

# force dimension

## delta.3 haptic device

force feedback interface



The **delta.3** is a high performance force feedback interface based on the delta manipulator. It offers 3 active degrees-of-freedom in translation and features a **larger workspace** than omega.x devices. Thanks to its unique parallel mechanical design, the **delta.3** can convey **large continuous forces** anywhere in its workspace.

### applications

The **delta.3** provides 3D active force feedback for a wide range of applications:

- › medical and space robotics
- › micro and nano manipulators
- › teleoperation consoles
- › virtual simulations
- › training systems
- › research



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## delta.3

<b>workspace</b>	translation	Ø 400 x L 260 mm
<b>forces</b>	continuous	20.0 N
<b>resolution</b>	linear	< 0.01 mm
<b>stiffness</b>	closed loop	14.5 N/mm
<b>dimensions</b>	height	550 mm
	width	550 mm
	depth	440 - 630 mm

## electronics

<b>interface</b>	standard	USB 2.0
<b>power</b>	universal	110V - 240V

## software

<b>platforms</b>	Microsoft	Windows XP / Vista / 7
	Linux	kernel 2.4 / 2.6
	Apple	OS X 10.5 / 10.6
	QNX	Neutrino 6.3 / 6.4 / 6.5
	Tenasys	INtime 4.0
<b>SDK</b>	DHD-API	haptic software library
	DRD-API	robotic software library

## features

<b>structure</b>	delta-based parallel kinematics gravity compensated orientable device base
<b>controller</b>	external unit
<b>calibration</b>	automatic, driftless
<b>comfort</b>	enhanced sensitivity for reduced user fatigue
<b>user input</b>	1 programmable button
<b>safety</b>	velocity monitoring electromagnetic damping

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