

force dimension

omega.6 haptic device

force feedback interface



The **omega.6** is the most advanced pen-shaped force-feedback device available. Building on the omega.3 base, its design provides **perfect decoupling** of translations and rotations. The combination of **full gravity compensation** and **driftless calibration** contributes to greater user comfort and accuracy. Conceived and manufactured in Switzerland, the omega.6 is designed for demanding applications where **performance and reliability** are critical.

applications

The **omega.6** provides 3D active force feedback and passive rotation sensing 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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omega.6

| | | |
|-------------------|-------------|---------------------|
| workspace | translation | ∅ 160 x 110 mm |
| | rotation | 240 x 140 x 320 deg |
| forces | translation | 12.0 N |
| resolution | translation | < 0.01 mm |
| | rotation | 0.09 deg |
| stiffness | closed-loop | 14.5 N/mm |

electronics

| | | |
|------------------|--------------|-------------|
| 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 |
| | Apple | OS X 10.5 / 10.6 |
| | QNX | Neutrino 6.3 / 6.4 / 6.5 |
| | tenAsys | INtime 4.0 |
| 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 programmable button |
| safety | velocity monitoring |
| | electromagnetic damping |
| option | right- or left-handed |

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