Lamborghini Huracan / R8 Gen2 Kit

Thank you for choosing the Syvecs Huracan / Audi R8 Gen2 kit

The kit comes with the following:

1x S12 Ecu (Di Enabled)

1x Di12

1x Huracan/ R8 PNP Harness

2x Direct fit Interfaces
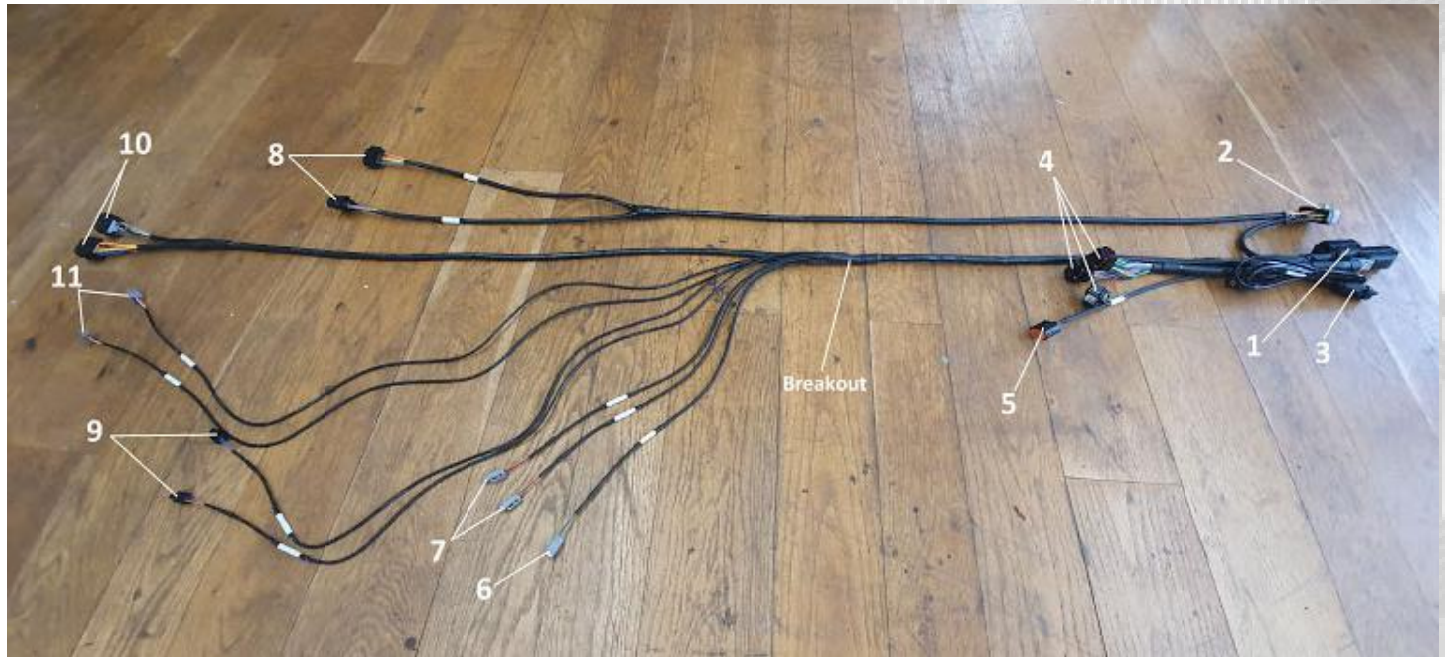
1x Can Bridge (Specific to Huracan Or Audi R8 (2017>)

2x Map Sensors

1x Mounting Bracket

1x Ethernet Lead 2m

Harness Breakdown

1, S12 Ecu Connector.
2, Syvecs DI12 Connector.
3, Ethernet Header, for interfacing your laptop with the ECU.
4, Connects with the Master Direct Fit interface board (Bank 1/ Master Ecu Location). Shown below

5, Can Bridge Connector.
6, Air Charge Temp (Optional extra, speak to Sales Team).
7, Boost Solenoid Connectors (Normally one, though we can fit an additional one if required).
8, Bank 1 & 2 T14 Direct Injector Connectors.
9, Fuel rail Spill Bank Solenoids 1 & 2
10, Connects with the Slave Direct Fit interface board (Bank 2/ Slave Ecu Location).
11, Map Sensor Connectors Bank 1 & 2

(All the sensor and solenoid cables are clearly labelled for convenience so please read them)

Installation

1.) Remove the Negative Terminal from the battery on the Vehicle. This is found in the Front Trunk area behind the Panel highlighted below

2.) Remove the Engine bay covers shown below by turning the fasteners anti clockwise which are marked in Red
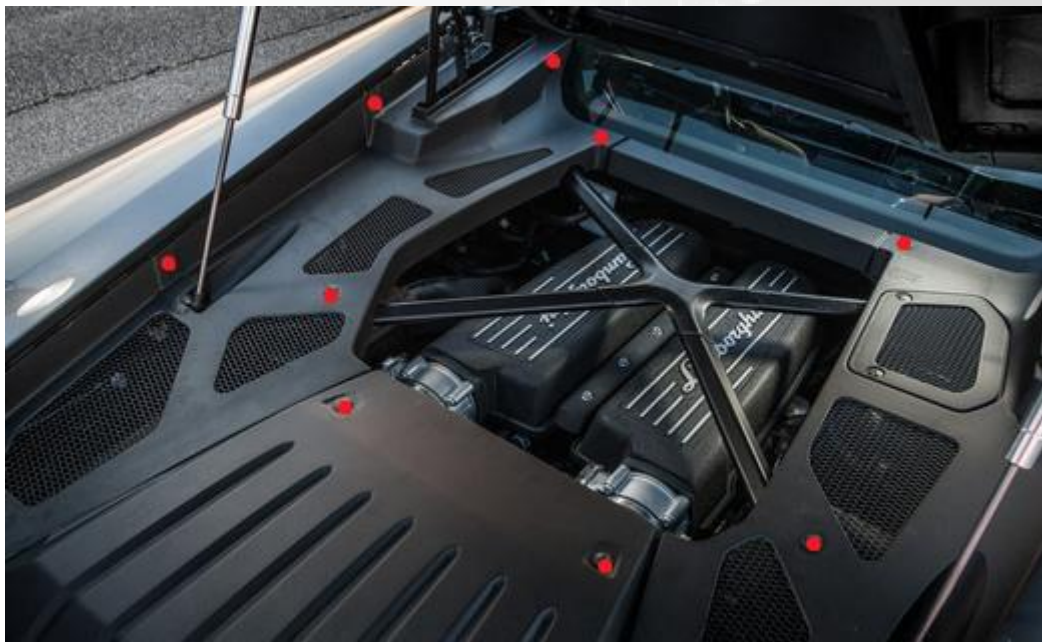
3.) Remove the OEM Engine Management computers which are found on both sides of the Engine bay as shown

If you are unfamiliar with the OEM ecus we recommend labeling them with Master and Slave in the event of returning the vehicle to Factory.

4.) The Red line on the cross member (Above) is where you should be mounting the main body of the Syvecs Adapter Harness. The 'Breakout' Should be dead centre of the engine bay.
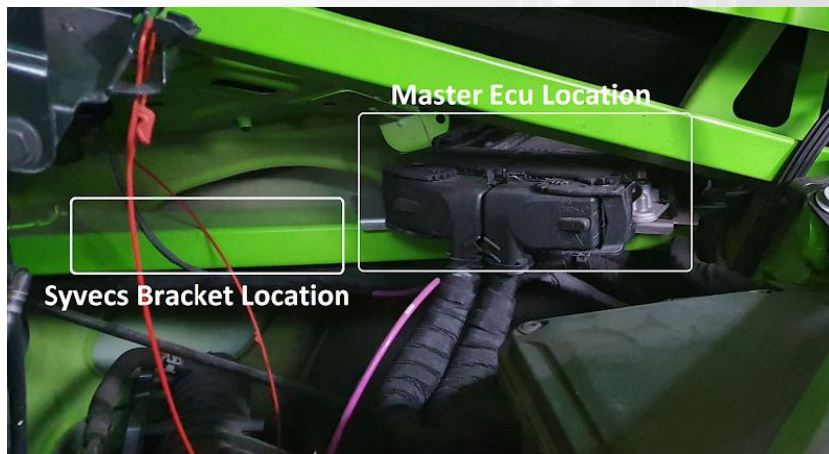
5.) Mount the S12, DI12 and Can Bridge Module on the Bracket provided in the location shown above

IMPORTANT - Be sure to put the bracket in situ before mounting the S12. Sit the S12 on top whilst in place and make a mental note of position - Failure to do so will result in not being able to put the bracket on the rail once fully assembled, due the fouling of the inner guard.

6.) Fit the Syvecs Interface boxes in the mounts which are for the OEM Ecu then route the loom as shown below - If the interface boxes are not labeled Bank1 or Bank2 then they can be fit either side... i.e universal

7.) Plug in the GDI Fuel Pump wires to each pump. Pay attention to the Bank Allocation labels
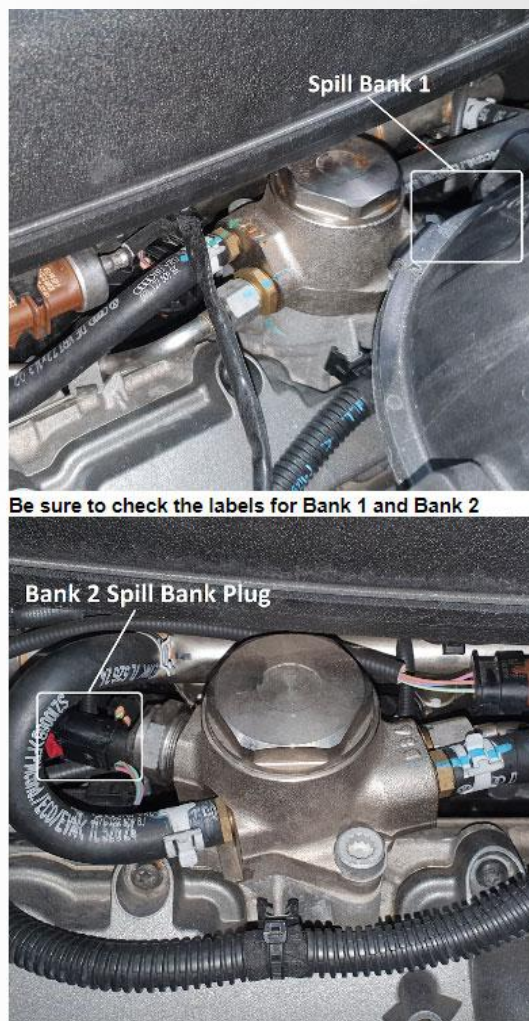
8.) Connect Bank1 High Pressure Injector loom, This is a **Black** 14 Way connector found underneath the Bank1 Throttle Body as shown below
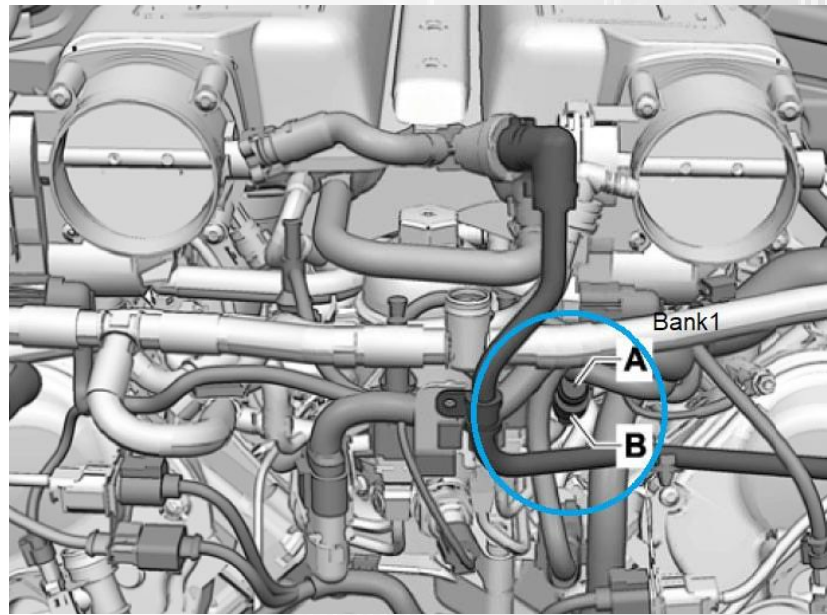
9.) Connect Bank2 High Pressure Injector loom, This is a **Black** 14 Way connector found underneath the Bank2 Throttle Body as shown below
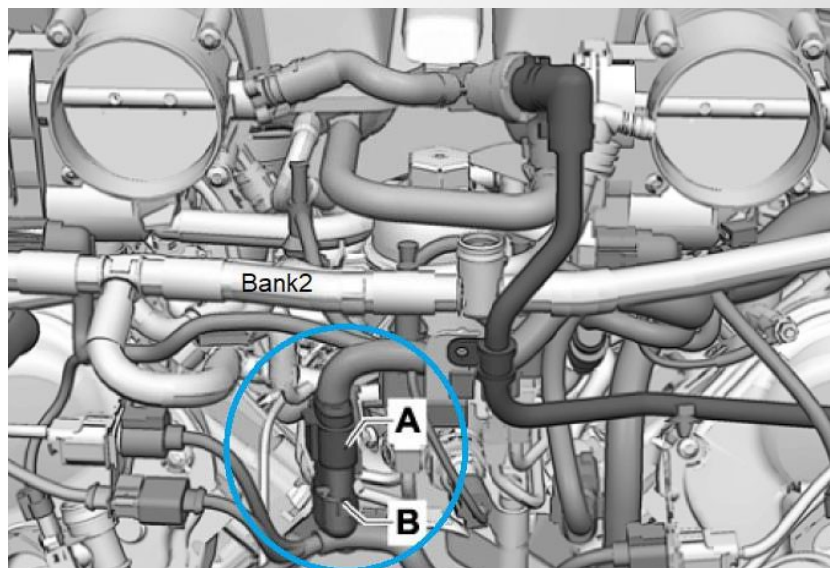
8.) Reconnect the battery terminal and proceed to the Syvecs Manual

Assignments in Scal for external connections

Map Sensor Bank1 – AN08 (Pin33)
Map Sensor Bank2 - AN16 (Pin50)
Air Charge Temp – AN02 (Pin35)
Boost Solenoid – PWM6 (Pin100)

Custom Clutch Tables and Parameters

The Huracan in Launch Mode doesn't send any Torque Reduction in as stock and without a TCM Flash or poor clutch friction it can cause the clutch to slip on shifts as well as cause the shifts to be harsh and Spin the wheels with a good clutch friction so we have added 2 custom variables and Tables

1 . XCan A01 (U12)= Clutch Slip rpm in Launch mode and during shifting - This variable will sit at 0 but in Launch mode and during a clutch exchange will send in RPM - Input shaft speed. Ranging from 0-1000rpm. You can then use this to plot a Custom torque reduction table as you will in the Base maps on CM307.

2. XCan A04 (U13)= Clutch Slip RPM - This variable will be sent when ever the clutch status from the TCM is Closed so on pull away and shifting it won't effect engine torque. This is useful so that if the clutch wont hold while on full load it will limit engine torque if clutch slip is detected. See CM308 in Base Maps

EngTrqLimIgnRtd from OEM TCM Request vs Custom CM307 Map control
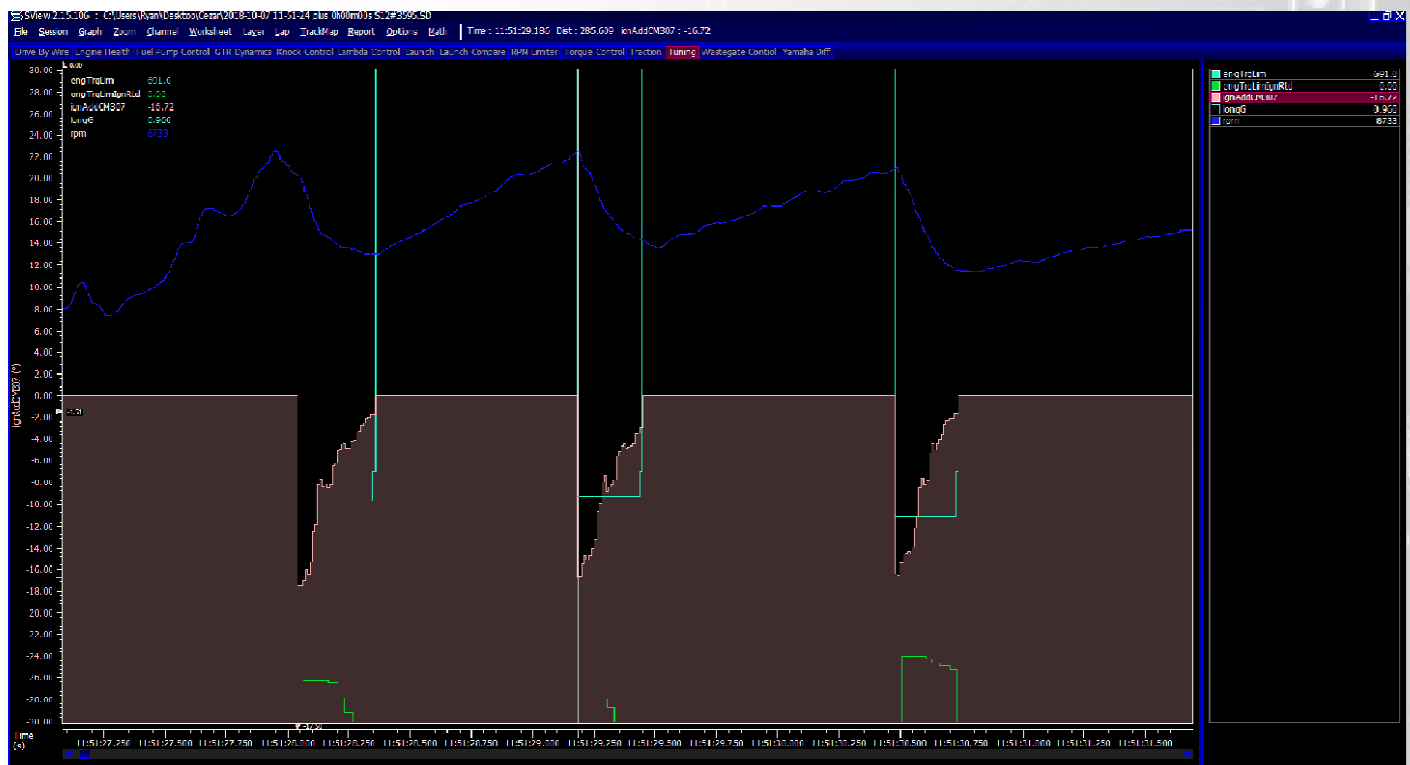
TCM Logging

This is activated in I/O Configuration - Car Code1

If trying to connect to TCM With Diagnostic Equipment must set to Off

0 = Off

1 = On

TCM and AWD DTC Clear

This is activated in I/O Configuration - Car Code2

After Setting to 1 make sure it goes back to 0 to stop constant TCM Clearing

0 = Nothing

1 = Clear

Huracan/R8 Kit FAQ and Help

Q) The Map Sensor Loom on the Syvecs Harness, What colour wire is signal

A) Signal = White / 5v = Red / Ground = Black

Q) Can i installed a different fuel pump?

A) Yes, the Syvecs communicates with the OEM Fuel Pump Ecu to allow PWM Control of the Pump so it can be adjusted to suit your new pump. Plus there is spare outputs to control additional pumps.

Q)How do i change calibration switches

A) You have a 3 calibration switch option which is controlled via the Sport Mode switches as shown below on the Huracan or the Drive Select Buttons on the R8.... You can have mode controls if your car is equipped with cruise control

Huracan

Strada = Calibration 1

Sport = Calibration 2

Corsa = Calibration 3

R8

Comfort = Calibration 1

Auto = Calibration 2

Dynamic = Calibration 3

Q) How do you active Rolling antilag?

A) Ensure you are in Corsa mode and Manual mode. Then hold down the M button by the Hand Brake Button and go full throttle, when you want to disengage the

antilag release the M Button.

Q) Can we use the OBD port still to Log, Read Codes and Clear them on other ecus on the car like ABS?

A) Yes via the Use on VagCom

Q) How is the Fuel Mapping done in Scal

A) On the Secondary injection map – The base map is 4D tuned as MAP1 is before the TPS as default on engine. Uses Secondary Multipler Under Run-Mode Fueling and

Simple Manifold Pressure under Run-Mode Fueling – Corrections

Q) Do you support Cruise Control

A) The Huracan as standard didn't have cruise control but on the later R8 and Huracans its supported by XCan B13, B14, B15 and B16 in Pin assignments

Q) Do you support the Exhaust Control button on the R8

A) Yes, Xcan B10 is available in pin assignments for Exhaust Flap Button

Q) How do I setup Additional Port Injectors

You need to set the Secondary multiplier difference between the DI and Port under Run mode fueling – Correction – Secondary

Multiplier OEM DI Injectors flow around 650cc.. So do 650 / (Port Injectors cc) to give a good starting point on Secondary multiplier

Ensure that the Secondary Injection Opening Time values are correct from your manufacture.

After Start the engine up and monitor the Lambda1 Value and FuelMltCll1 Value. Now go to Injector Split1 and increase the values up to 50% in the area and around

that the tracer is showing the engine is current at.

As the Ports start to blend in and you have the Split at 50% you need to be monitoring the Lambda1 and FuelmltCll1. If the values are different compared to before

when split was at 0% then adjust the Secondary multiplier live until they are the same with the split present.. Once that is good, set the Split back to 0%,

When the OEM DI Injectors now reach their limit the Syvecs ecu will automatically bring the ports in to maintain the desired fuel requirements, If you wish to bring the

port injectors in sooner then set the split table as required.

Huracan S12 Kit Pinouts

S12 ECU Pinout	S12 Pin Function	Description
1	PWRGND	
2	IGN01	Ignition Coil Cyl 1
3	IGN02	Ignition Coil Cyl 2
4	IGN03	Ignition Coil Cyl 3
5	IGN04	Ignition Coil Cyl 4
6	IN25	Throttle Position 1a
7	KNOCK 4	Knock + 4
8	KNOCKGND	Knock Ground
9	THERMO_2 +	
10	IN21	MAF Air Temp 1
11	IN18	Pedal Position 1a
12	IN14	Cam Position - Exhaust 1
13	IN11	Cam Position - Intake 1
14	IN07	Crank Position
15	IN04	Starter Signal
16	IN01	
17	LAM 1 I	
18	CAN 2 LO	
19	RS232 TX	
20	LAN RX-	Orange/White
21	FUEL07	Sec Fuel Injector 1
22	FUEL03	Sec Fuel Injector 2
23	VBAT	
24	PWRGND	
25	IN26	Throttle Position 1b
26	5V OUT	
27	KNOCK 1	Knock + 1
28	THERMO_1 -	
29	IN22	MAF Air Temp 2
30	IN19	Pedal Position 1b
31	IN15	Cam Position - Exhaust 2
32	IN12	Cam Position - Intake 2

33	IN08	External Map Sensor
34	ANGND	Tank Pressure, Cam Sensor,
35	IN02	
36	LAM 1 V	Nerst Cell V
37	CAN 3 HI	
38	RS232 RX	
39	LAN RX+	White/Orange
40	FUEL08	Sec Fuel Injector 3
41	FUEL04	Sec Fuel Injector 4
42	VBAT	
43	PWRGND	
44	IN27	Throttle Position 2a
45	5V OUT	
46	KNOCK 2	Knock + 2
47	THERMO_1 +	
48	IN23	
49	IN20	Fuel Pressure - Low Side 1
50	IN16	Sec Air Pressure (MAP 1)
51	ANGND	
52	IN09	Sec Air Pressure (MAP 2)
53	IN05	Brake Light Switch
54	ANGND	
55	LAM 2 V	Neret Cell V
56	CAN 3 LO	
57	RS232 GND	
58	CAN 1 HI	
59	LAN TX-	Green/White
60	FUEL05	Sec Fuel Injector 5
61	FUEL01	Sec Fuel Injector 6
62	HBRIDGE 6	DBW 1b -
63	IN28	Throttle Position 2b
64	10VOUT	
65	KNOCK 3	Knock + 3
66	THERMO_2 -	
67	IN24	Coolant Temp 1
68	ANGND	
69	IN17	Fuel Pressure - Low Side 2
70	IN13	Fuel Pressure - High Side 1
71	IN10	Fuel Pressure - High Side 2
72	IN06	
73	IN03	Oil Pressure SWiTCH
74	LAM 2 I	
75	LAM GND	
76	CAN 2 HI	
77	CAN 1 LO	
78	LAN TX+	White/Green
79	FUEL06	Sec Fuel Injector 7
80	FUEL02	Sec Fuel Injector 8
81	HBRIDGE 5	DBW 1 +
82	HBRIDGE 2	DI Spill Valve 2 - 12V
83	PWM4	Lambda Heater B1
84	PWM8	Lambda Heater B2
85	FUEL12	Sec Fuel Injector 9
86	FUEL16	Sec Fuel Injector 10
87	FUEL20	Cam Adjuster B1 Intake
88	FUEL24	Cam Adjuster B1 Exhaust
89	VBAT	
90	HBRIDGE 1	DI Spill Valve 1 - 12v

91	PWM3	Starter Relays
92	PWM7	Brake Servo Relay
93	FUEL11	Cam Adjuster B2 Intake
94	FUEL15	Cam Adjuster B2 Exhaust
95	FUEL19	DI12 Injector 1
96	FUEL23	DI12 Injector 2
97	PWRGND	
98	HBRIDGE 4	DBW 2 -
99	PWM2	
100	PWM6	Boost control Sol
101	FUEL10	DI12 Injector 3
102	FUEL14	DI12 Injector 4
103	FUEL18	DI12 Injector 5
104	FUEL22	DI12 Injector 6
105	PWRGND	
106	HBRIDGE 3	DBW 2 +
107	PWM1	Fuel Pump
108	PWM5	Cooling Fans
109	FUEL09	DI12 Injector 7
110	FUEL13	DI12 Injector 8
111	FUEL17	DI12 Injector 9
112	FUEL21	DI12 Injector 10
113	PWRGND	
114	IGN05	Ignition Coil Cyl 5
115	IGN06	Ignition Coil Cyl 6
116	IGN07	Ignition Coil Cyl 7
117	IGN08	Ignition Coil Cyl 8
118	IGN09	Ignition Coil Cyl 9
119	IGN10	Ignition Coil Cyl 10
120	IGN11	DI Spill Valve 1
121	IGN12	DI Spill Valve 2

Email Support@syvecs.co.uk for a base map to suit your setup.