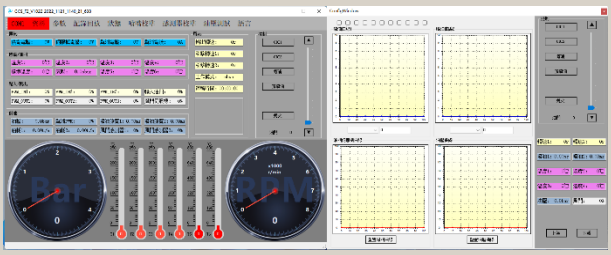
# Unmanned aerial vehicle dedicated Electronic Fuel Injection (EFI) system

*For multi-fuel electronic fuel injection fuel control*

**UAV Multi-Fuel Electronic Fuel Injection Control System**

The EX Multi-fuel Electronic Fuel Control System is specifically designed for UAV two-stroke and four-stroke engine applications. It eliminates the need for numerous sensors and incorporates intelligent computation, electronic fuel pump, optimized fuel-air mixture intake, transforming the fuel system from carburetor control to an effortless electronic active fuel injection system.

The built-in intelligent computation adjusts fuel mixture intelligently based on engine operating conditions, providing a more stable working environment. Whether in summer or winter, at sea level or at 6000 meters high altitude, with our professional tuning, you can easily adapt without the hassle of adjusting carburetor needles.

For UAV applications, lightweight and high-precision components are used, making the entire system weigh only 330g. The compact design further relieves traditional carburetor upgrade users from concerns about sensor placement and weight.

## System Features

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| Visual interface for clear curve presentation |
| User-friendly operation, convenient connection with existing engine systems |
| USB / TTL interface |
| Support for firmware upgrade |
| Support for two ignition devices |
| 11 mixture adjustment points within the RPM range |
| Overheating protection system |
| Mixture fuel adjustment based on atmospheric pressure |
| Electronic fuel pressure dynamic adjustment |
| Cylinder head temperature monitoring point |
| Exhaust temperature monitoring point |
| External ambient temperature sensor |
| Built-in atmospheric pressure sensor |
| Active system heat control |
| Built-in operational log recording |
| Intelligent control signal detection |

## Software Functionality

SBus functionality includes channel mapping support.

Engine temperature compensation feature (engine overheat protection mechanism), environmental temperature compensation feature.

Recording of system operating time and cumulative working hours.

Log data playback

Engine maintenance reminder

Fuel injection parameter curve display/adjustment

Setting of minimum and maximum positions for throttle servo, idle throttle setting, and configuration of signal ranges and bidirectional functionality for 3-channel PWM output channels.

Air pressure compensation

Abnormal power outage restart warning

Fuel pump system selection

## Hardware functionality

ECU operational log storage functionality, supports up to 32GB TF card

Control over fuel pump voltage output switch

Support for collecting data from 4 channels of PT100 temperature sensors, using a 2-wire configuration

Support for 2 channels of K-Type temperature sensors, using a 2-wire configuration

Support for 2 channels of RPM signal input

Support for outputting 2 channels of fuel injection signals, with the ability to independently select their corresponding RPM signals

Support for 2 channels of CDI power supply with individually controllable switches, supplying power at 7V, the same voltage as the servo power supply

Support for environmental temperature collection

Support for SBus signal input

ECU power supply range: 16.8V to 28V

USB Type-C connection to computer for reading log files and updating device firmware

Support for Bluetooth parameter adjustments

LED light indicators to display ECU status

Support for 2 serial ports

Support for 3 channels of PWM signal input

Support for air pressure collection

Support for collecting data from 2 channels of intake position sensors

## Electrical specifications

Input voltage: 16.8~28V (Recommended: 24V)

Idle power consumption: 0.6W

Full load power consumption: <45W

Fuel pump port output voltage: 13.5~14.5V (<5A)

Servo port output voltage: 7V (<3A)

Analog acquisition port output voltage: 5V (<0.5A)

CDI control port output voltage: 7V (<3A)

Serial port type: TTL (3.3V)

Fuel pump operating voltage: 10~14V (<3A)

## Exterior specifications

ECU

Dimensions: Length 90mm x Width 80mm x Height 17.6mm

Weight: 120g

Fuel pump

Dimensions: Length 90mm x Width 39mm x Height 42mm

Weight: 130g