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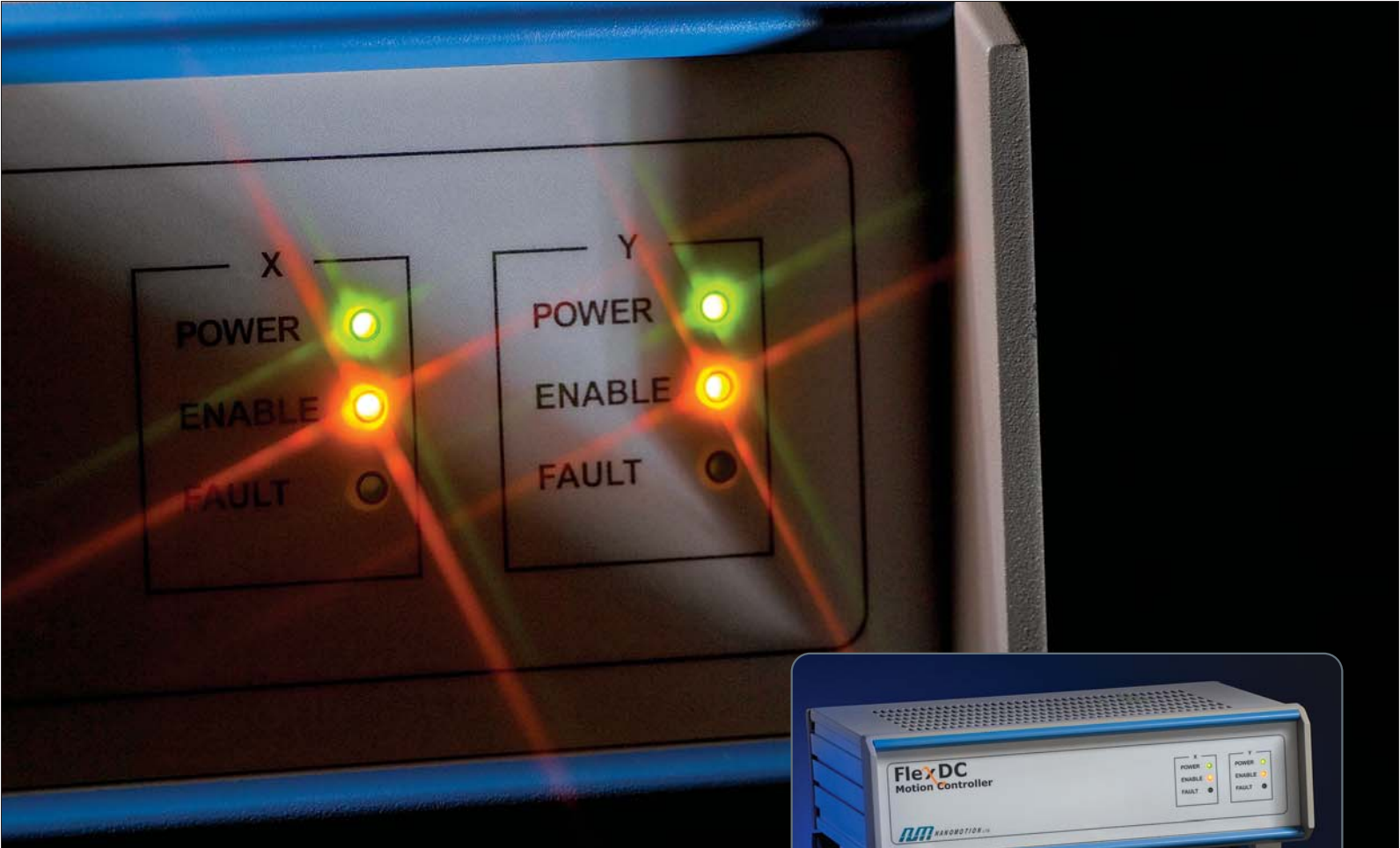
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FlexDC
Motion Controller
by Nanomotion

The Next Generation Controller Has Arrived

Introducing the **FlexDC** Motion Controller-Nanomotion's new high performance single/multi-axis controller driver. The FlexDC Motion Controller is a powerful, cost-effective, simple-to-use controller specifically designed for easy plug and play support of all Nanomotion's motion systems, stages and motors – with absolutely no interface cables required. From components to complete systems to control options, Nanomotion meets all your motion requirements.

This compact, full-featured motion controller is provided with our AB1A-3U or AB5-3U driver cards built in, and a motion controller card designed to meet the most demanding motion profiles. The **FlexDC** Motion Controller is the ultimate in user-friendly controllers, offering absolute precision, even in the most demanding applications. The **FlexDC** Motion Controller's GUI based user software makes system set-up and programming simple. The Flex DC interface has data recording capability as well as a host of custom algorithms to optimize performance.

NANOMOTION

FlexDC Motion Controller

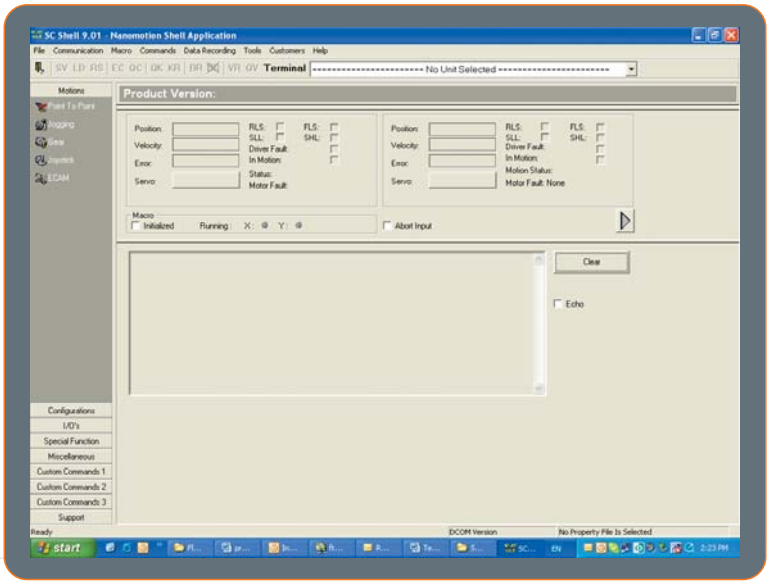
by Nanomotion

Special Features of the FlexDC Motion Controller

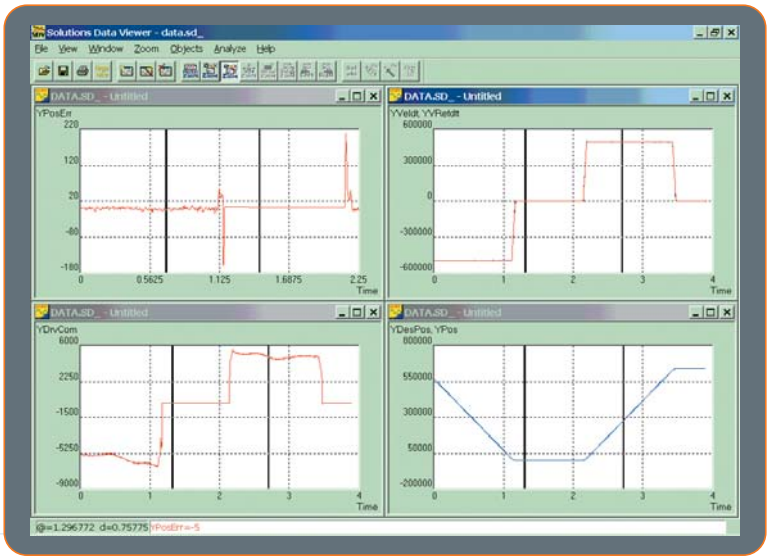
- Data Recording
- Dual Axes Analog Joystick
- Nanomotion Algorithms, including Ultra High Resolution and Dead Band
- LED Indications on Front Panel
- All connectors and power inlets available on rear panel for easy access

GUI screens

The start up screen for the FlexDC Program Shell.
The FlexDC's user friendly GUI-based interface and programming make system set-up simple and easy.



Data captured from Y-Axis operation of the FlexDC Motion Controller. The graphs show that at 50mm/sec constant velocity, desired vs. actual motion performance show a position error of +/- 5 counts.
Bottom left graph shows that even at 0 command, the system easily holds its friction status.





Technical Specifications

Dimensions 2U Enclosure	123mm H x 361mm W x 308mm D
Weight	5.2 kg (depends on configuration)
Technical Specification	
Up to 2 axes integrated	AB1A or AB5 driver cards, driving up to 16 elements per axis
Servo Rate:	8kHz
DAC Output:	+/- 10V, 16 bit
A quad B Encoder Input:	(one per axis)
Sin/Cos Encoder with on board 8192 resolution interpolators	Optional (one per axis)
Discrete inputs	One per axis
I/O	
8 x Digital Isolated Inputs	
2 x Digital Isolated Outputs	Valid when AB1A is configured.
2 x Digital Fast Inputs	
2 x Digital Fast Outputs	
Communication	RS232, CAN-open, Ethernet
ASCII based RS232 communication protocol	
Full Binary, high baud rate, CAN Bus communication protocol	
Power	
Universal input voltage:	100-240 VAC, 50-60 Hz
Power consumptions:	130VA max
Environmental	
Ambient operating temperature:	0°-45°C
Storage temperature:	up to 70°C
Operating humidity:	up to 80%, non-condensing



Part Number Ordering Methodology:

FlexDC	X axis drive	Y axis drive	X axis motor type	X axis number of elements (Ex)	Y axis motor type	Y axis motor config. (Ey)	Sin/Cos X axis	Sin/Cos Y axis
L	1 = AB1A 5 = AB5	1 = AB1A 5 = AB5	H=HR D=DM S=ST	1 (element) 2 (elments) 4 (elements) 8 (elments) 16 (elements)	0=single axis H=HR D=DM S=ST	0 (elments) 1 (element) 2 (elments) 4 (elements) 8 (elments) 16 (elements)	1=sin/cos option 0 = digital	1=sin/cos option 0 = digital

L	Dual axes with AB1A drivers	1	1	H	Ex	H	Ey	0	0
L	Dual axes with AB5 drivers	5	5	H	Ex	H	Ey	0	0

* Ex= x is a number of elements on X axis
* Ey = y is a number of elements of Y axis

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