



ENGINE CONTROL UNIT

SRT-EDL32/64

Internal data logger
Professional engine control
High performances

Description

SRT-EDL32/64 combines the performance of the SRT-E Engine Control Unit with an internal 32/64 Mbyte data logger with a very high speed Ethernet connection for data download. The engine control capability of the SRT-EDL32/64 is an evolution of the SRA Engine Control Unit with greater input/output and communications capability in reduced package size and having more robust external connections.

Like the SRT-E, SRT-EDL32/64 is a dedicated Engine Control Unit. A single SRT-EDL32/64 can drive up to eight injectors and six ignition coils. It is compatible with a wide range of sensors and actuators (especially F1 products) such as coils, injectors and sensors. SRT-EDL32/64 can also drive logic command coils (HW option).

In addition to the very high speed Ethernet connection for data download, communications from the PC based configuration tool and to other units (such as dashboard and logger) is possible by 2 CAN lines and an asynchronous serial line.

Inside the unit there is a high performance RISC microcontroller and an FPGA for diagnostic purposes.

SRT-EDL32/64 provides analogue inputs for single-ended, temperature and knock-sensor as well as an interface for a linear wide band lambda sensor. The unit also provides 2 H-Bridge output stages for use with suitable "Drive by Wire" or Trumpet Control actuators.

6 configurable speed sensor inputs (up to 3 inductive) provide full flexibility of configuration for engine angle detection as well as other frequency inputs such as wheel or shaft speed.

Main Features

- 14 Single-ended
- 3 Pick-ups or Hall effect
- 3 Hall effect
- 6 Inductive or logic command ignition drivers (HW option)
- 8 On/Off injector drivers
- 2 H-Bridge: DC-Motor driver for "Drive by Wire" control
- 4 PWM
- 2 Linear Lambda
- 2 Knock input for detonation control accelerometers
- 32 or 64 Mbyte internal data logger
- Up to 256 logged channels
- Up to 40 Kbyte/s logging rate
- Sampling rates up to 1000 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
- Accurate engine control by means of high computation power
- Compatible with F1 products (injectors, coils, sensors etc.)
- The logic command coils option is available on request
- SW selectable NTC/PT1000 temperature sensors
- 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)
- Requires Axon logging setup tool
- Introduced circular connectors
- Very compact design and easy to install

Typical Applications

Professional circuit and rally applications
One make race series

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Technical Characteristics

Inputs

Analogue Single-ended	14
Linear Lambda sensor	2
Knock sensor	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	3
Hall effect	3
Lap trigger	1
"Code Load" enable pin	1
Syncro (Iso9141)	1

Outputs

On/Off injector drivers	8
Inductive or logic command ignition drivers (HW option) ..	6
H-Bridges	2
Lambda heater drivers	2
PWM	4
Voltage references	3

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	64 Kbyte
Time keeper	1

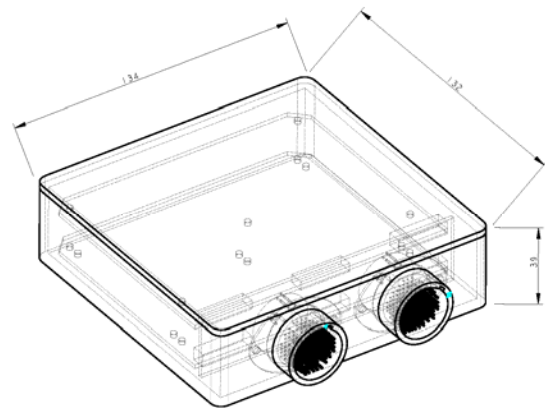
Logging

Flash disk memory	32 or 64 Mbyte
Logged channels	up to 256
Logging rate	up to 40 Kbyte/s
Sampling rate	up to 1000 Hz

Other Characteristics

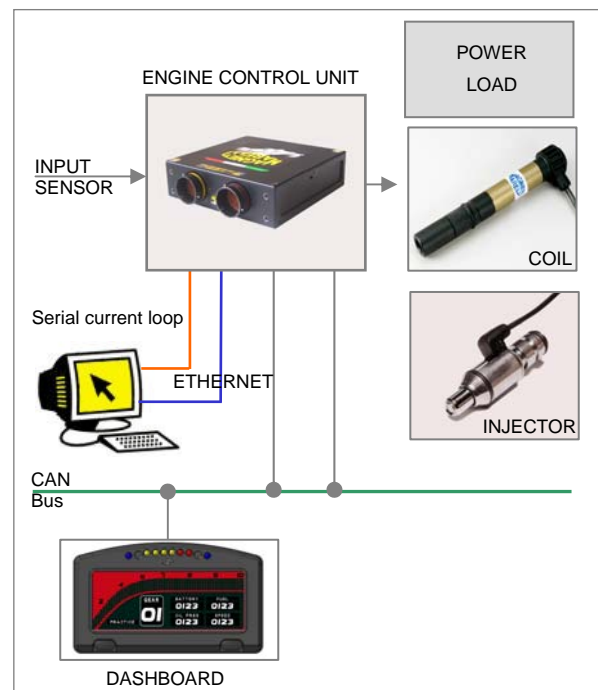
Power supply	7 to 16 V
Operating temperature range (internal)	-20 to 85 °C
Protection class	IP 54
Dimensions	
without connectors	134 x 132 x 39 mm
Weight (approx.)	700 g

Dimensions



Dimensions in millimetres

Application Schematics



For further information, please contact:



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May 2010
rel. 01
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