MARS ROBOTICS
مارس روبوتكس

PRODUCT DATA SHEET

MARSECU

OVERVIEW:

The Engine Control Unit (ECU) is an electronic device designed to optimize engine performance by regulating fuel injection timing, the amount of fuel being injected, and ignition timing. This improves fuel efficiency, reduces emissions, and enhances overall engine performance. Our ECU features a user-friendly Graphical User Interface (GUI) that monitors various engine data.

Support Engines from 35 to 300 cc	**Automatic Fuel Injection**	**Regulating Injection Time and Amount**
Ignition Management	**Start and Warm-up Fuel Enrichment**	**Altitude Compensation**
Graphical User Interface	**Adaptability Across Varying Conditions**	**Enhancing Engine Performance and Efficiency**

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MARSECU Specifications:

Specification	Description
Engine Type	2-Stroke Engines, single or twin cylinders
Volumetric Displacement Range	35 to 300 cc
Communication	Serial (RS232, UART), CAN
Processor	NXP FS32K144
Processor Capability	Arm Cortex, up to 112 MHz, 2 MB RAM/Flash memory
ECU Features	Auto-injection, Auto-ignition, Start and Warmup Fuel Enrichment, Engine Monitoring, Altitude Compensation, System Voltage Measurement
Connector Pins	37 pins, redundancy in power and ground pins
Power Input	12 volts, protected onboard
Baro Sensors	Yes, absolute, for altitude compensation
Injection	1 port, ability to withstand 2 injectors on the same port. Auto-fuel injection.
Ignition	1 port, ability to withstand 2 CDI modules firing at the same time. Automatic spark advance calculation
EFI Kit Supported Components	IAT sensor, CHT sensor, CDI module, EV1 Injector (size-dependent), Fuel Pump kit, Throttle body (size-dependent), Harness, RPM Sensor, TPS Sensor,
GUI	Engine monitoring through Serial Communication
Programmability	Option to calibrate to different engine sizes

GRAPHICAL USER INTERFACE (GUI):

Our Graphical User Interface (GUI) is user-friendly and allows monitoring of various sensor readings:

- Engine Speed (RPM).
- Throttle Position (TPS).
- Air to Fuel Ratio (AFR).
- Start Fuel Factor.
- After Starting fuel factor.
- Warm-Up Fuel Factor.
- Intake Air Temperature (IAT).
- Cylinder Head Temperature (CHT).

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