



## AiM Infotech

### Haltech Platinum Sprint

Release 1.02



This tutorial explains how to connect Haltech Platinum Sprint 500 ECU to AIM devices.

# 1

## Haltech CAN protocol

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Haltech Platinum Sprint 500 communicates using the CAN bus.

As for Haltech CAN Broadcast Protocol, there are two versions of Haltech CAN protocol:

- V1 installed in all Haltech Platinum Sprint 500 but that will be dismissed;
- V2 installed in all Haltech Platinum Sprint 500 starting from firmware version 1.11.

We recommend to always have your ECU updated to the last firmware. Please address to Haltech for software/firmware settings and/or upgrading.

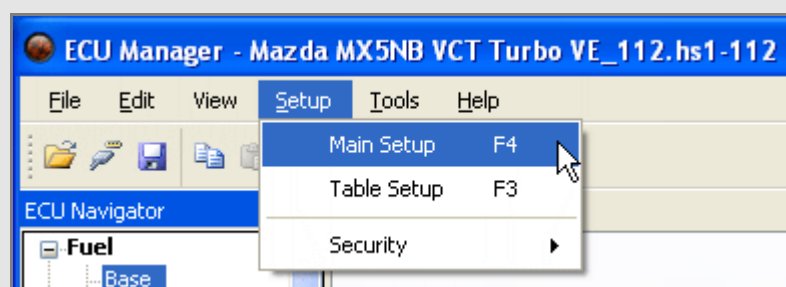
### 1.1

## CAN MODE check

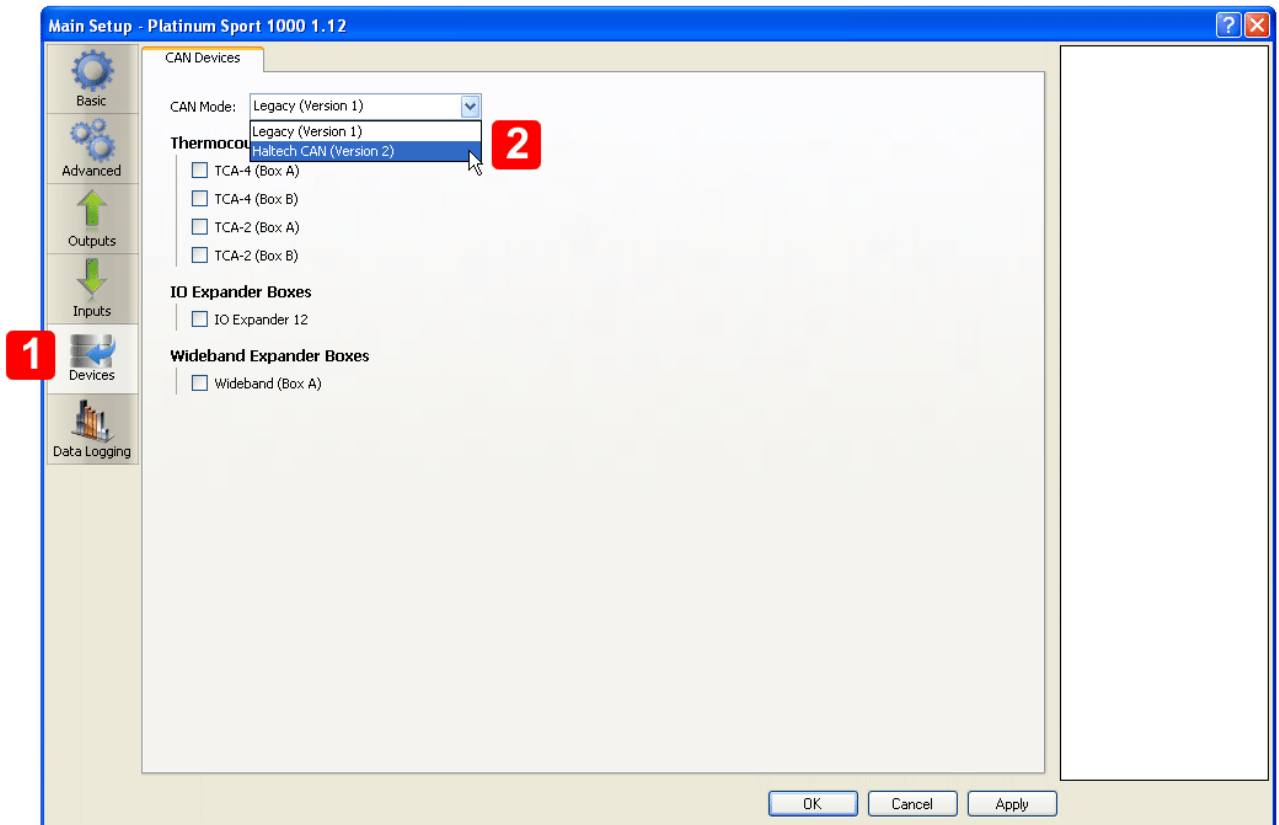
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Before attempting any communication between Haltech ECU and AiM devices ensure that your ECU has CAN export data mode enabled. Here is explained how to check/change this setting.

Open "ECU Manager" software and follow this path: "Setup ->Main Setup" as shown here below.

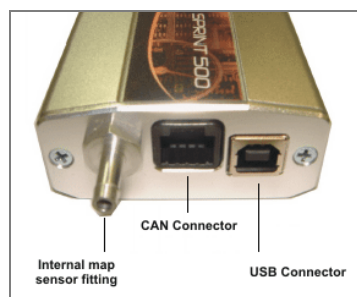


In Main Setup window select "Device" layer and set "CAN Mode" on "Haltech CAN (Version 2)" as shown here below then press "OK" and transmit the configuration to the ECU.

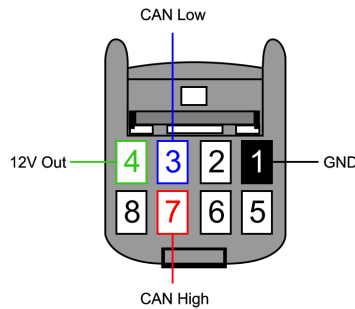


## 2 CAN Communication setup

Haltech Platinum Sprint 500 ECU has an 8 pins CAN rear central female connector shown here below. The connector is sold separately by Haltech and its part number is #HT030003. Please refer to Haltech for any other information about Haltech hardware components.



This ECU needs GND and Vbatt connection too. Please refer to your AiM device pinout to connect them. ECU CAN connector pinout and connection table are shown below.



| 8 pins connector pin | Pin function | AiM cable label |
|----------------------|--------------|-----------------|
| 4                    | 12V Out      | VBatt           |
| 1                    | GND          | GND             |
| 7                    | CAN High     | CAN+            |
| 3                    | CAN Low      | CAN-            |

### 3 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 "HALTECH"
- ECU Model:
  - "CAN" if your ECU **firmware version** is **up to 1.10**;
  - "CAN\_V2" if your ECU **firmware version** is **from 1.11 (included)** onward.

## 4

# Available channels

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Channels received by AIM devices connected to Haltech Platinum Sprint 500 changes according to the selected protocol.

## 4.1

### "Haltech" "CAN" protocol

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Channels received by AIM devices connected to "Haltech" "CAN" protocol are:

| <b>ID</b> | <b>CHANNEL NAME</b> | <b>FUNCTION</b>            |
|-----------|---------------------|----------------------------|
| ECU_1     | HAL_RPM             | RPM                        |
| ECU_2     | HAL_SPEED           | Speed                      |
| ECU_3     | HAL_OIL_PRESS       | Oil pressure               |
| ECU_4     | HAL_OIL_TEMP        | Oil temperature            |
| ECU_5     | HAL_ECT             | Engine cooling temperature |
| ECU_6     | HAL_FUEL_PRESS      | Fuel pressure              |
| ECU_7     | HAL_BATT_VOLT       | Battery supply             |
| ECU_8     | HAL_TPS             | Throttle position sensor   |
| ECU_9     | HAL_MAP             | Manifold air pressure      |
| ECU_10    | HAL_AIR_TEMP        | Air temperature            |
| ECU_11    | HAL_EGT             | Exhausted gas temperature  |
| ECU_12    | HAL_LAMBDA          | Lambda value               |
| ECU_13    | HAL_IGN_ADV         | Ignition advance           |
| ECU_14    | HAL_GEAR            | Engaged gear               |
| ECU_15    | HAL_INJ_DCYCLE      | Injection duty cycle       |

## 4.2 "Haltech" "CAN\_V2" protocol

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Channels received by AIM devices connected to "Haltech" "CAN\_V2" protocol are:

| <b>ID</b> | <b>CHANNEL NAME</b> | <b>FUNCTION</b>            |
|-----------|---------------------|----------------------------|
| ECU_1     | H_RPM               | RPM                        |
| ECU_2     | H_VEH_SPEED         | Vehicle speed              |
| ECU_3     | H_WHEEL_FL          | Front left wheel speed     |
| ECU_4     | H_WHEEL_FR          | Front right wheel speed    |
| ECU_5     | H_WHEEL_RL          | Rear left wheel speed      |
| ECU_6     | H_WHEEL_RR          | Rear right wheel speed     |
| ECU_7     | H_THROTTLE          | Throttle position sensor   |
| ECU_8     | H_BOOST_OUTPUT      | Boost output               |
| ECU_9     | H_MANIF_PR          | Manifold air pressure      |
| ECU_10    | H_DECEL_CUT         | Deceleration cut           |
| ECU_11    | H_FUEL_PR           | Fuel pressure              |
| ECU_12    | H_OIL_PR            | Oil pressure               |
| ECU_13    | H_CLUTCH            | Clutch                     |
| ECU_14    | H_LAMBDA1           | Lambda value 1             |
| ECU_15    | H_LAMBDA2           | Lambda value 2             |
| ECU_16    | H_TIMED_DUTY_1      | Timed duty cycle 1         |
| ECU_17    | H_TIMED_DUTY2       | Timed duty cycle 2         |
| ECU_18    | H_COOLANT_T         | Engine coolant temperature |
| ECU_19    | H_AIR_T1            | Air temperature 1          |
| ECU_20    | H_FUEL_T            | Fuel temperature           |
| ECU_21    | H_OIL_T             | Oil temperature            |
| ECU_22    | H_GEAR              | Engaged gear               |
| ECU_23    | H_EGT1              | Exhaust gas temperature 1  |
| ECU_24    | H_EGT2              | Exhaust gas temperature 2  |
| ECU_25    | H_EGT3              | Exhaust gas temperature 3  |



|        |                |                           |
|--------|----------------|---------------------------|
| ECU_26 | H_EGT4         | Exhaust gas temperature 4 |
| ECU_27 | H_EGT5         | Exhaust gas temperature 5 |
| ECU_28 | H_EGT6         | Exhaust gas temperature 6 |
| ECU_29 | H_EGT7         | Exhaust gas temperature 7 |
| ECU_30 | H_EGT8         | Exhaust gas temperature 8 |
| ECU_31 | H_TRIGGER_CNT  | Trigger counter           |
| ECU_32 | H_HOME_CNT     | Home counter              |
| ECU_33 | H_MISS_CNT     | Missing counter           |
| ECU_34 | H_TRIGGER_LAST | Trigger last              |
| ECU_35 | H_TRASM_T      | Transmission temperature  |
| ECU_36 | H_DIFF_T       | Differential temperature  |
| ECU_37 | H_INJ_DUTY_1   | Injection duty cycle 1    |
| ECU_38 | H_INJ_DUTY_2   | Injection duty cycle 2    |
| ECU_39 | H_IGN_ANG_LE   | Ignition angle lead       |
| ECU_40 | H_IGN_ANG_TR   | ignition angle thyristor  |
| ECU_41 | H_IN_CAM_ANG_1 | internal camshaft angle 1 |
| ECU_42 | H_IN_CAM_ANG_2 | internal camshaft angle 2 |
| ECU_43 | H_EX_CAM_ANG_1 | external camshaft angle 1 |
| ECU_44 | H_EX_CAM_ANG_2 | external camshaft angle 2 |
| ECU_45 | H_WHEEL_SLIP   | Wheel slip                |
| ECU_46 | H_FUEL_COMPOS  | Fuel composition          |
| ECU_47 | H_BRAKE_PR     | Brake pressure            |
| ECU_48 | H_NOS_PR       | NO2 Pressure              |
| ECU_49 | H_BARO_PR      | Barometric pressure       |
| ECU_50 | H_FUEL_CONSUMP | Fuel consumption          |
| ECU_51 | H_BOOST_TARGET | Boost target              |
| ECU_52 | H_AIR_T2       | Air temperature 2         |
| ECU_53 | H_BATT_VOLT    | Battery supply            |
| ECU_54 | H_KNOCK_RET_B1 | Knock retard B1           |
| ECU_55 | H_KNOCK_LEVEL  | Knock level               |
| ECU_56 | H_L_ANTILAG_ON | Left Antilag on           |
| ECU_57 | H_L_ANTILAG_SW | Left Antilag switch       |



|        |                |  |
|--------|----------------|--|
| ECU_58 | H_REV_LIMITER  | Revolution limiter (speed limiter)             |
| ECU_59 | H_R_ANTILAG_SW | Right Antilag switch                           |
| ECU_60 | H_NOS_SW       | NO2 switch                                     |
| ECU_61 | H_NOS_ACT      | NO2 actual                                     |
| ECU_62 | H_MIL_CHK_ENG  | Malfunctioning indicator lamp for engine check |
| ECU_63 | H_TURBO_SPEED  | Turbo speed                                    |
| ECU_64 | H_FUEL_CUT     | Fuel cut                                       |
| ECU_65 | H_FUEL_FLOW    | Fuel flow                                      |
| ECU_66 | H_FUEL_FLOW_R  | Fuel flow return                               |
| ECU_67 | H_FTRIMSHORTB1 | Fuel trim short term bank 1                    |
| ECU_68 | H_FTRIMSHORTB2 | Fuel trim short term bank 2                    |
| ECU_69 | H_FTRIMLONGB1  | Fuel trim long term bank 1                     |
| ECU_70 | H_FTRIMLONGB2  | Fuel trim long term bank 2                     |
| ECU_71 | H_GEAR_SHIFT   | Engaged gear                                   |
| ECU_72 | H_FLAT_SHIFT   | Neutral signal                                 |
| ECU_73 | H_BATT_CHRG    | Battery supply                                 |
| ECU_74 | H_LIMP_MODE    | LIMP mode active                               |
| ECU_75 | H_AVE_FUEL_ECO | Average fuel economy                           |