3D Motion Capture

Phoenix Technologies Inc
20 Years of Performance and Innovation

PTI

Fastest of All

Visualeyez **VZ10K5**
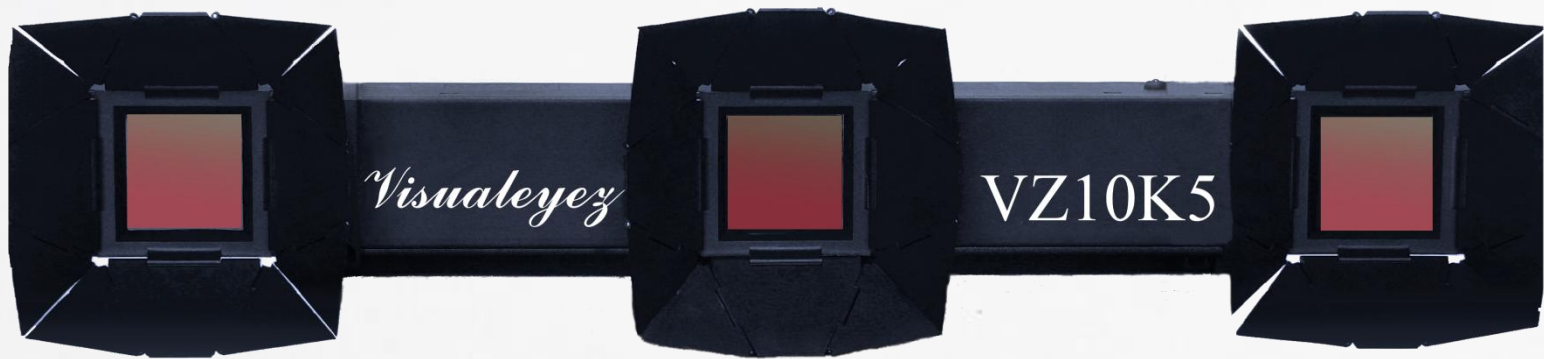
Power Performance Speed For Research

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.

PTI
3D Motion Capture
10,000Hz
Sampling
For Research

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**

Six On-board Processors

10,000Hz Sampling

Visualeyez™ III

VZ10K

Max. 100° Rectangular FOV

15 µm Resolution Sensor
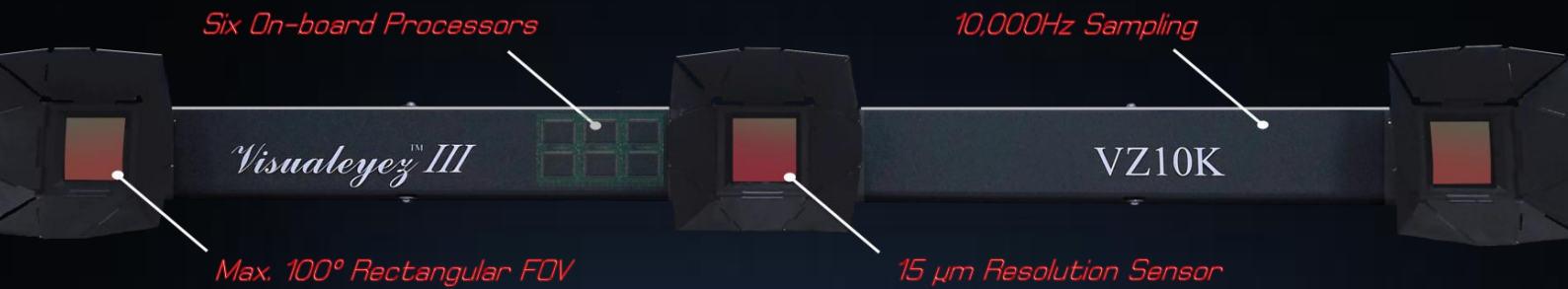
Move your tracker *during* capture. Re-arrange tracker(s) arbitrarily.
No need to register markers or patterns, unlike camera-based systems.
No manual calibration required ever! …even for a multi-tracker system.

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.

VZ10K

**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 …**
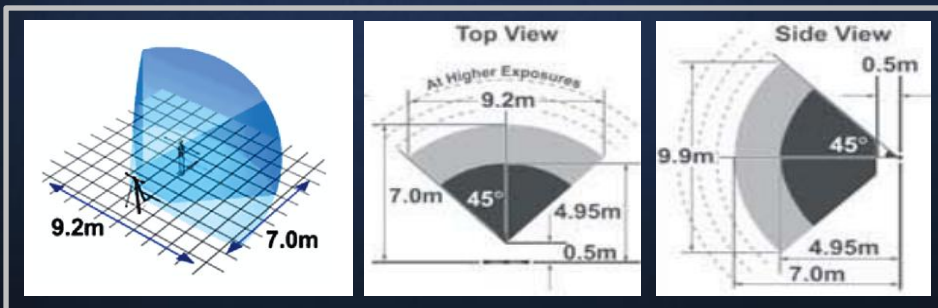
TECHNICAL SPECIFICATIONS

Sensing Volume:	**~190 m³ of capture space, over 7m distance nominal**
Minimum Sensing Distance:	**0.5m (VZ10K), 0.25m (VZ10K5)**
Position Resolution:	**0.015mm at 1.2m distance (smallest detectable position change)**
Number of Markers:	**512 active LED markers with unique IDs**
Accuracy :	**Up to 0.10mm (RMS, 1D, nominal), 0.25mm (RMS, 3D-combined, nominal) for standard calibration range (VZ10K)**
Data Latency:	**<0.3 ms (at fastest sampling rate)**
Sampling Speed:	**10,000 3D data points per second**
Calibration Range:	**Standard range: 0.6~2.5m distance** **Extended range: 0.6~4m+ distance** **+/-40° yaw, +/-30° pitch** **Custom range possible (please inquire)**

PFI