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## **CR2700 COMPARED TO THE COMPETITION A Code White Paper**



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## Understanding the Differences

In an effort to eliminate medical errors and mediate exploding healthcare costs, barcode scanning technology has emerged as a value-added tool and is credited for a marked increase in patient safety. One case study noted that the use of barcodes reduced medication administration error by 82% across a five-unit study from pre to post-implementation.<sup>(1)</sup> With such significant positive workflow and patient impact, barcode scanning has become one tool healthcare professionals and hospitals don't want to be without.

When a healthcare facility selects the tools and equipment necessary for the treatment of their patients, the focus is often on which vendor has the lowest price. Unfortunately, low price typically doesn't correspond to high quality. How does that old business paradox go? Price, quality, or speed—pick two. We all understand the valid reasoning but find it logically unacceptable when it comes to our needs. It's critical when comparing which scanner is best suited to your facility to be sure you're looking for the components that matter most. When we tell you that you won't find a better-quality scanner than Code's CR2700, we are prepared to back it up with the crucial data you need to make a fair comparison and a well-informed decision.

## Quick, Easy, Routine Disinfecting

With over 20 years of data capture experience in the healthcare industry, we have seen the impact from the early evolution of infection control, and specifically, the abuse these harsh chemicals have wrought upon the devices and tools subjected to daily cleaning. Starting in the mid-1970s, a number of hospital instituted a disinfecting protocol, while others simply had no plan to ever do so. With strong scientific evidence supporting the value of these cleaning and disinfecting routines, medical accrediting organizations made these cleanings a requirement for accreditation in 1976.<sup>(2)</sup> Today, due to CDC studies in the 1970s, profound changes have been mandated to deliver the highest level of patient safety possible. Programs now focusing on preventing and controlling hospital acquired infections (HAIs) are present in virtually every hospital in the US and in many hospitals abroad. Infection control programs vary from hospital to hospital and many subscribe to the logic if some is good, more is better. As a direct result, the harsh chemicals used to disinfect the tools hospitals need effectively end up significantly shortening the life span of that product.

Understandably so, durability and extended warranties have become a primary factor for healthcare facilities when choosing one barcode scanner over another. As a result, routine and not so routine disinfecting protocols are always a primary factor in choosing one scanner over another. Typical scanners are *not made* of truly medical-grade plastic and quickly fall victim to

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the chemical abuse of cleaners in one or two short years. Remember, these readers are virtually bathed in chemical solutions that are designed to kill bacteria and germs not once, but dozens of times a day. If it isn't plastic erosion, it's liquid seeping into the device and devastating internal components. Code's CR2700 is made from a very unique plastic formulation called [CodeShield](#)<sup>®</sup>. This guarded, trade-secret compound delivers consistent top-of-the-line, medical-grade plastics specifically formulated to withstand the harshest cleaners and disinfectants. Wiping down the CR2700 takes approximately 1-2 minutes, including drying time. Our closest competitor requires several minutes to wipe down and up to 30 minutes to properly dry. That added drying time takes away from the productivity of the nursing staff and interferes with workflows in healthcare facilities.

## IP65 Rating

An IP65 rating means that the scanner is water resistant and protects against both liquid and dust particles breaching the housing. Several of our competitors claim the same IP rating, but don't have the advantage of the **CodeShield** plastic formulation for added durability. The value of the IP65 rating matters more when it's strengthened by the **CodeShield** plastic housing that will withstand the chemical cleaners and disinfectants commonly found in healthcare settings.

## Secure Data Transmission

The sanctity of the data dealt with in every healthcare facility is nothing to be taken lightly. In fact, HIPPA requires hospitals to take it so seriously they have instituted fines from \$100 to \$50,000 per occurrence to a maximum annual penalty of \$1.5 million per violation. <sup>(3)</sup> With that kind of money at risk, anything transmitting healthcare-related data should rightfully be closely scrutinized and clearly understood. Knowing that patients' information is being handled safely and securely is critical to us as well. Most scanners today sold into the healthcare industry operate on an older Bluetooth<sup>®</sup> standard with optional encryption leaving data at risk from outside influences. At Code, we are aren't willing to settle for a higher level of risk. The CR2700 uses the most secure BLE 5 with AES-128 encryption by default. This represents the highest level of security available for any scanner by any manufacturer.

## Charging Technology

In the beginning, barcode scanning offered so many different advantages that being tethered to a computer or cart really seemed like a small price to pay. As the cords became longer to reach what needed scanning, it became more difficult to clean and disinfect the devices properly. Eventually, a wireless scanning solution became available and offered a non-tethered workflow

option that seemed a perfect solution. Of course, cordless scanning required that the barcode scanner be charged periodically to remain in operation.

Most wireless scanners rely on pogo pins, or external metal charging pins that then make contact with the metal pogo pins inside a charging base station to charge the reader's battery. Contact between these two metal points is required to move the electrical charge from one place to another. This technology has been widely accepted as the standard for wireless hand-held barcode readers for years. However, like most things used within healthcare, it was quickly discovered this convenient new wireless charging solution also led to a variety of issues such as slow and/or intermittent charging limiting the scanners usefulness.

It was known that, in most cases, the charging issues were directly related to the disinfecting protocol the hospitals used. Exposure to the harsh chemicals caused a reaction with the exposed metal. Essentially, this chemical reaction created a form of chemical corrosion on the charging pogo pins limiting direct metal contact which is required for complete and efficient charging. Understanding the problem doesn't fix the problem; it does, however, highlight an opportunity to solve the problem and advance the wireless barcode scanning design. This led directly to the evolution of Code's wireless CR2700. The CR2700 avoids all of these issues by incorporating an inductive charging technology. This internal charging mechanism provides a more effective, faster charge, and again, leaves no external metal pieces to corrode or contend with during cleaning.

## **Battery Health and Management**

Data capture, battery life, customized configuration, and deployment management are all important areas which healthcare IT teams daily govern and trouble shoot during normal asset management duties and larger refresh cycles. They always advocate for simple solutions that make it easier for them to complete the tasks required, many of which involve multiple hospitals or office sites located in different states.

Today, most scanners require external battery charging (which leaves exposed metal that can become corroded with cleaning), and changing batteries takes valuable time that impacts productivity. The CR2700 offers the option of two different charging solutions. There is the quick, hot-swap battery feature that saves valuable workflow time, or the inductive base station that charges the battery while it is still attached to the reader. Additionally, and unique to only Code's CR2700, this reader offers a battery fuel gauge that visually identifies the charge status of each battery, not only helping team members know when they need to head for a replacement, but also eliminating the guess work by visually identifying which batteries are fully charged and ready to be used.

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## Purpose-Built for Healthcare

Many companies will tell you that a scanner is a scanner is a scanner. Plain and simple, this is a lie. The truth is, a barcode scanner built for retail is built focused on cost and nothing else. From the plastic and buttons, to the firmware and software, they are substandard to the requirements of healthcare facilities. They are just not designed nor required to endure or withstand the kind of abuse the healthcare industry demands. Let's face it, a little bacterium hanging out on a retail scanner is not going to hurt the produce or clothing it touches. Many companies build a single product model for one audience and then try to make it fit into other industries using brand strength and flashy colors. This strategy will never produce products that measure up to the specific and critical needs of the healthcare industry.

At Code, we call it "purpose-built for healthcare" for a reason. From the unique, medical-grade plastics, securely encrypted data transmission, and inductive charging to the dual field optics that read both high density and wide field barcodes in a single scan, Code scanners are purposefully designed for the exacting needs of the medical environment. Our scanners feature a glare reduction technology that uniquely delivers the ability to read barcodes on transparent or shiny backgrounds, in low light, or with poor contrast. Code's trade-secret decoding algorithms allow the CR2700 to read any barcode symbology one at a time, or hundreds at one time, including codes that are damaged or colored. Purpose-built means built for healthcare first rather than adapting a technology already engineered for someplace else. For all of these reasons and more Code's CR2700 excels at meeting the unique needs of the healthcare environment including:

- Point-of-Care
- Blood Bag Single Scanning
- Mobile Carts
- Pharmacy and Lab
- Positive Patient Identification
- Bedside Medication Administration
- Positive Breast Milk Verification
- Mobile Phlebotomy
- Inventory Management
- Immunization Tracking

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## Why You Should Choose the CR2700

In addition to all the amazing and unique features we have previously mentioned that set Code and the CR2700 apart from competitive products, no matter your hospital's equipment refresh cycle, the CR2700 offers a standard warranty of three years and offers extended warranties up to five years. The CR2700 can save you money over other companies' scanners because of these added considerations:

- Easily customizable for varied workflows
- Eliminates errors
- Minimizes equipment downtime
- Automates more processes
- Reduces/redistributes headcount

The CR2700 can also help you make money because it:

- Processes transactions faster
- Provides better service
- Increases patient engagement
- Captures more patient data

## In Summary

There are so many reasons to choose the CR2700. But let us offer you just one more. **Call us today for your free product demo** of the CR2700 and see for yourself what a difference a healthcare purpose-built scanner can mean for your team.

Resources:

- (1) Work, M. (2005). "[Improving medication safety with a wireless, mobile barcode system in a community hospital.](#)" *Patient Safety and Quality Care*.
- (2) Weinstein RA. Nosocomial infection update. *Emerg Infect Dis* 1998;4:416--20.
- (3) <https://www.truevault.com/resources/compliance/how-much-do-hipaa-violations-cost>

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