

Flexible, Powerful, Customizable

Clio Series B is a command, control, communications, and power distribution platform designed for use in a standalone or hub-and-spoke system. Clio can be everything from a simple switch to a flight computer.

Clio offers 2 Ethernet and 17 serial ports, 9 switched power outputs and a various GPIO with many customizable options.



Communications

Clio is outfitted with 2 and 4 wire RS-485, RS-232, 5V TTL, CAN-FD, and 10/100 switched Ethernet in a variety of port mappings.

Various serial wire protocols are natively supported, and for ports connected to the FPGA coprocessor many more are possible.

Of special note are ports that can be used as Remote Control receiver, PWM, safety termination inputs and PWM outputs.

Power

Clio features 4 independent power inputs which can be fed to 3 independent power distribution busses. One of these busses can also be powered from an internal, adjustable 3.5A power supply for even more flexibility.

These distribution busses then feed 9 independently switched and e-Fused power outputs.

Functional safety of the Clio can be assured with a comprehensive set of voltage taps, as well as high and low side current measurements on both the inputs and outputs.

Control

Featuring a 400 MHz ARM[®] Cortex[®]-M7 STM32H7x3 with double precision FPU, 1 MB of RAM and up to 34 MB of flash, coupled with a Spartan 7 FPGA communications co-processor and internal expansion ports, the Clio is ready to handle any controls workload.

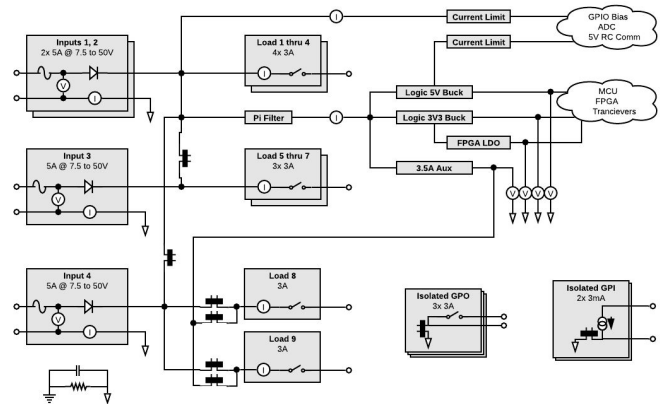
Custom Software

An open-platform C++ and Verilog SDK allows the Clio to be configured to your exact needs.

Specifications

Input Voltage	12V - 50V typical extended range options available
Power	> 3.5 Watts Typical
Weight	Aluminum: 325g Composite: 285g
Environmental	Ingress: IP64* Operating Temp: -40 to +70°C Vibration: DO-160G Cat R* Altitude: -5k to 40k MSL* * designed, but not tested to
Power Distribution	3.5A Buck SMPS 9x 3A Switched/Fused Outputs 1x 200mA 5V Aux Output
Supported Serial Standards	15x Half Duplex RS-485 1x RS-232 1x 5V Invertible TTL 10x CAN-FD Programmable or Fixed Termination and Duplexing
Managed Ethernet	3 ports (2 external) 10/100 Mbps, Auto-MDIX, VLANs, QoS, Rate Limiting, IGMP Snooping, IEEE 1588v2, and Cable Diagnostics
GPIO	3x Isolated 50V/3A Solid State Relay Outputs 2x Isolated 50V/3mA Max Constant Current Inputs 10x 3.3V PWM or GPIO
Analog Inputs	2x +/-2.5V differential with programmable gain
E-Stop or Flight Termination	Voltage or Current Mode, Monitored by FPGA with Programmable Reaction
Internal Expansion	UART, SPI, GPIO (SMA through enclosure)

Power Tree



Mechanical Outline

