



Introduced in 2008, Currawong Engineering have worked with Autronic to supply an aerospace grade product to what was, at the time, a fledgling industry, and have continued support for this product for 13 years.

Continued pressure on the global supply chain, and major disruption of electronics manufacture in 2020-2021 has led to persistent shortages of components for this product. Costs and lead times have been subject to unpredictable increases, but have been absorbed up until now. To continue to support both established and new customers, Currawong Engineering will be moving to a new ECU platform. There will be a limited quantity of CE367B ECU units available as we move through this transition process.

From early 2022, Currawong Engineering will be using the IntelliJect Engine Control Unit for controlling their high quality Electronic Fuel Injection systems. A significant effort in testing and validation with Currawong Engine products will be undertaken to assure complete compatibility with existing products.

A summary of the IntelliJect features is included in this document. Currawong Engineering will work with customers to ensure compatibility with existing engine systems in the field, and also work to tightly integrate the ECU with standard engine system products.

Further information will be made available to customers directly and via the website throughout the transition process.

For any questions, please contact Currawong Engineering: admin@currawong.aero

Product Information – IntelliJect

Power4Flight has developed their ECU internally to meet the unique and numerous demands of the UAV industry. The product was launched in 2018, and there are currently more than 100 units in the field.



<https://power4flight.com/uav-engine-products/uav-engine-control-units/intelliject-efi/>

Hardware Features

- Onboard power conditioning (8-30 Volts in)
- Dual injector outputs with fault detection
- Dual CDI ignition output
- Fuel pump control output
- PWM outputs for throttle and cowl flap control
- Manifold pressure sensors
- Dual redundant barometric pressure sensor
- Dual redundant crank sense inputs
- Dual redundant CHT sensor inputs
- Manifold air temperature input
- Fuel pressure input
- Analog and PWM throttle position or command input
- CAN, USB, and Serial communications
- Onboard SD card data logging
- Compatible with Currawong EFI accessories
- Weight:
- Board Only: 29.0g (1.02oz)
- With Enclosure: 71.3g (2.51oz)
- Size:
- Board Only: 45mm x 75mm (1.77" x 2.95")
- With Enclosure: 48mm x 79mm (1.89" x 3.11")

Software Features

- Highly configurable for a variety of engine types (two-stroke, four-stroke, triples, twins and singles)
- Seamless integration with third party systems, particularly flight controllers
- Free communications ICD and software developers kit
- Multiple communication protocols supported
- Sophisticated and robust firmware designed for high reliability aerospace applications
- Choice of alpha-n or speed-density fuel injection with multi-variable compensation
- Direct throttle command, RPM control, or throttle sensing
- Configurable throttle limiting based on temperature and/or speed
- Spark and injection interruption for rev limiting
- Injector skipping to improve injector dynamic range
- Closed loop cooling control using CHT sensors
- Fuel pump control using proportional or bang-bang fuel pressure feedback
- Fault detection and correction for Baro, MAT, MAP, CHT, fuel pressure, and crank sense
- Onboard electronic log-booking and maintenance tracking

Power4Flight have completed several FAR33 endurance tests on their engines using the IntelliJect hardware and software. The software tools designed for use with the IntelliJect are well matured and are in use with several customers at this stage. The ECU will be compatible with Currawong Engineering's CEquip software tool, however for full functionality it is recommended to use the IntelliJect software tool.