Polaris Vega® XT

Industry-leading performance and reliability.

Navigate new possibilities in OEM robotic-assisted procedures with the market leader in measurement performance. NDI's newly upgraded premier tracking solution combines best-in-class measurement accuracy with higher-speed tracking and lower latency for exceptional reaction times between the software and the robot end-effector.

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Unrivaled Measurement Rate

The Polaris Vega XT has an **improved maximum frame rate of 400 Hz and reduced latency below three milliseconds**, which allows for fast and efficient transfer of tracking data within robot-control systems. The frame rate remains constant even when multiple tracked tools are in view.

Enhanced Communication Protocol

The Polaris Vega XT optical tracker now supports both TCP and **UDP network communication methods**. Selectable through the API, the addition of UDP provides users with a better option for wireless host communications in time-sensitive applications.

Exceptional Measurement Accuracy

The Polaris Vega XT delivers volumetric **accuracy to 0.12 mm** RMS with minimal noise. Track tools with total confidence; hardware characterization, and factory calibration optimizes accuracy for measurements that are highly repeatable and reliable.
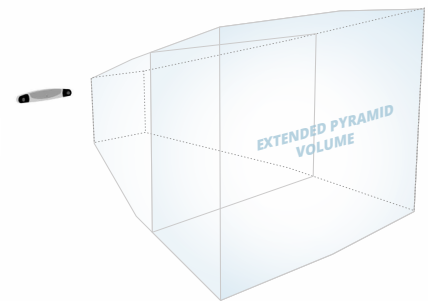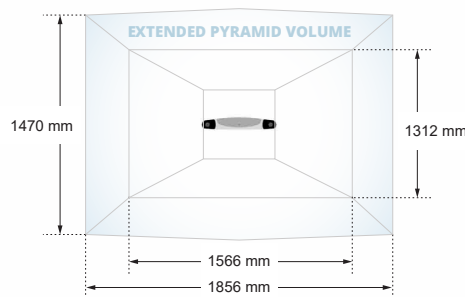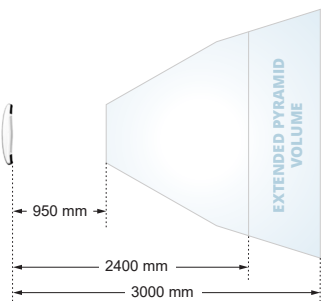
Ease and Speed of Integration

The Polaris Vega XT includes software, source code, and API tools to streamline the design and development of tools, and to **speed integration with OEM software applications**. The software suite also includes utilities to support ongoing system diagnostics and maintenance.

Polaris Vega® XT Technical Specifications:

PERFORMANCE	
Maximum Frame Rate	400 Hz **(UPGRADED)**
Average Latency	<3 ms (typical) **(IMPROVED)**
Measurement Volume	Pyramid / Extended Pyramid (optional)
Volumetric Accuracy[1,2] RMS	Pyramid: 0.12 mm, Extended Pyramid: 0.15 mm
TOOL TRACKING	
Tool Types	Passive, Active Wireless **(NEW)**
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
DATA COMMUNICATION & CONNECTIVITY	
Data Communication	Gigabit Ethernet
Communication Protocol	TCP, UDP **(NEW)**
Data/Power Interface	Ethernet, RJ45
HARDWARE	
Dimensions (L x W x H)	591 x 103 x 106 mm
Weight	1.7 kg
Mounting	Four M4 x 0.7 mm pitch x 10 mm deep threaded holes, rear mount

[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.

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