Subaru MY97-98 S6PnP OEM Pinout

Below is the I/O Schedule for the Subaru MY97-98 S6PnP Carrier Board :

Model Years 1997 & 1998 -- Pins viewed looking into the ECU connector

Three connectors, A 26 pin, B 22 pin, C 16 Pin

A :

13 12 11 10 09 08 07 06 05 04 03 02 01
26 25 24 23 22 21 20 19 18 17 16 15 14

B :

11 10 09 08 17 06 05 04 03 02 01
22 21 20 19 18 17 16 15 14 13 12

C :

08 07 06 05 04 03 02 01
16 15 14 13 12 11 10 09

FUEL1 Fuel Injector 1 (A26)
FUEL2 Fuel Injector 2 (A13)
FUEL3 Fuel Injector 3 (A12)
FUEL4 Fuel Injector 4 (A11)
FUEL5 I/C Auto Wash (A16) [AVCS/EGR]
FUEL6 MAP/BAP Solenoid (A06) [AVCS/AntiphaseWG]
FUEL7 Idle + (A1)
FUEL8 Idle - (A2) [Idle/AVCS]

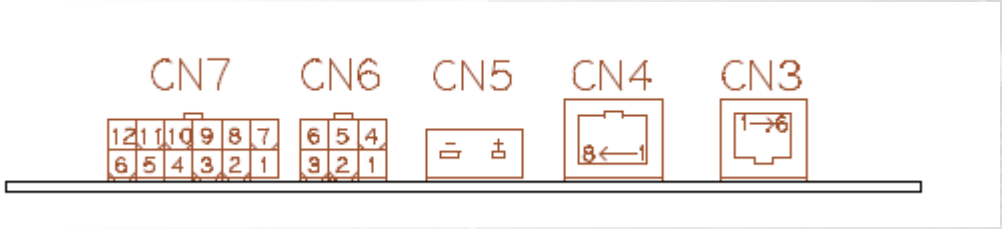
FUEL9 A/C Clutch (A21)
FUEL10 Tacho (C14)
FUEL11 Rad Fan Relay (C8)
FUEL12 Rad Fan Relay (C16)
FUEL13 Wastegate (A3)
FUEL14 Warning Lamp (A8)
FUEL15 __UEGO_HEATER
FUEL16 Fuel Pump Relay (A7&A17)

IGN1 Ignition 1 (A10)
IGN2 Ignition 1 (A9)
IGN3 __TTLHDR
IGN4 __TTLHDR
IGN5 __TTLHDR
IGN6 __TTLHDR

AN1 Crank (B8)
AN2 Cam (B10)
AN3 Diag Port (C4) [G11_AVCS/VR_SPEED]
AN4 Diag Port (C5) [G11_AVCS/VR_SPEED]
AN5 Vehicle Speed (C3)
AN6 O2 Signal (B5) [O2/ACT/G12_AVCS/HALL_SPEED]
AN7 MAF Signal (B6) [MAF/ACT/G12_AVCS]
AN8 Test Mode (B21) [ALS/LAUNCH/PIT/ACT/G12_AVCS]
AN9 Throttle (B16)
AN10 MAP (B17)
AN11 Starter Switch (C2) [CAL]
AN12 A/C Request (C10)
AN13 Coolant Temp (B3)
AN14 Air Temp (C1)
AN15 Read Memory (B20) [ALS/LAUNCH/PIT]
AN16 Neutral Switch (C9) [ALS/LAUNCH/PIT]

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

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 PNP. 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.