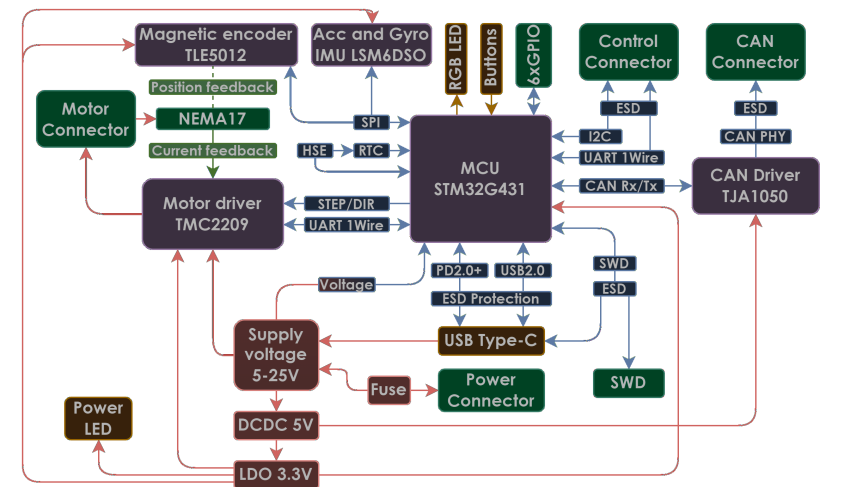


CLN17 Closed-Loop Stepper Motor Driver

Designed for various applications such as robotics, automation, 3D printing and CNC machining, the CLN17 closed-loop stepper motor driver provides superior performance and reliability. With an input voltage range of 5-25VDC, reverse polarity protection and overvoltage protection, this driver is equipped to handle demanding environments. The TMC2209 advanced stepper motor driver provides silent operation, step loss detection, current control, and step divisions up to 1/256. A 14-bit absolute magnetic encoder provides precise motor shaft positioning from 0-360 degrees.

Powered by the ARM Cortex STM32G431 MCU, the system performs real-time calculations directly on the driver. Communication is through five universal interfaces: STEP/DIR/EN, UART Single Wire, I2C, USB 2.0 and CAN bus. The driver also supports SWD (Single Wire Debug) with SWO traceability, Power Delivery (PD2.0 or PD3.0) via Type-C, and ESD protection for all interfaces, ensuring safe and reliable operation. All I/O is compatible with both 3.3V and 5V.

Additional features include two user-configurable buttons, one of which can operate as an NRST, optional HSE and LSE crystals for accurate off-line time control, a 6-axis IMU (gyroscope and magnetometer) for orientation and vibration control, RGB LED indication, and synchronous DC-DC and LDO for efficient power management. An 8-pin 1.27mm board-powered connector and 6 GPIOs with UART and ADC support can be used for interfacing with expansion boards.



More information on <https://creapunk.com/cln17>

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CLN17 project

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