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BARCODE EGUIDE, VOL 3



# Optimizing Barcodes for Your Healthcare Organization



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# Vol. 3: Optimizing Barcodes for Your Healthcare Organization

Barcodes have made a decisive impact on the healthcare industry. Check out Volumes 1 and 2 of this three-part eGuide series to learn more about the various ways healthcare organizations have leveraged the technology.

Barcodes offer significant [advantages for healthcare organizations](#) by helping reduce the complexity around patient treatments, pharmaceutical tracking, and document management. However, some challenges remain with the use of full-service barcode technologies in healthcare. Let's explore how solutions like [Barcode Xpress](#) and [Barcode Xpress Mobile](#) can be used to improve the performance of your healthcare organization's barcode system.

In the healthcare industry, barcodes can provide an added layer of security — helping facilities accurately manage data around patient care, pharmaceuticals, lab specimens, and medical equipment. In a healthcare setting, where there is little room for error, barcode technology can help. If a pharmaceutical or patient code is damaged or hard to read — resulting in the wrong medication being given to the wrong patient — the results can be life threatening.

What can be done to improve the accuracy of barcode scanning in healthcare? You could task your development team with building a custom barcode software that improves accuracy. However, the time and cost involved can be prohibitive for many healthcare organizations.

Perhaps the fastest and more affordable option is to integrate a [software development kit \(SDK\)](#) into your existing applications. The right SDK will enable improved scanning regardless of barcode condition — a move that can significantly improve the reliability of barcode technology.





## What the Right SDK Can Do

For a barcode system to perform at scale in healthcare, it must be able to handle barcodes that aren't clean, pristine, and perfect. Adding the right SDK with confidence values and false-positive elimination tools will help ensure a more accurate barcode reading.

Accusoft's Barcode Xpress is designed with defect detection in mind, providing healthcare organizations with a natural defense against less-than-ideal barcodes that are damaged, misaligned, or otherwise hard to read.

Barcode Xpress is a multi-language library that runs in multiple platforms, including Windows and Linux-based systems. This barcode library can read and write over 30 different barcode types with high speed and accuracy. It also comes with a free license to ImagXpress, an image processing SDK, which supports loading and saving numerous image file formats, including BMP, JPG, multi-page TIFF, and many others.

**While the quality of barcode labels is hard to control, you can implement a barcode SDK that will more consistently produce reliable output regardless of the quality of input it receives.**

**For example, Accusoft's Barcode Xpress has the ability to:**

- › Handle broken, damaged, and poorly printed or scanned barcode images, including barcodes with black noise (extra pixels) or white noise (missing pixels)
- › Automatically correct accidental erasures, low resolution, and white line streaks
- › Streamline the process of barcode scanning without sacrificing accuracy
- › Read multiple barcodes — at up to 1,000 pages per minute — while accurately locating and decoding multiple barcodes on each page
- › Integrate 1D and 2D scanning into existing application with just a few lines of code

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# Beneficial Qualities of an Advanced SDK

When it comes to top-of-the line barcode SDKs, it's important to carefully evaluate any solution you're considering to make sure it meets the needs of your healthcare organization. For example, make sure any solution you're considering provides:

## 1. SPEED

Is the solution able to identify and recognize barcodes anywhere on the page, in any orientation, in milliseconds?

## 2. ACCURACY

Does the solution report confidence values for detected barcodes? Does it read barcodes accurately? Will it eliminate false positives when reading patch codes to minimize size?

## 3. BROAD BARCODE TYPE SUPPORT

Can the solution detect, read, and write several barcode types including common and uncommon images? Accusoft's Barcode Xpress supports a wide range of [barcode types](#), including 1D, 2D, postal codes, and patch codes.

## 4. IMAGE TYPE SUPPORT

Look for a solution that is capable of supporting a wide range of images, including 24-bit color images, 8-bit grayscale images, and 1-bit black and white images. Barcode Xpress .NET and ActiveX solutions include [ImagXpress](#), which offers over 80 functions for image processing and editing.

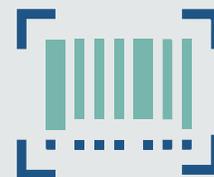
## 5. DEVELOPMENT ENVIRONMENTS

Will the solution work well with all of your programming languages and platforms? Accusoft offers complete source code samples with Barcode Xpress, which will help you read and write any barcode in your preferred programming language, including: Linux, Windows, Node.js, ActiveX, .NET (VB / C#), .NET Core (Linux / Windows), JAVA, C/C++, Python (Linux), Swift, or Objective-C.

## 6. SOFTWARE DEVELOPMENT KIT SUPPORT

A good barcode solution will fully support your development from the time of purchase and throughout the implementation process. Accusoft provides all customers with free upgrade support for 90 days after initial purchase, which includes email support and all product upgrades. We also offer additional options for customers who desire long-term, priority, or expedited support.

Ready to [take Barcode Xpress for a test drive?](#) See what it's like to quickly identify single barcodes from mixed content documents, or locate and decode multiple barcodes on a single document. You can also upload your own document and watch the SDK read any barcode in any orientation anywhere on the page.





# Leveraging Mobile

Barcodes offer the benefit of complex encoding of information such as patient identification and drug codes. By scanning the barcodes on a patient's wristband or drug label, healthcare staff can quickly access data that will help them provide the right care to the right patient at the right time. However, if healthcare providers don't have the right tools to accurately read barcode information, the benefits of the technology are lost.

Accusoft helps bridge the technology gap with **Barcode Xpress Mobile**. With it, healthcare organizations can easily integrate barcode scanning functionality into any mobile phone or tablet using the Android operating system or iOS. The addition of this mobile SDK makes it easy for users to quickly and accurately read barcodes in any healthcare setting.

## **Barcode Xpress Mobile contains everything your IT admin needs to get started, including:**

- ▶ Sample code with camera integration
- ▶ Support for 30 types of barcodes
- ▶ Ability to leverage Accusoft's default user interface or customize your own

## **The SDK is available for iOS or Android integration.**

Barcode Xpress Mobile is an SDK which allows you to build applications for iOS or Android phones with barcode recognition capabilities and read a wide variety of 1D and 2D supported barcode types. It also provides:

- ▶ **Objective-C and Swift interfaces to Accusoft's Barcode Xpress recognition library** — a thread-safe image processing library that will efficiently find and decode a large number of types of barcodes.
- ▶ **Barcode detection for iOS or Android devices** – it automatically detects barcodes in the viewfinder of your iOS device and gives you complete details about each barcode.



**Barcode**  
Xpress Mobile



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# Make Barcodes Work for Your Organization

Barcode technology has made a significant impact in the healthcare industry — from inventory management to patient identification. To effectively leverage the benefits of barcodes, healthcare organizations need straightforward, SDK-based integrations that deliver accuracy, reliability, speed, and mobility.

Discover how our Barcode Xpress Collection can help you maximize the power of barcodes by starting your free trial today.



**Barcode**Xpress



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