

SwiftDecoder™ Barcode Decoding Software Development Kit

SwiftDecoder is a barcode decoding Software Development Kit (SDK)—not a barcode scanner—packaged for developers, Independent Software Vendors (ISVs), and other Original Equipment Manufacturers (OEMs) that develop barcode scanning apps or custom barcode scanning solutions. SwiftDecoder offers the "M" version for mobile platforms, including Apple® iOS®, Android™ and Windows™ UWP (Universal Windows Platform), and the "S" version for non-mobile platforms, including Windows™ Desktop, Linux Foundation™, and Embedded OS.

Developers are looking for a barcode decoding solution that rivals the best commercial scanners. They need a decoding SDK that is easy to integrate and offers many configuration options to fit their applications. They require an SDK that will adapt to support the latest development environments as smart phones and operating systems get updated. Many developers can benefit from software integration support.

- **More reliable:** Utilizes the same technology that is deployed in Honeywell retail and industrial barcode scanners worldwide that more quickly and reliably scans millions of barcodes each day.
- **Faster:** Provides barcode scanning with snappy performance with faster decode times, helping to expedite the scanning process and minimize errors and delays.
- **More accurate:** Unique algorithms simultaneously perform aggressive reading and more accurate reading, which reduce costly errors by minimizing barcode misreads associated with other decoders.



SwiftDecoder-M SDK for Mobile Platforms



SwiftDecoder-S SDK for Non-Mobile Platforms

FEATURES & BENEFITS



More reliable: Uses the same decoding technology found in Honeywell barcode scanners worldwide that more quickly and reliably scan millions of barcode.



Faster barcode scanning: Helps to expedite the scanning process and minimize errors and delays.



More accurate: Capable of aggressive and more accurate reading, reducing errors by minimizing barcode misreads.



Effectively reads poor quality barcodes: Able to more quickly recognize and correct 1D and 2D barcode defects that can make scanning difficult, helping to expedite processing time.



Omni-directional: True 360° omni-directionality enhances ease-of-use and enables successful first-pass read.

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- **Reads poor quality barcodes:** Able to more quickly recognize and correct barcode defects (e.g., blurred, cluttered, dirty background, dot matrix, faded, high density, ink spread, ink shrink, low contrast, inadequately illuminated, partially obscured, plastic-covered, poorly printed, scratched, smudged, specular reflection, torn, voids, warped, or wrinkled) which typically make scanning difficult and impede workflow, helping to minimize processing time.
- **Aggressive:** Improves end-user read rates of damaged and poorly-printed, real-world bar codes.
- **Omnidirectional:** True, 360° omnidirectionality enhances ease-of-use and enables successful first-pass reads.
- **Decodes many different types of barcodes:** Some SDKs can read only a few barcode types, while others may claim the ability to read barcodes such as PDF417 (a stacked linear barcode symbol format). However, the algorithms may not meet the demanding requirements of a typical commercial workflow. SwiftDecoder provides a professional capability, regardless of the barcode type the application demands. Many developers start with one barcode type and then, as their applications mature, need to add code types. SwiftDecoder allows developers to easily add barcodes while achieving exceptional results, allowing continued use of the same API to more easily update their apps.
- **Portable:** Available for mobile platforms including iOS, Android, and Windows 10, plus industrial cameras, Windows desktop, and purpose-built devices.
- **Autodiscriminates:** Automatically identifies symbology, and then decodes.
- **Mirror image processing:** Reads and decodes inverted barcode images.
- **Barcode location coordinates** : Programmers can utilize barcode location data to help improve barcode visibility to the user.
- **Barcode quality metrics:** Automatically provides a quality metric that determines the readability level of the barcode.
- **Sample code:** Allows programmers to get started more quickly.
- **Symbologies:** Supports all 1D and 2D barcode symbologies in popular use.
- **One-time license authentication:** Simplifies the digital licensing process.
- **Global support:** Work directly with Honeywell's developers to shorten development and implementation time.

POTENTIAL APPLICATIONS

SwiftDecoder may be used worldwide in high-performing barcode scanners, including hand-held area-imaging scanners, fixed-position scanners, mobile computers, and smartphones. Examples of potential applications include postal and package distribution facilities, access control, identification card readers, medical drug dispensing, mobile payment terminals, and package couriers, to name a few.

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TABLE 1. SWIFTDECODER BARCODE DECODING SOFTWARE SOLUTIONS

SwiftDecoder-M SDK for Mobile Platforms	SwiftDecoder-S SDK for Non-Mobile/Stand-Alone Platforms
 <p>As workers evolve from costly purpose-built devices to mobile phones and tablets in their professional work activities, many companies want professional barcode decoding without the cost of a purpose-built device. Until recently, mobile phones and tablets did not have the features and capabilities needed for aggressive barcode decoding. SwiftDecoder-M changes the game.</p> <p>SwiftDecoder-M is designed for programmers who need to add professional barcode decoding to apps that run on mobile devices. Originally developed for mission-critical, high-speed, conveyor reading applications, now that same performance and reliability are available for mobile devices. Developing high speed barcode applications is easier because SwiftDecoder-M manages the challenging task of acquiring barcode images and managing the mobile device’s camera system. SwiftDecoder-M provides the essential tools needed to automatically acquire and integrate images with the decoding logic, allowing programmers to focus on business logic and other important aspects of the mobile application. Workers can utilize all the functionality of a Honeywell barcode scanner or purpose-built mobility device directly on their mobile phones or tablets.</p> <ul style="list-style-type: none"> • Preconfigured integration with the latest camera APIs (iOS, Android, Windows UWP) • Flexible “plug-in” architecture allows developers to customize the display and capture of user inputs during scanning • Trial apps allow programmers to explore and test the features of the SDK (iOS, Android, Windows UWP) 	 <p>This decoder is designed for programmers who need to customize their applications to meet specific image acquisition requirements. Choose SwiftDecoder-S when your requirements call for a specific image acquisition system such as a special high-speed camera or a purpose-built industrial camera system. SwiftDecoder-S runs on the Windows or Linux OS, or can be built for your embedded platform.</p> <ul style="list-style-type: none"> • Easily ported to a broad range of custom camera and imaging systems. Let us know your specifications and we can customize SwiftDecoder-S to your system requirements • Demonstrator program enables programmers to explore and test the features of the SDK

TABLE 2. SUPPORTED SYMBOLOGIES

CODE	Symbology
1D	Code 39, Code 93, Code 128, UPC/EAN/JAN, Interleaved 2 of 5, Hong Kong 2 of 5, Matrix 2 of 5, NEC 2 of 5, Codabar, Code 11, MSI Plessey, Pharmacode, RSS, Telepen, Straight 2 of 5, Korea Post, Trioptic
2D	Data Matrix, PDF417, MicroPDF417, QR Code, Micro QR Code, Aztec Code, Codablock, MaxiCode, UCC Composite, Hanxin, DotCode, Grid Matrix
POSTAL	PLANET, Australia Post, POSTNET, Japanese Post, Royal Mail RM4SCC, USPS 4CB, UPU, Infomail, KIX, Sweden Post, Canada Post
OCR	OCR-A, OCR-B, MICR E-13B, SEMI

TABLE 3. SUPPORTED HARDWARE PLATFORMS

SWIFTDECODER VERSION	Hardware Platform
SWIFTDECODER-M	iPhone, iPad, Ipod Touch, Windows UWP tablet, Android phone, Android Tablet
SWIFTDECODER-S	x86, ARM StrongARM, MIPS, DragonBall, PowerPC, XScale, Blackfin, Hitachi SH Family

TABLE 4. SUPPORTED OPERATING SYSTEMS

SWIFTDECODER VERSION	Operating System
SWIFTDECODER-M	iWindows UWP, iOS, Android
SWIFTDECODER-S	Windows, Linux, .NET, Mac

ADDITIONAL INFORMATION

- Application Note: SwiftDecoder™ Barcode Decoding Software Effectively Reads Poor Quality Barcodes

Find out more

Honeywell serves its customers through a worldwide network of sales offices and distributors. For application assistance, current specifications, pricing or name of the nearest Authorized Distributor, contact your local sales office.

To learn more about Honeywell's scan engines and barcode decoding software, visit honeywellaidc.com.

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