

IntelliGen is a Starter/Generator controller designed by Power4Flight specifically for use in small engine aerospace applications.

Hardware features

- 75V active 3-phase boost rectification for BLDC generators
- High voltage output for high power loads
- 28.5V (8S LFP) or 26.4 (6S LiPo) battery-backed 300W regulated output
- 12V and 6V battery-backed regulated outputs
- Switched engine heater output
- All outputs can be user enabled / disabled
- Generator, batteries, and regulator current measurements
- Real time adjustable current limiting for the regulator
- Hall sensor inputs for worry free commutation
- Generator thermistor temperature input
- Internal temperature measurement
- Shore power / high voltage battery input
- CAN and Serial communications
- **Weight: 250g (8.8oz)**
- **Size: 126mm x 66mm x 26 mm (5.0" x 2.6" x 1.0")**



Software features

- Configurable for a variety of use cases and generator designs
- Free communications specification and software developer's kit
- Sophisticated and robust firmware designed for aerospace applications
- Automatic load shedding to protect the engine and/or generator
- **Configurable high voltage charger for eVTOL lift packs**
- Engine starting via main or high voltage batteries
- Power augmentation using high voltage battery to add engine shaft power
- Choice of sensors and/or sensorless commutation with automatic failover
- Free user interface for testing and configuration development
- Interoperates with IntelliJect ECU

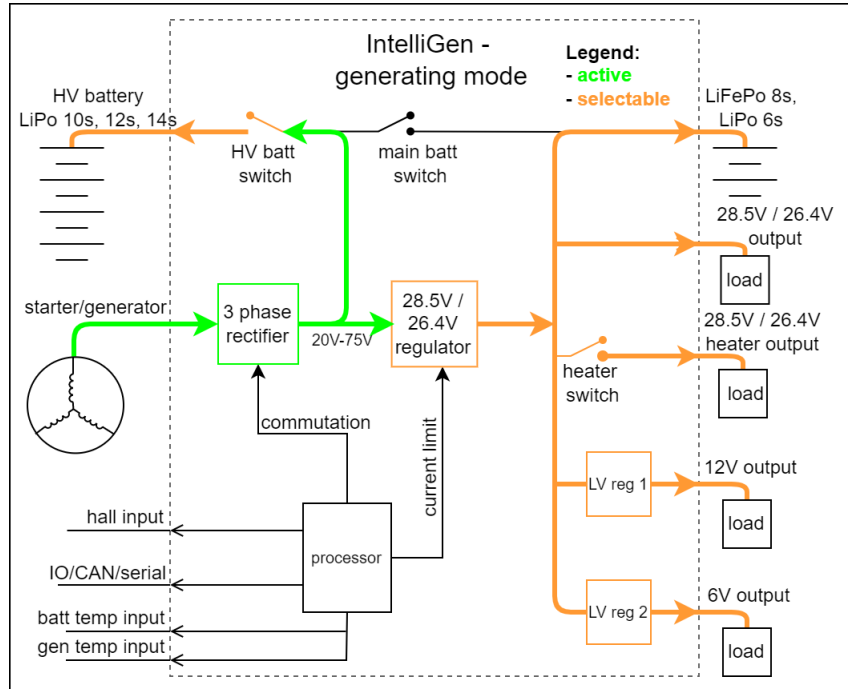


Figure 1 - IntelliGen System Block Diagram

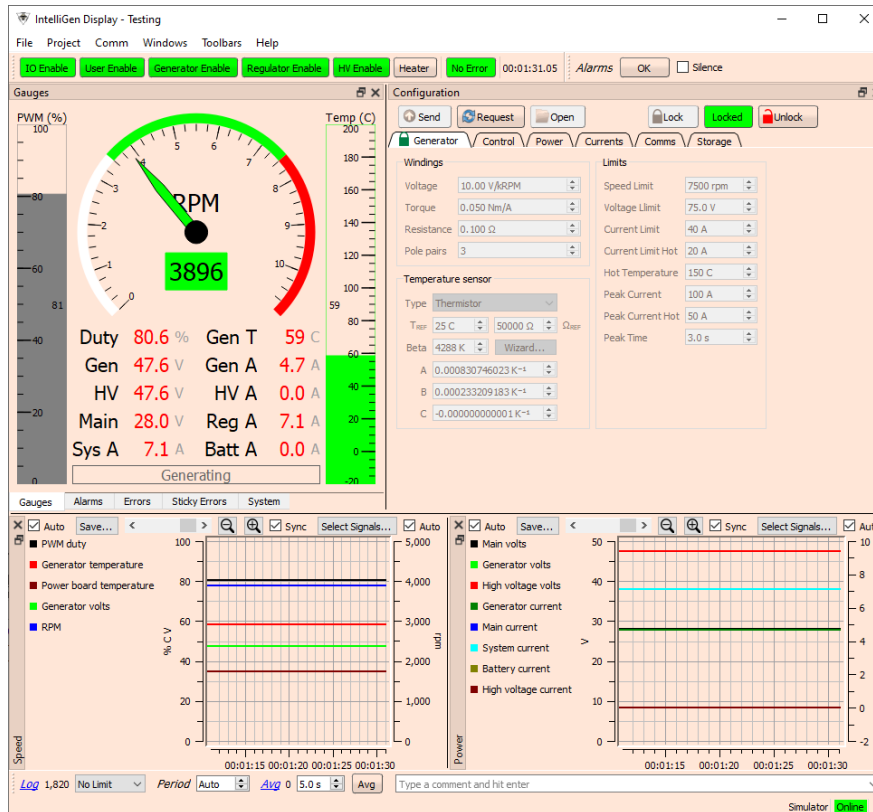


Figure 2 - IntelliGen Display Application

The IntelliGen display software is a development tool used to configure IntelliGen, test generators, and develop software that interfaces with the IntelliGen. It is freely available from Power4Flight.