Image 1: ECU PR-8

- 100 MHz dual-core processor
- Integrated dual lambda control
- 250 kPa integrated MAP sensor
- Up to 8 injectors (sequential)
- Peak and Hold capability
- Continuous datalogging (128Mb)
- Programmable user functions
- 3D tables
- Automotive connectors
- Quad cam control
- CNC machined enclosure
- Dual EGT monitoring

General

Pro Tune PR-8 is an electronic engine management system with integrated data acquisition. It has been developed to control engines up to 8 cylinders in sequential mode, or up to 12 in semi-sequential mode. Variable cam control, drive-by-wire, closed-loop lambda control, boost control among others, are native system functions.

Technical Specifications

Outputs

11 general purpose outputs - max current 3 A

6 ignition outputs

8 injectors outputs - max current 4,5 A

Inputs

17 analog inputs (0-5V)

14 analog inputs with a 2k7 ohms pull up resistor (0-5V)

8 digital inputs, (0,5 - 6500 Hz)
22 inputs max

2 thermocouple inputs (k type)

2 analog inputs (0-12V)

Inputs	Pull-up	High speed	12V	Digital
IN_1	X			X
IN_2	X	X		
IN_3	X			X
IN_4	X			X
IN_5	X		X	
IN_6	X		X	
IN_7		X		
IN_8		X		
IN_9		X		
IN_10	X			
IN_11	X			
IN_12	X			
IN_13	X			
IN_14	X			

ENGINE CONTROL UNIT PR-8

Inputs	Pull-up	High speed	12V	Digital
IN_15	X			
IN_16	X			
IN_17	X			
DIG_IN2				X
DIG_IN5				X
DIG_IN6				X
DIG_IN7				X
DIG_IN8				X

Functions

Dual boost control

Launch control

Quick shift

Quad cam control

CAN Custom

Odd fire

Traction control

Secondary injector rail

Long term lambda learn

Anti Lag

Idle control

Dual lambda control

Dual ETC control

Engine running time

Internal datalog

Peak and hold

Some functions need to be activated by their activation codes - sold separately

Mechanical characteristics

Enclosure built of custom CNC machined aluminum

Fixing bracket

Automotive connectors

Weight: 580 g

Size: 154 mm x 123 mm x 40 mm

Temperature range from -10°C up to 105°C

Electrical characteristics

Max current: 20 A @ 12 V

8 digital inputs, (0,5 - 6500 Hz)

11 general purpose outputs - max current 3 A

2 analog inputs (0-12V)

2 ETC control outputs up to 5 A

Software

Pro Tune Workbench

Pro Tune Analyzer

Resources

250 kPa integrated MAP sensor

Connect Box (CB1204) interface

Integrated lambda (LSU 4.2, LSU 4.9, NTK and narrowband) controller

32 Mb internal datalogging

Communication

USB interface

CAN protocol (100 - 1000 kbps)

Serial protocol (115.2 - 500 kbps)

Pino	Função
A1	INJ_1
B1	INJ_2
C1	INJ_3
D1	INJ_4
A4	INJ_5
B4	INJ_6
H1	IGN_1
J1	IGN_2
K1	IGN_3
H2	IGN_4
J2	IGN_5
K2	IGN_6
F4	CKP+
G4	CKP-
H4	CMP+
J4	CMP-
C2	IN_1
D2	IN_2
E2	IN_3
F2	IN_4
G2	IN_5
G3	IN_6
F3	IN_7
H3	IN_8

Pino	Função
J3	IN_9
E4	DIG_IN_2
G1	OUT_1
F1	OUT_2
E1	OUT_3
L1	OUT_4 5A
M1	OUT_5 5A
M3	OUT_6
M2	OUT_7
K4	MAIN_RELAY
A3	LA_HT-
B3	LA_SEN_ 0V
C3	LA_RCAL
C4	LA2 RCAL
D3	LA_IP
D4	LA2_IP
E3	LA_VS
A2	CAN/SP_Tx
B2	CAN/SP_Rx
M4	12V SWITCH
K3	SENSOR 5V
L3	PWR_GND
L4	PWR_GND
L2	SEN_GND

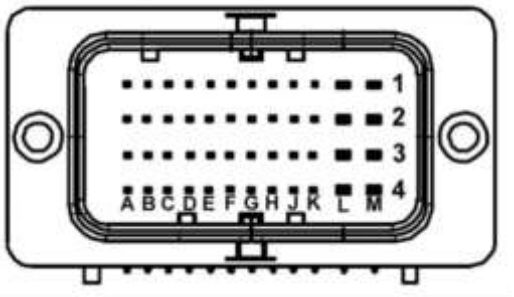

Image 2 – PR-8 Connector

This connector uses a letter and number system to identify each pin, with the columns being identified by letter A to M and lines identified by numbers 1 to 4.

Pino	Função
1	OUT_8
2	OUT_9
3	OUT_10
4	OUT_11
5	IN_10
6	IN_11
7	IN_12
8	IN_13
9	DIG_5
10	DIG_6
11	DIG_7
12	DIG_8

Pino	Função
13	SENSOR 5V
14	SENSOR 8V
15	SEN_GND
16	IN_14
17	IN_15
18	IN_16
19	IN_17
20	TP_1+
21	TP_1-
22	TP_2+
23	TP_2-
-	NC

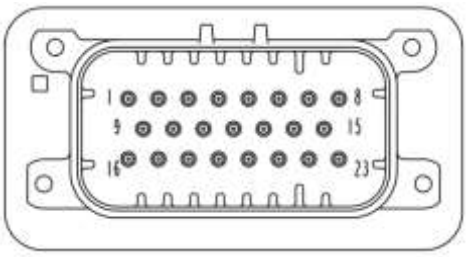

Image 3 – PR-8 Secondary Connector

This connector uses a number system to identify each pin. The numbers go from 1 to 23.