Redundant Flight Control System

RiCopterControl RiCC

developed and produced by *RIEGL*

The new flight control system RiCopterControl (RiCC) is *RIEGL*'s response to highest safety and reliability requirements and features a fully redundant hardware design. RiCC supports a wide variety of power and control interfaces, straightforward sensor payload integration and thus enables high flexibility in system configuration.

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Key features

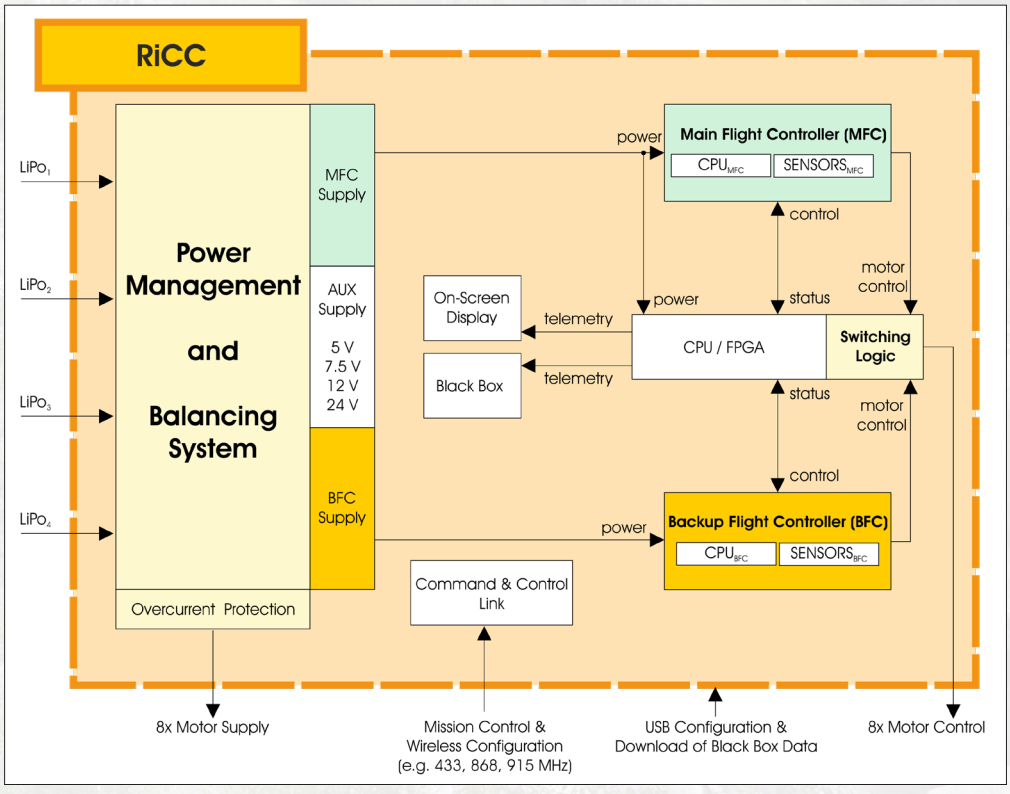
- redundant hardware system design (including flight controller CPU and sensors)[1)]
- sophisticated power management and battery balancing concept
- outstanding build quality for highest reliability, robustness and lifetime
- temperature-calibrated and damped sensors to optimize operation in harsh environments
- resilient to electrical short circuits, CPU or sensor crash failures, cable breaks, etc.
- rigorous in-flight failure detection, handling, and alarming
- highly customizable and optimized for multi-sensorsystem integrations
- powerful telemetry functions (remote control, on-screen-display, operator software, blackbox)
- standard (433, 868, 915 MHz) or customizable frequencies; MAVLINK-based command and control link

1) partly based on open-hardware project Pixhawk and open-source firmware PX4

Interfaces for sensor payload

Power supply:
2x 5 V (in total 4 A)
3x 7.5 V (in total 6 A)
2x 12 V (in total 8 A)
1x 24 V (8 A)

Control interfaces:
1x RS-232
2x UART (3V3)
3x PWM or I/O Pin (3V3)



Integration examples

- *RIEGL* VUX- and miniVUX-series
- *RIEGL* VQ-840-G
- ADS-B transponder
- siren, parachute
- strobe-light, landing-light
- data processing hardware
- data transmission hardware

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