

Intelligent operations: Smarter healthcare with advanced asset visibility solutions



Introduction



The connected care advantage

Clinicians do extraordinary work. More patients, more complex conditions, more to coordinate, and through all of it, they keep care at the center of everything. We're here to help. And as healthcare is always innovating, so are we. Our printing, labeling, mobile computing, and intelligent tracking solutions connect the physical and digital worlds to present the right information about the right patient or asset at the moment it's needed. Through these technologies, we help reduce pressure on teams, streamline workflows to boost efficiencies, and support clinicians in elevating patient care and achieving positive clinical outcomes. The future of healthcare demands more. We're ready to deliver.

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Positive patient identification (PPID)



Wristbands are available for different skin types, lengths of stay, and profiles, including adult, infant, pediatric, and maternity care. The wristbands are essential to PPID and include:

Z-Band thermal wristbands—high-quality wristband solution

Zebra's Z-Band thermal wristbands stay readable through the demands of a busy ward. Resistance to hand sanitizers minimizes fading to keep barcodes scannable and reduce the need for nurse workarounds. Silver antimicrobial coatings and latex and BPA-free construction, with magnetic resonance (MR) safe materials, ensure wristbands are safe and comfortable to wear.

Zebra LaserBand solutions—print using standard laser printers

LaserBand wristbands are built for busy clinical environments. A self-laminating seal protects barcodes from moisture and hand sanitizers, while the innovative shaped design lies flat against the wrist for easier scanning. With features to reduce wear and tear and keep printers running smoothly, LaserBand ensures smooth, uninterrupted workflows.

Z-Band UHF RFID wristbands—support automatic data capture

Combining PPID with real-time tracking, our RFID wristbands can be read through a blanket or a surgical drape without disturbing the patient. Longer-range options are seamlessly read by overhead readers to enable you to monitor patient journeys and track vulnerable patients.

Recommended printers

- ZD621R desktop printer
- ZD611R desktop printer

Alert solutions—visual notification of patient status

These labels deliver clear, color-coded identification that clinical teams can act on instantly. Compliant with U.S. color-coding standards for allergies, DNR orders, fall risks, and restricted limbs, they're available as vinyl, Tyvek, or spot-alert labels that attach to any existing wristband. Tamper-evident adhesive ensures every alert stays where it should be.²

OmniBand wristbands—seamlessly add barcoding into your workflows

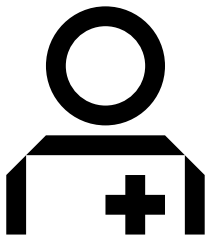
OmniBand makes it simple to add barcode wrist banding without replacing existing label printing systems. An integrated self-laminating design protects printed text and barcodes from moisture, smearing, and hand sanitizers, while latex-free, adjustable sizing ensures a comfortable fit for both adult and pediatric patients.³

Next we will look at tracking solutions and optimal specimen management.

Built for lasting comfort

Independent tests confirm Zebra wristbands withstand a wider range of hand sanitizers in comparison to a leading competitor. Since 1998 our wristbands have identified over **4 billion** people, and we've made multiple improvements to the durability and comfort of our wristbands.

Cardiovascular Foundation of Colombia uses Zebra wristbands for patient ID, **boosting bedside verification from 50% to 95%** and cutting medication, sample, and blood collection errors by **40%**.



ZD510-HC wristband printer: Supporting your sustainability initiatives

The Zebra ZD510-HC features an easy-to-load sustainable cartridge, which in turn actively supports your sustainability initiatives by using environmentally friendly, curbside-recyclable PET 1 plastic.¹



¹ In the U.S. market, refer to your local recycling requirements
² Available in the U.S., Canada, LATAM and APAC markets
³ Available in the U.S., Canada, LATAM and APAC markets

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Assured specimen and blood bag management



When a specimen is labeled at the point of collection and matched directly to a patient's wristband, the risk of error is significantly reduced. Our labels give every vial a digital voice, with a simple barcode scan capturing the full chain of custody, ensuring data integrity from collection through to the lab.

The comprehensive range of specimen labels is engineered for demanding conditions, such as:

- Frozen/fridge storage
- Centrifugation and chemical exposure
- Repeated freeze-thaw cycles
- High-humidity environments

8000T CryoCool—cryogenic survivability down to -321°F / -196°C

Designed for long-term biobank storage, CryoCool labels withstand liquid nitrogen submersion without losing adhesion or legibility.

Recommended printers

- ZD400 Series / ZD600 Series desktop printers
- ZT400 Series / ZT600 Series industrial printers
- 5095 High-Performance Resin
- 5100 Premium Resin
- 4800 Standard Resin

Z-Xtreme 5000T—resistant to harsh lab chemicals

Paired with Zebra's Image Lock ribbon, the 5000T withstands Xylene, Acetone, and Ethanol. Patient data stays intact through every stage of the diagnostic process.

Recommended printers

- ZD600 Series desktop printers

IQ Color specimen labels—urgent sample labeling

Color zones are activated during printing to flag STAT or urgent samples with a bright visual stripe for the quick identification of critical samples for patients who need urgent testing.

Recommended printers

- ZD400 Series / ZD600 Series desktop printers
- ZT400 Series / ZT600 Series industrial printers
- ZQ600 Plus Series mobile printer

Next, we look at how asset tracking solutions can support reliable medication management.



Protecting valuable blood stocks, from donation to transfusion

Ensure every unit is identified, protected, and traceable, from donation to transfusion, and give your teams the confidence to return blood bags to freezers:

- **8000T Primary Blood Bag—certified safety, from donation to transfusion.** Tested against ISO 3826-1 and USP Class VI standards, the label withstands centrifugation and autoclave sterilization up to 284°F / 140°C, providing a robust and reliable barcode solution for accurate tracking and tracing.
- **8000T Blood Bag All Temp / Deep Freeze—stays bonded down to -112°F / -80°C*.** Essential for fresh frozen plasma storage, this label maintains a strong bond at ultra-low temperatures, keeping barcodes readable through the thawing process and preventing unidentified units from being discarded.

Recommend printer: ZT400 Series desktop printers

- **Safe-T-Vue 6 and 10 temperature indicators—non-reversible indicators for cold chain assurance.** The indicators turn permanently red if blood reaches a critical temperature, even if it's later refrigerated. Clinicians get an undeniable visual alert that the cold chain was broken, reducing manual paperwork and protecting patients.

*Not available in NALA market



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Reliable medication management



Our connected system of mobile devices, software, and analytics digitizes every step of the medication lifecycle, making it a quick, assured, simple, and repeatable process to ensure the five rights of administration (right patient, right drug, right dose, right route, and right time) are upheld every time.

At point-of-care, wristbands and medication can be scanned by our handheld and presentation scanners. This creates a secure digital handshake at the bedside for closed loop medicine administration. Data is shared with the patient's EHR and any issues (e.g., allergies or wrong medication) are instantly raised.

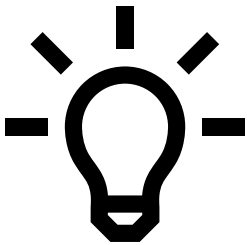
Connected clinicians

We offer a wide range of scanners, mobile computers, and tablets designed for healthcare's unique demands. The devices are the nervous system of connected hospitals, providing the insights that teams need to elevate care and flow through digital tasks.

- **Empowered staff:** From managing patient IDs, to accessing and updating EHRs, taking specimens, checking inventory, and connecting instantly with colleagues, our devices take pressure away from clinicians.
- **Built for clinical life:** Devices withstand over 30 types of disinfectant. Screwless designs and sealed buttons prevent liquid ingress, and every device is built to survive repeated drops onto hard floors.
- **Thoughtful touches for patients:** Clinicians can select haptic vibrations or subtle visual confirmations to keep device noise down.

A powerful suite of healthcare apps

Zebra Workcloud Sync is a secure, cloud-based platform for real-time team collaboration, replacing outdated methods like pagers with encrypted messaging, voice, and video. Designed for clinical settings, it integrates with EHR systems and provides high-level security to protect patient data while offering features like push-to-talk, emergency alerts, and staff location tracking.



40%

Reduction in patient care errors

Clínica de las Américas uses Zebra scanners and printers to gain a 40% drop in patient care errors, achieved by digitizing the patient journey, from admission to discharge, ensuring that every medication and procedure was traced back to the correct patient ID.



HC50 / HC55 healthcare mobile computers

The features healthcare professionals need to improve efficiency, accuracy, and the quality of care.

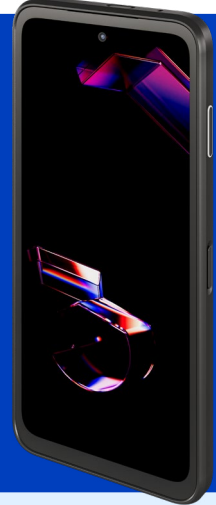
- Advanced 6-inch FHD+ edge-to-edge display
- Fast wireless connectivity (Wi-Fi 6E, 5G)
- True hot-swappable battery
- Dedicated red duress button
- Front-facing camera



DS82-HC Series scanners

The next generation of healthcare imaging, with a design focused on hygiene, durability, and seamless clinical workflows.

- **2MP** sensor—instantly reads challenging barcodes on wristbands, meds, and specimens
- Programmable multi-function button to switch between clinical tasks on the fly
- Only activates during active scanning, to protect patient comfort
- Contactless charging and a hot-swappable battery



EM45 Series Enterprise Mobile

The features clinicians need to stay connected, productive and protected.

- Bright 6-inch FHD+ edge-to-edge display
- Fast wireless connectivity (Wi-Fi 6E, 5G-ready)
- Hot-swappable battery for full-shift power
- Programmable hard key for instant access to critical functions
- Front-facing camera for video calls and remote support

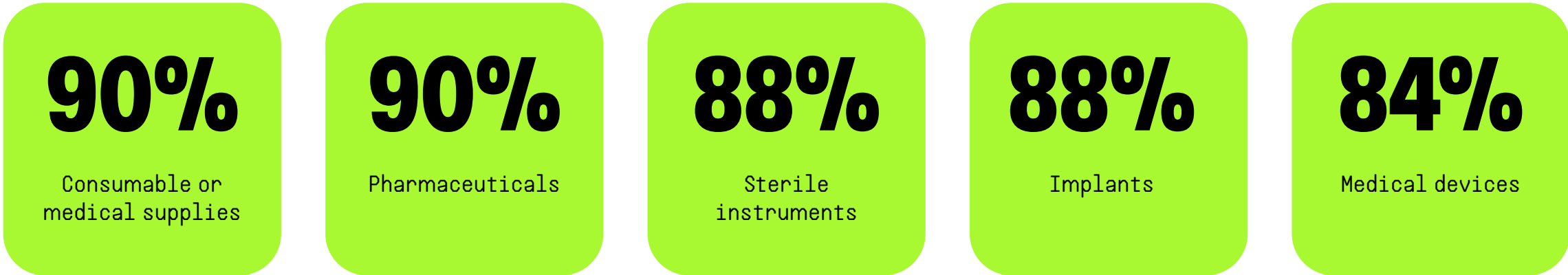
4

Asset tracking



Precise, real-time inventory tracking ensures that essential equipment and supplies are available at the moment they're needed, streamlining operations and elevating care.

Percentage of decision-makers rating the ability to track real-time location and use of assets as “very” or “extremely” important.



RFID asset tracking

With our RFID solutions, you can track assets like beds, wheelchairs, surgical instruments, defibrillators, and mobile workstations across your facilities. You can see the last-known locations of items and, with active RFID solutions, have a real-time view over item locations.

Solutions include:

Fixed RFID readers: In a hospital ecosystem, our FX9600 Fixed RFID Reader is typically installed to manage high-volume tracking of bulk supplies, at dock doors and in laundry areas. The compact FX7500 Fixed RFID Reader is ideal for clinical spaces, monitoring high-value surgical kits or pharmacy inventory within supply rooms. Our low-profile RFID antennas complement these readers in patient-facing areas; their slim design allows for flush mounting in hallways or under shelves, tracking assets seamlessly.

Mobile RFID readers: Mobile computers like our TC52-HC (with RFD8500 Handheld RFID Sled) capture RFID data. Staff can perform rapid cycle counts by scanning a room in seconds and find items using a Geiger-counter-style search mode. Many of our clinical users refer to the devices as “wands” for their seemingly “magical” ability to locate what they’re looking for.

RFID labels and inlays: We provide a wide range of RFID labels and inlays, which communicate asset and location information with RFID readers. The solutions you use are dependent on the materials being tracked (e.g., metal surgical tools) and how robust the solutions need to be. Inlays include the RFID chip and antenna, while the label (paper/plastic/adhesive) provides protection for the inlay and adhesion. Examples of items tracked and traced by our RFID solutions include:

Assets	Label / inlay	Recommended printer(s)
Metallic objects Pumps, wheelchairs, beds, surgical instruments 	Silverline II On-Metal labels With metal interfering with radio signals, Silverline has a design which creates a buffer between the inlay and the surface it's attached to.	ZT411 On-Metal Tagging Solution
	The Z-Ultimate 3000T A premium, high-gloss polyester label offering superior resistance to chemicals and abrasion. Engineered for long-term tracking in demanding healthcare environments, it ensures high-quality print remains legible, even after repeated exposure to harsh cleaning agents.	ZT231 RFID industrial printer ZD621R RFID desktop printer
Lab specimens Optimized for non-metallic surfaces, including plastic tubes and glass vials, with options to suit clinical environments. They are paired with a range of inlays. 	PolyPro 3000T Moisture and chemical-resistant synthetic label for standard specimen containers, commonly paired with the compact BT573 inlay.	ZD621R RFID desktop printer
	Z-Select 2000D / 2000T Cost-effective paper labels for general sample labeling, paired with ZBR2200 or BT793 inlays.	ZD621R RFID desktop printer ZQ630 Plus RFID mobile printer
	Z-Ultimate 2500T* Durable polyester for harsh lab chemical environments, with a BT577 flag configuration to maintain read range on liquid-filled specimens.	
(*available in EMEA only)		

Real-time asset tracking with Zebra MotionWorks Healthcare

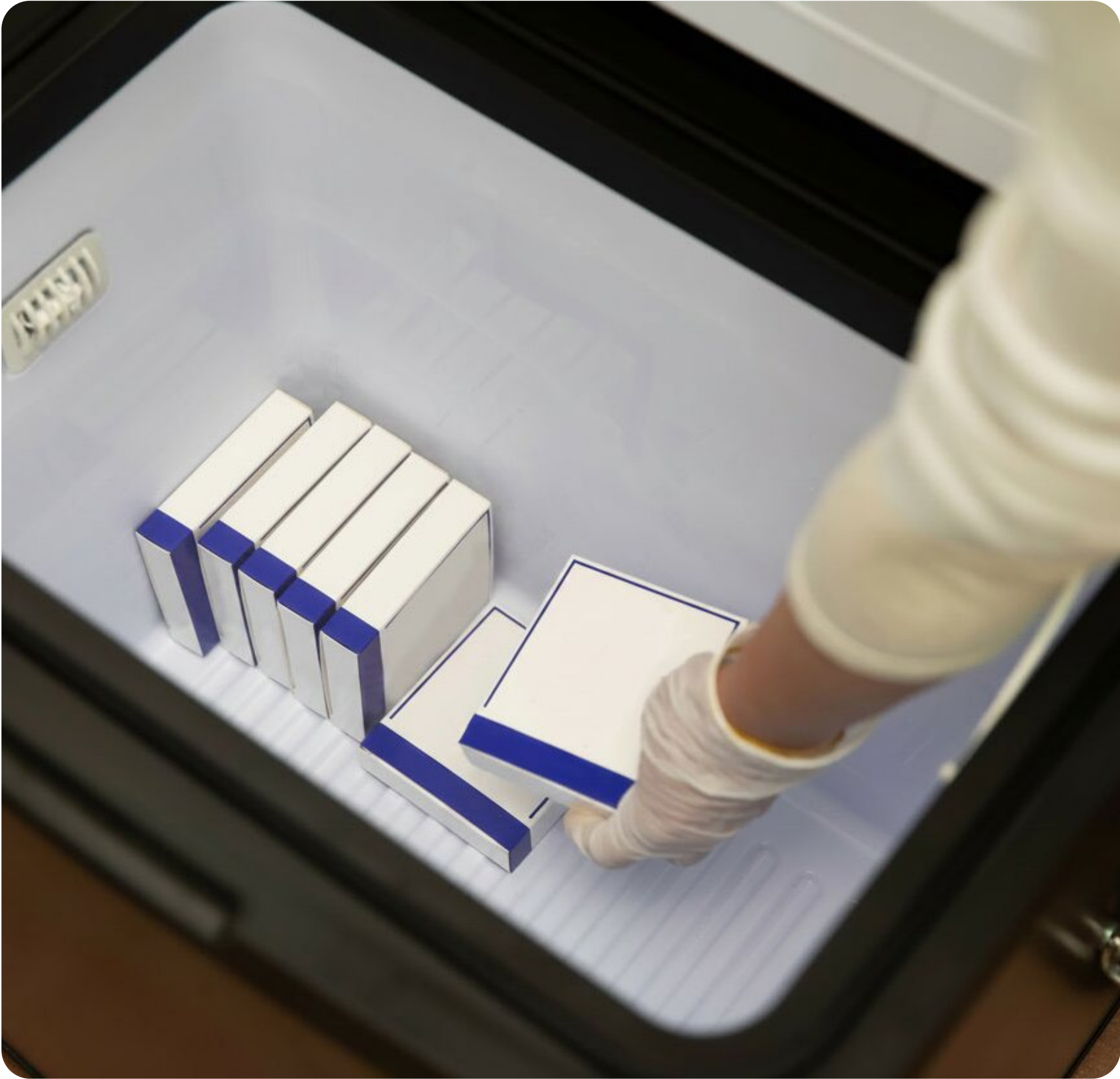
MotionWorks Healthcare is a real-time location system (RTLS) using RFID, BLE, and Wi-Fi to track high-value medical assets. It enables teams to instantly locate equipment via handheld devices, significantly reducing time wasted searching for items. This platform supports Scan4Safety standards, offering actionable dashboards for managing equipment status: clean, used, or needing maintenance. It ensures critical equipment is readily available, ultimately elevating patient care and safety.

Saving 88,000 hours at Hull University Teaching Hospitals

Clinical staff at Hull University Teaching Hospitals NHS Trust were spending 56 minutes every week searching for equipment. The Trust deployed RFID tracking across 1.3 million square feet of clinical space, labeling over 72,000 assets. Each search now takes under 4 minutes, saving 88,000 hours annually across 2,500 staff, with full return on investment inside 24 months.

“We’re already seeing improvements to patient care, as well as huge time savings.”

Rachael Ellis, Scan4Safety Programme Director, Hull University Teaching Hospitals NHS Trust



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Optimized pharmacy and inventory management





We enable the creation of a “digital pharmacy,” which blends barcodes with automated RFID. This creates a real-time view over inventory to eliminate manual counting, prevents the distribution of expired medications, and reduces waste by nearly 50%. The approach ensures that, whether your technicians are scanning a vial at the bench or “waving” a shelf for a weekly audit, data is exceptionally accurate. Our asset visibility portfolio for pharmacy inventory is extensive and customizable to your needs. Frequently used solutions include:

Here are the specific Zebra label names and their paired printers commonly used in hospital pharmacies:

Z-Select 2000D—standard prescription and dispensing labels

This standard thermal paper label provides clean, readable barcodes for outpatient prescriptions and ward medication boxes. It does not require a ribbon, making it easy to swap rolls in fast-paced pharmacy environments.

Recommended printers

- ZD421-HC healthcare desktop printer
- ZD621-HC healthcare desktop printer

8000T CryoCool—low-temperature storage

A thermal transfer polypropylene label that remains bonded at temperatures as low as -321°F / -196°C. It is essential for labeling vaccines, biologics, and medications stored in liquid nitrogen or ultra-low temp freezers.

Recommended printers

- ZD621-HC healthcare desktop printers
- ZT411 industrial printer (high-volume printing)

IQ Color 2000D—visual alerts and priority labeling

Print “color on demand” on areas of the label. Pharmacies use them to highlight high-alert medications (e.g., look-alike/ sound-alike drugs) or expiration dates.

Recommended printers

- ZD421-HC healthcare desktop printer
- ZD621-HC healthcare desktop printer
- ZQ600 Plus Series mobile printer

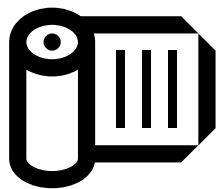
Z-Perform 1000D—short-term unit-dose labeling

A cost-effective, direct thermal paper label used for individual medication units, vials, and oral syringes, intended for immediate use or short-term storage in automated dispensing cabinets.

Recommended printers

- ZD411-HC desktop printer (2-inch ultra-compact)
- ZQ600 Plus-HC Series mobile printers

In the final section, we look at how RFID solutions can help keep your facilities safe and secure.



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Secure staff and visitor management



Hospitals and clinics are bustling places where security for staff, guests, and patients is paramount. Our barcode and RFID solutions bring real-time visibility, automated identity verification, and controlled access together in one connected system.

Staff safety and access control

RFID-enabled staff badges allow authorized personnel to access secure areas, pharmacies, operating theaters, and maternity wards with a simple tap, while real-time location tracking helps managers identify workflow bottlenecks and monitor people's locations. If issues arise and help is needed, our mobile devices include duress buttons to summon immediate assistance.

Visitor management

Zebra card printers produce on-demand, durable visitor badges embedded with barcodes or RFID inlays, logging check-in and check-out times automatically. Access can be restricted to specific zones or timeframes, with RFID readers at entrances verifying authorization without manual checks.

Patient protection

Zebra Z-Band RFID wristbands provide an additional layer of safety for vulnerable patients, triggering automatic alarms if a patient moves near an unauthorized exit. Combined with MotionWorks Healthcare, they help clinical teams maintain a complete, real-time picture of patients, staff, and assets across the entire hospital estate.



Versatile secure access solutions

Zebra's secure access solutions center on the ZC300 / ZC350 Series dual-sided card printers, designed for creating high-quality, secure identification and access badges. These printers utilize modular encoders to program MIFARE/HF chips for "tap-and-go" workstation login, while the ZC350 also supports UHF RFID encoding for long-range, hands-free entry. Security is bolstered directly during the printing process using specialty ribbons that provide color-shifting graphics, UV-fluorescing watermarks, and 3D metallic effects, along with physical printer locks to protect blank media. For longevity, composite PVC cards are preferred, as they provide high durability and resist cracking from daily badge reel use.

Card and security options include:

- **HF/NFC (MIFARE):** Close-range "tap" for doors and PCs
- **UHF Gen 2 (ZC350):** Long-range for hands-free ward access
- **Composite PVC:** Highly durable material for everyday wear and tear
- **Color-shifting graphics & specialty overlays:** Visual anti-counterfeit layers applied directly via the printer's ribbon
- **UV watermarks:** Hidden security markers that fluoresce under UV light for instant verification
- **Physical locks:** Kensington™ secure lock



Helping you make a difference, **every day**

Zebra is the foundation for intelligent operations that help you prioritize patient care, unify staff, improve communications, streamline workflows, and instantly locate critical data and equipment.

From the moment a patient arrives, through every medication administration, specimen collection, and equipment interaction, our advanced tracking technologies and asset identification solutions create a connected thread of accurate, real-time data. This insight helps clinicians elevate care, work with greater efficiency, and achieve better outcomes for all healthcare departments.

For more information, please visit and contact us at:
www.zebra.com/gb/en/industry/healthcare.html

