**Hoektronics CNC Controller Specs v1.1**

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| **Licensing** | * Fully OSHW, GPLv3 * Developed in the open at: https://github.com/Hoektronics/Hoektron-CNC |
| **Input Power** | * 12-24VDC, 24V preferred * Internal regulators to 5v and 3.3v * Current sensing on main power for POST and realtime current monitoring. * Replaceable fuse for safety (5x20 cylinder type) |
| **CPU** | * LPCXpresso from NXP * LPC1769 microcontroller * 512kb Flash * 64kb RAM * 100mhz operation |
| **Connectivity** | * USB 2.0 Full Speed (B Connector) * 10mbit Ethernet (RJ45 Connector) * Bluetooth v2.0 (via RN-42 module) * WiFi – 802.11 b/g (via RN-131 module) |
| **Spindle Control** | * Isolated Relay for up to 230VAC operation, with option to use built-in 24V supply. |
| **Vacuum Control** | * Isolated Relay for up to 230VAC operation, with option to use built-in 24V supply. |
| **Stepper Drivers** | * 4 axes built-in (XYZA) * Supports 2 different types of modular stepper drivers: * A4983 based “Pololu” style drivers for NEMA17 size motors (Up to 1A) * TB6560 based “HoekStep23” style drivers for NEMA23 size motors (Up to 3A) * Step size and other options configurable. * Optional support for dynamic current setting on Hoektronics “HoekStep17” style drivers |
| **Storage** | * microSD slot w/ support for up to 32GB cards. |
| **Debug** | * 3.3v TTL Serial connection * JTAG through LCPXpresso board |
| **Peripherals** | * 4 endstops (max for each axis) * Tool zeroing input * Door open/close input * Spindle speed input * Buzzer for alerts and simple user feedback * All extra I/O broken out for hackability. |