

# Mitsubishi Lancer Evolution 4-8(260) S6PnP

Below is the I/O Schedule for the Mitsubishi Lancer Evolution 4-8(260) S6PnP Carrier Board :

Four connectors, A 26 pin, B 22 pin, C 16 pin, D 12 pin -- Pins viewed looking BACK of OEM Connectors



FUEL1 Fuel Injector 1 (A1) FUEL2 Fuel Injector 2 (A14) FUEL3 Fuel Injector 3 (A2) FUEL4 Fuel Injector 4 (A15) FUEL5 Alternator G (C3) [Injector 5] FUEL6 I/C Spray Relay (D5) [Injector 6] FUEL7 A/C Fan Lo & A/C Fan Hi (C4 & C2) FUEL8 A/C Relay (A8 / A22) [Injector 8]

FUEL9 MAF Reset (A19) [Exhaust MiVEC] FUEL10 Fuel Pressure Solenoid (A3) [Inlet MiVEC] FUEL11 Secondary Air (A6 / D3) FUEL12 Lambda Geater (D10 / D4 / UEGO) FUEL13 Tacho (D8) FUEL14 Wastegate (A11) FUEL15 Rad Fan Speed (A21 / A20) FUEL16 Fuel Pump (A8 / A22)

IGN1 Ignition 1/4 (A10) / TTL1 [Ignition 1] IGN2 Ignition 2/3 (A23) / TTL2 [Ignition 2] IGN3 I/C Spray Light (C5) / TTL3 [Ignition 3] IGN4 Fuel Pump Speed (C9) / TTL4 [Ignition 4] IGN5 MIL LIght (C6) / TTL5 [DBW Control] IGN6 Idle (A4 / A5 / A17 / A18) / TTL6 [Linear Idle]

# External Knock Sensor Wiring

Knock Signal - B8 Knock Ground - B9

AN01 Idle Switch / ACD/AYC Signal (B17) [Fuel Pressure / NSF Wheel Speed / Pedal Position] AN02 Steering Switch (C7) [Oil Pressure / OSF Wheel Speed/ Pedal Position] AN03 I/C Spray Manual (B21) [Other sensor / NSR Wheel Speed / Pedal Position] AN04 Clutch Switch (C13) [Other sensor / OSR Wheel Speed / Pedal Position] AN05 Crank Signal (B19) AN06 Cam Signal (B18) [Exhaust MiVEC] AN07 Road Speed (B16) [Other Voltage / Other Speed Sensor] AN08 Airflow Signal (B20) [Inlet MiVEC / Turbo Speed ] AN09 Throttle (B14) AN10 Baro Pressure (B15) [MAP] AN11 Lambda Signal (B6 / B5) [Pedal Position / Other Sensor] AN12 A/C Request (C15) [Throttle B] AN13 Coolant Temp (B13) AN14 Air Temp (B2) AN15 Alternator FR (C11) [Oil Temperature / ALS Switch] AN16 I/C Spray Auto (C14) [Calibration Switch]

The Evo PNP boards fits inside the OEM Case but it requires some small trimming inside to allow the S6/S7 Carrier to fit between the pillars at the back. See below Image of what to Trim.

First its best to cutout the Back part of the case to allow access to the Aux Connectors and the Ethernet port to calibrate the ECU. After this has been opened up its alot easier to trim the inside of the case which stops the S6/S7 carrier for going all the way inside.





Once trimmed the front facial provided in the kit clips on the front like the OEM Board to hold it all in place



# Solder Bridges from Syvecs will be set based on the model your ordered but you can customize the board settings as explained below:

There are also jumpers on the reverse side which should be set as follows :

**RESERVED - Should be CLOSED** 

STEP1 - Should be set to SEQ if using a stepper motor for idle. Can be set to IGN6 if using linear idle, then IGN6 is buffered and presented on STEP1 (A4)

SAS/EGR - Should be set to A6 for all models except EVO 7, where it may be set to D3 if a SAS solenoid is connected to the D3 pin

FAN SLV - Should be CLOSED for EVO4-6 and OPEN for EVO7 & EVO8(260)

LAM HTR - Should be set to OEM unless an NTK UEGO sensor is plugged into the UEGO socket, then it should be set to UEGO.

IGN BUF (C9) - Should be CLOSED unless IGN4 is to be used as a TTL output (eg for sequential ignition)

AIR CON - Should be set to A8 on EVO8(260) and to A22 on all other models

FUEL PUMP - Should be set to A22 on EVO8(260) and to A8 on all other models

IGN BUF (C5) - Should be CLOSED unless IGN3 is to be used as a TTL output (eg for sequential ignition)

ALM / GND - Should be CLOSED on EVO8(260) and OPEN on all other vehicles

IGN BUF (C8) - Typo, should read (C6) - Should be CLOSED unles IGN5 is to be used as a TTL output (eg control signal for DBW)

IGN TO TTL1 - Should be OPEN unless IGN1 is to be fed out the TTL header (eg bundle of IGN1-4 to CDI module). If closed DO NOT USE A10

IGN TO TTL2 - Should be OPEN unless IGN2 is to be fed out the TTL header (eg bundle of IGN1-4 to CDI module). If closed DO NOT USE A23

IGN TO TTL3 - Should be OPEN unless IGN3 is to be fed out the TTL header (eg bundle of IGN1-4 to CDI module). If closed, IGN BUF (C5) should be open

IGN TO TTL4 - Should be OPEN unless IGN4 is to be fed out the TTL header (eg bundle of IGN1-4 to CDI module). If closed, IGN BUF (C9) should be open

IGN TO TTL5 - Should be OPEN unless IGN5 is to be fed out the TTL header (eg control signal for DBW H-Brdige). If closed IGN BUF (C8) should be open

IGN TO TTL6 - Should be OPEN unless IGN6 is to be fed out the TTL header (eg fuel pump PWM controller). If closed then do not use STEP1-4 outputs, lack of the correct drive signal on IGN6 will prevent the stepper drive from working correctly.

LAMHTR - Should be set to FRONT unless the rear sensor is to be used (only on EVO7 & EVO8(260)).

LAM SIG - Should be set to FRONT unless the rear sensor is to be used (only on EVO7 & EVO8(260)).

# Syvecs PNP Auxiliary Connector Pinouts

As those who have installed their own S6PnP units will have noticed, there are 5 additional connectors on the rear edge of the board. Below are the pinouts for these connectors looking from the back of the mating connectors :



## Comms :

Pin 1 - Power GND Pin 2 - CAN LO Pin 3 - CAN HI Pin 4 - Comms GND Pin 5 - RS232 TX Pin 6 - RS232 RX

#### Ethernet :

Pin 1 - LAN TX+ Pin 2 - LAN TX-Pin 3 - LAN RX+ Pin 4 - Not Connected Pin 5 - Not Connected Pin 6 - LAN RX-Pin 7 - Not Connected Pin 8 - Not Connected

## **UEGO LAMBDA :**

Pin 1 - LAM V (Nernst Cell Voltage) (Red or Grey) Pin 2 - LAM I (Ion Pump Current) (White) Pin 3 - LAM GND (Cell Ground) (Black) Pin 4 - VBAT (Heater +) (Orange or Blue) Pin 5 - INJ\* (Heater -) (Yellow) Pin 6 - PWRGND

NB: Pin 5 is version specific, check the actual pinout using Calibration -> Comments. Subaru MY99/00 has INJ8, for example.

## Auxiliary :

Pin 1 - IGN1 / PWRGND Pin 2 - IGN2 / PWRGND Pin 3 - IGN3 / PWRGND Pin 4 - IGN4 / PWRGND Pin 5 - IGN5 / PWRGND Pin 6 - IGN6 / PWRGND Pin 7 - VBAT Pin 8 - 12VOUT Pin 9 - 5VOUT#2 Pin 10 - ANGDN#2 (Sensor Ground) Pin 11 - Not Connected (Reserved) Pin 12 - Not Connected (Reserved) NB : Pins 1-6 only connected to free outputs, so Subaru MY99/00 has pins 1&2 to PWRGND, IGN3-6 are available though. MY92-96 on the other hand has pins 1 to 4 to PWRGND, only IGN5&6 are available. 12VOUT is low current, use only for sensors.

## Thermocouple

This connector is a standard miniture K-Type, if a sensor is wired correctly and plugged in it will work. NB: The linearisation for any sensor configured to use this input should be flatline 0 this will cause the built in curve to be used. It is possible to specify custom curves but this is only appropriate to the most advanced engine developers.

#### **General Notes**

These connectors have a standard pinout. Any future products will feature the same pinout, so a lead made for an NTK sensor for a Subaru MY92-96 will work fine on an Evo VIII (when that carrier board is released). Any external interfaces created to these pinouts should be inherently safe if moved from one model to another; moving an external device which used IGN3 on an MY99 board to an MY92 board will cause that function to simply turn off, rather than be in an uncertain state.