3D Motion Capture
Phoenix Technologies Inc
20 Years of Performance and Innovation

Fastest of All

Power Performance Speed For Research

Treat yourself to the fastest 3D Motion Capture System with the new Visualeyez III trackers.

- Multiple onboard processors for real-time 3D computations and 512 target ID tracking.
- Power without compromise.

Automatic Calibration
10,000 Hz Sampling
No Marker Errors
0.1mm Accuracy

15 µm Resolution
100° Square FOV
0.3ms Latency
512 Unique Target IDs
Move your tracker *during* capture. Re-arrange tracker(s) arbitrarily. No need to register markers or patterns, unlike camera-based systems. **No manual calibration required ever!** ...even for a multi-tracker system.

**10,000 Hz Sampling**

Each VZ10K/10K5 tracker can reach sampling speed up of 10,000 Hz to capture faster motions and more markers. Unchallenged in 3D capture!

**100° FOV**

Up to 100-degree field of view with a rectangular capture space. Largest viewing angle in the market. Every tracker can capture 3D coordinates over a *9x7x7m* space, all the way to the right-angle corners.

**0.1mm Accuracy**

Highest RMS accuracy (1D, standard calibration range). Each 3D tracker’s accuracy is verified with a 0.045mm certified 3D coordinate measurement machine complying standards ISO 9001, ISO 10012-1, MIL-STD-45662A (artifacts traceable to the National Institute of Standards and Technology).

**0.3ms Latency**

Built for true real-time applications from the start. All computations are done internally by *multiple dedicated processors* within each tracker and data are sent to the user instantly. No extra hardware or protocol stands in the way.

Matlab / Labview / ROS / Visual 3D Plug-ins, SDK, Low-level control APIs.
The only technology to offer **INSTANT CALIBRATION** for even a multi-tracker system. **Move your tracker DURING capture** without any need to stop recording, and with no data errors!

Each active LED marker has **one unique ID** and is tracked flawlessly by the system, always. No marker/pattern registration required, ever. **Up to 512 unique IDs. NO MARKER SWAPPING/identification errors.**

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 ...

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**TECHNICAL SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Sensing Volume:</th>
<th>~190 m$^3$ of capture space, over 7m distance nominal</th>
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<tbody>
<tr>
<td>Minimum Sensing Distance:</td>
<td>0.5m (VZ10K), 0.25m (VZ10K5)</td>
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<tr>
<td>Position Resolution:</td>
<td>0.015mm at 1.2m distance (smallest detectable position change)</td>
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<tr>
<td>Number of Markers:</td>
<td>512 active LED markers with unique IDs</td>
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<tr>
<td>Accuracy:</td>
<td>Up to 0.10mm (RMS, 1D, nominal), 0.25mm (RMS, 3D-combined, nominal) for standard calibration range (VZ10K)</td>
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<tr>
<td>Data Latency:</td>
<td>&lt;0.3 ms (at fastest sampling rate)</td>
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<tr>
<td>Sampling Speed:</td>
<td>10,000 3D data points per second</td>
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<tr>
<td>Calibration Range:</td>
<td>Standard range: 0.6<del>2.5m distance Extended range: 0.6</del>4m+ distance +/- 40° yaw, +/- 30° pitch Custom range possible (please inquire)</td>
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