## force I dimension

### delta.6 haptic device

force feedback interface



The **delta.6** is a high performance force feedback interface based on the delta manipulator. It offers 6 active degrees-of-freedom in translation and rotation and offers a **larger workspace** than omega.x devices. Thanks to its unique parallel mechanical design, the **delta.6** can convey **large continuous forces and torques** anywhere in its workspace.

#### applications

The **delta.6** device provides 6DOF (active force and torque) 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.6

workspace translation  $\varnothing$  400 x 260 mm

> rotation  $\pm$  22 deg

forces translation 20.0 N rotation 150 mNm

translation < 0.01 mm

rotation < 0.04 deg

#### electronics

resolution

interface standard **USB 2.0** 

refresh rate up to 8 KHz

power universal 110V - 240V

#### software

platforms Microsoft Windows XP / Vista / 7

Linux kernel 2.6 OS X 10.5 / 10.6 Apple

Neutrino 6.3 / 6.4 / 6.5 QNX

INtime 4.0 tenAsys

software haptic SDK

robotic SDK

#### features

structure delta-based parallel kinematics

hand-centered rotations

rotations decoupled from translations

active gravity compensation

calibration automatic

driftless

user input 1 haptic programmable button

safety velocity monitoring

electromagnetic damping

right- or left-handed option

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