AiM Infotech

GM Corvette C6-C7 ECUs

Release 1.02
This tutorial explains how to connect GM Corvette cars to AiM devices. Supported models and years are:

- GM Corvette C6 LS2 2005-2008
- GM Corvette C6 LS3 2008-2013
- GM Corvette C6 Z06 LS7 2005-2013
- GM Corvette C7 Stingray from 2014

1 CAN connection

Corvette cars feature a bus communication protocol based on CAN on the OBDII plug located left under the steering column as shown here below on the left (1). On the right is OBDII connector pinout and below connection table.

<table>
<thead>
<tr>
<th>OBDII connector pin</th>
<th>Pin function</th>
<th>AiM cable</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>CAN High</td>
<td>CAN+</td>
</tr>
<tr>
<td>14</td>
<td>CAN Low</td>
<td>CAN-</td>
</tr>
</tbody>
</table>
## AiM Logger configuration

Before connecting the ECU to the logger, set this up using AiM Race Studio software. The parameters to select in the device configuration are: ECU manufacturer and ECU Model according to the following table:

<table>
<thead>
<tr>
<th>ECU Manufacturer</th>
<th>ECU Model</th>
<th>Car model</th>
</tr>
</thead>
<tbody>
<tr>
<td>GM</td>
<td>Z06_LS7</td>
<td>C6 Z06 LS7 2005-2013</td>
</tr>
<tr>
<td>GM</td>
<td>C7_STINGRAY</td>
<td>C7 Stingray from 2014</td>
</tr>
</tbody>
</table>
3
Available channels

Channels received by AiM devices connected to Corvette cars depend on the selected protocol.

3.1 "GM" "C6_LS2" protocol

Channels received by AiM devices connected to "GM" "C6_LS2" protocol are:

<table>
<thead>
<tr>
<th>ID</th>
<th>CHANNEL_NAME</th>
<th>FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECU_1</td>
<td>GMX_RPM</td>
<td>RPM</td>
</tr>
<tr>
<td>ECU_2</td>
<td>GMX_SPEED</td>
<td>Vehicle speed</td>
</tr>
<tr>
<td>ECU_3</td>
<td>GMX_ACC</td>
<td>Accelerometer</td>
</tr>
<tr>
<td>ECU_4</td>
<td>GMX_PPS</td>
<td>Pedal position sensor</td>
</tr>
<tr>
<td>ECU_5</td>
<td>GMX_TPS</td>
<td>Throttle position sensor</td>
</tr>
<tr>
<td>ECU_6</td>
<td>GMX_TENGINE</td>
<td>Engine temperature</td>
</tr>
<tr>
<td>ECU_7</td>
<td>GMX_AIR_TEMP</td>
<td>Intake air Temperature</td>
</tr>
<tr>
<td>ECU_8</td>
<td>GMX_FUEL_LEVEL</td>
<td>Fuel Level</td>
</tr>
<tr>
<td>ECU_9</td>
<td>GMX_FUEL_USED</td>
<td>Used fuel</td>
</tr>
<tr>
<td>ECU_10</td>
<td>GMX_OIL_PRESS</td>
<td>Oil pressure</td>
</tr>
<tr>
<td>ECU_11</td>
<td>GMX_WH_SPD_FL</td>
<td>Front Left wheel speed</td>
</tr>
<tr>
<td>ECU_12</td>
<td>GMX_WH_SPD_FR</td>
<td>Front Rear wheel speed</td>
</tr>
<tr>
<td>ECU_13</td>
<td>GMX_WH_SPD_RL</td>
<td>Rear left wheel speed</td>
</tr>
<tr>
<td>ECU_14</td>
<td>GMX_WH_SPD_RR</td>
<td>Rear right wheel speed</td>
</tr>
<tr>
<td>ECU_15</td>
<td>GMX_STR_WHEEL_ANG</td>
<td>Steering angle</td>
</tr>
<tr>
<td>ECU_16</td>
<td>GMX_YAW_RATE</td>
<td>Yaw rate</td>
</tr>
<tr>
<td>ECU_17</td>
<td>GMX_GEAR</td>
<td>Engaged gear</td>
</tr>
<tr>
<td>ECU_18</td>
<td>GMX_OIL_TEMP</td>
<td>Oil temperature</td>
</tr>
</tbody>
</table>

**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.
### 3.2 "GM" "Z06_LS7" protocol

Channels received by AiM devices connected to "GM" "Z06_LS7" protocol are:

<table>
<thead>
<tr>
<th>ID</th>
<th>CHANNEL NAME</th>
<th>FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECU_1</td>
<td>GMX_RPM</td>
<td>RPM</td>
</tr>
<tr>
<td>ECU_2</td>
<td>GMX_SPEED</td>
<td>Vehicle speed</td>
</tr>
<tr>
<td>ECU_3</td>
<td>GMX_ACC</td>
<td>Acceleration</td>
</tr>
<tr>
<td>ECU_4</td>
<td>GMX_PPS</td>
<td>Pedal position sensor</td>
</tr>
<tr>
<td>ECU_5</td>
<td>GMX_TPS</td>
<td>Throttle position sensor</td>
</tr>
<tr>
<td>ECU_6</td>
<td>GMX_TENGINE</td>
<td>Engine temperature</td>
</tr>
<tr>
<td>ECU_7</td>
<td>GMX_AIR_TEMP</td>
<td>Intake air temperature</td>
</tr>
<tr>
<td>ECU_8</td>
<td>GMX_FUEL_LEVEL</td>
<td>Fuel level</td>
</tr>
<tr>
<td>ECU_9</td>
<td>GMX_FUEL_USED</td>
<td>Used fuel</td>
</tr>
<tr>
<td>ECU_10</td>
<td>GMX_OIL_PRESS</td>
<td>Oil pressure</td>
</tr>
<tr>
<td>ECU_11</td>
<td>GMX_WH_SPD_FL</td>
<td>Front left wheel speed</td>
</tr>
<tr>
<td>ECU_12</td>
<td>GMX_WH_SPD_FR</td>
<td>Front right wheel speed</td>
</tr>
<tr>
<td>ECU_13</td>
<td>GMX_WH_SPD_RL</td>
<td>Rear left wheel speed</td>
</tr>
<tr>
<td>ECU_14</td>
<td>GMX_WH_SPD_RR</td>
<td>Rear right wheel speed</td>
</tr>
<tr>
<td>ECU_15</td>
<td>GMX_STR_WH_ANG</td>
<td>Steering angle</td>
</tr>
<tr>
<td>ECU_16</td>
<td>GMX_YAW_RATE</td>
<td>Yaw rate</td>
</tr>
</tbody>
</table>

**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.
### 3.3 "GM" "C7_STINGRAY" protocol

Channels received by AiM devices connected to "GM" "C7_STINGRAY" protocol are:

<table>
<thead>
<tr>
<th>ID</th>
<th>CHANNEL NAME</th>
<th>FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECU_1</td>
<td>ECU_RPM</td>
<td>RPM</td>
</tr>
<tr>
<td>ECU_2</td>
<td>ECU_VEH_SPD</td>
<td>Vehicle speed</td>
</tr>
<tr>
<td>ECU_3</td>
<td>ECU_TPS</td>
<td>Throttle position sensor</td>
</tr>
<tr>
<td>ECU_4</td>
<td>ECU_STEER_ANG</td>
<td>Steering angle</td>
</tr>
<tr>
<td>ECU_5</td>
<td>ECU_STEER_SPD</td>
<td>Steering speed</td>
</tr>
<tr>
<td>ECU_6</td>
<td>ECU_ECT</td>
<td>Engine coolant temperature</td>
</tr>
<tr>
<td>ECU_7</td>
<td>ECU_IAT</td>
<td>Intake air temperature</td>
</tr>
<tr>
<td>ECU_8</td>
<td>ECU_BRK_SW</td>
<td>Brake switch</td>
</tr>
<tr>
<td>ECU_9</td>
<td>ECU_OILP_SW</td>
<td>Oil pressure switch</td>
</tr>
<tr>
<td>ECU_10</td>
<td>ECU_MAP_OBD</td>
<td>Manifold air pressure via OBD</td>
</tr>
<tr>
<td>ECU_11</td>
<td>ECU_CLUTCH</td>
<td>Clutch switch</td>
</tr>
<tr>
<td>ECU_12</td>
<td>ECU_HANDBRK</td>
<td>Hand brake switch</td>
</tr>
<tr>
<td>ECU_13</td>
<td>ECU_GEAR</td>
<td>Engaged gear</td>
</tr>
<tr>
<td>ECU_14</td>
<td>ECU_BRK_PRES</td>
<td>Brake pressure</td>
</tr>
<tr>
<td>ECU_15</td>
<td>ECU_SPD_RL</td>
<td>Rear left wheel speed</td>
</tr>
<tr>
<td>ECU_16</td>
<td>ECU_SPD_RR</td>
<td>Rear right wheel speed</td>
</tr>
<tr>
<td>ECU_17</td>
<td>ECU_SPD_FL</td>
<td>Front left wheel speed</td>
</tr>
<tr>
<td>ECU_18</td>
<td>ECU_SPD_FR</td>
<td>Front right wheel speed</td>
</tr>
<tr>
<td>ECU_19</td>
<td>ECU_TRASM_T</td>
<td>Transmission temperature</td>
</tr>
<tr>
<td>ECU_20</td>
<td>ECU_OIL_T</td>
<td>Oil temperature</td>
</tr>
<tr>
<td>ECU_21</td>
<td>ECU_BRK_PERC</td>
<td>Brake percentage</td>
</tr>
<tr>
<td>ECU_22</td>
<td>ECU_LAT_ACC</td>
<td>Lateral accelerometer</td>
</tr>
</tbody>
</table>
ECU_23  ECU_GYRO  Gyroscope
ECU_24  ECU_OIL_P  Oil pressure
ECU_25  ECU_RED_PW  Reduced power indication
ECU_26  ECU_MIL  Malfunctioning indication lamp

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