



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

VZ4000v TRACKER MODELS



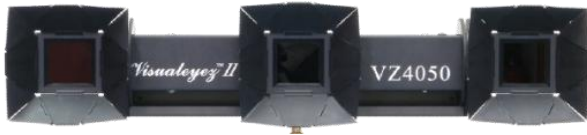
Robust and autonomous, VZ4000v trackers offer the highest accuracy and capture up to 4850 times per second.

	L-Series	E-Series	H-Series	H2-Series
Sensing Volume	~ 190 cubic meters of useful space, over 7.0 meters radius (at min. exposure)			
Minimum Sensing Distance	0.5 meter			
Tactile Feedback Function	No	Yes	Yes	Yes
Position Resolution	0.015 mm at 1.2m distance			
Number of Markers	512 max (no 'swapping' problem)			
Calibration	Not required for an individual tracker (factory calibrated) Automatic and continuous for multiple trackers with VZAutocal software			
Accuracy (3D combined, nominal)	0.9mm RMS (Calibration data range: 0.6~2.2m distance, $\pm 30^\circ$ yaw, $\pm 30^\circ$ pitch)	0.5~0.7mm RMS (Calibration data range: 0.6~2.2m distance, $\pm 30^\circ$ yaw, $\pm 30^\circ$ pitch)	<0.5mm RMS (Calibration data range: 0.6~2.2m distance, $\pm 30^\circ$ yaw, $\pm 30^\circ$ pitch)	<0.2mm RMS (Small Capture volume. Custom calibration range)
Operation Angle	90° ($\pm 45^\circ$) in both pitch and yaw (107° diagonally)			
Sensing Rate	4850 real-time 3D data points per second (single sampling, 'vbr' series) 4167 real-time 3D data points per second (double sampling)			
Data Latency	< 0.0005s at maximum sample rate			
Computer Communication	Serial RS232/RS422 (921.6kbps) real-time protocol			
Mounting Orientation	Any (no 'blinding' problem)			
Tracker Bar Weight	3 Kg			
Tracker Bar Length	110 cm			



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VZ4050 TRACKER MODELS






Portable and flexible, VZ4050 trackers capture markers from 25cm to 9m away with high accuracy.

	L-Series	E-Series	H-Series	H2-Series
Sensing Volume	~ 190 cubic meters of useful space, over 7.0 meters radius (at min. exposure)			
Minimum Sensing Distance	0.25 meter			
Distributive Tactile Feedback	No	Yes	Yes	Yes
Position Resolution	0.03 mm at 1.2m distance			
Number of Markers	512 max (no 'swapping' problem)			
Calibration	Not required for an individual tracker (factory-calibrated) Automatic and continuous for multiple trackers with VZAutocal software			
Accuracy (3D combined, nominal)	1.2mm RMS (Calibration data range: 0.6~2.2m distance, $\pm 30^\circ$ yaw, $\pm 30^\circ$ pitch)	0.7~1mm RMS (Calibration data range: 0.6~2.2m distance, $\pm 30^\circ$ yaw, $\pm 30^\circ$ pitch)	<0.7mm RMS (Calibration data range: 0.6~2.2m distance, $\pm 30^\circ$ yaw, $\pm 30^\circ$ pitch)	Please inquire
Operation Angle	90° ($\pm 45^\circ$) in both pitch and yaw (107° diagonally)			
Sensing Rate	4850 real-time 3D data points per second (single sampling, 'vbr' series) 4167 real-time 3D data points per second (double sampling)			
Data Latency	< 0.0005s at maximum sample rate			
Computer Communication	Serial RS232/RS422 (921.6kbps) real-time protocol			
Mounting Orientation	Any (no 'blinding' problem)			
Tracker Bar Weight	1.6 Kg			
Tracker Bar Length	62 cm			



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MARKER SET COMPARISON TABLE

Marker Sets	Precision	Set-up Ease	Flexibility	1-Chip LED Version	Price Level
Standard Markers 	★ ★ ★	★	★	Yes	Low
Octopus Markers 	★ ★ ★	★ ★ ★	★ ★ ★	Yes	Med.
SIT Markers 	★ ★ ★	★ ★ ★	★ ★ ★	No	Med.

★ ★ ★ is better, or lower for price

Standard Markers :

They are **packaged in different ways for application conveniences**. The flat-based versions are intended for direct attachment to the skin with double-sided tapes or medical adhesive. Multi-chip LEDs are intended for longer distance larger motion capture, while single-chip (or 1-chip) LEDs are for applications which require higher capture accuracy.

Octopus Markers :

This intelligent marker system will **reduce up to 90% of the wiring requirement** compared to the Standard LED marker system. Each marker comes with a distinct built-in ID for flawless marker identification. Each marker has 3 connectors and can be freely interconnected with other Octopus Markers to **build a flexible layout**.

SIT Markers :

An SIT Marker can support up to 3 LEDs through its two side-connectors. All three LEDs will have their own distinct marker IDs. This self-identified marker is convenient for capturing the 6DOF information of an object. It can also be cost-effectively used as **three independent markers**. Self-contained, it comes with its own rechargeable battery and **requires no electronic setup**.



SIT Markers

Revolutionary wireless marker with uniquely identified active LED targets

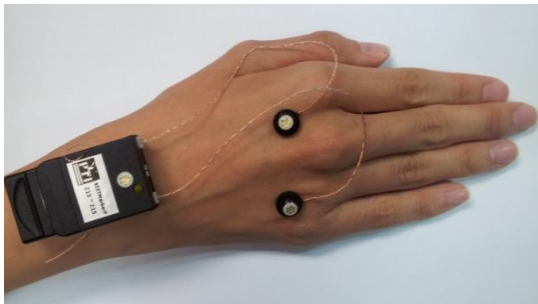
An SIT Marker can support up to 3 LEDs through its two side-connectors.

All three LEDs will have their own distinct marker IDs.

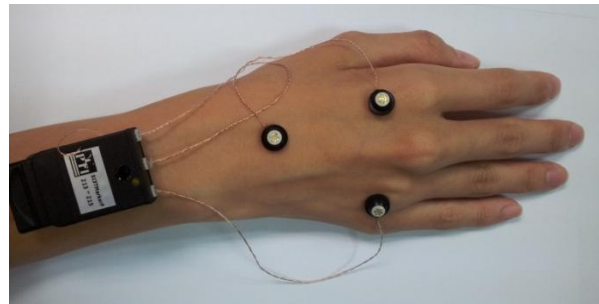
This self-identified marker is convenient for capturing the 6DOF information of an object, when placed on a rigid body.

It can also be cost-effectively used as **three independent markers**. Self-contained, it comes with its own rechargeable battery and **needs no electronic setup**.

This marker exists also with tactile feedback function – Please inquire



SIT marker with 2 targets on extension wires, one target on marker itself



The target on the marker can be removed, so that all 3 targets are on extension wires