



Revision	Date
Initial Release	Jan 25, 2017
Added 550, 750, 1000, 2000	Mar 9, 2017
Updated data stream to V2.2	Apr 17, 2018
Fixed pinout on Aux CAN port	June 4, 2018



**CAN  
data**



### *Haltech Elite ECU CAN Interface to CD-5 & CD-7 Displays*

## Supported Devices

Elite 550

Elite 750

Elite 950

Elite 1000

Elite 1500

Elite 2000

Elite 2500

Elite 2500T

## Supported Channels

The CD-5 & CD-7 displays support 114 independent channels transmitted by the Haltech ECUs under the V2.2 protocol; consisting of 91 Data channels and 23 Status channels.

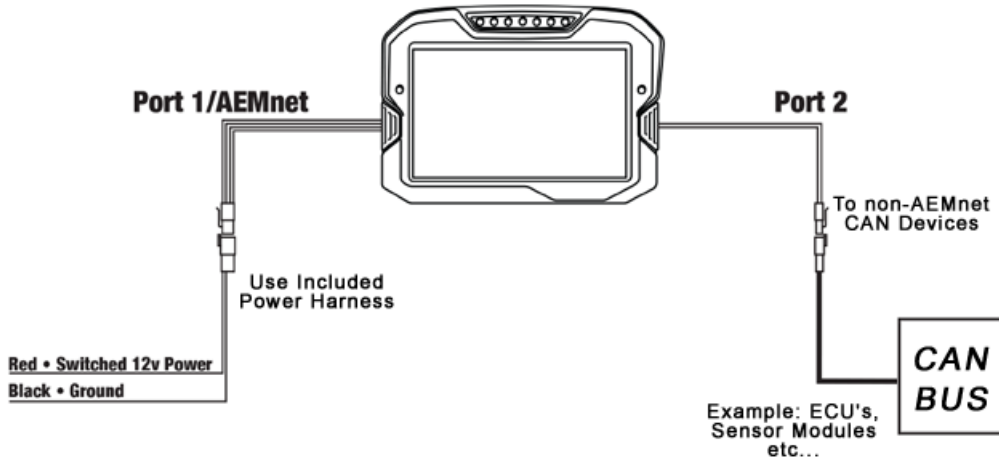
Note: not all Haltech ECU's will transmit values on all channels.

AFR1 (L)	FuelLevel (L)
AFR1LongTermFuelTrim (%)	FuelMassFlowDiffRate (ml/min)
AFR1ShortTermFuelTrim (%)	FuelMassFlowRate (ml/min)
AFR2 (L)	FuelMassFlowReturnRate (ml/min)
AFR2LongTermFuelTrim (%)	FuelPress (bar)
AFR2ShortTermFuelTrim (%)	FuelTemp (C)
AFR3 (L)	GearboxTemp (C)
AFR4 (L)	GearPosCalculated
AmbientAirTemp (C)	GearShiftCutState (On/Off)
AntilagActiveState (On/Off)	GearShiftSwitchState (On/Off)
AntilagFuelEnrich (deg)	IgnitionSwitchState
AntilagIgnRetardOffset (deg)	IgnitionTiming (deg)
AntilagSwitchStatus (On/Off)	IgnitionTiming_Trailing (deg)
BaroPress (kPa)	IndicatorBatteryState (On/Off)
BoostControlOutput (%)	IndicatorHighBeamState (On/Off)
BoostControlTarget (kPa)	IndicatorLeftTurnState (On/Off)
BrakePress (bar)	IndicatorParkingBrakeState (On/Off)
BrakeSwitchState (On/Off)	IndicatorRightTurnState (On/Off)
CamExhaustBank1Pos (deg)	IntakeManifoldAirPress (kPa)
CamExhaustBank2Pos (deg)	IntakeManifoldAirPress2 (kPa)
CamIntakeBank1Pos (deg)	IntakeManifoldAirTemp (C)
CamIntakeBank2Pos (deg)	KnockBank1IgnOffset (deg)
ClutchSwitchState (On/Off)	KnockBank2IgnOffset (deg)
CoolantPress (bar)	KnockLevelLogged
CoolantTemp (C)	KnockLevelLogged2
DifferentialOilTemp (C)	LimpHomeModeState (On/Off)
ECU_HomeCounter	MILState (On/Off)
ECU_MissCount	NitrousBottlePress (bar)
ECU_TriggerCounter	NitrousBottlePress2 (bar)
ECU_TriggersSinceLastHome	NitrousBottlePress3 (bar)
ECUBatteryVoltage (V)	NitrousBottlePress4 (bar)
EngineProtectionState (On/Off)	NitrousOutputState (On/Off)
EngineSpeed (rpm)	NitrousSwitchState (On/Off)
EngineSpeedAuxLimitState (On/Off)	OilPress (bar)

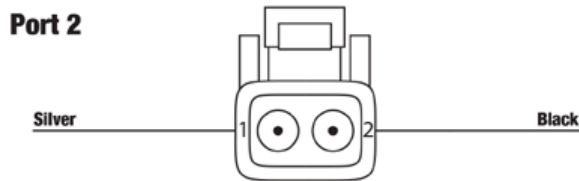
EngineSpeedRateofChange (rev/s^2)	OilTemp (C)
ExhaustTemp1 (C)	RallyAntiLagSwitchState (On/Off)
ExhaustTemp2 (C)	SteeringWheelAngle (deg)
ExhaustTemp3 (C)	ThrottlePedalPos (%)
ExhaustTemp4 (C)	ThrottlePos (%)
ExhaustTemp5 (C)	TimedDutyOutputDuty1 (%)
ExhaustTemp6 (C)	TimedDutyOutputDuty2 (%)
ExhaustTemp7 (C)	TimedDutyOutputState (On/Off)
ExhaustTemp8 (C)	TracControlCutState (On/Off)
ExhaustTemp9 (C)	TracControlSlipMeasured (km/h)
ExhaustTemp10 (C)	TracControlTorqueReduceState (On/Off)
ExhaustTemp11 (C)	TurboSpeed (rpm)
ExhaustTemp12 (C)	TurboTimerEngTimeRemaining (s)
FuelAccelPumpState (On/Off)	TurboTimerTimeRemaining (s)
FuelConsumptionRate (L/h)	VehicleSpeed (km/h)
FuelCut (%)	WastegatePress (kPa)
FuelDecelCutState (On/Off)	WheelSpeedAvgFront (km/h)
FuelEconomyAverage (L/100km)	WheelSpeedAvgRear (km/h)
FuelEthanolContent (%)	WheelSpeedDifference (km/h)
FuelInjDutyPrimary (%)	WheelSpeedFrontLeft (km/h)
FuelInjDutySecondary (%)	WheelSpeedFrontRight (km/h)
VehicleLateralG (G)	WheelSpeedRearLeft (km/h)
VehicleLongitudinalG (G)	WheelSpeedRearRight (km/h)

# CAN Bus Wiring on the CD-5 & CD-7

The AEM CD-5 & CD-7 each have 2 separate CAN ports. For 3<sup>rd</sup> party devices, AEM recommends you use AEM CAN BUS 2, whose connection can be found in the 2 pin Deutsch DTM connector with Silver and Black wires.



Connecting CD Dash to non-AEMnet devices requires that the included power harness be used to power the dash. Red & Black wires from the power harness should be connected to switched, fused 12V power and ground, respectively



**CAN connector port 2 pinouts**

PORT 2		
PIN	WIRE COLOR	FUNCTION
1	SILVER	Port 2 CAN+
2	BLACK	Port 2 CAN-

## CAN Bus Wiring on the ECU

The larger Haltech Elite ECU's (1000, 1500, 2000,2500) have the CAN bus available at 2 different locations. On the main 26P connector and also on the dedicated CAN connector. You can use either location. On the 550, 750 and 950, it is only in the main 36P connector.

### !!! WARNING !!!

**THE HALTECH ECUS AND AEM HAVE BOTH SELECTED SAME CONNECTOR AS THE CAN NETWORK CONNECTOR BUT DO NOT SHARE THE SAME PINOUT OR THE SAME WIRE COLORS. DO NOT CONNECT THE AEM DASH HARNESS CONNECTOR DIRECTLY TO THE HALTECH ECU!**

#### Elite 550, 750, 950 ECU's

Haltech CAN HI (Pin 16, 34P conn) → AEM CAN 2+, (pin 1, silver wire)

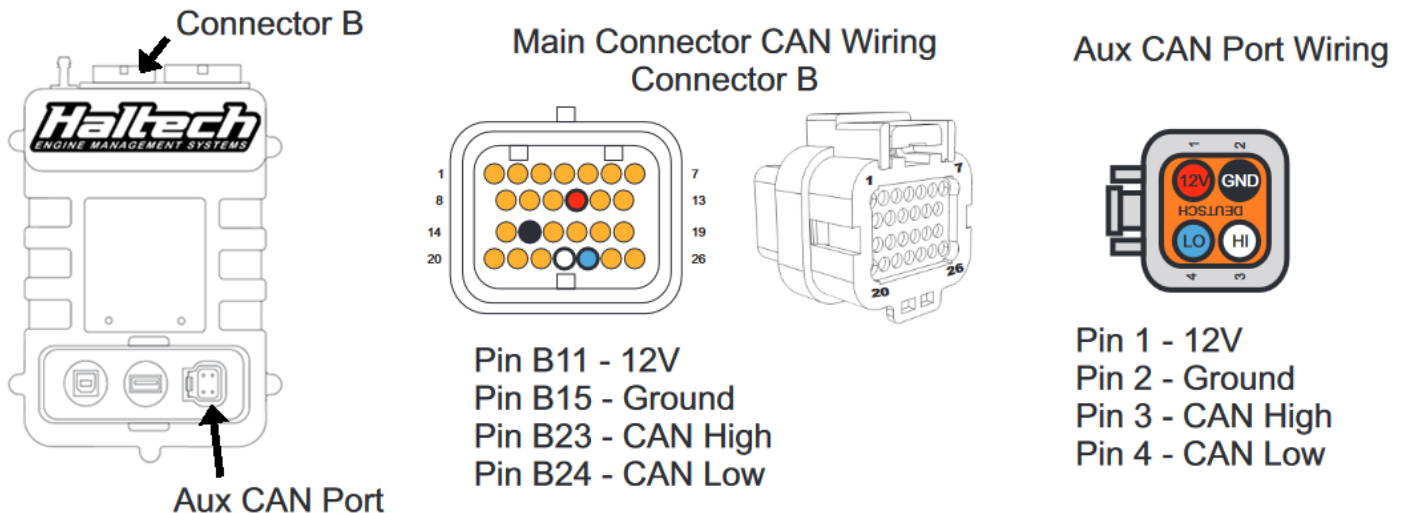
Haltech CAN LO (Pin 17, 34P conn) → AEM CAN 2-, (pin 2, black wire)

#### Elite 1000, 1500, 2000, 2500, 2500T ECU's

Haltech CAN HI (Pin B23, 26P conn) → AEM CAN 2+, (pin 1, silver wire)

Haltech CAN LO (Pin B24, 26P conn) → AEM CAN 2-, (pin 2, black wire)

The larger Elite ECUs also have a dedicated CAN connector (Aux CAN Port). Be careful with this pinout if you use this connector as it is the same connector AEM uses for CAN but the pinout is different!



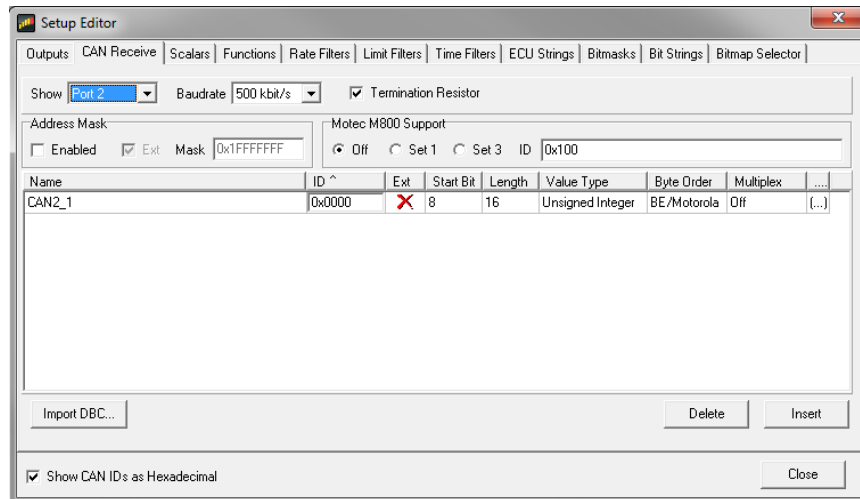
Follow Haltech instructions to determine if you need a terminating resistor at the ECU.

## Haltech Software Setup

Open ECU Manager and select; Setup | Main Setup, then under CAN Mode: select "Haltech CAN (Version 2)"

# AEM CD-5 & CD-7 Setup

To import the Haltech V2 CAN setup you select SETUP then DISPLAY from the main DashDisplay menu. Once the dialog box opens you select the “CAN Receive” tab.



Change the settings to the following:

**Show:** “Port 2”

**Baudrate:** 1 Mbit/s

**Termination Resistor:** “ON”

**Address Mask:** “OFF”

**M800 Support:** “OFF”

Then click on “Import CAN” on the lower left and open the “Haltech\_V2\_RevX” file. You can view what is in the file or just click “Import”. There will now be 114 new items shown under CAN BUS 2.

There will also be a large number of new outputs created and they are accessed in the “Outputs” tab. They can now be viewed on the display or logged. You can rename, filter, or manipulate any of these channels to make them more useful.