Phoenix Technologies Incorporated

4302 Norfolk Street, Burnaby, BC Canada

Autonomous 3D Motion Capture

Patented 3D Sensing Technology Since 2001

www.ptiphoenix.com | info@ptiphoenix.com | +1-604-321-3238 (Canada) or +886-2-2698-9070 (Asia)

Autonomous 3D Motion Capture

by Phoenix Technologies Inc

Why capture motions in 2D when they can be directly tracked in 3D?

Advanced 3D Trackers from Phoenix Technologies capture motions natively in 3D and in real-time since 2001.

Five generations of 3D Trackers have brought multiple unique and patented functions:

- ✓ Automatic and Continuous Calibration
- ✓ Full Wireless 170° LED Markers
- ✓ 90° Viewing Angle Sensor
- ✓ Self-Identifying Markers...

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Autonomous 3D Motion Capture

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PTI systems are made to be autonomous to free researchers from repetitive tasks

- Automatic Multi-Tracker Calibration
- 90° Viewing Angle
- Unique IDs for all Markers

- No manual calibration required
- Instant multi-tracker calibration
- Capture **190m³ space** with just one tracker
- No marker-swapping error
- Real-time automatic marker identification
- Detect target displacement as small as **15µm**

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Fastest Capture

4850 real-time
data points per second

Real-Time:

0.5 ms Latency

Highest 3D Accuracy:

<0.5mm RMS, 3D, Raw

Fully Portable:

One 62cm, 2kg Tracker to capture 7x9m

No Layout Restrictions:

Position markers / trackers in any way

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Autonomous 3D Motion Capture

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DYNAMIC

You can freely **build your own flexible marker layout** within minutes with wireless markers. Easily connect more markers to any existing one.

Up to 512 markers with unique IDs can be tracked by a system

AUTONOMOUS

No manual calibration, no marker registration: leave and enter the capture space at will, or move trackers on the fly during capture!

You need only **one** tracker to capture 3D coordinates over a 7x9m space

COMPACT

Small setup space? The compact 62cm long **VZ4050 trackers** can fit in the tightest spaces!

No need to dim down the lights, no blinding problems.

Solve occlusions with patented 90˚ viewing angle and 6-chip 170˚ LEDs

Biomechanics
Robotics
Virtual Rehabilitation
Posture and Gait
Virtual Reality
Sport Science
Human Factor
Neuroscience
Real-Time Feedback

Sensing Volume	190 m³ of useful space over 7m radius
Min. Sensing Distance:	0.5 m (VZ4000v) 0.25 m (VZ4050)
Markers:	512 maximum with IDs (no marker ID errors)
Calibration:	Automatic & Instant (patented)
Accuracy:	<0.5mm RMS (H-series)
Viewing Angle:	90° (horizontal & vertical)
Data Latency:	<0.0005s
Resolution:	0.015 mm at 1.2m distance (VZ4000v)
Plug-ins:	Visual 3D, The Motion Monitor, Matlab, Labview, ROS, …
Synchronization:	Via DAQ device for analog data, or through BNC cable if supported

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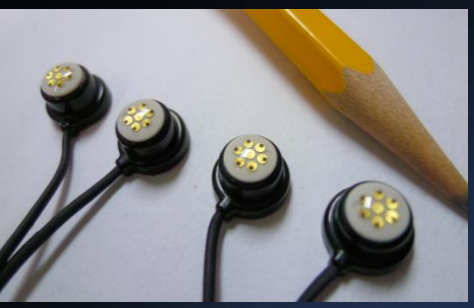
Freely combine different marker systems to meet size, accuracy, flexibility, weight or range requirements



Semi-Wireless Active LED Markers – 7mm Diameter – Ruggedized – Dynamic ID

Wireless Self-Identifying 170° LED Markers Hot-Swappable, Static ID

Wireless Self-Contained LED Markers – 6DOF unit with 3 LED targets

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