PhoeniX Technologies Incorporated

High Performance Real-Time 3D Motion Capture Systems For Professionals

VZ4050 Tracker (62 cm)

VZ4000v Tracker

Phoenix Technologies manufactures the world first wide-angle high accuracy active optical motion capture systems with **distributed tactile feedback**. Developed to provide professional motion capture solutions to scientific and research sectors, the VZ4000v and VZ4050 trackers break new grounds.

90° Angle Capture

With the largest viewing angle on the market, one **single** tracker can capture 3D coordinates **over a 9x7 m space.**

9.2m   7.0m
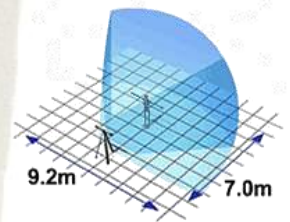
3D View of Capture Area

Automatic Calibration

The only system to offer **automatic calibration** for multiple-tracker system. No user action required, start capturing out-of-the-box.

Tactile Feedback

Revolutionary tactile feedback function lets you send stimuli to any specific part of a subject, **prompt motions on demand**, **alert your subject(s) of motion deviation, provide virtual touch feedback …**

No Marker Errors

Each marker has **one unique ID** and is tracked flawlessly by the system. Marker id swap errors cannot occur. Captured data is reliable even in real-time.

Precision LED Markers

Octopus Markers

Wireless Markers

Wireless Tactile Markers

PTI systems come with **motion analysis software** and are ideal for Biomechanics, Rehabilitation, Exercise Sciences, etc.

Trackers feature **<0.5 mm RMS** accuracy and can detect a change of position of 0.015 mm at 1.2m

Plug-ins are available for Matlab, Labview, Visual3D…, data can be analyzed / visualized **in real-time.**

PTI systems can be easily **synchronized** with external equipment: force plates, EMG, HMD, Eye Tracking…

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Biomechanics   Sport Science
Virtual Rehabilitation   Human Factor
Posture and Gait   Neuroscience
Virtual Reality

FLEXIBLE

You can freely **build your own flexible marker layout** within minutes with Octopus markers. Easily connect more markers to any existing one.
Up to 512 markers can be tracked by a system.

WIRELESS

The **100% wire-free, self-powered** SIT Marker comes with 3 LEDs and needs no setup.
You need only **one** tracker to capture 3D coordinates over a 7x9m space.
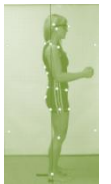
VZ4000 Tracker

COMPACT

Small setup space? The compact 62cm long **VZ4050 trackers** can fit in the tightest spaces!
Our trackers can be setup anyway you like to capture the motions you want from any direction!

Sensing Volume:	190 m³ of useful space over 7m radius
Min. Sensing Distance:	0.5 m (VZ4000, VZ4000v) 0.25 m (VZ4050)
Markers:	512 maximum (no marker ID errors)
Calibration:	Automatic & Instant (patent pending)
Accuracy:	<0.5mm RMS (H-series)
Viewing Angle:	90° (horizontal & vertical)
Data Latency:	<0.0005s
Resolution:	0.015 mm at 1.2m distance (VZ4000v)
Tactile Feedback:	Yes (VZ4000v, VZ4050)

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MOTION CAPTURE WITH TACTILE FEEDBACK

Opening up new research and application possibilities in Life Sciences

Introducing:
DISTRIBUTED TACTILE STIMULATION

New!

Tactile Feedback Markers

For the first time, you can **send tactile stimuli** to a select part(s) of your subject and accurately **capture his/her/its 3D motion responses** via one single integrated motion capture system.

Each of these wireless, or semi-wireless, intelligent markers can :

- **Vibrate and prompt motions on demand**
- **Alert your subject of motion deviation**
- **Provide virtual touch feedback**
- **Validate motions on cue**, … etc

while continuing to serve as active optical markers for accurate 3D motion capture.

Each marker comes with a unique ID for flawless identification by the 3D tracker(s) and a 170 ° detection LED for both fine and complex motion capture.

Tactile markers come in two models: the **SI2VT markers** are totally wireless, self-powered markers, each of which can support up to two LED's. The **Octopus markers** are semi-wireless markers that can be freely inter-connected to build more complex marker layouts.
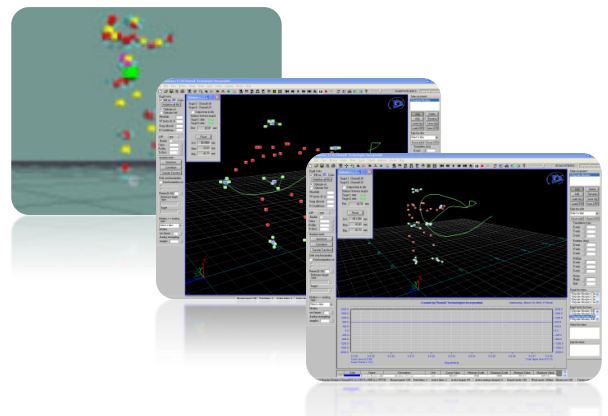
Our software suite easily lets you define groups of markers to **activate them in real-time**, to instruct correct motions, or to define range detection to alert your subject of **motion disparity**.