

The Virtuose 3D RV is a 6 degrees-of-freedom haptic device with 3 active force feedback translations.

The Virtuose 3D RV is specifically designed to interact in Virtual Reality environments. Thanks to its large workspace and high forces, it enables a scale one interaction with digital mock-up.

# Research

# Medical co-manipulation

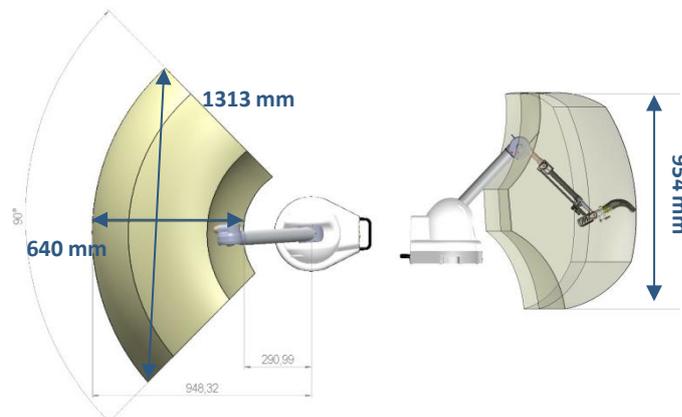
# Virtual Reality

# Medical training & simulation



### 3 ACTIVE TRANSLATIONS + 3 PASSIVE ROTATIONS = 6 MEASUREMENTS

- ✓ Passive weight balancing
- ✓ Ethernet UDP communication system, or EtherCAT on request.
- ✓ Removable handle, equipped with 3 user buttons and a presence sensor Software interface:
  - ✓ Long term native drivers (binary) in C++ and C. Drivers availables for ROS2™, ROS™, CHAID3D™ open source platforms.
  - ✓ Can be used\* with open source platforms (Godot™, Bullet™, SOFA™, ...) and with third parties platforms (UnReal™, Unity™, NVIDIA Flex™, LabVIEW™, Matlab™/Simulink™, CORTEX™, XDE™...). (\*No drivers/examples are supplied.)
  - ✓ Industrial solutions with third party solutions such as Unity™, UnReal™ by our Partners : LS Group, Tree-C, TOIA Ltd, ...



### MODULARITY

The end-effector is easy to remove and replace, with no tool, in order to customize the application and reinforce the sensation of immersion. The ergonomic telerobotic handle (end effector) is equipped with 4 user buttons, one can be used to implement a shift feature to extend the workspace, 1 LED indicator, and an analog finger trigger provides a signal 0 – 100%. User push-buttons status are provided to the software interface.



The end effector orientation can be modified.  
The device can be configured in up-side-down position.

We are available to discuss with you any customized needs you have.

### TECHNICAL

Translation workspace	1313 x 640 x 954 mm
Rotation Workspace	330° x 120° x 267°
Payload (center of the workspace):	35 N (peak)/ 10 N (continuous)
Position resolution	0.0164 mm
Rotation resolution	0.35 °
Device weight	15 kg ( + external power supply 3,4kg)

### ELECTRICAL

Power supply	100-240 VAC 50/60Hz single phase
Consumption	Average consumption 200W Max consumption: 800W

### SOFTWARE

Maximum translation stiffness	2 000 N/m
Update Rate	1 000 Hz

*Information in this document is subject to change without notice.*

**HAPTION S.A.S.**

8 ZA Route de Laval – 53210 SOULGE SUR OUETTE – France

Tel. +33(0)2 43 64 51 20

Email : [contact@haption.com](mailto:contact@haption.com) <https://www.haption.com>

