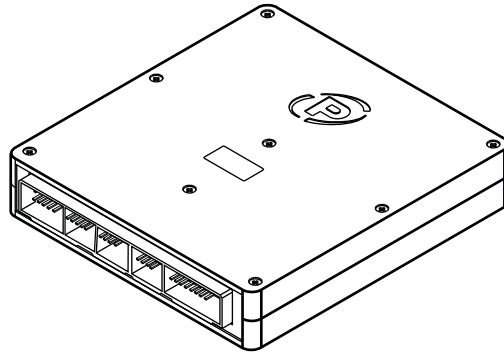




## Pectel C2 ECU



### Introduction

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The Pectel C2 ECU is designed for use in pre-2007 Subaru Impreza WRX Group N rally cars. The ECU is a direct replacement for the factory fitted ECU and is supplied complete with engine maps. It is also supplied with configuration software.

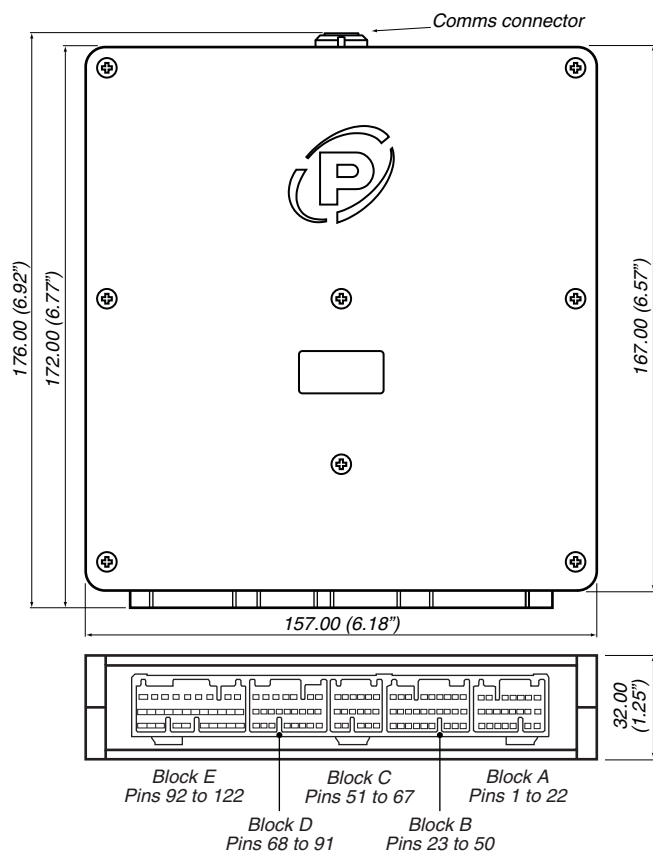
The Pectel C2 ECU has an onboard Engine Logbook facility. Data from this is downloaded using the **ECU Offload Tool** software.

### Installation

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The ECU is a direct replacement for the factory fitted ECU. Unplug the factory supplied ECU and plug in the Pectel C2 ECU.

## Dimensions



Dimensions in millimetres and (inches)

## Specifications

Description	Value
Voltage Range	6V to 18V
Injector Drives	4 High Impedance
Ignition Drives	2 Internal Clamp
PWM / Relay Outputs	3
Crank Sensor Type	Inductive
Cam Sensor Type	Inductive
Analogue Inputs	6
Application Software	DESCPRO, ECU Offload Tool and Pi Toolbox
Data logging	40 Channels
Data Throughput	100Hz
RAM	128kB or 512kB
Flash	128kB
A/D Accuracy	10bit

Description	Value
Communication	RS232
Internal Sensors	Barometric Pressure ECU Temperature Battery voltage
Temperature Range	-40°C to 85°C
Weight	325 grams

## Ordering information

Product	Part number
Pectel C2 ECU	01E-500229



## Connector information

### Comms connector

Connector	Mating connector
Lemo EEA-1B-307-CLV	Lemo PFA-1B-307

### Comms connector pinout details

Pin	Function
1	Ground
2	12V
3	CAN High
4	CAN Low

Pin	Function
5	RX232
6	TX232
7	Ground

## Main connector pinout

The main connector is divided into five sections, Blocks A to E. The location of pins on the connector blocks are shown in the connector diagram before each pinout table.

### Main Connector Block A

A1	A2	A3	A4	A5		A6	A7
A8	A9	A10	A11	A12	A13	A14	A15
A16	A17		A18	A19	A20	A21	A22

Face view of Block A, 22 way

Pin	Signal name	Description
A1	SPD 5	Road speed
A2	RLAL 14	ALS light (AC) / main relay
A3	AN 9 (ALSSW)	ALS switch (defog)
A4	SPD 6	Turbo speed
A5	VIGIN 1	Ignition power +ve
A6	MAIN 1	Main relay
A7	PWR GND	Power ground
A8	SW 1 (NTLSW)	Neutral switch
A9	SW 2 (FANSW)	Fan switch
A10	DIG GND	Digital ground
A11	No connection	-
A12	No connection	-
A13	RLAL 9	Fuel pump Sig / AC relay
A14	VIGIN 2	Ignition power +ve
A15	PWR GND	Power ground
A16	No connection	-
A17	No connection	-
A18	SW 1 (HBKSW)	Handbrake switch
A19	SW 2 (FBKSW)	Foot brake switch
A20	RS232 RX	RS232 RX
A21	RS232 TX	RS232 TX
A22	PWR GND	Power ground

### Main Connector Block B

B1	B2	B3	B4	B5	B6		B7	B8	B9
B10	B11	B12	B13	B14	B15	B16	B17	B18	B19
B20	B21	B22		B23	B24	B25	B26	B27	B28

Face view of Block B, 28 way

Pin	Signal name	Description
B1	CAM	Cam sensor +ve
B2	CRANK	Crank sensor +ve
B3	AN 8	Diff select
B4	KNOCK 1	Knock 1
B5	No connection	-
B6	VDIF +5VE	Diff control
B7	AN 3 (TPS)	Throttle sensor
B8	AN 1 (MAP)	Manifold pressure
B9	5V SENSOR OUT	5V sensor power
B10	ANA GND	Analogue ground
B11	ANA GND	Analogue ground
B12	AN 13	ISC sw / RH TGV sensor
B13	No connection	-
B14	No connection	-
B15	ANA 7 (EXT LAM)	External Lambda
B16	No connection	-
B17	REGO	Rear A/F sensor +ve
B18	AN 4 (ECT)	Water temperature
B19	No connection	-
B20	No connection	-
B21	PWR GND	Power ground
B22	PWR GND	Power ground
B23	AN 13	ISC sw / RH TGV sensor
B24	No connection	-
B25	AN 11	Launch select
B26	PWR GND	Power ground
B27	AN 5 (AAT)	Ambient air temp
B28	AN 10	ALS Switch



### Main Connector Block C

C1	C2	C3	C4	C5	C6
C7	C8	C9	C10	C11	C12
C13	C14	C15		C16	C17

Face view of Block C, 17 way

Pin	Signal name	Description
C1	PWR GND	Power ground
C2	RVCAM (DIG)	RH AVCS sensor +ve
C3	ANA GND	Analogue ground
C4	MOT OUT 2A	RH TGV valve open
C5	MOT OUT 2B	RH TGV valve close
C6	VBAT OUT	RH AVCS +12ve
C7	No connection	-
C8	PWR GND	Power ground
C9	LVCAM (DIG)	LH AVCS sensor +ve
C10	MOT OUT 1A	LH TGV open
C11	MOT OUT 1B	LH TGV close
C12	RLAH6	RH AVCS valve
C13	AN 2 (MAF)	Airflow sensor
C14	PWR GND	Power ground
C15	ANA GND	Analogue ground
C16	RLAH 5	LH AVCS valve
C17	VBAT OUT	LH AVCS +12ve



### Main Connector Block D

D1	D2		D3	D4	D5	D6	D7	
D8	D9	D10	D11	D12	D13	D14	D15	D16
D17	D18	D19	D20	D21		D22	D23	D24

Face view of Block D, 24 way

Pin	Signal name	Description
D1	ANA GND	Analogue ground
D2	No connection	-
D3	No connection	-
D4	INJ 4	Fuel injector 4
D5	INJ 3	Fuel injector 3
D6	INJ 2	Fuel injector 2
D7	No connection	-
D8	PWR GND	Power ground
D9	TACHO	Tacho output
D10	RLAH 3	Idle valve
D11	SPD 1	FL speed
D12	SPD 2	FR speed
D13	RHTR (RLAH4)	Rear A/F heater
D14	SPEEDO	Speedo output
D15	RLAH 2	Fuel pump PWM no Imob
D16	RLAH 2	Fuel pump PWM Imob
D17	PWR GND	Power ground
D18	PWR GND	Power ground
D19	SPD 3	RL speed
D20	SPD 4	RR speed
D21	IGN 4	Ignition coil 4
D22	IGN 3	Ignition coil 3
D23	IGN 2	Ignition coil 2
D24	IGN 1	Ignition coil 1



### Main Connector Block E

	E1	E2		E3	E4	E5	E6	E7	E8	E9	
E10	E11	E12	E13	E14	E15	E16	E17	E18	E19	E20	E21
E22	E23	E24	E25	E26		E27	E28		E29	E30	E31

Face view of Block E, 31 way

Pin	Signal name	Description
E1	INJ 1	Fuel injector 1
E2	VBAT IN	Switched power
E3	VBAT IN	Switched power
E4	FHTR (RLAH4)	Front A/F heater
E5	FHTR (RLAH4)	Front A/F heater
E6	No connection	-
E7	No connection	-
E8	PWR GND	Power ground
E9	PWR GND	Power ground
E10	PERM +VE	Permanent power +ve
E11	RLAL 13	Water spray (ISC)
E12	No connection	-
E13	No connection	-
E14	AN 12 (ACT)	Air charge temperature
E15	RLAL 11	Check light
E16	RLAL 10	Purge valve
E17	RLAL 8	Rad Fan 1
E18	PWR GND	Power ground
E19	FEGO	Front A/F sensor +ve
E20	No connection	-
E21	No connection	-
E22	No connection	-
E23	No connection	-
E24	RLAH 1	Boost control valve
E25	No connection	-
E26	RLAL 12	Shift light
E27	RLAL 9	Fuel pump Sig / AC relay
E28	RLAL 7	Rad fan 2
E29	ANA GND	Analogue ground
E30	Knock 2	Knock sensor 2
E31	No connection	-

