

# Avid CNC EX Controller Specifications

NEMA 23 Stepper	NEMA 34 Stepper	ClearPath® Servo
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## Motors

Motor Type	Stepper		Teknic ClearPath® Servo
X / Y1 / Y2 Axis	(4x) 420 oz-in, 3/8" Shaft	(4x) 960 oz-in, 1/2" shaft	(3x) 196W, 1/2" shaft
Z Axis			(1x) 122W, 1/2" shaft
Drives *	(4x) 50V / 56A digital stepper	(4x) 80V / 70A digital stepper	Integrated within Motors
Power Connector	DB9 - 4 pin / 5A	XLR - 4 pin / 7A	Molex - 4 pin
Signal Connector			M12 - 8 pin
Power Cable			RD-24 to Power Hub to (4x) Molex 4 pin
Signal Cable	DB9 20 AWG shielded	XLR 18 AWG shielded	M12 - 8 pin, A Code

## Controller

Power Supply (Motors)	(1X) 480W, 48V/10A	(2X) 480W, 48V/10A	(2X) 480W, 48V/10A
Power Supply (Logic)	24V / 5V	24V / 5V	24V / 5V
Power Supply (Sensors)	24V	24V	24V
Input Power	90-264 VAC	90-264 VAC	90-264 VAC
Current Draw	5A Max	10A Max	12A Max
Software	CNC12, Acorn Router Pro License		
Motion Control	Centroid Acorn CNC Control PCBs		
Max Independent Axis Control	4 Axis (X, Y, Z, Auxiliary)		
Enclosure	Industrial Painted Steel NEMA Rated		
Main Power Switch	Industrial Rotary Multipole Switch		
Cooling Fan	80x80x10mm, 24V		
Controller Power Cable	NEMA 5-15P to C13		

## Inputs / Outputs

Motor Signal	(4x) DB9-4 pin 48V/4.2A	(4x) XLR-4 pin 48V/7A	(4x) M12-8 pin, A Code
Motor Power			RD24-4 pin 48V/20A
AC Input Power	C13 - AC		
PC / Laptop	Cat 6 Ethernet		
Spindle or Plasma Control	Amphenol 14 pin CPC		
Proximity Sensor	(6x) M12-4 pin, 24V		
Emergency Stop	M12-4 pin, 24V, Normally Closed		
Z-Axis Brake	M12-4 pin, 24V		
Power Relay Hub	M12-4 pin, 24V		
Corner Finding Touch Plate	M12-4 pin, 24V		
Tool Height Setter	M12-4 pin, 24V		
Expansion Controller **	(2x) M12-4 pin, 24V		

## Plasma Enabled

Compatibility	Configured at Purchase		
Software	CNC12, Acorn Plasma Pro License		
Torch Height Control (THC)	Centroid TX and RX PCBs with Fiber Optic Isolation		
Power Supply	Isolated 8W/24V PSU		
Ohmic Touch-Off	M12-4 pin, 24V		

## Auxiliary (4th) Axis Enabled

Compatibility	Configured at Purchase		Upgrade Ready
Compatible Motor	420 oz-in, 3/8" Shaft Stepper	960 oz-in, 1/2" Shaft Stepper	196W or 122W, 1/2" Shaft Servo
Additional Drive	50V/56A Digital Stepper	80V/70A Digital Stepper	Integrated within Motor
Motor Power			M12-5 pin (K Code) 48V/8A
Motor Signal	DB9-4 pin 48V/4.2A	XLR-4 pin 48V/7A	M12-8 pin (A Code)

### Notes:

\* Supports dual-drive gantry systems, which require 4 drives to move 3 axes.

\*\* Supports Avid CNC Deployable Laser System and other upgrades.