Haltech CAN Protocol Document

The current Haltech CAN protocol is based on the AIM CAN protocol. The protocol operates at a bit rate of 1Mbit/sec. It uses the base format (CAN 2.0a - 11 bit identifiers).

ID	Byte	Channel	Units	Resolution
0x010	0 – 1	RPM	RPM	1 RPM
	2 – 3	Road Speed	Km/h	0.1 km/h
	4 – 5	Oil Pressure	Bar	0.1 Bar
	6 – 7	N/A[1]	0	
0x011	8 – 9	Coolant Temperature	Deg C	0.1 Deg C
	10 – 11	Fuel Pressure	Bar	0.1 Bar
	12 – 13	Battery Voltage	Volts	0.01 Volts
	14 – 15	Throttle Position	%	0.1 %
0x012	16 – 17	Manifold Pressure	mBar	1 mBar
	18 – 19	Air Temperature	Deg C	0.1 Deg C
	20 – 21	N/A[2]	0	
	22 – 23	Lambda	Lambda	0.001 λ
0x013	24 – 25	Ignition Advance	Degrees	0.1 Deg
	26 – 27	Gear	0 = neutral, 1 = first, 2 = second, etc	
	28 – 29	Injector Duty Cycle	%	1 %
	30	Data Bytes Sent	30	
	31	Marker Byte 1[^]	FC	
0x014	32	Marker Byte 2[^]	FB	
	33	Marker Byte 3[^]	FA	
	34	Checksum[*]		

1. This channel is Oil Temperature in the original AIM CAN protocol. It has the units of Deg C and a resolution of 0.1 Deg C. Currently Haltech ECU's do not take in such information. It is reserved as a channel with the same units and resolution as to maintain compatibility with the AIM Dash. A zero is sent in its place.

2. This channel is Exhaust Gas Temperature in the original AIM CAN protocol. It has the units of Deg C and a resolution of 1 Deg C. Currently Haltech ECU's do not take in such information. It is reserved as a channel with the same units and resolution as to maintain compatibility with the AIM Dash. A zero is sent in its place.

^. Marker Bytes are from the original AIM CAN protocol and are in to maintain compatibility.

*. Checksum is the sum of all bytes of the structure up to and including marker byte.

Channel	Units	m	c	Sign	Min	Max
RPM	RPM	1	0	N	0	16000
Road Speed	Km/h	0.1	0	N	0	400
Oil Pressure[1]	Bar	0.1	0	Y	0	327
Coolant Temperature	Deg C	0.1	0	Y	-400	1270
Fuel Pressure[1]	Bar	0.1	0	Y	0	327
Battery Voltage	Volts	0.01	0	N	0	16000
Throttle Position	%	0.1	0	N	0	1000
Manifold Pressure[2]	mBar	1	0	Y	-1000	32767
Air Temperature	Deg C	0.1	0	Y	-400	1270
Lambda	Lambda	0.001	0	N	680	1361
Ignition Advance	Degrees	0.1	0	Y	-25.6	600
Gear	0 = neutral, 1 = first, 2 = second, etc	1	0	N	0	6
Injector Duty Cycle	%	1	0	N	0	1000

1. Absolute pressure
2. This value comes through as gauge pressure, meaning 0 mBar is equal to 1013 mBar absolute pressure.