



Polaris Vega[®] ST

Enable new OEM surgical tool tracking and navigation applications with NDI's multi-purpose optical tracking solution: the Polaris Vega[®] ST.

This versatile optical tracker provides accurate 3D measurements for reliable instrument tracking in a variety of OEM surgical navigation and research applications. Optional features such as a positioning laser, extended measurement volume, radiation robustness, and OEM branding further enhance the customization of this Polaris Vega.



Exceptional Measurement Accuracy

The Polaris Vega ST delivers high volumetric accuracy to 0.12 mm RMS with low noise. Track passive spheres attached to tools with confidence; hardware characterization and factory calibration optimize accuracy for measurements that are highly repeatable and reliable.

Volumetric Accuracy^{1,2} RMS	Pyramid Volume: 0.12 mm Extended Pyramid: 0.15 mm
95% Confidence Interval^{1,2}	Pyramid Volume: 0.20 mm Extended Pyramid: 0.30 mm

¹ Based on a single marker stepped through more than 900 positions throughout the measurement volume using the mean of 30 samples at each position at 20°C

² Accuracy stated based on overall volume

Streamlined Tool Design

The Polaris Vega ST has a built-in API and software is available to facilitate tool development and accelerate integration into OEM and end-user software applications. The NDI ToolBox software includes utilities to support ongoing system diagnostics and maintenance.

Tool Types	Passive, Active Wireless
Maximum Number of Tools	Load up to 25 tools (maximum of 6 active wireless)
Maximum Number of Markers per Tool	6 single-face/20 multi-face

Robust Hardware Design

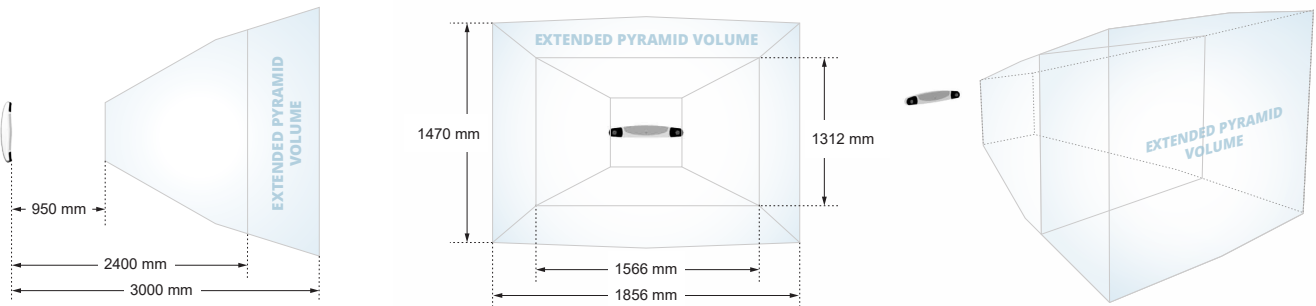
The Polaris Vega ST can include optional radiation hardening to maintain accurate and reliable performance in harsh environments, such as those found in radiation therapy suites. Consistent operation in variable room conditions add to product robustness.

Measurement Rates	20, 30, 60 Hz
Average Latency	17 ms (typical) at 60 Hz
Measurement Volumes	Pyramid, Extended Pyramid (optional)

Ethernet Connectivity

The Polaris Vega ST streams tracking data to the OEM host application via Gigabit Ethernet, as powered by POE (Power over Ethernet). Ethernet connectivity allows for greater flexibility, interoperability, and scalability of equipment setup and use within the operative space.

Data Communication	Gigabit Ethernet
Network Synchronization	Precision Time Protocol
Data/Power Interface	Ethernet, RJ45



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