“All-In-1-DC” CNC Controller: A complete CNC control contained on one printed circuit board. All you need for a typical mill, router or lathe.

- includes built-in 3-axis Digital DC Servo drive, preconfigured CNC PLC with 16 IN and 9 Relay Out, and Analog out Spindle Control.

- Optional Expansion boards for more complex machines with automatic tool changers, 4,5,6 axis, slaved axes and multi spindles. Allin1DC eliminates cables, connectors and power supplies and simplifies installation while providing robust performance.

- Runs with CENTROID Mill or Lathe CNC software on a Windows 7 or 8 PC*

**Optional Wired Manual Pulse Generator (MPG)**

**Plug and Play Operator’s Control Panel**

**Plug and Play Plug and Play Touch Probes**

**Plug and Play Digital Drive Communication**

**Optional DC: Single Axis DC Servo Drive. Add up to three DC1’s for a total of 6 axes**

- Six Servo Motor Encoder Inputs. Direct Encoder feedback to Motion Control CPU and DC Servo Drive for true closed loop CNC control operation. Any spare inputs can be used with Spindle Encoder for Rigid Tapping and Constant Surface Speed, Scales, Dual MPG’s etc.

- Built-in: Hi-Performance DSP CNC Motion Control CPU

- Built-in: 3-axis DC Servo Motor Drive up to 180 VDC & 15 amps per axis!

- 16 PLC Inputs, preprogrammed for typical CNC machine tool inputs such as: Limit Switches, Home Switches, Gear range indicators, Hi/Lo range indicator, E stop, Lube level sensor, Spindle Fault, etc. User definable and editable for custom installations. User configurable voltage and polarity.

- 9 Fused Relay Outputs

- 6 Encoder/Scale Inputs

- 16 Inputs (5, 12, 24 VDC)

- 16 Relay Outputs

- 4 Digital to Analog Outputs

- 4 Analog to Digital Inputs

- DC Servo Motor Power Supply: Reuse existing DC servo motors or use new CENTROID DC Servo Motors. Encoder upgrade kits available for older Servo Motors.

- Use existing DC Servo Motors when upgrading older CNC machinery OR Use new CENTROID DC Servo Motors. Encoder upgrade kits available for older Servo Motors.

- Optional I/O Expansion Boards: Add up to 4 in any combination Up to 80 In / 73 Out

- Note: The All-in-One DC includes enough preconfigured I/O for typical milling machine/router/lathe applications, optional expansion boards are available for complex retrofits requiring additional I/O above and beyond the included I/O.

- Optional Wireless MPG Control Pendant

- Optional Touch Probes, Plug and Play

- Optional Wired Manual Pulse Generator (MPG) Plug and Play

- Optional Wi-Fi MPG Control Pendant

- 110, 220, 380, 440 VAC IN

- DC OUT

- 110, 220, 380, 440 VAC IN

- Preprogrammed Relay Outputs greatly simplify CNC control machine tool integration and reduce wiring, connections and associated parts and labor cost. Use our standard included PLC programs or create/modify your own for limitless custom applications. Preprogrammed for a wide variety of typical cnc machine tool functions such as: Lube pump control, Flood pump, mister solenoid, and anything you want to control automatically with G&M codes.

- Allows fully programmable spindle speed control with a simple connection to a wide variety of AC motor inverters. User selectable: 0-5, 0-10, +5, +10 vdc output. User selectable 4 range Analog Input.

- Preprogrammed PLC add 16: 16 Inputs, 4 Digital to Analog Outputs, 4 Analog to Digital Inputs

- Add 4AD4DA 4 Digital to Analog Outputs

- Add 1616 16 Relay Outputs

- Note: The All-in-One DC includes enough preconfigured I/O for typical milling machine/router/lathe applications, optional expansion boards are available for complex retrofits requiring additional I/O above and beyond the included I/O.

- **To order**
  - Add DC1: Single Axis DC Servo Drive.
  - Add up to three DC1’s for a total of 6 axes

- **To order**
  - Add up to four DC1’s for a total of 6 axes

- For more information, please contact CENTROID at (814) 353-9290 or visit www.centroidcnc.com