Application Case Study - Eppendorf, Germany

Handheld Barcode Imager Ensures Traceability and Accuracy in Laboratory Processes

Customer Profile

Eppendorf is a leading life science company that develops and sells instruments, consumables, and services for liquid-, sample-, and cell handling in laboratories worldwide. Its product range includes pipettes and automated pipetting systems, dispensers, centrifuges, mixers, spectrometers, and DNA amplification equipment as well as ultra-low temperature freezers, fermentors, bioreactors, CO_2 incubators, shakers, and cell manipulation systems.

Associated consumables like pipette tips, test tubes, microtiter plates, and disposable bioreactors complement the instruments for highest quality workflow solutions. Eppendorf was founded in Hamburg, Germany in 1945 and has more than 2,700 employees worldwide. The company has subsidiaries in 25 countries and is represented in all other markets by distributors.

The Challenge

The epMotion® 5075 automated pipetting solution from Eppendorf is the ideal solution for advanced liquid handling demands. With 12 to 15 worktable positions and many additional features the epMotion 5075 versions have a high application flexibility.

It can be used in demanding, small-volume applications such as next generation sequencing, real-time polymerase chain reaction (PCR) set-up or magnetic bead based purification, as well as cell assays or any routine pipetting task.

With epBlue™, the intuitive software that Eppendorf has developed for the epMotion automated pipetting systems, laboratory workers and researchers can enjoy the new concept of user-guided software assistance.

Eppendorf looked for a reliable barcode reader to complement the epMotion 5075 automated pipetting system and software, to identify samples, and to enable visual guidance.

To meet the needs of their customers, Eppendorf offers bespoke configurations, including accessories for ensuring traceability and compliance with standards and regulations.

Eppendorf needed a reliable barcode reader that they can provide to their customers together with the epMotion 5075 and software, to identify samples, and to enable visual guidance with their software solution.

The Solution

To meet Eppendorf's barcode reading needs, beic Ident GmbH, a Microscan value added reseller based near Hannover in Germany, recommended the HS-21 2D handheld imager from Microscan.

- ■ **Requirement:** A reliable barcode scanner as an accessory to the epMotion® 5075 to identify and track samples and reagents
- ■ **Project:** 1D/2D barcode scanning solution

- ■ **Solution:** HS-21 handheld imager from Microscan

- ■ **Result:** Improved accuracy and efficiency in laboratory processes, and compliance with government regulations

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The HS-21 imager provides fast barcode decode rates and long range reading in a lightweight, durable package. Its dual field optics decode most 1D and 2D symbols in any orientation at short and long distances. The HS-21 combines a compact form factor with ruggedness and high performance. It can sustain multiple drops from 1.8 meters and is ideal for clean room applications. The reader's sensitive components are protected by an IP54-rated enclosure, and it can easily be cleaned by common disinfectants.

Together with Eppendorf's epBlue ID software module, the HS-21 imager allows for safe data exchange with laboratory information management systems (LIMS) and simplifies external communication. The barcode reader enables the user to record barcodes on all tube types and microplates.

Reagents can be documented with type and lot number. After manually scanning the barcodes, epBlue ID will store the IDs in its database from which data can be verified at any time. A result file containing sample IDs and their final location is generated by epBlue ID when the liquid handling process is completed. The result ID list can then be exported to a network drive and uploaded to a LIMS.

The Benefits

Thanks to the barcode reading solution, the laboratories can follow and fully track the entry list and every single step in the procedures. Accuracy and documentation are critical, and this solution helps them ensure compliance with standards and government regulations, as well as ensure efficiency and avoid human errors.
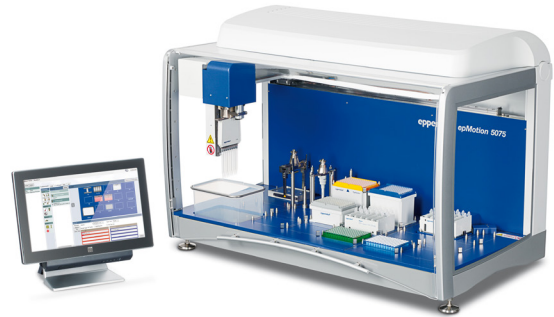
Together with Eppendorf's epMotion and epBlue ID software module, the HS-21 scanner allows for safe data exchange with laboratory information management systems (LIMS).

The HS-21 handheld imager decodes most 1D and 2D symbols in any orientation at short and long distances, and its disinfectant-ready housing makes it ideal for clean room applications.

OVERVIEW:

- **Customer:** Eppendorf
- **Industry:** Life Sciences
- **Application:** Laboratory Automation
- **Products:** HS-21 Handheld Imager from Microscan
- **Reseller/integrator:** beic Ident GmbH, Germany

Founded in 1982, Microscan has a strong history of technology innovation which includes the invention of the first laser diode barcode scanner and the 2D symbology, Data Matrix. In 2008, Microscan acquired the Siemens Machine Vision division. Today, Microscan remains a technology leader in automatic identification and machine vision with extensive solutions for ID tracking, traceability and inspection.

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