

6 Degrees of Freedom* CAD Input Device A4361C Technical Data

Intuitive and interactive motion control for 3D modeling and animation.

Grab Hold of Your Designs

With an HP Spaceball® 3003 FLX motion controller and a high-performance HP VISUALIZE or Kayak Workstation, you can simultaneously pan, zoom and rotate 3D models as you build, modify and inspect your design and animations - within the active design session.

A Spaceball provides 6DOF (6 degrees of freedom) motion control. Simply push, pull or twist the Spaceball's PowerSensor® ball for smooth and dynamic X, Y and Z axis rotations and translations.



* 6DOF



Spaceball 3003FLX

The PowerSensor ball moves, providing ease of use. It's a natural and intuitive method for moving and viewing 3D designs, so you can focus on the model... *not on the method required to move the model.*

Features and Benefits

- Improved Productivity
- Earlier Error Detection
- Improved Design Comprehension
- Faster Time-to-Market

Increased Productivity

Independent studies show that the intuitive nature of the Spaceball increases productivity by a minimum of 25%, by eliminating multiple mouse clicks and menu selections to move or view a model.

Earlier Detection of Errors

More frequent assembly and viewpoint movement increases the likelihood of observing visible design problems.

Improved Design Comprehension

With the ability to "fly through" your work at will, you will see your design from far more points of view than is practical with traditional mouse-only or knob-box user interfaces.

Easy to Use and Customize

The Spaceball does not replace the mouse. It is an interface for moving and viewing 3D models. Use the mouse with your dominant hand for picking, pointing and menu selection, while using the Spaceball for 6DOF control.

It's easy to use: Simply rest your palm on the Spaceball base. This is a natural and relaxed position that eliminates stress and fatigue of hand and arm. Lightly push, pull, lift, depress and/or twist the PowerSensor® ball in the desired direction of motion.

Simplified Movement of Large Assemblies

Interactively changing the center of rotation makes it easier to move large assemblies and focus on specific areas of a design.

Extend Application Functionality

Beyond the basic Spaceball control in supporting applications, the SpaceWare® software interface for HP-UX applications (included with the Spaceball) provides a pop-up *SoftButtons* window in the application for instant access to eight customizable buttons:

- create custom functions
- modify or re-map Spaceball hard and soft buttons to standard or user-defined functions
- create and select groups of functions
- dominant axis mode
- On/Off toggling of rotations and translations
- basic (global) & advanced (individual) axis sensitivity settings
- on-line help

Applications and Specifications

Spaceball-Compatible Applications (as of 06/99)

Supplier	Application	Platform Support	
		HP-UX	NT 4.0
Altair	<i>Hypermesh</i> ®		
Ansys, Inc.	<i>Ansys</i> ®		
Autodesk	<i>AutoCAD</i> ®		
	<i>Mechanical Desktop</i> ®		
Baystate	<i>CADKEY</i> ®		
CNC Software, Inc.	<i>MasterCAM</i>		
Delcam	<i>DUCT5</i>		
Division, Inc.	<i>dVISE</i>		
EAI	<i>Vis/MOCKUP</i>		
	<i>Vis/VIEW</i>		
4D Vision	<i>4D Paint</i>		
	<i>Sculptor Pro Tools</i>		
HP/Co-Create	<i>SolidDesigner</i>		
IBM/Dassault	<i>4D Navigator</i>		
	<i>CATIA</i> ®		
ICEM Technologies	<i>ICEM-Surf</i>		
Immersive Design	<i>Interactive PA</i>		
Kinetix	<i>3D Studio Max</i> ®		
	<i>3D Studio Viz</i> ®		
Matra Datavision	<i>Euclid</i> ® 3 (<i>Megavision</i>)		
	<i>STRIM</i> ® (<i>Euclid Styler</i>)		
MSC	<i>MSC/PATRAN</i> ™		
PTC	<i>CADDS</i>		
	<i>Pro/ENGINEER</i> ®		
SDRC	<i>Cammand</i>		
	<i>I-DEAS ArtisanSeries</i> ™		
	<i>I-DEAS MasterSeries</i> ™		
	<i>SmartCAM</i>		
SolidWorks	<i>SolidWorks</i>		
SurfWare, Inc.	<i>SurfCAM</i> ®		
Tecnomatix	<i>DYNAMO</i>		
	<i>ROBCAD</i>		
Tecoplan	<i>Virtual Workshop</i>		
Think3	<i>ThinkDesign</i>		
Unigraphics Solutions	<i>Unigraphics</i> ®		
	<i>SolidEdge</i> ®		
Vero International	<i>VISI Series</i>		

The Spaceball requires specific application support. Unlisted applications, and customer-written applications require customer-written software using the SpaceWare® libraries.

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Specifications

Specification	Spaceball 3003FLX
Force Range:	0.5-8.2 N (1.8-29.5 oz.)
Torque Range:	6-91 Nmm (0.085-0.33 oz.-in.)
Resolution:	10 bits
Buttons:	2 Programmable, 1 Dedicated re-zero 8 Screen softbuttons
Dimensions:	mm: 200Lx85Wx155H in.: 8.0Lx3.3Wx4.5H
Ball Diameter	68mm (2.4 inches)
Weight:	0.68 kg (1.5 lb.)
Cable (Captive):	Approx. 3.0m, 10 ft.
Host Connector	9-pin Dsub receptacle
Power:	75mW (15mA drawn from serial port)
Components:	Spaceball w/Cable SpaceWare Software Quick-Start Manual User Manual (on CD)
Software Media:	CD-ROM
Updates:	http://www.labtec.com
Documentation:	English
Std. Warranty:	1 year, on-site

Supported Platforms:

- HP VISUALIZE B-Class, C-Class and J-Class Workstations; HP-UX release 10.20.
- HP VISUALIZE P-Class and X-Class, HP Kayak; Microsoft Windows NT 4.0.

Refer to the PA-RISC Workstation **Hardware Compatibility List** for further details and additional HP-UX platform support information.

Ordering Information

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Number Description

A4361C HP Spaceball 3003 FLX

The A4361C is powered by trickle current from the host serial port. No AC adaptor is included (or required).

Year 2000 Compliance

The A4361C Spaceball, and its SpaceWare version 7.4 (or later) software, are year 2000 compliant when used with a year 2000 compliant application and operating system.

Choose Your Control

HP offers a second Spaceball model, the HP Spaceball 4000 FLX, product number A4992A, a twelve-button version often preferred in certain applications.



A separate data sheet describes this product.

For More Information

For more information on HP VISUALIZE Workstations visit our website at URL:

<http://www.hp.com/visualize>

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