature 1 |
| ECU_34 | ECU_CAT2_TEMP | Catalyst Temperature 2 |
| ECU_35 | ECU_FUEL_LEV | Fuel level |
| ECU_36 | ECU_FUEL_CONS | Fuel Consumption L per hour |
| ECU_37 | ECU_ENG_TORQ | Engine Torque |
| ECU_38 | ECU_ENG_TQ_DRV | Engine Torque Drive |
| ECU_39 | ECU_ENG_TQ_REQ | Requested Engine Torque |
| ECU_40 | ECU_EDIFF_PR | Differential Pressure |
| ECU_41 | ECU_EDIFF_TQ | Differential Torque |
| ECU_42 | ECU_CALC_LOAD | Calculated Load Value |
| ECU_43 | ECU_ABS_LOAD | Absolute Load Value |
| ECU_44 | ECU_PITCH_RATE | Pitch Rate |
| ECU_45 | ECU_ENG_OILT | Engine Oil temperature |
| ECU_46 | ECU_ENG_OILP | Engine Oil Pressure |

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.

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Appendix

Suspensions (channel 31) and ECU (channel 32) can be manually set pushing the related button – Suspensions: left image below – and through the proper selector – ECU: right image below.



With reference to the right image above, available ECU mode settings are:

- Rain – light blue box: 1
- Sport – white box: 2
- Race – Yellow box: 3
- Traction control disabled – orange box: 4
- Traction and stability control disabled – red box: 5