



## SPECIFICATIONS

# AMC-A

## ADVANCED MACHINE CONTROLLER

### Standalone multi-axis stepper motor motion controller/ machine controller

#### Description

This low cost motion controller is ideal for small and medium sized multi-axis stepper motor driven machines performing engraving, routing, profiling, milling, dispensing and cutting operations.

The same control is the ideal, easy retrofit for dramatically improving older machines' productivity, ease-of-use, and capability.

The amazing power of our AMC motion controllers can best be appreciated when machining complex 3D models and moulds.

The AMC-A is essentially an AMC-E stepper controller with a 3 axis micro-stepping driver, an optional DC brushed or brushless spindle motor drive and power supply, all in a compact enclosure.

Our customers frequently benefit from machine productivity improvements of 300, 400 and even 500% by replacing other motion controllers with ours, transforming the economics of making 3D parts.

The AMC-A uses the same modern RISC processor technology as other controllers in the AMC range, giving machines very high



performance and productivity. The systems are designed for Original Equipment Manufacturers who need industrial quality machine controllers, open architecture, performance, reliability and flexibility all at lowest cost.

The AMC-A has an integral PLC, which is easily configured using Event Sub Editor software supplied with each motion controller, to automatically control and monitor machine operations such as cutter control and monitoring, dispensing control, laser control, automatic part loading and unloading, automatic tool changing and numerous other functions.

The AMC-A is generally controlled directly from a PC using our WinAMC custom control panel software. The AMC-A can also be used together with one of NEE's handpad options.

#### Benefits

- Increased machine productivity (400% on 3D work is not unusual).
- Smooth, accurate quiet machine operation giving precise parts.
- The ability to use the system with a wide range of CAD and machine control software.

- Axes, analogue, I/O and RS232 are optically isolated.
- NEE perpetually invests in product development which results in frequent system improvements and upgrades.
- Output signals can switch on-the-fly, without interrupting axis motion.

#### Compact Handpad

The Compact handpad is a simple to use, low cost HMI for use with all the AMC range of machine controllers. It is capable of performing all functions necessary for setting up 2D and 3D jobs irrespective of the programming interface. Standard key functions can be enabled or disabled at the discretion of the commissioning engineer. The Compact handpad can be used up to 100m away from the AMC controller, making it suitable for larger applications where remote control is essential.



#### Dimensions:

- Length - 145 mm
- Width - 90 mm
- Depth - 40 mm

#### Weight:

- 220g

# Technical Specifications

## AMC-A ADVANCED MACHINE CONTROLLER

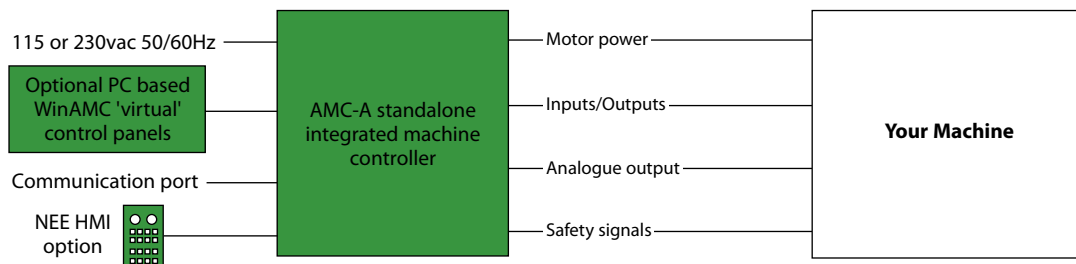
Max. No. of Axes	3
Max. internal drive power	3 off 3.0 Amp 50V micro-stepping
Max. steps per sec.	400,000 per Axis
RS232 ports	1
Total user inputs	20
2 Wire Proximity. Inputs (9 volt)	4
User Inputs (10 µS)	2
User Inputs (500 µS)	14
Total user outputs	10
User O/Ps 24VDC @ 0.25 Amp	10 @ 100uSec
Analogue Output – 11 bit isolated	1
Internal Drive options	3 off 3.0 Amp 50V micro-stepping
Control Panel/Display & System STOP switch	Connectors for a range of NEE HMIs
Enclosure size (cm)	47.5 x 25 x 10
System weight	10.4 kg
Custom units to your specification	Yes
14.7 MHz processor	Yes (25 MHz*)
150 Kb Job memory	Yes (1.5 Mb*)
HMI Interface	Yes

\* Extra cost option

Integral Drive power supply	Yes
DC spindle drive	Yes*
Safety relays (Meets Machine Safety Regulations Cat 3)	Yes
Logic and Opto power supply	Yes
Cased system	Yes

Firmware options	
WinAMC Interface	Yes
3D Capability	Yes*
Tangential axes	1*
Tool length/diameter offsets	Yes*
Backup and Skip	Yes (requires WinAMC)
Closed loop spindle control	Yes*
Laser pulse triggering based on distance moved	No
Error Compensation Mapping	Yes *
Vision Interface	No
Automatic Height Control system	1*

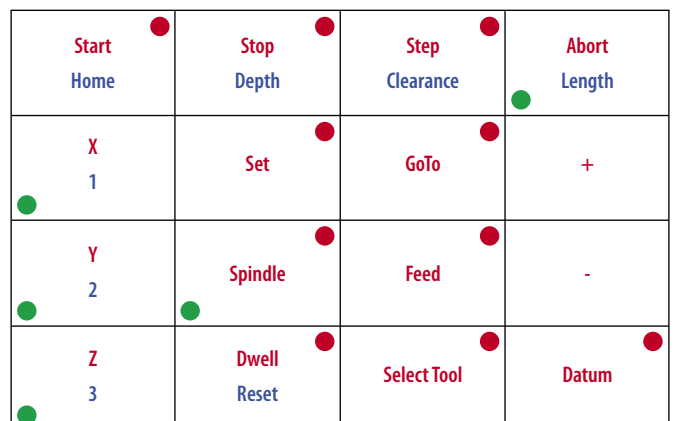
## Typical System



## Compact Handpad Functionality

Start	Abort					
Stop	Single step					
Set	Origin	Depth	Clearance	Length	1-3 O/P toggle	Reset
Goto	Origin	Depth	Clearance			
Jog	x	Y	z	+	-	
Feed	+	-				
Spindle	+	-				
Select tool	'numerals'	Abort				
Datum						
Tool Dwell	+	-				

## Compact Handpad Keypad Layout



Red = Primary function Blue = Secondary function

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