

LEM G3 – Subaru WRX V3-4 AdaptaLink

Board Revision V1.1 – Includes Mod V1.0 to V1.1

This AdaptaLink is designed to reduce installation effort by allowing an almost direct plug-in of a Link LEM^{G3} ECU to the following vehicles:

- Subaru WRX V3-4

The AdaptaLink must be configured for each application by fitting the jumpers in the correct locations. To do this, remove one end plate from the AdaptaLink enclosure then slide out the top cover. In some cases additional modifications are required.

Disclaimer

All care has been taken to ensure the pin outs and interconnections of this ECU AdaptaLink board are correct. However due to variations between vehicle models it is the installers responsibility to check wiring connections BEFORE installing the AdaptaLink. Link ElectroSystems will not be held responsible for any damage caused by the incorrect installation of this product.

Warning

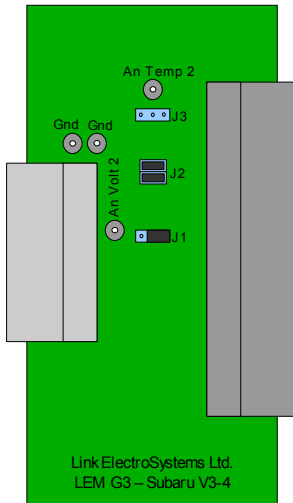
This AdaptaLink has been designed to be used with HIGH impedance (greater than 6 Ohms) injectors. Ballast resistors must be wired if low impedance injectors are to be used. Consult the ECU's Wiring and Installation manual for more information on injector wiring.

Limitations

- This AdaptaLink has been designed for use with manual transmissions only. Use of this AdaptaLink with an automatic transmission may cause unexpected transmission operation.
- As the LEM^{G3} has a limited number of inputs and outputs, not all of the sensors and actuators used by the factory ECU can be used. If a sensor/actuator is required that is not used wiring modification may be required.
- This AdaptaLink has been designed to be used with HIGH impedance (greater than 6 Ohms) injectors. Ballast resistors must be wired if low impedance injectors are to be used. Consult the ECU's Wiring and Installation manual for more information on injector wiring.

AdaptaLink Options

Immobiliser



Jumper J2 sets the Immobiliser option. For vehicles without an immobiliser system, set the jumpers as shown to the left ('No Immobiliser' position). If the vehicle has an immobiliser, fit the jumper in the 'Immobiliser' position.

Note that Jumper J2 swaps the crank and cam angle sensors connection to the ECU's Trig 1 and Trig 2 signals. If the engine will not start and the ECU is recording Trigger Errors, then the position of J2 may be wrong.

Intake Air Temperature (IAT)

The position of Jumper J3 determines what is connected to the ECU's An Temp 2 pin. It is highly recommended that an IAT sensor is connected to this pin. The following options exist for assisting the wiring of an IAT sensor:

1. External IAT Wiring – By placing Jumper J3 in the 'External IAT' position an IAT sensor can be wired to the AdaptaLink boards 'An Temp 2' and 'Gnd' breakout pads.
2. Use of Air Flow Meter (AFM) Wiring – Placing Jumper J3 in the 'IAT on AFM Sig.' position allows the factory AFM's wiring to

be used to bring IAT into the ECU. This saves running additional wiring through the firewall. Wire the IAT sensor to the AFM's signal and ground wires. Consult manufacturers wiring diagrams for information on the location of these wires in the AFM's connectors.. The AFM must remain unplugged when this option is used.

3. Use of Factory IAT Sensor – Some models have a factory fitted IAT sensor in the manifold. If this sensor is to be used, fit Jumper J3 in the 'Factory IAT' position.

Digital Input Options

Jumper J1 selects what is connected to the ECU's DI1 (Aux4) pin. Set the jumper in the 'DI1 = A/C In' position if the air conditioning is to be retained. Otherwise, fit the jumper in the 'DI1 = Speed' position. This will allow the ECU to measure vehicle speed for functions such as launch control and idle speed control.

Subaru WRX V3-4

LEM ^{G3} Function	Sensor / Actuator	Note
Inj 1	Injectors 1 and 3	
Inj 2	Injectors 2 and 4	
Ign 1	Ignition Cylinder 1 and 2	
Ign 2	Ignition Cylinder 3 and 4	
Ign 3	Fan Relay 1	
Ign 4	Fan Relay 2	
Aux 1	ISC Close	
Aux 2	ISC Open	
Aux 3	Fuel Pump Relay	
DI 1 / Aux 4	Speed or AC In	Select DI 1 input using J1
Aux 5	Waste gate Solenoid	
Aux 6	A/C Out	
Aux 7	Check Engine Light	
Aux 8	Tachometer	
An Temp 1	Engine Coolant Temperature (ECT)	
An Temp 2	Intake Air Temp (IAT)	Set sensor location with J3
An Volt 1	Oxygen Sensor	
An Volt 2	N/C	Breakout pad on AdaptaLink board
An Load 3 (TPS)	Throttle Position	