

ECUMASTER ADU

Application Note



HALTECH ELITE 1500 & 2500

Revision 1.00

1. Copyright and trademarks

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2. Introduction

This application note explains how to connect and configure the Haltech Elite 1500-2500 series with the ECUMASTER ADU.

3. Electrical connection

The Haltech Elite ECUs are able to send the data stream over two independent CAN networks. One of the CAN BUS is located on main connector B (Vehicle network communication), the second one is located on Aux CAN Port connector (Haltech devices communication).

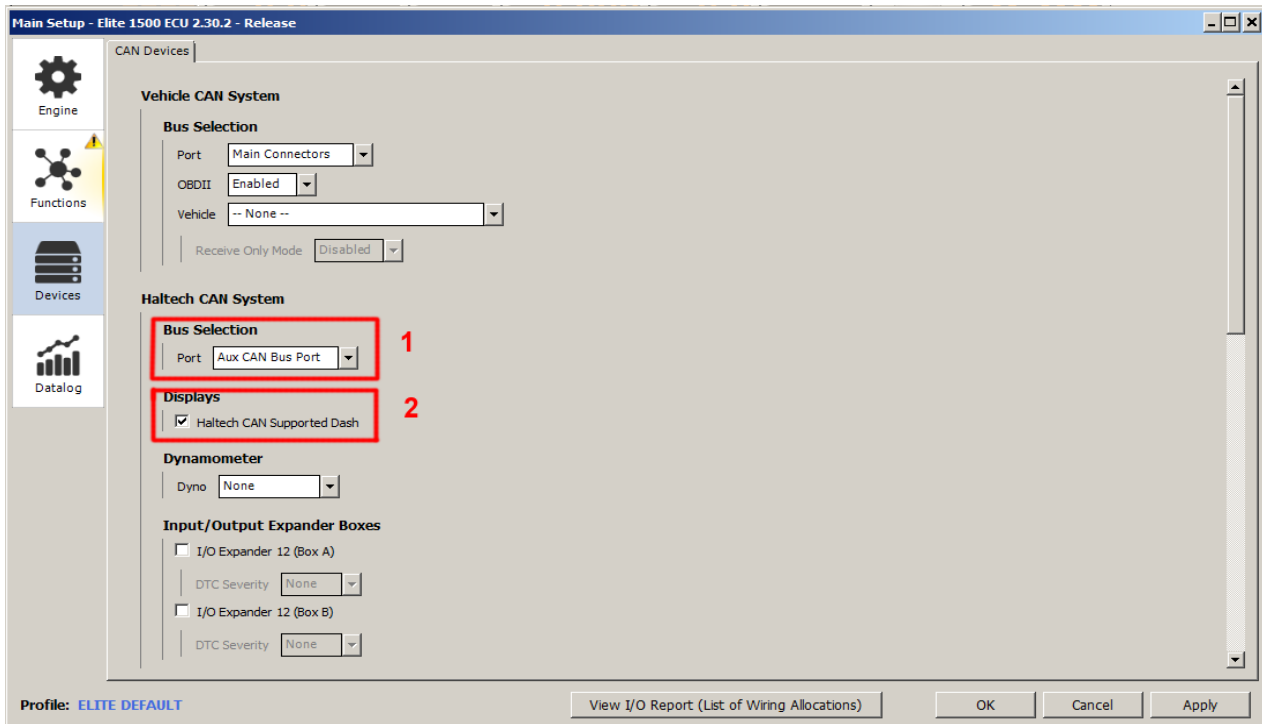


TERMINAL	ADU CAN1	ADU CAN2	Comment
AUX CAN PIN 4	4	6	CAN L
AUX CAN PIN 4	3	5	CAN H
CONN B PIN 24	4	6	CAN L
CONN B PIN 23	3	5	CAN H

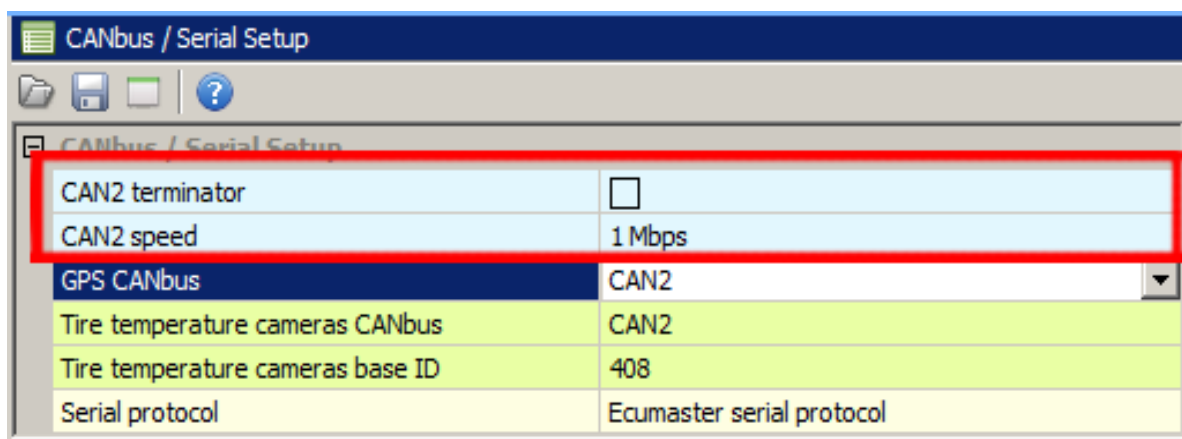
Twisted pair cable is required for any CAN BUS connection.
Ensure that the CAN BUS is properly terminated.

4. ADU and HALTECH ELITE configuration

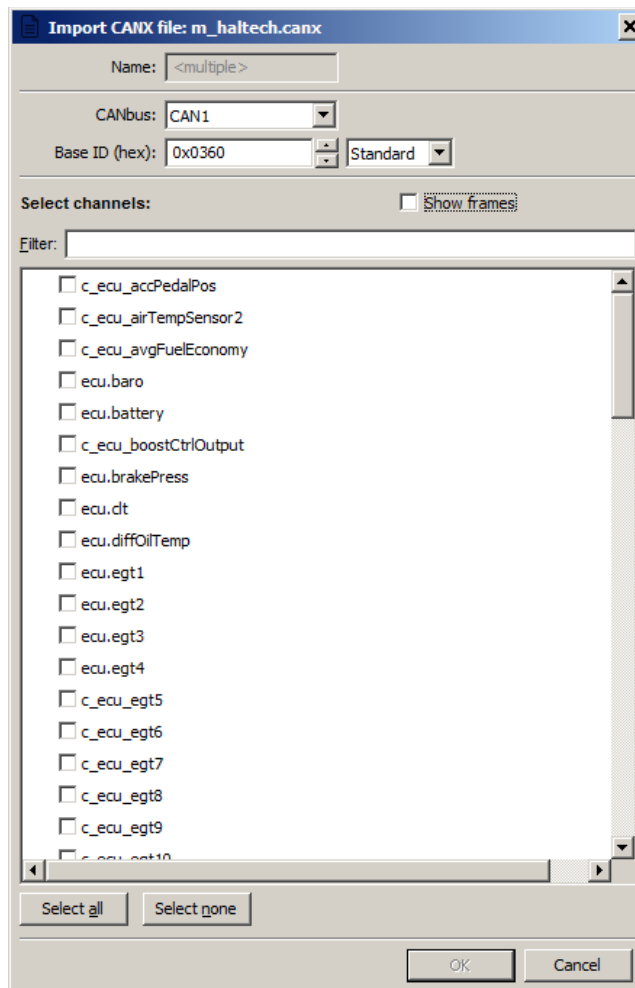
The first step is to enable Dash output protocol in Setup/ Main setup / Devices window. In the dropdown list **Bus Selection** (1) you can choose what CAN network will be used to send data (Main connector or Aux CAN Bus Port). The Haltech **CAN supported Dash** (2) option need to be selected too.



If you use ADU CAN1, the speed is fixed at 1Mbps and no CAN configuration is required. If you choose to ADU CAN2 bus, you must set proper CAN BUS speed (1Mbps) and termination. To open CAN2 configuration, press F9 to show the pane selector. Then open “*General / CAN BUS Serial setup*”.

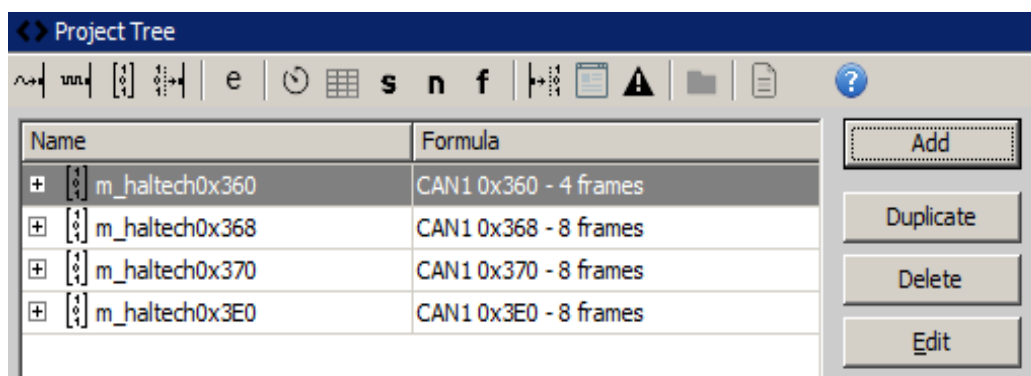


The next step is to load the CANX file with Haltech Elite channels definitions.



On the Project tree, click the “Add” button and select “Import .CANX file”. When the file dialog opens, select the “haltech.canx” file. The following dialog appears:

At this point, select the CAN BUS that will be used for communication (CAN1 or CAN2) and the channels you want to read. In most situations all channels should be loaded (Select All). The project tree should look like the following:



If you open “m_haltechXXX” mobs, all available CAN inputs (channels) should be visible.

5. Supported channels

ADU channel	Description
ecu.rpm	Engine RPM
ecu.map	Manifold absolute pressure
ecu.tps	Throttle position sensor
ecu.waterPress	Coolant pressure
ecu.fuelPress	Fuel pressure
ecu.oilPress	Oil pressure
c_ecu_accPedalPos	Accelerator pedal pos
c_ecu_wgPress	Wastegate pressure
ecu.injDC	Primary injectors duty cycle
ecu.secInjDC	Secondary injectors duty cycle
ecu.ignAngle	Ignition angle (Leading)
c_ecu_ignAngleTrailing	Ignition angle (Trailing)
c_ecu_wheelSlip	Wheel slip
c_ecu_wheelDiff	Wheel speed difference
c_ecu_engineAcc	Engine acceleration
c_ecu_map2	Manifold absolute pressure 2
ecu.lambda1	Lambda 1
ecu.lambda2	Lambda 2
c_ecu_lambda3	Lambda 3
c_ecu_lambda4	Lambda 4
c_ecu_missCount	Missfire count
c_ecu_triggerCounter	Trigger count
c_ecu_homeCounter	Home counter
c_ecu_triggerSinceLastHome	Triggers since last home
c_ecu_knckLv1Logged	Logged knock level 1
c_ecu_knckLv1Logged2	Logged knock level 2
c_ecu_knckRetardBank1	Knock retard bank 1
c_ecu_knckRetardBank2	Knock retard bank 2
c_ecu_brakePress	Brake pressure
c_ecu_NOSPress	Nitrous pressure
c_ecu_turboSpeed	Turboshaft speed
c_ecu_wheelSpeedFL	Front left wheel speed
c_ecu_wheelSpeedFR	Front right wheel speed
c_ecu_wheelSpeedRL	Rear left wheel speed

c_ecu_wheelSpeedRR	Rear right wheel speed
c_ecu_wheelSpeedFront	Front wheels speed
c_ecu_wheelSpeedRear	Rear wheels speed
c_ecu_exCamAngle1	Exhaust CAM angle 1
c_ecu_exCamAngle2	Exhaust CAM angle 2
c_ecu_fuelCutPerc	Fuel cut percent
c_ecu_lclgnRetard	Launch control ignition retard
c_ecu_lcFuelEnrich	Launch control fuel enrichment
c_ecu_boostCtrlOutput	Boost control output DC
c_ecu_timedOutDuty1	Timed duty output DC 1
c_ecu_timedOutDuty2	Timed duty output DC 2
ecu.speed	Vehicle speed
ecu.gear	Current gear
c_ecu_inCamAngle1	Intake CAM angle 1
c_ecu_inCamAngle2	Intake CAM angle 2
ecu.battery	Battery voltage
c_ecu_airTempSensor2	Air temperature sensor 2
c_ecu_targetBoostLevel	Boost target
ecu.baro	Barometric pressure
ecu.egt1	Exhaust gas temperature 1
ecu.egt2	Exhaust gas temperature 2
ecu.egt3	Exhaust gas temperature 3
ecu.egt4	Exhaust gas temperature 4
c_ecu_egt5	Exhaust gas temperature 5
c_ecu_egt6	Exhaust gas temperature 6
c_ecu_egt7	Exhaust gas temperature 7
c_ecu_egt8	Exhaust gas temperature 8
c_ecu_egt9	Exhaust gas temperature 9
c_ecu_egt10	Exhaust gas temperature 10
c_ecu_egt11	Exhaust gas temperature 11
c_ecu_egt12	Exhaust gas temperature 12
ecu.clt	Coolant temperature
ecu.iat	Intake air temperature
ecu.fuelTemp	Fuel temperature
ecu.oilTemp	Oil temperature
ecu.gearboxOilTemp	Gearbox oil temperature
ecu.diffOilTemp	Differential oil temperature
ecu.ethanolContent	Fuel ethanol content

c_ecu_fuelConsumptionRate	Fuel consumption rate in L/h
c_ecu_avgFuelEconomy	Average fuel economy in L/100km
c_ecu_fuelTrimShortBank1	Short term fuel trim for bank 1
c_ecu_fuelTrimShortBank2	Short term fuel trim for bank 2
c_ecu_fuelTrimLongBank3	Long term fuel trim for bank 1
c_ecu_fuelTrimLongBank4	Long term fuel trim for bank 2

6. Revision log