

## ENGINE CONTROL UNIT

# SRA-EDL8/16

Internal data logger, DBW control  
High number of Inputs/Outputs  
Ethernet line

## Description

SRA-EDL8/16 is a dedicated Engine Control Unit. A single unit can drive up to eight injectors and six ignition coils. SRA-EDL8/16 can drive logic command coils (SW option).

SRA-EDL8/16 is an engine control unit which includes data logger and a very high speed Ethernet line to download data. Communication from the PC based configuration tool and to other units (such as dashboard and logger) is by the 2 CAN lines and an asynchronous serial line.

Inside the unit there is a high performance RISC microcontroller with a logging capability of 8 or 16 Mbyte and an FPGA for diagnostic purposes.

SRA-EDL8/16 provides analogue inputs for single-ended, temperature and knock-sensor as well as an interface for a switching lambda sensor. The unit also provides an H-Bridge output stage for use with suitable "Drive by Wire" actuators.

6 configurable speed sensor inputs (inductive or Hall) provide full flexibility of configuration for engine angle detection as well as other frequency inputs such as wheel or shaft speed.

SRA-EDL8/16 is supplied with the mating connector (loom side).



## Main Features

- 8 Single-ended
- 6 Pick-ups or Hall effect
- 6 Inductive or logic command ignition drivers (SW option)
- 8 On/Off injector drivers
- 1 H-Bridge: DC-Motor driver for "Drive by Wire" control
- 4 PWM (Current controlled PWM)
- 1 On/Off or Linear Lambda sensor
- 2 Knock input for detonation control accelerometers
- 8 or 16 Mbyte internal data logger
- Up to 128 logged channels
- Up to 10 Kbyte/s logging rate
- Sampling rates up to 200 Hz
- 2 CAN communication buses
- 1 Ethernet line

## Benefits

- No need of external data logger
- Extremely reduce data download time by means of Ethernet link
- The logic command coils option is available on request
- SW selectable NTC/PT1000 temperature sensors
- Flexible setup by means of a high number of Inputs/Outputs
- Floating point data management
- Direct management of Marelli dashboard display
- Pick-up inputs for wheel speed and distance measurement
- Requires Wintax4 analysis software (compatible Win2K/XP/Vista 32 bit/7)
- Requires Axon logging setup tool
- Easy to install

## Typical Applications

One make race series

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### Technical Characteristics

#### Inputs

Analogue Single-ended .....	8
On/Off or Linear Lambda sensor .....	1
Knock sensor (multiplexed) .....	2
K-type thermocouple .....	2
NTC/PT1000 temperature sensor (selectable).....	4
NTC internal temperature sensor.....	1
V battery injector .....	1
VR Pick-ups or Hall effect.....	6
On/Off digital .....	6
Lap Trigger.....	1
"Code Load" enable pin .....	1

#### Outputs

On/Off injector drivers.....	8
Inductive or logic command ignition drivers (SW option) ..	6
H-Bridges .....	1
Lambda heater drivers.....	1
PWM .....	4
Low-side On/Off .....	2
Voltage references .....	2

#### Communications

CAN line (1 Mbit/s (*)).....	2
Ethernet line (100 Mbit/s) .....	1
Serial current loop .....	1

(\* ) Configurable on request

#### Logic Core

Microcontroller (80 MIPS RISC).....	1	
FPGA (50k gates).....	1	
Flash E2PROM (microcontroller) .....	1	Mbyte
RAM memory (microcontroller).....	48	Kbyte
RAM memory .....	512	Kbyte
E2PROM parallel.....	64	Kbyte
E2PROM serial.....	4	Kbyte
Time keeper .....	1	

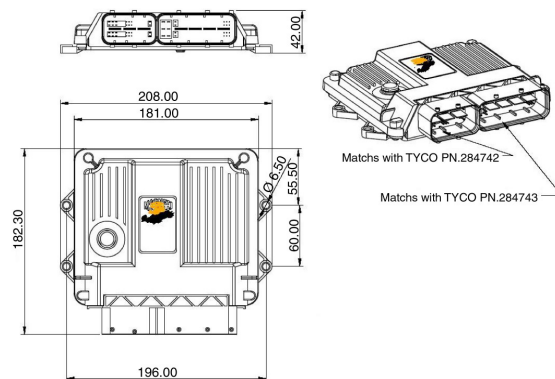
#### Logging

Flash disk memory .....	8 or 16	Mbyte
Logged channels .....	up to 128	
Logging rate .....	up to 10	Kbyte/s
Sampling rate .....	up to 200	Hz

#### Other Characteristics

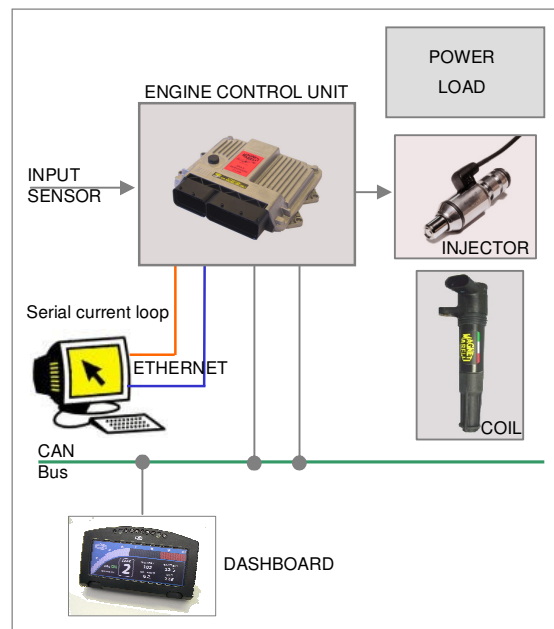
Power supply.....	6 to 16	V
Operating temperature range (internal).....	-20 to 85	°C
Protection class .....	IP 65	
Dimensions		
with connectors .....	208 x 182.30 x 42	mm
Weight (approx.).....	960	g

### Dimensions



Dimensions in millimetres

### Application Schematics



For further information, please contact:



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