



Increasing Medical Device Tracking Accuracy with UDI Scan+

Automatically scan, parse, format, and send UDI barcode data to Electronic Health Records (EHR) and other healthcare systems.



In healthcare, nothing is more important than patient safety. Medical devices play a crucial role in delivering safe, high-quality patient care and achieving positive outcomes.

However, to safeguard quality and patient safety, medical devices must be tracked and traced from the point of production through the product's safe and appropriate use until final disposal.

To help improve patient safety worldwide, the FDA and European Commission have defined and adopted Unique Device Identification (UDI) standards to trace the millions of individual medical devices used for patient care.¹ Device manufacturers are responsible for applying a UDI label to each device to enable tracking and traceability throughout the supply chain and the device's life cycle.

Additionally, the American Hospital Association has issued recommendations that hospitals and other healthcare systems implement UDI traceability in their clinical information systems and supply chains.² This will allow providers to have a clear record of the medical devices used in patient care. It will also facilitate recalls and allow patients to be more informed about their care.

Providers can use UDI to better manage medical inventories and reduce costs. By capturing and tracing each device's UDI—from procurement through use and disposal—hospitals and healthcare systems can get accurate visibility into their medical device inventory. This allows teams to optimize ordering, replenishment, placement, and distribution while minimizing costs and ensuring positive patient care and outcomes.



1. Unique Device Identification System, FDA final rule (2013), <https://www.federalregister.gov/documents/2013/09/24/2013-23059/unique-device-identification-system>.

2. "Implementing the Unique Device Identifier," American Hospital Association (2017). <https://www.aha.org/system/files/advocacy-issues/factsheets/fs-unique-device-identifier.pdf>.

The Challenges Of UDI Traceability

Implementing UDI traceability requires UDI data to be captured and entered into EHR, or other information systems. Important fields to be captured include the device identifier (DI) and the product identifier (PI), which contain a serial or lot number and an expiration date. This can prove challenging for several key reasons:

Inefficient and Error-Prone Manual Processes

Many hospitals and healthcare systems may attempt to rely on manual processes as a near-term solution to capture UDI data, but this creates inefficiency and significant risk of human error.

Complex Information Systems That Don't Integrate Easily

Leading EHR have been updated to support UDI, but there remains the challenge of getting UDI data into those EHR, and other systems that may not be updated or are difficult to connect and integrate.

Data Capture Technologies That Aren't UDI-Ready

Many automated data capture technologies and solutions are not UDI-ready and are unable to automatically capture and parse UDI barcodes, which have their own format and specification. This indicates there may still be significant human intervention required to parse captured data, format, and import it into EHR and other information systems. This translates to less efficiency and greater risk of human error.

The Need to Capture Multiple Barcodes Selectively

The FDA UDI standards allow UDI to be presented as a set of barcodes, and medical device packaging labels include multiple UDI-formatted barcodes, all of which need to be captured and parsed accurately. In addition, workers may need to scan other non-UDI-formatted 1D and 2D barcodes. To avoid mistakes in scanning the right barcodes, they may have to resort to covering up nearby, unwanted barcodes, which is time-consuming and potentially reduces productivity and accuracy.

Scanning and Capturing Direct-Part-Marked UDI

The FDA's UDI standards require that UDI be permanently embedded directly on single-unit medical devices via a direct part mark (DPM). But many barcode scanning technologies do not support DPM data capture.



Automating UDI Scanning and Tracking

Fortunately, hospitals and healthcare systems don't have to suffer through the challenges of UDI traceability. UDI track-and-trace can be achieved quickly and relatively easily with the right automated data capture strategy.

By using UDI-ready data capture technologies and solutions, healthcare providers can automate the UDI scanning and tracking process for complete traceability. They can achieve accurate and reliable results without the costs, headaches, risks, and limitations of manual processes or unsuitable technologies.

At Zebra Technologies, our engineers and developers have worked closely with leading healthcare providers to develop UDI Scan+, a complete solution automating UDI data capture and traceability.

UDI Scan+ is an easy-to-use parsing application that automatically scans and tracks UDI data and sends it to EHR and other healthcare information systems. It parses, formats, and sends UDI data without requiring any human intervention beyond pulling the trigger on a barcode scanner.

UDI Scan+ serves as an all-in-one scanning solution that captures and parses all UDI as well as non-UDI formatted 1D and 2D barcodes for maximum accuracy and efficiency.

Zebra's scanners deliver better performance, faster processing speeds, higher resolution sensors, and Zebra's exclusive PRZM intelligent imaging technology to address the challenges of UDI traceability.



Support for All UDI Barcode Standards

UDI Scan+ is a purpose-built solution that supports all UDI standards and formats. It automatically captures and parses UDI data on medical devices and packaging labels using intelligent decoding algorithms to process each barcode according to its unique standard and format. It then sends correctly formatted data to EHR and other information systems automatically, without manual reformatting or intervention. UDI Scan+ also supports GS1 barcode standards, and future support will also be available for the HIBCC and ICCBBA barcode standards.

Automatic UDI Scanning and Recognition

To eliminate worker training requirements and make scanning as easy as possible, UDI Scan+ automatically recognizes and scans each barcode with point-and-shoot simplicity. There is no need to determine which barcode to scan or cover nearby barcodes. The application can be configured to transmit only the specific barcodes needed while ignoring other nearby barcodes.

Multi-Barcode Capture with a Single Trigger Pull

Since UDI may be presented as a set of barcodes, and medical device packaging may include multiple UDI, UDI Scan+ works together with Zebra's Multi-Code Data Formatting to automatically capture multiple barcodes with one trigger pull. Zebra's scanner will capture all required barcodes and transmit only those required in the precise order that an EHR or other application needs.

Reduced Error Rates for Better Patient Safety

Manual data capture and data entry leads to identification and tracking error rates of 1 in every 4 to 6 medical devices. In contrast, automated barcode scanning reduces error rates to 1 in every 10 million characters scanned.³ And UDI Scan+ automatically parses UDI and other barcodes to ensure the right data is captured, in the right sequence, with minimal risk of human error.



3. "UDI: It's Not (Just) About the Barcode," Champion Healthcare Technologies, March 14, 2016.



DS8100 Series for Healthcare

As a healthcare provider, you need to deliver the very best in care, every second of every day. This means giving your healthcare professionals the tools they need to improve patient outcomes, increase productivity, and streamline everyday processes. With the purpose-built DS8100 Series for Healthcare, you can. With the ability to instantly capture even the most difficult to read barcodes, a purpose-built housing designed to withstand repeated disinfectant wipedowns to help reduce the spread of infections, Night Mode with vibration for can't miss feedback on decodes, and a built-in lamp, the DS8100-HC Series can seamlessly integrate into existing healthcare workflows to boost process efficiencies and ensure that patients are left undisturbed until necessary. Combined with swappable power sources—a PowerPrecision+ battery or PowerCap™ capacitor—and unrivaled manageability tools to keep your scanners up and running in the hands of your staff, the DS8100-HC Series is the ideal solution to enhance patient safety and the efficiency of point-of-care operations.

- Easily unlock the benefits of UDI Scan+
- Exclusive power charge gauge
- Purpose-built housing designed to withstand repeated wipe-downs with approved disinfectants, to help reduce the spread of infection
- Connect+ contact technology designed to last
- Choice of compact USB powered cradles
- Doubles as a workstation lamp
- Eliminate Bluetooth interference with Zebra's proprietary Wi-Fi friendly mode
- Locate a misplaced scanner in seconds using the cradle's paging button



Take Your Next Steps with Medical Device Tracking

To learn more about UDI Scan+, get answers to your questions, and find out if Zebra solutions are the right fit for your medical device tracking, contact us now to schedule a discovery call at your convenience.

connect.zebra.com/healthcare-udi-scan