Picard Industries

Specializing in Miniature Smart Motors and Sensors

Serv Designs™

USB XYZ-Stage

System Features

- USB controlled 3-Dimensional Linear Stage for moving up to 2.0 Kg loads
- Three axis linear stage with 25 mm of travel of each X, Y, and Z axis
- Each stepper motor based linear actuator has 0.75 um full steps
- Mounts on standard optical tables with M6 screws on 25 mm centers
- Low USB powered motors are energized only when moving
- Built-in magnetic Home sensors for detecting the fully retracted position.
- USB Hot pluggable with Autodetection of actuators
- Includes wireless 3D-Space Mouse
- Easy to use Windows (XP and higher) based User Interface software, LabView examples and a DLL file included for integrating control into your own application.

Single unit for only \$ 3,485



A wireless USB Space Mouse is provided with this stage for manual control. It allows you to remotely position the stage with a single hand without losing sight of your load. This is very useful for inspection type applications.



http://www.3dconnexion.com/products/spacemouse/spacemousewireless.html

Picard's XYZ-Stage system offers a compact, efficient and simple method of remotely positioning a 2-Kg load in three dimensions. Each linear axis has 25 mm of range with 0.75 um incremental step motion. The Stage provides a USB-powered method of positional control unmatched in size, simplicity, and cost. The system comes complete with custom application software that operates on any standard PC with Windows-XP (or higher) with a USB 2.0 port.

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USB XYZ-Stage User Interface

Below is a screen shot of the main control panel that is provided with the USB 4D-Stage system. This software is obtained by downloading it from our website (http://picard-industries.com/software/usb-xyz-stage.zip). After the software has been successfully loaded, simply click the XYZ-Stage icon on the desktop. The software will auto-detect the connections and display the Status of each axis and if properly connected, allow you to begin controlling the Stage with the User Interface or the Space Mouse.

										X	Y	Z
Axis	Status	Home	Position	Destinatio	n				Serial Number:	417	419	416
X	0	0		1	μm	Go to Dest	Go to Ref	Home	Senar Number	102.52	415	410
Y		201				1			Max Steps:	33000	33000	33000
T		0		1	μm	Go to Dest	Go to Ref	Home	Slow velocity:	1 ¥	1 ¥	1
Z		Ø		1	μm	Go to Dest	Go to Ref	Home	Fast velocity:	10 🗸	10 ¥	10
			6							10 *	10 +	10
						All to Dest	All to Ref	Home All	Units:			
Motic	on mode (F	-5).	Move	e speed (F6):					Name:	μm	μm	μm
mout	an mode (r	5).										
	love O J	1.52.57		low			Halt All		Step Size:	0.75	0.75	0.75
	10 V S 10 S	1.52.57		low 🖲 Fast		Picard		ries	Step Size: Jog distance:	0.75	0.75	0.75
	10 V S 10 S	log	0s	low Fast		The second second second	Indust					100.0
	10 V S 10 S	log	0s			Picard Serv www.Picard	Industi Desi	igns™	Jog distance:	100.0	100.0	100.0
	love OJ	log	0 si	Z+		Servo	Industi Desi	igns™	Jog distance:	100.0 12375.0 Set Refer	100.0 12375.0 rence to Curren	100.0 12375.0 t Position
	love OJ	log	0 si			Servo	Industi Desi	igns™	Jog distance: Reference position:	100.0 12375.0 Set Refer	100.0 12375.0 rence to Curren	100.0 12375.0 t Position
	love OJ	Y+	0 si	Z+		Servo	Industrie	S.com ™	Jog distance: Reference position:	100.0 12375.0 Set Refer	100.0 12375.0 rence to Curren	100.0 12375.0 t Position

To be properly connected, the 4-port USB Hub will need to be connected to an AC power source and its USB cable connected to the PC's USB port. The serial numbers and other motor operating parameters may need to be entered. This is accomplished by clicking the "Settings" button. Upon a successful initial connection the linear (X, Y, and Z) motors should be Homed by clicking the "All Home" button, after which they can be moved to the desired positions.