



## NDI Polaris® Tools, Markers, Software, and Accessories

We provide all the tools required for OEM partners to create the right solutions for their surgical application workflow.

The Polaris Vega® and Polaris Lyra® optical measurement solutions are designed for accuracy, reliability, and versatility within OEM applications. NDI developer tools, software, and accessories are available to enhance application development and system customization.



# Tools

Polaris tool design, marker geometries, and tool tracking parameters are set by the medical device OEM. The medical device OEM can create the exact tools needed for their surgical application workflow, and control exactly how each tool is tracked by the Polaris optical tracker. NDI offers ready-to-use (non-medical) rigid body tools for research applications and for the exploratory stage of OEM research and development. Multiple tools can be tracked simultaneously.

## Passive 4-Marker Probe

#8800825

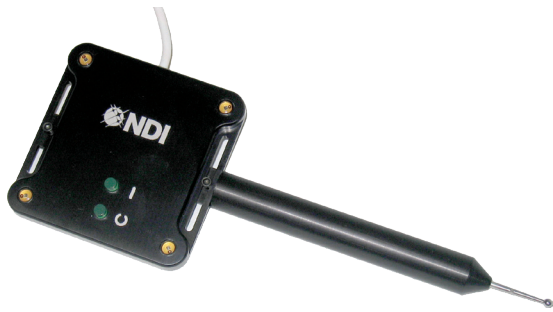
Single-faced passive probe for testing and evaluation purposes.



## Passive 4-Marker Rigid Bodies

#8800823\* / #8800824 / #8800841

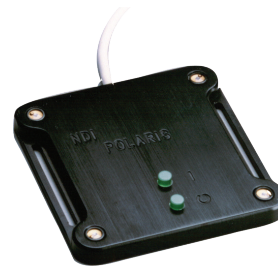
Ready-to-use rigid bodies for testing and evaluation purposes. Bodies can be attached to objects with available clamps. (\* Polaris Lyra only)



### Active 4-Marker Probe

#8700229.002

Single-faced active probe for testing and evaluation purposes. Requires a System Control Unit.



### Active 4-Marker Rigid Body

#8700223.002

Single-faced planar rigid body with holes for mounting. Requires a System Control Unit.



### Passive Tool Kit

#10005857 / #10010739

The Passive Tool Kit contains the core components needed to get started with the Polaris Vega or Polaris Lyra:

- 2 Rigid Bodies
- 2 Rigid Body Clamps
- 1 Probe
- 1 Pkg. of NDI Passive Spheres (25)



### Hybrid Tool Kit

#10005858

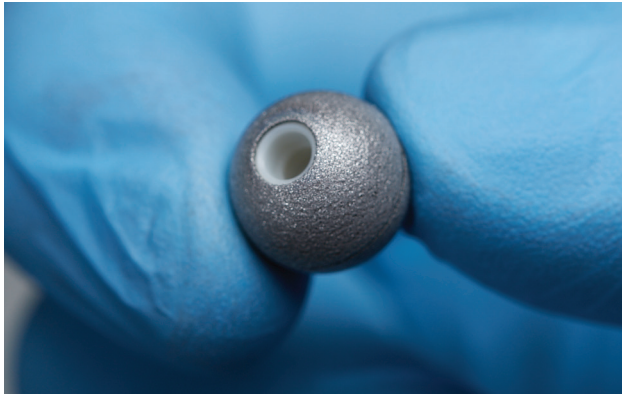
The Hybrid Tool Kit provides the same tools and accessories as the Passive Tool Kit with the addition of an Active Probe and an Active Rigid Body.



# Markers

Navigation markers are a key component of optical navigation technology. At NDI, we have two types of markers - passive and active to provide flexibility to OEM development needs. When attached to OEM instruments, navigation markers function as triangulation points for the instrument within the treatment space. The navigation marker and the Polaris optical tracker work together to localize, detect, and track OEM instruments with pinpoint accuracy. NDI offers a variety of marker options to provide flexibility.

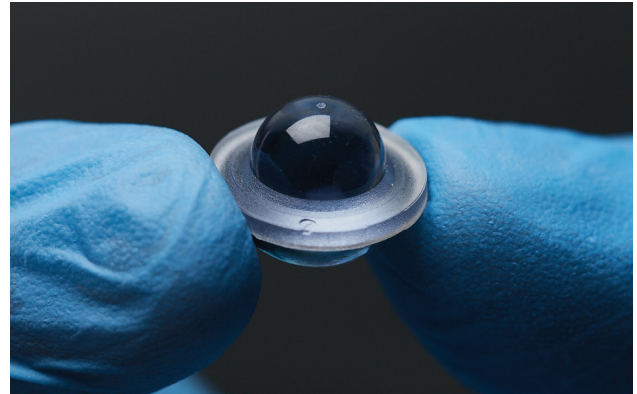
## Passive



### Spheres

#8800700

The NDI Passive Sphere™ is specifically developed to work with Polaris optical navigation systems. For development purposes, they are available in packages of 25. Also available pre-sterilized. Contact NDI for more details.



### Radix™ Lenses

#10007718

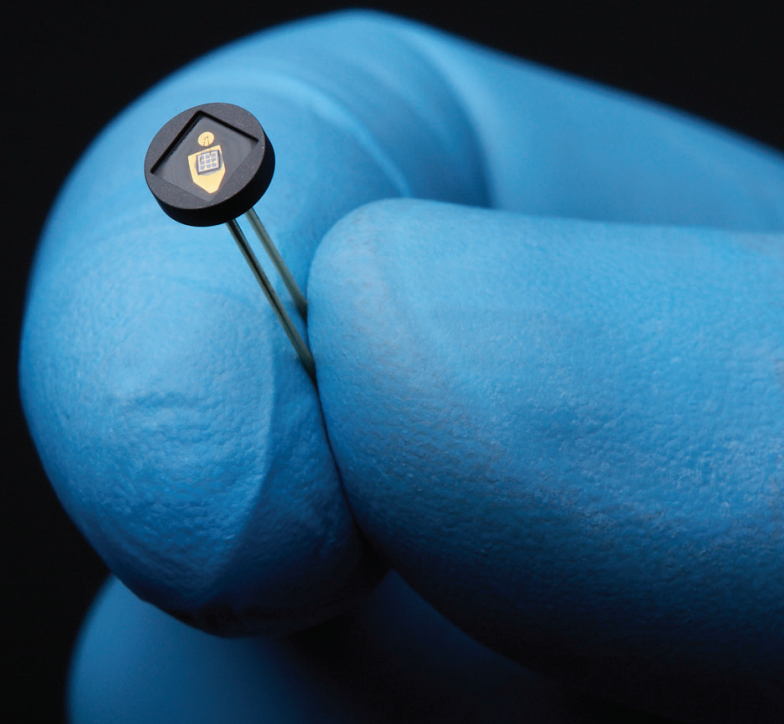
The Radix Lens is a passive, retro-reflective, wipeable lens that can be attached to OEM surgical instruments. For development purposes they are available in packages of 40.

## Active

### IRED

#3000199

The infrared emitting diode (IRED) is an active marker mounted on a ceramic base. The optical tracker detects the infrared light emitted by the active markers and calculates the position and orientation of tools that incorporate them. Power for the IRED comes from an optional System Control Unit for wired tools or from an external supply (such as batteries) for wireless tools. For tool development, active markers are available to order in packages of 50.



# Tool Development

NDI provides developer kits for the cost-effective and flexible development of custom passive or active tools.

## Passive Tool Developer Kit

#10005859

Kit includes:

- NDI Passive Sphere (package of 25)
- Mounting Post for NDI Passive Sphere (package of 12)

## Hybrid Tool Developer Kit

#10005860

Kit includes:

- NDI Passive Sphere (package of 25)
- Mounting Post for NDI Passive Sphere (package of 12)
- Active Marker (package of 12)
- Active Tool Cable Assembly

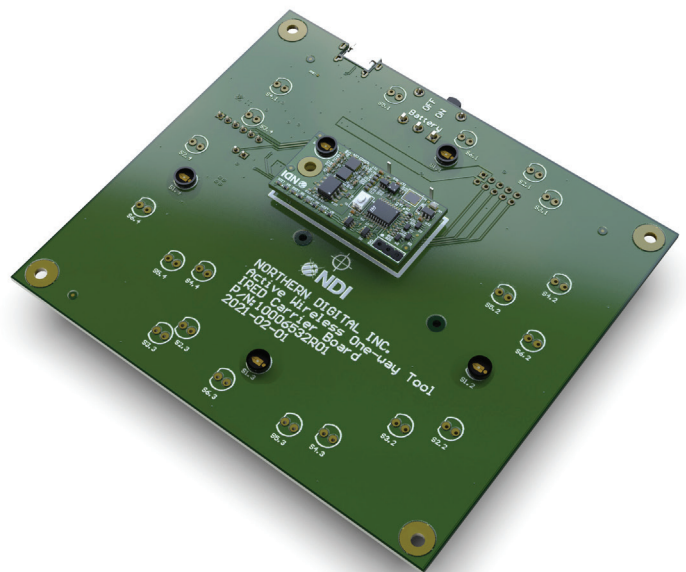


## Active Wireless Information Package

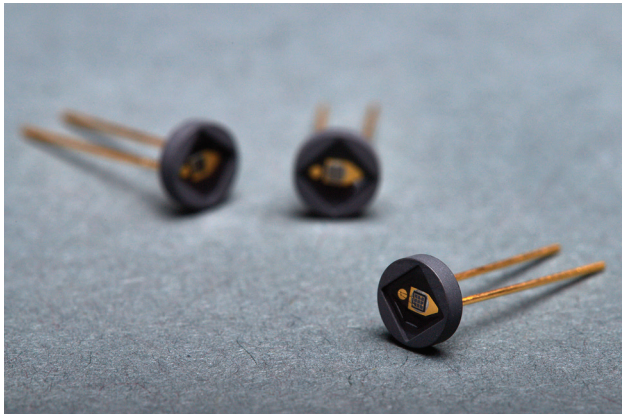
To support OEM customers who wish to design active wireless tools, NDI provides a reference design information package. This design package can be used with any Polaris product and is available for download via the Customer Support Site.

Components of the Polaris Active Wireless Sample Tool package include:

- Tool Design Guide
- Receiver Assembly Design Files
- Carrier Board Assembly Files
- Firmware Binary File
- Source Code Binary File
- Tool Definition File



# Tool Development



## Photodiode for Active Wireless Tools

#10000646

Receiver necessary when developing active wireless tools.



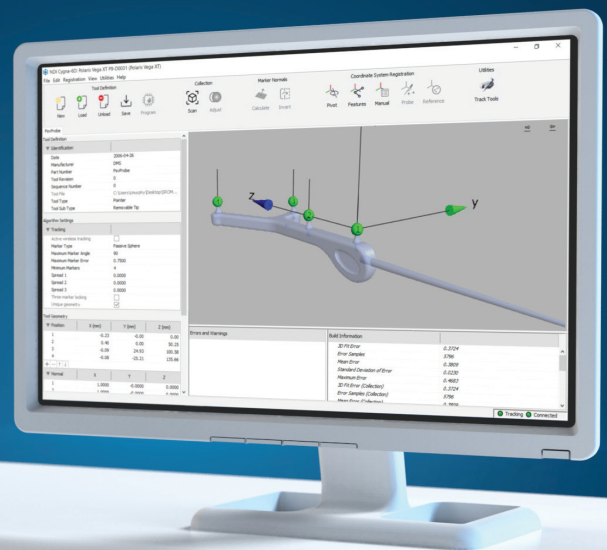
## Active Tool Cable Assembly

#120096

A length of tool cable pre-wired with connector and SROM device, to facilitate the development of active (wired) tools.

## Cyigna-6D™

This software is an essential component of the tool characterization process and is necessary for the creation of tool definition files. As a replacement for its predecessor (NDI 6D Architect™), Cyigna-6D features an efficient user interface that has been streamlined to a single window, reducing the number of steps (and dialogue boxes) to complete tasks.



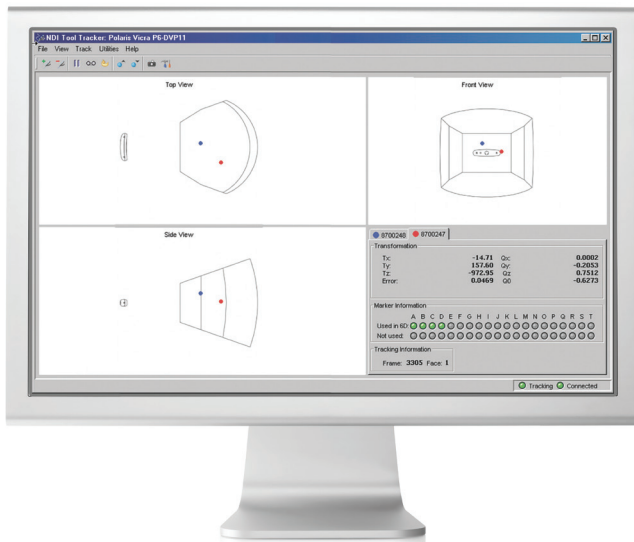
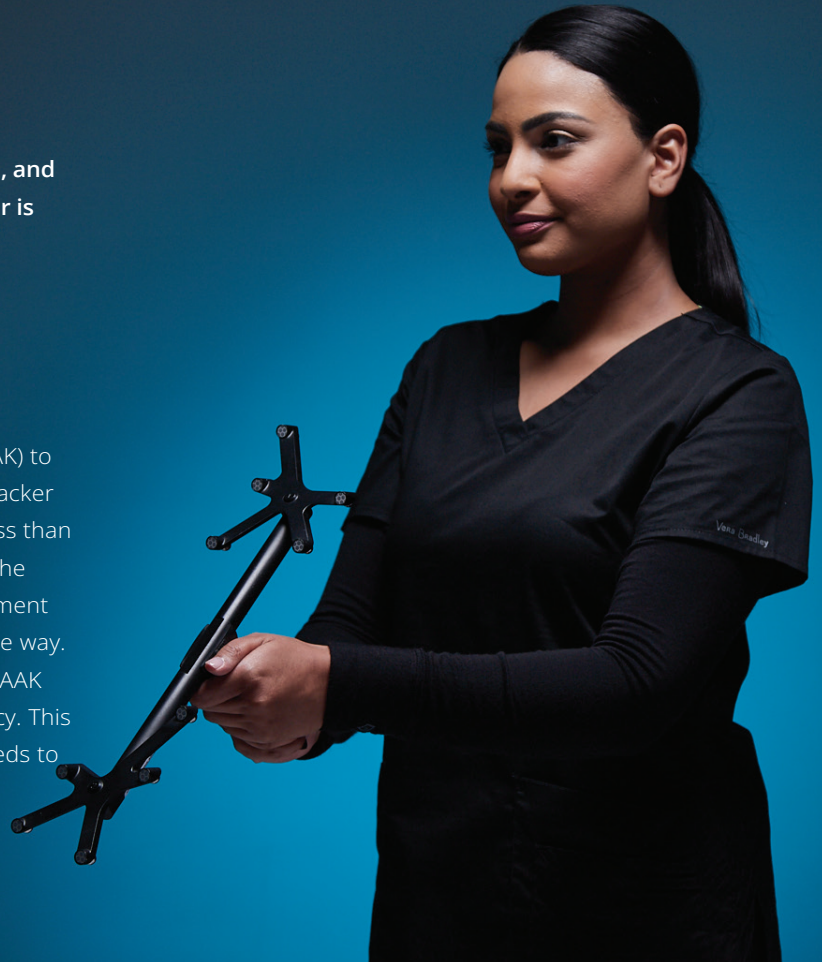
# Accessories

We provide the necessary software and tools to enable OEM customers to configure, characterize, and track tools and ensure their Polaris optical tracker is optimized for performance.

## Accuracy Assessment Kit

#10001475

NDI offers an optional Accuracy Assessment Kit (AAK) to assess the in-field accuracy of the Polaris optical tracker within the application environment. Together, in less than 15 minutes, the hardware and software will guide the user through predefined positions in the measurement volume, with measurement data recorded along the way. Once the measurement results are calculated, the AAK software will generate a pass/fail report for accuracy. This helps to determine if the Polaris optical tracker needs to be sent back to NDI.



## ToolBox™

This collection of software utilities allows OEM developers to configure, upgrade, troubleshoot and test the Polaris solutions. It also supports tool tracking and the collection and saving of tool tracking data. For the Polaris Vega VT®, the NDI ToolBox software also provides a video client application for streaming video.

## TOOLS

DESCRIPTION	PART NUMBER
Passive 4-Marker Probe <sup>1</sup>	8800825
Passive 4-Marker Rigid Body 1 <sup>1,2</sup>	8800823
Passive 4-Marker Rigid Body 2 <sup>1</sup>	8800824
Passive 4-Marker Rigid Body 3 <sup>1</sup>	8800841
Passive Rigid Body Clamp, Large	8800826
Passive Rigid Body Clamp, Small	8800827
Active 4-Marker Probe	8700229.002
Active 4-Marker Rigid Body	8700223.002
Lyra Tool Kit, Passive <sup>2</sup>	10010739
Vega Tool Kit, Passive	10005857
Vega Tool Kit, Hybrid	10005858

## MARKERS

DESCRIPTION	PART NUMBER
NDI Passive Sphere (package of 25)	8800700
Mounting Post for NDI Passive Sphere (package of 12)	1201101
Radix Lens (package of 40)	10007718
Active Marker (package of 50)	3000199

## TOOL DEVELOPMENT

DESCRIPTION	PART NUMBER
Passive Tool Developer Kit	10005859
Hybrid Tool Developer Kit	10005860
Active Wireless Information Package	Download from Customer Support Site
Photodiode for Active Wireless Tools	10000646
Active Tool Cable Assembly	120096
Cygna-6D Software	Download from Customer Support Site

## ACCESSORIES

DESCRIPTION	PART NUMBER
ToolBox Software	Download from Customer Support Site
Accuracy Assessment Kit	10001475

<sup>1</sup> NDI Passive Spheres not included

<sup>2</sup> Recommended for Polaris Lyra only



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