

# Instant Quote



PC based CNC controls  
 Machine tools and  
 Custom applications

993 Carbon Canyon Rd. Chino Hills, CA 91709  
 Office: (714) 528-7061 Fax: (714) 528-4892

## SALES – SERVICE – TRAINING



CNC enthusiast

September, 2011

Thank you for inquiring about our Build it Yourself CNC control components kit. Quoted below are the minimum components needed to build a Centroid CNC control while retaining your **Fanuc** Servo Motors and drives. The following pages will explain how additional components can benefit your upgrade project. After deciding which components are right for you there is a printable purchase order form to simplify the process.

1. Machines in Motion Inc. is providing you with Centroid's Windows7 based CNC control software. This will load onto your PC computer. Then, your PC computer will be sending all motion control commands to our MPU11 processor board via Ethernet cable. Our GPIO4d board will wire to your machine's inputs and outputs. The Optic4 board will communicate with up to 4 Fanuc servo drivers.
2. Choose your software type. "Turning" for lathe applications or "Milling" for mills, routers, drilling machines, plasma & water jet cutting.

**Recommended Options** include an MPG hand wheel, & Hand held jog pendant.

Technical support is provided free of charge for 45 days after receiving your kit.

Please contact Doug Laursen to begin processing your order. Typically we need your payment and a company purchase order (or use the copy included here). Include your ship to and bill to address. Name of contact and best phone number for us to reach that person. Your MPU11 component kit will ship shortly after receipt of your payment.

Your payment can be made by company or personal check, money order, cashier's check or wire transfer. Credit cards are processed by PayPal with a 3% processing fee. Their fee, not ours.

Doug Laursen  
 President  
 Machines in Motion Inc.  
 (714) 528-7061  
 (714) 528 4892 Fax  
<http://cnc-machine-controls.com>

# Quotation

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### What comes standard with Fanuc version CNC control kit?

- ✓ When purchased from Machines in Motion Inc. your MPU11/Fanuc CNC control kit will include PLC software that recognizes all of your Jog panel buttons.
- ✓ Spindle motor control can be handled by reversing contactors or **V**ariable **F**requency **D**rive controller which ever your application requires.
- ✓ Install a sensor switch on your back gear lever (Knee mill) and the control will automatically reverse the spindle motor between high and low gears. If you are using a VFD, the control will also calculate the proper gear ratio to provide the correct programmed RPM. Spindle fault input and reset output is provided for as well.
- ✓ Autolube pump is turned on when your machine is in motion. Use our internal relay to provide power directly to your 110/220VAC lube pump. Wire up the lube float sensor and your control will remind you when lube is low. (3 phase lube pumps will require a contactor to switch power)
- ✓ Limit switches are already provided for in your PLC program. Centroid uses your limit switch to provide precise and repeatable “machine home” position after you power on your control. If you do not have limits there are 3 other methods of machine homing available.
- ✓ Programmed outputs for flood & spray mist coolants are included.
- ✓ An additional output is available for control of other accessories. M10 turns it on M11 turns it off.
- ✓ 4th axis can be easily added.
- ✓ Options like the MPG hand wheel and DP4 touch probe just plug in ready for use.
- ✓ Encoder and or scale inputs for 4 servo motors. Expandable to 8 servo motors plus a spindle encoder.
- ✓ Mills, Lathes, Water Jet cutting, Routers, Grinders, or special built production machinery can all be accommodated by Centroid CNC control hardware and software systems.

Our **COMPONENT LEVEL KIT** can handle most any sized machine tool including special machine services such as:  
Large servo motors  
2 servo motors on one axis  
Automatic tool changer or lathe tool turret  
Tombstone and/or pallet changer

### Technical support

Machines in Motion Inc. takes pride in offering FREE lifetime technical support for each new CNC machine we deliver. This also extends to every complete Centroid CNC control system Installed by us. Keeping in line with the low cost objective of these COMPONENT LEVEL KITS, Centroid does not offer any technical support nor do most Centroid dealers. However, Machines in Motion has chosen to provide our COMPONENT LEVEL KIT customers with FREE technical support via phone or email for a full 45 days after receiving your kit. Additionally we pledge to make available the latest software updates for as long as you own your control. Just send us an email request and we will send you a link to Centroid’s latest release version of software. Machines in Motion also offers an extended technical support plan.

# Purchase order

Sold to:

Name _____
Address _____
City _____
State _____ Zip _____
Phone _____

Ship to:

Date \_\_\_\_\_

Name _____
Address _____
City _____
State _____ Zip _____
Phone _____

PLEASE PRINT CLEARLY

Line #	Component Description	Price	Total
1	MPU11& GPI.O.4 <b>Fanuc</b> control boards set.	3090.00ea	3090.00
2	PLC Add 1616 Expansion board. 16 additional inputs and outputs.	355.00ea	
3	Add 4AD4DA 4 channels of analog inputs and outputs.	685.00ea	
*4	Centroid Professional CNC control console (includes computer) Console mounting arm with swivel, 6' flex conduit, & 15' cables set. - - - OR - - -	2995.00ea 645.00ea	
*5	Centroid supplied PC computer with Windows7 & CNC software loaded.	1125.00ea	
*6	Hand held operator control panel.	770.00ea	
7	MPG Hand wheel	485.00ea	
8	Encoder to fit your servo motor or spindle application. No cable Encoder cable 16' long with connectors at each end.	210.00ea 80.00ea	
9	DP-4 Touch probe with software unlock	1590.00ea	
10	"Other" Autolube pump \$339.00		
11			
12			
13		Sub- total	
14	Shipping	Shipping	
15	Add appropriate local sales tax amount when shipping to CA.	Tax Total	

- \* Choose from (\*4) our full CNC console with computer, 15" LCD display and Pushbutton Jog panel.
- (\*5) Computer only, includes Windows7 and control software loaded and configured.
- (\*6) If you choose our computer or supply your own you will want to purchase our hand held jog pendant. This greatly simplifies part setup and manual operations.

Print this purchase order form, complete, and fax to Machines in Motion Inc. 714 528-4892

Or Email to [centroid.controls@gmail.com](mailto:centroid.controls@gmail.com)

Your shortest path to fast delivery is to send us your completed purchase order along with your check for the full amount. Sending this by UPS overnight insures expedited handling by Machines in Motion Inc. and Centroid Corp.

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Questions ? Call us 714 528-7061



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## Optional Software and Accessories Price Sheet

New Prices Effective April 7 2011

**FREE Features are former options included as standard features on all new controls.**

Software Description	Part #	Price
Compression tapping	10620	Free
User Definable Macros and Sub Programs [M98 & G65]	10610	Free
Cutter Compensation	10851	Free
4 <sup>th</sup> Axis Software	10360	Free
Extended Multiple work coordinate systems [G54 p1 –p12] (6 WCS included, this option allows an additional 12 WCS)	10600	\$305
4MB part program size	-	Free
Unlimited part program size	10630	\$550
Intercon conversational programming (for your CNC control)	10729	Free
Intercon off-line conversational program (for your desktop PC)	10730	\$275
Rigid tapping [G74 & G 84] (includes 10620)	10810	\$550
Coordinate System Rotation (CSR)	10850	\$220
Scaling and Mirroring [G50 & G51]	10625	\$220
DXF in, CAD Drawing Input software	10814	\$305
BCD tool change output (M-39, M-400, T39, or T400 only)	10660	\$280
Engraving software	10740	\$500
<b>Digitizing &amp; Probing</b>	<b>Part #</b>	<b>Price</b>
DP-4 probing package w/ Probe, Probing software, and CSR (10850) **	10405	\$1,590
2D & 3D digitizing software (includes CENTROID's Mold Magic™ software) requires 10405 or 10960	10770	\$3,350
TT-1; Tool touch off kit	10220	\$610
Tool room package: (10405) DP4 Probe with probing, (10220)TT-1, and (10600)Work Coordinates **	10772	\$2,250
<b>Manual Pulse Generators (MPG)</b>	<b>Part #</b>	<b>Price</b>
100 Step MPG, CNC10 system	10808	\$485
100 Step MPG, MPU11 system	11069	\$485

\*\* New MPU control systems will require a Touch probe cable along with your purchase of this DP-4 or TT-1 Touch Probe.

**Software purchases are non-refundable.**

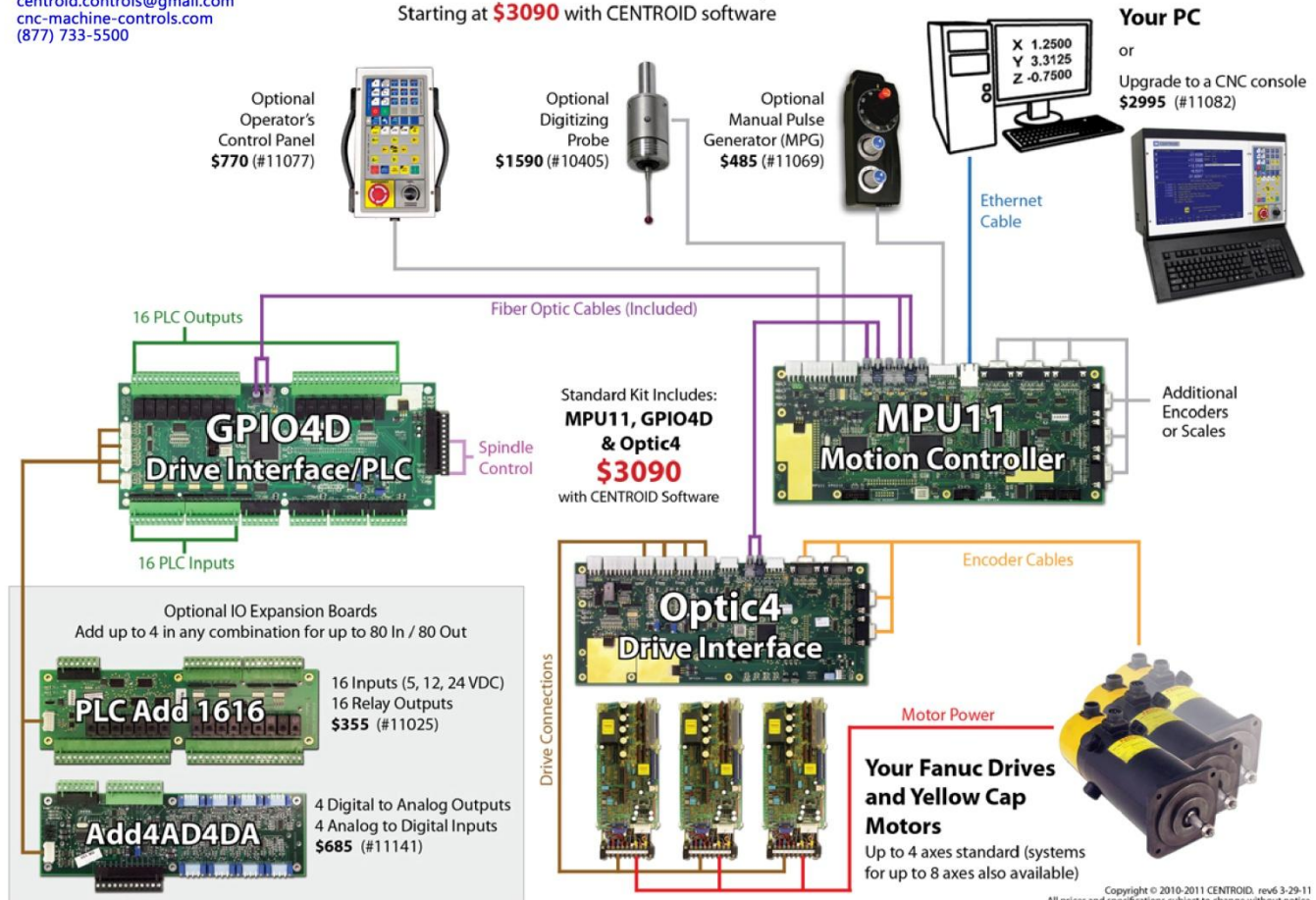
This price sheet supersedes all previous pricing. Beginning May 23, 2011



Machines in Motion, Inc.  
centroid.controls@gmail.com  
cnc-machine-controls.com  
(877) 733-5500

# Retrofit CNC Control for FANUC™

Includes Motion Controller, Drive Interface, and PLC  
Starting at **\$3090** with CENTROID software



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All prices and specifications subject to change without notice.

Prices listed here are valid beginning May 23, 2011 and superseded all other price lists prior to this date.

The console includes PC computer with Windows7 & CNC control software installed.

The panel mount kit consists of the display/computer panel and push button panel which are normally mounted into our sheet metal console. With this panel mount kit you will cut out your own holes in a sheet metal panel that you supply.

The console extension cable set includes Cat6 Ethernet communications cable for the MPU11 board, pushbutton panel cable, power cable for the computer, E-stop cable, & MPG cable. All cables include terminations at both ends for simple installation.

There is 6 feet of flexible conduit with fittings at each end. The cables themselves are 15' long. Of course you can order longer or shorter cable sets as required for your specific application.

MPG – If you do not order the console with its cables set then your MPG cable will plug into the MPU11 board.

When your time is valuable the optional operator's control panel (push button pendant) is a great convenience. Without this, you will be commanding the control by using multi key combinations on the computer keyboard. This will work if money is a critical issue.

If your application requires more inputs or outputs than provided for in the base hardware set we offer the PLC ADD 1616 board. One small cable (included) is connected between this expansion board and the main PLC board.

If you have other questions about our CNC kit hardware send us an email at [centroid.controls@gmail.com](mailto:centroid.controls@gmail.com)