



For Immediate Release

Radiant Vision Systems Announces New Automated Visual Inspection System for In-Line Assembly Verification

REDMOND, Wash. – November 1, 2017 — Radiant Vision Systems, a leading provider of high-resolution imaging solutions for automated visual analysis of devices and surfaces, announces the release of the [INSPECT.assembly](#) system, a new turnkey automated visual inspection station for in-line assembly verification. The INSPECT.assembly is fully-integrated with Radiant technology and configured to precise tolerances to meet production-level inspection needs of complex electronic assemblies. The INSPECT.assembly system detects the presence, position, and integrity of components including screws, cables, connectors, and other critical features before final device enclosure to automate assembly inspection.



“Electronics manufacturing processes today are largely automated. However, final inspection for board-based connected assemblies has lacked an effective automated solution that ensures both consistency and accuracy,” says Davis Bowling, Radiant’s Regional Account Manager for assembly verification applications. “At the final stages of production where internal components are verified – before electronics are enclosed before or after functional testing – human inspectors remain the primary inspection method. This is due to the human’s superior visual acuity and judgment over typical machine vision systems for complex visual analysis. Humans can quickly detect very subtle defects in a variety of assembly contexts, even as parts change. However, human inspection lacks an automated system’s repeatability. To apply an automated solution in these contexts, the technology must offer the same level of visual acuity and judgment to ensure failures do not escape or result after goods are shipped.”

Radiant’s new [INSPECT.assembly](#) system is a turnkey inspection station that employs [ProMetric® Y](#) imaging systems with camera resolution (up to 29 megapixels) and dynamic range (above 70 dB) far exceeding the specifications of typical machine vision systems. Applied in photometric measurement of light and color in displays and backlit components, ProMetric cameras capture fine-detail images with a level of precision that rivals human visual acuity. Because INSPECT.assembly is fully-integrated with Radiant camera, lighting, fixturing, and software, Radiant engineers are able to design each INSPECT.assembly to match the specifications of each customer application. This advanced vision technology solves critical inspection challenges through a combination of the image registration & analysis functions of the camera with proprietary machine vision “super tools” in INSPECT Software, which blend multiple machine vision software algorithms in a single tool to enable comprehensive analysis of specific features. For instance, a tool can be engineered with the unique algorithms required to locate the routing path of a cable to ensure that it is properly seated around guides on a board-based assembly.

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“Capturing precise feature flaws during final inspections is critical not only for preventing functional failures in the manufacturing process, but also latent failures that may occur after shipment,” states Bowling. “A cable that is routed away from its guide may be pinched or damaged with repeated device use. A loose connector may detach with vibration. These issues may cause a device to fail after it has left the manufacturing facility, resulting in a return or potentially a broader product recall. The INSPECT.assembly’s imaging capability combined with custom-configured software allow manufacturers to catch subtle errors like these that human inspectors, standard machine vision systems, and functional testing may miss.”

Radiant’s new INSPECT.assembly system rivals human visual acuity and judgment for detecting defects while quantifying visual data for automated operations, bridging the gap between human and machine vision inspection for the most challenging assemblies. Occupying the same physical footprint as a human operator on the line, the INSPECT.assembly system easily rolls onto moving conveyers, adjusting to heights from 525-950 mm. The system features a touch screen for results monitoring, adjustment of inspection tolerances, and part changes. The system’s INSPECT Software is pre-configured with multiple inspection tool recipes specific to each part, enabling adaptability to line changeover. The system also offers reporting functionality, barcode reading, and data output for traceability of inspection results and process control to improve operations for reducing product returns and recalls.

For additional information about the new [INSPECT.assembly](http://www.RadiantVisionSystems.com) system from Radiant Vision Systems, and other advanced vision solutions, visit www.RadiantVisionSystems.com.

About Radiant Vision Systems

Radiant Vision Systems works with world-class brands and manufacturers to deliver creative visual inspection solutions that improve quality, reduce costs, and increase customer satisfaction. Radiant’s legacy of technology innovation in photometric imaging and worldwide install base date back more than 25 years and address applications from consumer electronics to automotive manufacturing. Radiant Vision Systems product lines include TrueTest™ automated visual inspection software for quality control, and ProMetric® imaging colorimeters, photometers, and light source measurement systems. Radiant is headquartered in Redmond, Washington, USA, with strategic offices in China and South Korea. Radiant has been a part of Konica Minolta’s Sensing Business Unit since August 2015. For more information, visit www.RadiantVisionSystems.com.

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