

# AUTODESK® POWERINSPECT® 2018

Multi-device 3D inspection software

## 2018 Feature Comparison

	PowerInspect Standard	PowerInspect Premium	PowerInspect Ultimate
<b>CAD Imports</b>			
<b>Neutral CAD import</b> <i>Read/write neutral CAD formats.</i>	✓	✓	✓
<b>Third-party CAD import</b> <i>Read/write third party CAD formats.</i>	-	✓	✓
<b>Hardware Connectivity</b>			
<b>Manual device connection</b> <i>Connections to manual devices, such as articulated arms.</i>	✓	✓	✓
<b>Non-contact inspection</b> <i>Connection to noncontact inspection hardware, such as laser scanning hardware or optical systems.</i>	-	✓	✓
<b>Automated inspection</b> <i>Connections to automated devices, such as CNC/DCC CMMs, or machine tool probing.</i>	-	-	✓
<b>Error mapping for CMM</b> <i>Produce an error map to identify inaccuracies of machine construction and feedback devices.</i>	-	✓	✓
<b>Dual-device inspection</b> <i>Simultaneous connection to 2 manual devices, such as an articulated arm and laser tracker.</i>	-	✓	✓
<b>Machine tool probe calibration</b> <i>Calibrate the machine tool probe to understand its characteristics.</i>	-	-	✓
<b>On machine verification (OMV)</b> <i>Multi axis machine tool probing.</i>	-	-	✓
<b>Dual column CNC inspection</b> <i>Connection to a dual column automated inspection device.</i>	-	-	✓
<b>Import/Export</b>			
<b>Import CAD file</b> <i>Import a single CAD model.</i>	✓	✓	✓
<b>Import multiple CAD files</b> <i>Import CAD files and assemblies.</i>	-	✓	✓
<b>Export measurement to CAD</b> <i>Import CAD files and assemblies.</i>	✓	✓	✓

<b>Export point cloud</b> <i>Export point cloud to ASCII/mesh/STL.</i>	-	✓	✓
<b>Part alignment</b> <i>Export the machining work offset to optimize part alignment.</i>	-	✓	✓
<b>Electrode inspection</b> <i>Electrode .trode import and update.</i>	-	-	✓

General	PowerInspect Standard	PowerInspect Premium	PowerInspect Ultimate
<b>Geometric selection</b> <i>Create geometric items by selecting them from the CAD view.</i>	✓	✓	✓
<b>Real-time laser connection</b> <i>Connection to laser scanning devices.</i>	-	✓	✓
<b>Repeated measures</b> <i>Use one document to inspect multiple examples of a part.</i>	-	✓	✓
<b>Point cloud meshing/STL</b> <i>Create point cloud mesh or export point cloud to .stl.</i>	-	✓	✓
<b>Simulation probe/machine</b> <i>Probe/machine simulation in the CAD view.</i>	-	-	✓
<b>Automated batch measurement</b> <i>Measure a complete production run, or batch of components.</i>	-	-	✓

Alignments	PowerInspect Standard	PowerInspect Premium	PowerInspect Ultimate
<b>Geometric alignments</b> <i>Align a part to the CAD model using geometric items for which you know the CAD coordinates.</i>	✓	✓	✓
<b>Freeform fit alignments</b> <i>Align a part to the CAD model using a set of specified surface points.</i>	-	✓	✓
<b>RPS alignment</b> <i>Align a part to the CAD model using a set of features to constrain the part's axes of rotation and translation.</i>	-	✓	✓
<b>Best fit</b> <i>Use measured surfaces to optimize the alignment of the CAD model with the part.</i>	-	✓	✓
<b>Datums</b> <i>Display the locations of measured items relative to a specified point.</i>	✓	✓	✓

Geometric-based inspection	PowerInspect Standard	PowerInspect Premium	PowerInspect Ultimate
<b>Probed geometric features</b> <i>Probe 2D and 3D geometric features.</i>	✓	✓	✓
<b>Constructed features</b> <i>Create an item using an existing reference item.</i>	✓	✓	✓
<b>Dimensioning</b> <i>Create and display measurements as dimensions in the CAD view.</i>	✓	✓	✓
<b>GD&amp;T</b> <i>Add geometric dimensioning and tolerancing (GD&amp;T) items to the inspection sequence.</i>	✓	✓	✓
<b>Build feature from points</b>	-	✓	✓

CAD-based inspection	PowerInspect Standard	PowerInspect Premium	PowerInspect Ultimate
<b>Surface inspection</b> <i>Inspect a surface by probing points and comparing them to their CAD nominals.</i>	-	✓	✓
<b>Edge inspection</b> <i>Inspect the boundary of a surface.</i>	-	✓	✓
<b>Section inspection</b> <i>Measure cross sections through a part by specifying a plane along which the part must be probed.</i>	-	✓	✓
<b>Raster surface inspection</b> <i>Generate a probing pattern for use with surface inspection groups.</i>	-	-	✓

Reporting	PowerInspect Standard	PowerInspect Premium	PowerInspect Ultimate
<b>Labels</b> <i>Add labels to inspections.</i>	✓	✓	✓
<b>Single page report</b> <i>Create a single-page report.</i>	✓	✓	✓
<b>Full report</b> <i>Create a full tabular report.</i>	✓	✓	✓
<b>SPC output</b> <i>Output results for statistical process control.</i>	-	✓	✓