# SICK’s Mini InspectorP61x Packs in Machine Vision Power

Waldkirch / Germany, July 2021. SICK has launched an ultra-compact and ultra-powerful all-in-one 2D vision sensor, the InspectorP61x, which can be rapidly set up to conduct highly-reliable inline machine vision inspections even in the tightest of machine spaces, or when mounted on robot arms.

With the SICK InspectorP61x 2D vision sensor and pre-installed Quality Inspection SensorApp, users rapidly configure inline inspection, part localization and measurement tasks to run automatically on the device. Small enough to be mounted right where it is needed inside a machine, the InspectorP61x is ideal for inspecting fine detail parts such as electronics components or glue beads, or to focus on more intricate areas in larger assemblies. Tiny and lightweight, it can also be mounted on robot arms to provide real-time quality checks and positioning for tasks such as the insertion of small screws.

**Rapid Installation and Configuration**

Following instant installation with snap-in mounting, users quickly obtain high-quality images ‘out of the box’ with the SICK InspectorP61x’s integrated optics and adjustable LED illumination. Simply connect the SICK InspectorP61x to a PC with a standard web-browser interface to configure a wide choice of machine vision tools to run directly onboard the camera, sufficient to set up most applications in no time. Additional flexibility is also built-in to expand or customize inspections, together with the option to progress with ease to SICK’s Intelligent Inspection Deep Learning SensorApp for more challenging inspections, when required.

“It might be the smallest of the InspectorP6xx family of programmable 2D vision sensors, but the SICK InspectorP61x packs the power of its larger siblings into a miniature device that fits in the palm of your hand,” said Viktor Smedby, SICK 2D Machine Vision Product Manager.

“Whether you are a novice or an expert, it is quick and easy to configure your machine vision application using the onboard image processing tools provided within the SICK Quality Inspection SensorApp. It’s also simple to download additional free tools for specific applications, such as glue bead inspection, while more experienced users have the flexibility via the programming interface to access time-saving, ready-made code so they can fast-track customized inspections. Meanwhile even inexperienced users can progress to Deep Learning, starting from a low cost of ownership.”

**High Quality Image Processing with Flexible Illumination**

The SICK InspectorP61x is a versatile 2D vision sensor just 50 x 40.3 x 29.6 mm in size. It processes high-quality images with up to 1.2 Mpixel resolution, ideal for small- and medium-sized objects, even at very short distances down to 50mm. Its built-in illumination assures optimum results even at tight angles and supports reliable inspection all the way up to 300mm, enabling a much larger field of view when required.

In-situ camera set-up time is minimal, thanks to a choice of 6mm or 12mm pre-installed lenses, together with the InspectorP61x’s innovative integrated illumination concept. An array of blue and amber LEDs built into the sensor housing enables the user to fine tune the brightness, color and shape of the illuminated inspection area to achieve the best possible image processing results.

**Pre-installed Quality Inspection Software**

In common with all the SICK InspectorP6xx family of 2D vision sensors, the InspectorP61x comes with SICK’s Quality Inspection SensorApp already installed. Users are guided through easy point-and-click configuration, and have the freedom to add, combine and customize the machine vision tools they need. With the additional programming flexibility and tools within the SICK AppSpace software platform, users have the option to further extend their applications with minimal coding time, as well as to access the HALCON machine vision library.

**Deep Learning Extension Option**

Seamless integration with the SICK Intelligent Inspection Deep Learning SensorApp provides users with a rare opportunity using a vision sensor of the InspectorP61x’s tiny size to progress to Artificial Intelligence vision classifications. With the benefit of training a neural network based on real examples, users can try out the suitability of Deep Learning classification for their application before purchasing the additional license required. They can also use traditional rule-based vision tools together with Deep Learning to solve the application.

Image processing is conducted directly onboard the SICK InspectorP61x and the digital input and outputs offer versatile automation options for communication of measurement data to higher-level control systems, as well as for remote diagnostics and process monitoring. Its versatility for many applications is assured by a wide range of communications interfaces via Ethernet TCP/IP, FTP, EtherNET/IP®, and PROFINET fieldbuses.

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Pictures:

SICK\_Inspector\_P61x\_0087560 / SICK\_InspectorP61x\_Product\_0085837 / SICK\_InspectorP61x\_App\_0088970 / SICK\_InspectorP61x\_0095486

The compact and powerful all-in-one 2D vision sensor, InspectorP61x, can be rapidly set up to conduct highly-reliable inline machine vision inspections even in the tightest of machine spaces.

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SICK is one of the world’s leading solutions providers for sensor-based applications in the industrial sector. Founded in 1946 by Dr.-Ing. e. h. Erwin Sick, the company with headquarters in Waldkirch im Breisgau near Freiburg ranks among the technological market leaders. With more than 50 subsidiaries and equity investments as well as numerous agencies, SICK maintains a presence around the globe. In the 2020 fiscal year, SICK had more than 10,000 employees worldwide and a group revenue of around EUR 1.7 billion. Additional information about SICK is available on the Internet at [http://www.sick.com](http://www.sick.com/) or by phone on +49 (0)7681202-4183.