

SCANDIT

Scandit Specifications

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Software Updates

Scandit provides new releases in regular intervals that include performance improvements and maintenance updates for its Software (a Software Component or a Software Application). Performance improvements refer to general improvements to the overall barcode scanning, text recognition or ID scanning performance. Maintenance updates refer to updates to previous releases that address changes in operating systems (OS), relate to new devices or provide bug fixes.

The Software Specifications which apply will depend on the Scandit Software and Add-ons (if applicable) licensed and are subject to the applicable licensing scope and terms.

Software Components

Scandit Barcode Scanner SDK Native

The *Barcode Scanner SDK Native* is a software component that can be integrated into (mobile) applications to decode certain 1D and 2D barcodes from camera images. The *Barcode Scanner SDK Native* is available for different operating systems such as Android and iOS and supports a wide variety of smartphones and tablets. The specific barcode symbologies and operating systems available to a particular Native application using the software component depend on the licensing terms.

The *Barcode Scanner SDK Native* supports barcode scanning at different angles of orientation, pitch and yaw - the respective angles as well as minimum and maximum scan distances depend on the device and camera used, the barcode format, size and print quality and the lighting conditions. The *Barcode Scanner SDK Native* can scan certain damaged and faded barcodes - the exact conditions under which scanning of damaged or faded barcodes is feasible depends on the device used, environmental conditions and the exact damage.

Barcode scanning is always performed on the device and so the barcode scanning speed is not affected by a slow network connection. The *Barcode Scanner SDK Native* returns only a single decodable barcode (1D or 2D) per camera frame.

The *Barcode Scanner SDK Native* is also available as a plug-in/module for a number of different mobile development frameworks such as Cordova, Xamarin, and React Native. The API

features for each of the mobile development frameworks might differ from the API features offered for native Android and iOS applications.

Device, OS and Camera Requirements:

iOS:

- Please see our online documentation at <https://docs.scandit.com/data-capture-sdk/android/requirements.html> for minimum system requirements.

Android:

- Please see our online documentation at <https://docs.scandit.com/data-capture-sdk/ios/requirements.html> for minimum system requirements.

Windows:

- Min. OS Version: Windows 10
- Architectures: x86, x86_64

Linux:

- Min. OS Version: glibc 2.23, recommended distribution: Ubuntu 18.04
- Architectures: ARMv6, ARMv7, ARM64, x86, x86_64

The *Barcode Scanner SDK Native* is also available as an out-of-the-box integration through the *SparkScan* API. *SparkScan* includes a pre-built user interface to speed up integration time.

MatrixScan Options for the Barcode Scanner SDK Native

Scandit offers a number of add-ons to the *Barcode Scanner SDK Native*, as detailed below, that extend the functionality of the *Barcode Scanner SDK Native* for scenarios where one or more barcodes in the camera preview are scanned at once and virtual overlays are optionally shown in the camera preview anchored at 1D or 2D codes in the camera image.

- **MatrixScan:**
MatrixScan is an add-on feature of the *Barcode Scanner SDK Native* that allows for the scanning of multiple barcodes (1D and 2D) in the same camera frame and provides barcode tracking and highlighting across sequential camera frames in the camera preview at a resolution of up to 4K. All tracked barcodes are highlighted in the same, customizable color. The locations of tracked barcodes in screen coordinates are not exposed.
- **MatrixScan AR:**
MatrixScan AR includes *MatrixScan* as defined above and offers in addition virtual overlays that are anchored at the locations of the tracked barcodes (1D and 2D) in the image. This allows augmented reality applications where users see selected barcodes in the camera preview highlighted, see dynamic information displayed on top of barcodes in the camera preview and users can interact with individual barcodes (and/or virtual overlays) in the camera preview.
- **MatrixScan Light:**

MatrixScan Light is identical to *MatrixScan* except that the number of barcodes that can simultaneously be scanned in a camera frame and tracked across camera frames is limited to three and the maximum camera resolution that can be processed is 1080 by 1920 pixels.

- *MatrixScan AR Light*:

MatrixScan AR Light is identical to *MatrixScan AR* but the number of barcodes that can simultaneously be scanned in a camera frame and tracked across camera frames is limited to three and the maximum camera resolution that can be processed is 1080 by 1920 pixels.

- *MatrixScan Barcode Clustering* (requires *MatrixScan* and/or *MatrixScan AR*): *MatrixScan Barcode Clustering* returns the list of barcodes scanned and tracked in the camera preview grouped according to specific logic that takes into account barcode proximity, barcode formats and barcode data. This allows users to group barcode results based on the label on which they have been printed when multiple labels are present in the camera preview. *MatrixScan Barcode Clustering* is available as an additional option for *MatrixScan* and *MatrixScan AR*.

- *MatrixScan Count*:

MatrixScan Count is an add-on feature of the *Barcode Scanner SDK* that allows for the scanning of multiple barcodes (1D and 2D) in the same camera frame and returns a list of barcodes scanned using an out-of-the-box user interface. All tracked barcodes are highlighted with virtual overlays that are anchored at the locations of the tracked barcodes (1D and 2D) in the camera view. The *MatrixScan Count* add-on provides a number of different UI elements that help the user with barcode counting tasks. There is a limited number of configuration options available to customize the user interface.

The *MatrixScan* Add-Ons listed above are only available for Android or iOS operating systems. The *MatrixScan* Add-Ons listed above require sufficient computing resources and camera resolutions to operate properly. We recommend at least a 1080p video camera frame resolution.

Scandit Text Recognition SDK Native

The *Text Recognition SDK Native* is a software component that can be integrated into iOS and Android applications to decode certain text and digits from camera images.

The *Text Recognition SDK Native* is available for Android and iOS and supports a wide variety of smartphones and tablets. The specific operating systems available to a particular customer depend on the licensing terms. The *Text Recognition SDK Native* supports character recognition of certain different fonts and text types on a single line or with the appropriate configuration also for multiple lines of characters. The *Text Recognition SDK Native* requires good contrast for successful recognition and overall accuracy and speed of decoding depend on many factors including light conditions, quality of the print, font, contrast and device capabilities.

Optical character recognition is performed on the device so the optical character recognition speed is not affected by a slow network connection. The *Text Recognition SDK Native* returns decoding results only for a single target area/location on the screen. It does not support full

screen decoding of optical characters.

The *Text Recognition SDK Native* is also available as a plug-in/module for a number of different mobile development frameworks such as Cordova, Xamarin, and React Native, for which the API features might differ from the API features offered for native Android and iOS applications.

Device, OS and Camera Requirements:

iOS:

- Please see our online documentation at <https://docs.scandit.com/data-capture-sdk/android/requirements.html> for minimum system requirements.

Android:

- Please see our online documentation at <https://docs.scandit.com/data-capture-sdk/ios/requirements.html> for minimum system requirements.

Scandit ID Scanning SDK Native

The *Scandit ID Scanning SDK Native* is a software component that can be integrated into (mobile) applications to scan and extract information from certain official identity documents. The *Scandit ID Scanning SDK Native* is available for Android and iOS and supports a wide variety of smartphones and tablets. The specific operating systems available to a particular customer depend on the licensing terms.

The *Scandit ID Scanning SDK Native* requires sufficient contrast for successful extraction and the overall accuracy and speed of decoding depends on many factors including light conditions, quality of the print, font, contrast and device capabilities.

Subject to the conditions noted above, the *Scandit ID Scanning SDK* supports scanning and extracting information from various document types with the following licensing options:

International Travel & Europe Light

The *International Travel & Europe Light* option supports scanning of machine readable zones (MRZ) on machine readable travel documents (MRTDs) that are encoded according to the ICAO specification Doc 9303: Machine Readable Travel Documents. Specifically, the machine readable zones on the following types of documents are supported with the *International Travel & Europe Light* option:

- Official Passports, as specified in Doc 9303 Part 4: Specifications for Machine Readable Passports (MRPs) and other TD3 Size MRTDs
- ID cards in credit-card format, as specified in Doc 9303 Part 5: Specifications for TD1 Size Machine Readable Official Travel Documents (MROTDS)
- ID cards printed on paper, as specified in Doc 9303 Part 6: Specifications for TD2

Size Machine Readable Official Travel Documents (MROTDs)

- Visa Stickers and Documents, as specified in Doc 9303 Part 7: Machine Readable Visas

Additionally, the *International Travel & Europe Light* option includes support for the non-standard MRZ of selected ID formats, such as:

- French national identity card (machine readable version, as issued since 1994)
- Swiss driving license in credit-card format (DLC)
- China Mainland Travel Permit for Hong Kong & Macau Residents (non-ICAO)
- China Mainland Travel Permit for Taiwan Residents (non-ICAO)
- China Exit-Entry Permit for Travelling to and from Hong Kong and Macau (往来港澳通行证) (non-ICAO)
- China Exit-Entry Permit for Travelling to and from Taiwan (往来台湾通行证) (non-ICAO)

Europe Premium

In addition to the documents included in the *International Travel & Europe Light* option, the *Europe Premium* option supports scanning and extracting information from the front of the driving license of select european countries that issue driving licenses in accordance with Directive 2006/126/EC, such as:

- Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, France, Germany, Greece, Hungary, Ireland, Italy, Netherlands, Poland, Romania, Serbia, Slovenia, Spain, Sweden, UK

North America Light

The *North America Light* Option includes scanning and extracting of information from PDF417 barcodes which follow the AAMVA Driver License/Identification specification (versions 2000, 2003, 2005, 2009, 2010, 2011, 2012, 2013, 2016), including Magstripe encoding in the US and Canada, as well as the PDF417 Barcode on the United States Uniformed Services Privilege and Identification Card.

This support also provides workarounds for extracting data from certain non-compliant implementations of the AAMVA standards.

North America Travel Premium

In addition to the documents included in the *North America Light* option, the *North America Travel Premium* option includes the documents included in the *International Travel & Europe Light* option

North America Premium

In addition to the documents included in the *North America Light* option, The *North America*

Premium option supports scanning and extracting information from the front of certain driving licenses of North American states, provinces and territories, such as:

- USA: Alabama, Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, Wyoming
- Canada: Alberta, British Columbia, Manitoba, Ontario, Quebec, Saskatchewan

Global Premium

This option includes the documents covered in both the *North America Premium* option and the *Europe Premium* option.

Scandit Barcode Scanner SDK for the Web

The *Barcode Scanner SDK for the Web* is a software component that can be integrated into (mobile) websites to decode certain 1D and 2D barcodes from camera images. The specific barcode symbologies available to a particular customer depend on the licensing terms.

Based on Javascript and Webassembly, the *Barcode Scanner SDK for the Web* is compatible with most modern browsers (as specified below) and supports a wide variety of smartphones and tablets.

The *Barcode Scanner SDK for the Web* supports barcode scanning at different angles of orientation, pitch and yaw. The respective angles as well as minimum and maximum scan distances depend on a number of factors including the device and camera used, the barcode format and size and the lighting conditions. The *Barcode Scanner SDK for the Web* can scan certain damaged and faded barcodes - the exact conditions under which scanning of damaged or faded barcodes is feasible depends on the device used, environmental conditions and the exact damage.

Once the software component has been successfully downloaded to the device, barcode scanning is always performed on the device and so the barcode scanning speed is not affected by a slow network connection. The *Barcode Scanner SDK for the Web* returns only a single barcode (1D or 2D) scan result per camera frame.

Browser and Camera Requirements:

Version 6

- Please see our online documentation at <https://docs.scandit.com/data-capture-sdk/web/requirements.html#web-platforms> for minimum system requirements.

Version 5

- Please see our online documentation at <https://docs.scandit.com/stable/web/#browser-support-and-requirements> for minimum system requirements.

Recommended camera resolution: minimum 720p. Autofocus and fixed-focus are supported. Requires TLS 1.2+.

Multiscan Add-On Option for WebSDK

Multiscan is an add-on feature of the *Barcode Scanner SDK for the Web* that allows for the scanning of multiple barcodes (1D and 2D) in the same camera frame. There is no tracking of barcodes across different camera frames.

Scandit ID Scanning SDK for the Web

The *ID Scanning SDK for the Web* is a software component that can be integrated into (mobile) websites to scan and extract information from certain official identity documents with barcodes. Based on Javascript and Webassembly, the *ID Scanning SDK for the Web* is compatible with most modern browsers (as further specified in the section on *Barcode Scanning SDK for the Web*) and supports a wide variety of smartphones and tablets.

The *Scandit ID Scanning SDK for the Web* requires sufficient contrast for successful extraction and the overall accuracy and speed of decoding depends on many factors including light conditions, quality of the print, font, contrast and device capabilities.

Once the software component has been successfully downloaded to the device, ID Scanning is always performed on the device.

Subject to the conditions noted above, the *Scandit ID Scanning SDK for the Web* supports scanning and extracting information from various document types with the following licensing options:

International Travel & Europe Light

The *International Travel & Europe Light* option supports scanning of machine readable zones (MRZ) on machine readable travel documents (MRTDs) that are encoded according to the ICAO specification Doc 9303: Machine Readable Travel Documents. Specifically, the machine readable zones on the following types of documents are supported with the *International Travel & Europe Light* option:

- Official Passports, as specified in Doc 9303 Part 4: Specifications for Machine Readable Passports (MRPs) and other TD3 Size MRTDs
- ID cards in credit-card format, as specified in Doc 9303 Part 5: Specifications for

TD1 Size Machine Readable Official Travel Documents (MROTDs)

- ID cards printed on paper, as specified in Doc 9303 Part 6: Specifications for TD2 Size Machine Readable Official Travel Documents (MROTDs)
- Visa Stickers and Documents, as specified in Doc 9303 Part 7: Machine Readable Visas

Additionally, the *International Travel & Europe Light* option includes support for the non-standard MRZ of selected ID formats, such as:

- French national identity card (machine readable version, as issued since 1994)
- Swiss driving license in credit-card format (DLC)
- China Mainland Travel Permit for Hong Kong & Macau Residents (non-ICAO)
- China Mainland Travel Permit for Taiwan Residents (non-ICAO)
- China Exit-Entry Permit for Travelling to and from Hong Kong and Macau (往来港澳通行证) (non-ICAO)
- China Exit-Entry Permit for Travelling to and from Taiwan (往来台湾通行证) (non-ICAO)

Europe Premium

In addition to the documents included in the *International Travel & Europe Light Option*, the *Europe Premium* Option supports scanning and extracting information from the front of the driving license of select european countries that issue driving licenses in accordance with Directive 2006/126/EC, such as:

- Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, France, Germany, Greece, Hungary, Ireland, Italy, Netherlands, Poland, Romania, Serbia, Slovenia, Spain, Sweden, UK

North America Light

The *North America Light* Option includes scanning and extracting of information from PDF417 barcodes which follow the AAMVA Driver License/Identification specification (versions 2000, 2003, 2005, 2009, 2010, 2011, 2012, 2013, 2016), including Magstripe encoding in the US and Canada as well as the PDF417 Barcode on the United States Uniformed Services Privilege and Identification Card.

This support also provides workarounds for extracting data from certain non-compliant implementations of the AAMVA standards.

North America Travel Premium

In addition to the documents included in the *North America Light* option, the *North America Travel Premium* option includes the documents included in the *International Travel & Europe Light* option

North America Premium

In addition to the documents included in the *North America Light* option, The *North America Premium* option supports scanning and extracting information from the front of certain driving licenses of North American states, provinces and territories, such as:

- USA: Alabama, Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, Wyoming
- Canada: Alberta, British Columbia, Manitoba, Ontario, Quebec, Saskatchewan

Global Premium

This option includes the documents covered in both the *North America Premium* option and the *Europe Premium* option.

Scandit Parser Library

The Scandit Parser Library is an addition to the *Barcode Scanner SDK Native*, the *Barcode Scanner SDK for the Web* and the *Text Recognition SDK Native* that can be used to further process scanned data for validation and to decode raw data into certain structured output data formats. The Scandit Parser is currently available in the following different options:

- *GS1 AI Parser Option*: The GS1 AI parser validates and decodes data in GS1 AI strings typically encoded on GS1 barcodes. It supports version 19.0 of the GS1 Application Identifier (AI) definition standard and validates and decodes all specified application identifiers.
- *HIBC (Health Industry Bar Code) Option*: The parser library supports the ANSI HIBC 2.5 supplier labeling standard used in the medical industry.
- *Swiss QR Option*: The ISO 20022 standard defines how payment information is encoded in a specific type of QR codes, called Swiss QR codes. The parser supports the 1.0, 2.0 and the 2.1 versions of the Swiss QR ISO 20022 standard and decodes all fields specified in these versions.
- *VIN Parser Option*: The Scandit VIN Parser decodes all fields encoded in the Vehicle Identification Number (VIN). Both the informal North America standard and ISO 3779 used in the European Union are supported.

Software Applications

Scandit Enterprise Browser

The *Enterprise Browser* is a software application that combines a web browser with a camera-based barcode scanner to add barcode scanning (1D and 2D) as a source of data input to mobile web pages and web applications.

The *Enterprise Browser* can be configured via a web-based configuration interface (no-code integration). There is also a Javascript API available for customization via Javascript. The *Enterprise Browser* is available for Android and iOS and supports a wide variety of smartphones and tablets. The specific barcode symbologies and operating systems available to a particular customer depend on the licensing terms.

The *Enterprise Browser* supports barcode scanning at different angles of orientation, pitch and yaw. The respective angles as well as minimum and maximum scan distances depend both on the device and camera used, the barcode format and size and the lighting conditions. The *Enterprise Browser* can scan damaged and faded barcodes. The exact conditions under which scanning of damaged or faded barcodes is feasible depends on the device used, environmental conditions and the exact damage.

Barcode scanning is always performed on the device and so the barcode scanning speed is not affected by a slow network connection. The *Enterprise Browser* returns only a single barcode (1D or 2D) per camera frame.

Device and OS Requirements:

The web-based configuration interface of the *Enterprise Browser* can run on any make of computer with an internet connection and the following browsers:

- Google Chrome™, most recent stable version
- Mozilla® Firefox®, most recent stable version
- Apple® Safari®, most recent stable versions on OS X
- Microsoft® Internet Explorer® or Microsoft® Edge®, most recent stable version

For all browsers, you must enable JavaScript, cookies, and TLS 1.2 or later

To use the *Enterprise Browser* Android app, the following requirements have to be met:

- Android phone or tablet running OS 5.0 (Lollipop) or higher
- Recommended camera: minimum 720p. Autofocus and fixed-focus
- Intermittent internet connection over 3G or Wifi with connectivity to scandit.com to synchronize configurations.

To use the *Enterprise Browser* iOS app, the following requirements have to be met:

- An iPhone, iPad or iPod Touch running iOS 10 or later.
- Recommended camera: minimum 720p. Autofocus and fixed-focus
- Intermittent internet connection over 3G or Wifi with connectivity to scandit.com

to synchronize configurations.

Scandit Keyboard Wedge

The *Keyboard Wedge* is a software application that can be used to decode certain 1D and 2D barcodes from camera images without any application integration - barcodes decoded are injected into the current active input field. The *Keyboard Wedge* is available for Android and iOS (accessible as a software keyboard) and Windows (standalone application). It supports a wide variety of smartphones and tablets. The specific barcode symbologies and operating systems available to a particular customer depend on the licensing terms.

The *Keyboard Wedge* can be configured via a web-based configuration interface (no-code integration). The *Keyboard Wedge* supports barcode scanning at different angles of orientation, pitch and yaw. The respective angles as well as minimum and maximum scan distances depend both on the device and camera used, the barcode format and size and the lighting conditions. The *Keyboard Wedge* can scan damaged and faded barcodes. The exact conditions under which scanning of damaged or faded barcodes is feasible depends on the device used, environmental conditions and the exact damage.

Barcode scanning is always performed on the device and so the barcode scanning speed is not affected by a slow network connection. The *Keyboard Wedge* returns only a single result per scanning session.

Device and OS Requirements:

The web interface of the *Keyboard Wedge* can run on any computer with an internet connection and the following browsers:

- Google Chrome™, most recent stable version
- Mozilla® Firefox®, most recent stable version
- Apple® Safari®, most recent stable versions on OS X
- Microsoft® Internet Explorer® or Microsoft® Edge®, most recent stable version

For all browsers, you must enable JavaScript, cookies, and TLS 1.2 or later

To use the *Keyboard Wedge* Android app, the following requirements have to be met:

- Android phone or tablet running OS 5.0 (Lollipop) or higher
- Recommended camera: minimum 720p. Autofocus and fixed-focus

To use the *Keyboard Wedge* iOS app, the following requirements have to be met:

- An iPhone, iPad or iPod Touch running iOS 10 or later.
- Recommended camera: minimum 720p. Autofocus and fixed-focus

To use the *Keyboard Wedge* Windows app

- A Tablet PC running Windows 10 or later. Only 64-bit editions are supported.
- Recommended camera: minimum 720p. Autofocus and fixed-focus

Keyboard Wedge version 2.0 shares the same specifications with *Scandit Express* (specified below), but does not include the capability to scan from within the application.

Scandit Express

Scandit Express is an application that can be used to decode certain 1D and 2D barcodes from camera images without any integration or coding required. The application can be accessible as a software keyboard, allowing barcodes decoded to be injected into any active input field from an existing application. Moreover, by scanning from within the application, decoded barcodes can be copied to the clipboard or exported as a CSV file. *Scandit Express* is available for Android and iOS and supports a wide variety of smartphones and tablets. The specific barcode symbologies and operating systems available to a particular customer depend on the licensing terms.

Scandit Express initial configuration is a default one, and the user can decide to configure it differently via a web-based dashboard (no-code integration).

Scandit Express supports barcode scanning at different angles of orientation, pitch and yaw. The respective angles as well as minimum and maximum scan distances depend both on the device and camera used, the barcode format, size and print quality, and the lighting conditions. *Scandit Express* can scan certain damaged and faded barcodes - the exact conditions under which scanning of damaged or faded barcodes is feasible depends on the device used, environmental conditions and the exact damage.

Barcode scanning is always performed on the device and so the barcode scanning speed is not affected by a slow network connection. *Scandit Express* returns a single barcode or multiple barcodes, if the List mode is enabled, per scanning session.

Device, OS and Camera Requirements:

To use the *Scandit Express* Android app, the following requirements have to be met:

- Android phone or tablet running OS 9.0 (Pie) or newer.
- Recommended camera: minimum 720p. Autofocus and fixed-focus.

To use the *Scandit Express* iOS app, the following requirements have to be met:

- An iPhone, iPad running iOS 12 or newer.
- Recommended camera: minimum 720p. Autofocus and fixed-focus.

The web-based dashboard of *Scandit Express* can run on any computer with an internet connection and the following browsers:

- Google Chrome™, most recent stable version.
- Mozilla® Firefox®, most recent stable version.
- Apple® Safari®, most recent stable versions on OS X.
- Microsoft® Internet Explorer® or Microsoft® Edge®, most recent stable version.

For all browsers, the user must enable JavaScript, cookies, and TLS 1.2 or newer.