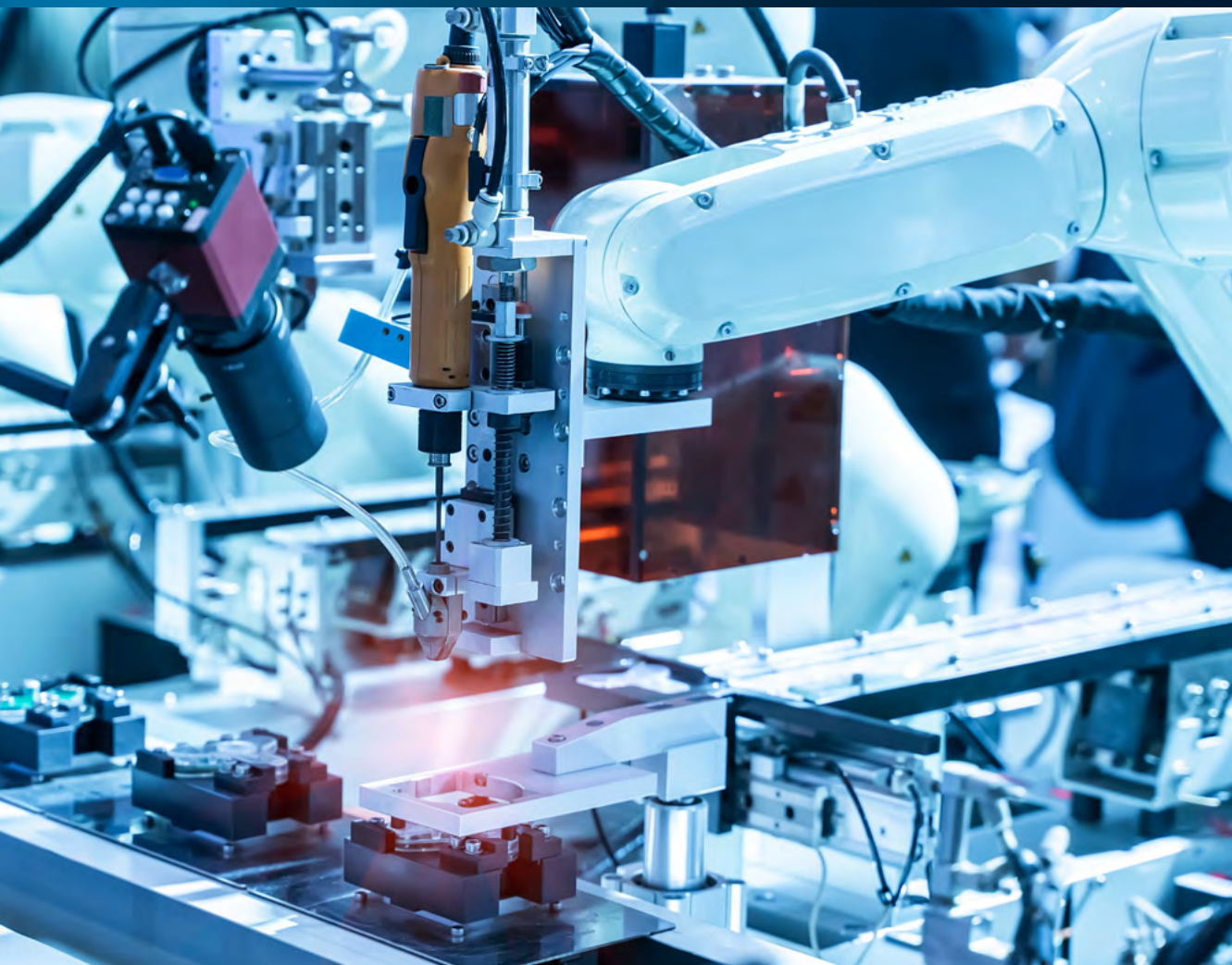# Case study: TTTech Industrial & MVTec

Machine vision solution integrated on secure IIoT platform

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nerve

MVTec MERLIC is an easy-to-use software for industrial machine vision with associated tooling for process integration. With MERLIC, it is possible to solve even demanding machine vision applications without programming knowledge. Based on MVTec's extensive machine vision expertise, MERLIC combines reliability and speed with best-in-class ease of use. An image-centric user interface and an intuitive operating concept ensure efficient workflows.
For integration into a production environment, MERLIC also provides easily configurable interfaces and a runtime environment, which helps to significantly shorten the time for creation and commissioning of machine vision applications.

TTTech Industrial's IIoT platform Nerve is a secure, IEC 62443-certified edge solution that offers vendor independence, flexibility, and openness. With Nerve, users can access data, manage devices, and deploy applications (in the form of containers and virtual machines) remotely. This reduces system complexity and costs, improves machine performance, and provides the opportunity for offering innovative new services to customers. The CODESYS Soft-PLC integrated in Nerve allows real-time data to be read via Ethercat and ProfiNet. Nerve runs on all industrial PCs with Intel processors.

The Nerve Management System operates in the cloud or on-premises and enables the management of a complete fleet of edge devices.

Challenge

Machine vision is always used when quality-critical processes must be monitored. Machine vision systems are therefore automatically relevant for the availability of machines and the quality of the parts or goods produced.

Machine vision applications often need to be optimized during operation, for example, adapting to new batches of parts with altered reflection behavior, optimizing detection, or learning about new objects. Experts on site are usually not available, but it is still necessary to react quickly to avoid machine downtimes.

Solution

The MVTec MERLIC runtime is now available as a container application for TTTech Industrial's Nerve. The MERLIC container can be remotely uploaded to the machine vision computer via the Nerve Management System, where it can also be updated. The MERLIC application parameters are also accessible remotely.

The MERLIC user interface allows access to the application at the customer's site by means of a secure connection via Nerve's Remote Connection. In many cases, expensive on-site service assignments can be avoided, as adjustments to the application, as well as updates can be carried out remotely. Nerve's cloud connectors make it easy to implement innovative visualization and diagnostic concepts.

Key benefits

The combination of MVTec MERLIC and Nerve from TTTech Industrial facilitates the development and operation of machine vision applications through new possibilities for remote management of applications and data.

MVTec MERLIC is available in version 5.6 for any number of cameras (GigE-Vision, GenICam, and USB3 Vision) for industrial PCs with Nerve from TTTech Industrial.

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