



## Should You Choose a Wired or Wireless Barcode Scanner?

*What matters most when shopping barcode readers?*

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Choosing a barcode scanner (also called a barcode reader) can be exhaustive—after all, aren't they all the same? No, just like virtually every other device, barcode readers aren't alike. Every model is carefully crafted to offer a suitable price-to-performance ratio; a wired vs. wireless design has a significant role in accomplishing this. So, is a wireless barcode reader better than a wired barcode scanner? And how do you pick the right barcode scanner? This barcode reader buyer's guide will help you evaluate your specific needs so you can choose the right tool for the right job.



*Figure 1: Wired barcodes are ideal for single-process tasks like retail.*

### **Flexibility: Will your barcode scanner be used on the move?**

If your application involves a single process (e.g., scanning a PCB board at the final packaging point), then a wired device makes sense. Should the application involve multiple processes in different areas that must be linked (e.g., scanning a [patient's wristband](#), then a blood vial, and then medication), a wireless device makes more sense.

### **Facility design: Building the case for wired vs. wireless scanners?**

Many modern buildings today are constructed with pre-installed data cabling, lending themselves well to wired barcode scanners. However, many facilities (think factories, hospitals,

town halls, and courts) were constructed long before communication needs evolved. These design limitations mean that retrofitting a wireless IT network to an older building isn't viable (due to cost and business interruptions), making these buildings better suited to wireless barcode readers. Environmental conditions should also be considered. If you're equipping staff in an area where water, dust, and dirt are present, such as cells on a production line, visit our blog on [ingress protection ratings](#) for barcode readers. That piece can help you better understand and assess your equipment needs.

### **Durability: Which will last longer, wired or wireless scanners?**

Most modern barcode scanners, both wired and wireless, are robust enough to counter the inevitable drop. In fact, specs for 1.2–1.6 meter (4–6 foot) drop tests on a hard surface, like sealed concrete flooring, are common on vendor spec sheets. Of course, a wired barcode scanner may not even hit the floor if it has a shorter cable. However, the force exerted on the cable when it stops the barcode reader from hitting the ground could eventually degrade the cable itself or connection integrity at either end—especially after repeated drops.

### **Speed: Wired or wireless barcode scanners—which design is up to speed?**

Either. The fact is scan/decode times for correctly set up wired and wireless barcode scanners are measured in milliseconds. For context, the entire Gettysburg Address—all 271 words—can be scanned and decoded in less than 70 milliseconds.



### **Info security: Which barcode scanner type keeps data on lock?**

No matter what type of enterprise you work within, chances are that if barcode scanning is an integral part of your processes, you will have a mix of wired and wireless barcode scanners. With the other factors above considered, how important is data security when selecting a data capture device? Both wired and wireless barcode readers offer several information security (infosec) features, such as the U.S. government-tested [FIPS cryptography](#) utilized by Code Corporation's wireless CR2700 Barcode Reader. Standing for Federal Information Processing Standards, devices incorporating FIPS ensure data security and interoperability. FIPS-equipped devices are mandatory in federally run facilities and preferred by firms with sensitive data.

In the recent past, a wired network was viewed as more secure than a wireless network—to commit espionage, a bad actor needed a physical connection to a wired network point. These days, however, a properly configured and secured wireless network can be as secure as a wired one, thanks to sophisticated programming. In addition, anti-virus software, limiting user access outside of the company's own applications, wireless encryption, and remote network monitoring have all contributed to the hardening of wireless network security. If data security represents a tipping point, it's highly recommended that you consult a [barcode scanner](#) authority to determine which device type would meet your data security needs.

**Cost: Is the price right on wired or wireless barcode scanners?**

Traditionally, wireless barcode scanners have commanded a premium over wired units. This delta is chiefly driven by the inclusion of additional technology (a wireless or Bluetooth card, for instance) and the requirement for a communications base and/or charging station (although these two barcode reader accessories are often one and the same). Basically, this one boils down to your budget.



Figure 2: Wireless barcodes are ideal in high-paced, mobile workflows.

**Personal vs. Team Use: More scanners to the people?**

No matter how large or profitable a business may be, very few can afford (or are willing) to provide a device to every user. A manufacturing plant running three daily shifts is likely to require that the same devices are used by different people for different tasks in different areas every shift. This variability makes wireless barcode readers preferable.

**Still unsure how to pick a barcode reader?**

Code's data capture experts were consulted to craft this barcode scanner shopping guide because they routinely address these concerns. If you are still uncertain about choosing a wired or wireless solution, our associates across the EMEA and TAM regions would be happy to help.

You can contact the professional in your area [here](#). Code is looking forward to helping you find the right barcode readers for the job.