

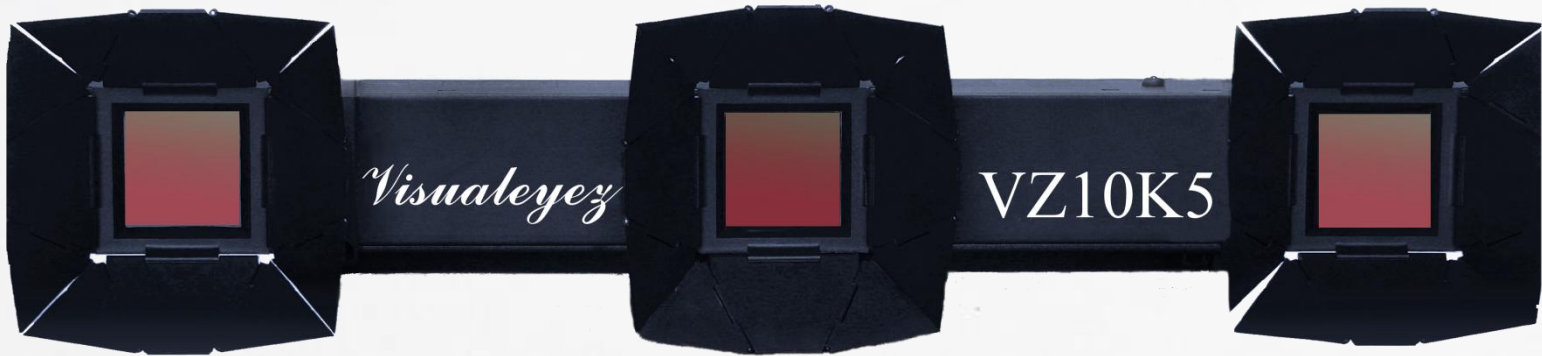
# 3D Motion Capture



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

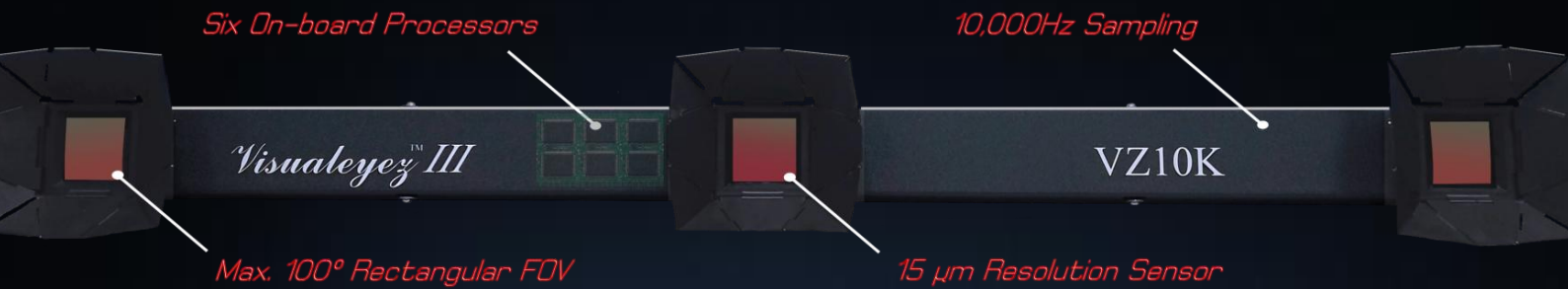
15  $\mu$ m Resolution

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!

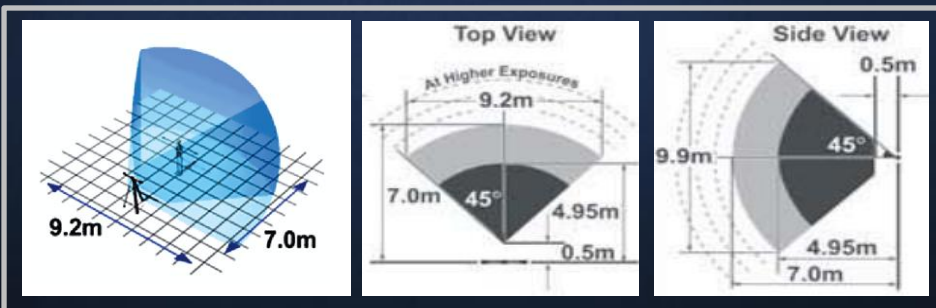
**Automatic Calibration**

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.**

**No Marker 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 ...

**Tactile Feedback**



**TECHNICAL SPECIFICATIONS**

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

