



## ENGINE CONTROL UNIT

# SRB-120

Professional engine control  
High performances

### Description

SRB-120 is an Engine Control Unit designed for engines with up to 2 cylinders, and either 2 stroke or 4 stroke configuration. The SRB-120 can drive 2 injectors and 2 ignition coils.

The unit can also be used in batteryless systems.

Communication with the PC based configuration tools and also with other units (such as expansion modules and logger) is possible by CAN line.

The logic core of the SRB-120 comprises a high performance RISC microcontroller.

SRB-120 provides analogue inputs for single-ended sensors, temperature sensors and UEGO lambda-sensor.

Standard automotive sensors can be used as well as motorsport sensors.

Advanced engine management features:

- Easy compensation of the injected fuel quantity:
  - Barometric pressure sensor
  - Throttle transient
  - Closed loop lambda control
- Self learning of lambda control corrections with update of base injection maps in a mouse click
- Antispin control
- Simplified tuning of strategic sensors (i.e. throttle position, fork and shock potentiometer)

The unit provides the possibility to manage a "Drive by Wire Control" by means of external modules and actuators.

3 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.

SRB-120 is supplied with the mating connector (loom side).

### Main Features

- 3 Single-ended
- 2 Pick-ups or Hall effect
- 1 Hall effect
- 2 Inductive ignition drivers
- 2 On/Off injector drivers
- 1 PWM (Current controlled PWM)
- 1 Linear Lambda sensor (UEGO)
- 2 Temperature
- 4 Digital input
- 1 CAN communication bus



### Benefits

- Suitable with batteryless systems
- Accurate engine control by means of high computation power
- Flexible setup by means of SW configurable Inputs/Outputs
- Standard automotive sensors can be used as well as motorsport sensors
- Floating point data management
- Compatible with a wide range of advanced Marelli software tools
- Very compact design and easy to install

### Typical Applications

Off-road bikes, 2 stroke & 4 stroke  
Go-karts  
ATV

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### Technical Characteristics

#### Inputs

Analogue Single-ended .....	3
NTC/PT1000 temperature sensor (selectable) .....	2
NTC internal temperature sensor .....	1
Linear Lambda sensor (UEGO) .....	1
V battery injector .....	1
VR Pick-ups or Hall effect .....	2
Hall effect .....	1
On/Off digital .....	3
"Code Load" enable pin .....	1

#### Outputs

On/Off injector drivers .....	2
Inductive ignition drivers .....	2
PWM .....	1
Voltage references .....	2

#### Communications

CAN line (1 Mbit/s (*)) .....	1
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(\*) Configurable on request

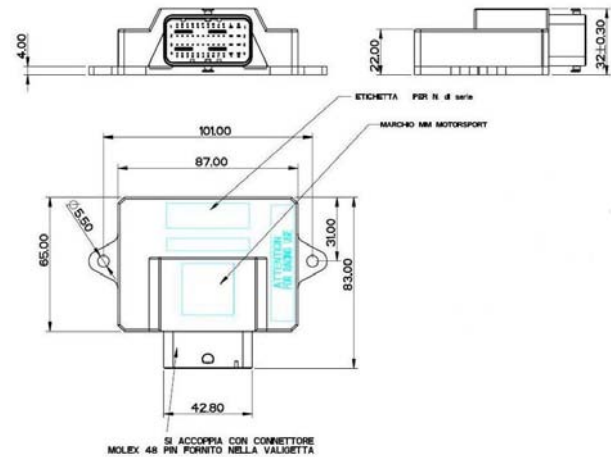
#### Logic Core

Microcontroller (80 MIPS RISC) .....	1	
Flash E2PROM (microcontroller) .....	1	Mbyte
RAM memory (microcontroller) .....	48	Kbyte
RAM memory .....	256	Kbyte
E2PROM serial .....	256	Kbit

#### Other Characteristics

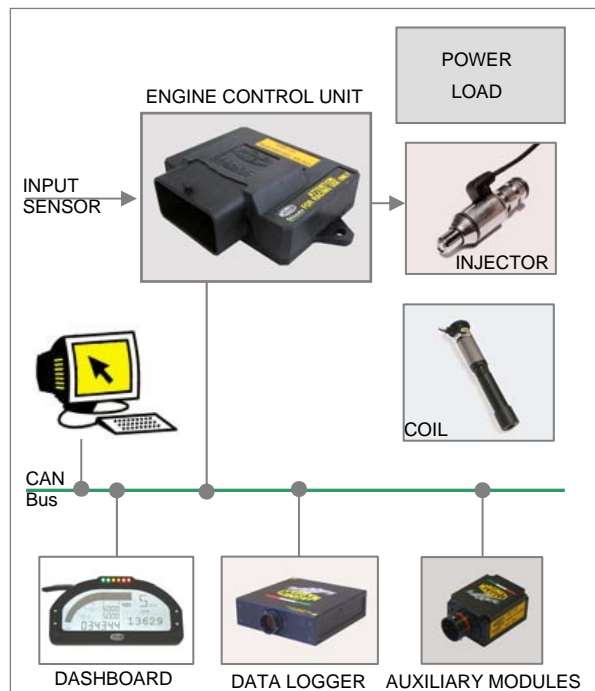
Power supply .....	6 to 16	V
Operating temperature range (internal) .....	-20 to 85	°C
Protection class .....	IP 64	
Dimensions		
with connectors .....	87 x 83 x 32	mm
Weight (approx.) .....	200	g

### Dimensions



Dimensions in millimetres

### Application Schematics



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