Release Notes - EMDK for Xamarin v4.0

Contents

About EMDK for Xamarin

The EMDK for Xamarin provides C# developers with a comprehensive set of tools to easily create powerful line of business applications for enterprise mobility devices and is designed for use with Visual Studio or Xamarin Studio. The EMDK for Xamarin includes class libraries, sample applications with source code, as well as all of the associated documentation to help your applications take full advantage of what our devices have to offer. It also includes an exclusive Profile Manager Technology within the Visual Studio and Xamarin Studio, providing a GUI based development tool to use along with Profile Manager API. This allows you to write fewer lines of code resulting in reduced development time, effort and errors.

The EMDK for Xamarin provides developers with the tools necessary for creating applications that target the enterprise mobility 'Xamarin' libraries, such as Barcode. This developer kit is designed for use with Visual Studio or Xamarin Studio with Xamarin.Android. The Xamarin Business or Enterprise license is required.
Note: For EMDK for Xamarin documentation and discussions, please visit the Launchpad Developer Community Web site at: https://developer.zebra.com/community/android/xamarin

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Important News

- **EMDK for Xamarin support for all Marshmallow (Android 6.0.1) devices has been terminated -** EMDK for Android v3.0 was the final version supporting Marshmallow (Android 6.0.1) devices. Starting from EMDK for xamarin 4.0, only the Nougat (Android 7.1.2) or higher devices are supported.

New in EMDK for Xamarin 4.0

Supported Devices:

No new device support added in this version. For a complete list of supported devices, visit the [TechDocs](#) webpage.

New Features:

1. Support for MX v9.0 provides the following enhancements. Currently these features are supported only on Oreo (Android 8.1.0) devices:
   a. Battery Manager new feature:
      i. Specify the percentage value, from 0 to 25, at which the battery level should be considered critical (value 0 for no change or not applicable)
   b. UI Manager new features:
      i. Select whether the user may turn Large Key Indicator on or off
      ii. Turn the Large Key Indicator on or off
   c. Added Symbol Security for MX
2. Support for MX v8.4 provides the following enhancements. Currently these features are supported only on Oreo (Android 8.1.0) devices:
   a. GPRS Manager new features:
      i. Specify the APN MVNO Type
      ii. Specify the APN MVNO Match Data
   b. UI Manager new features:
      i. Specify whether On-Screen Power Button can be used
      ii. Specify whether the access to Status Bar will be allowed
   c. Wi-Fi new features:
      i. Specify whether to enable AMPDU
      ii. Specify whether to enable Gratuitous ARP
      iii. Specify whether to enable ChannelBondingMode2g
      iv. Specify whether to enable WLAN extended config
3. Added support for Secure Access Module (SAM) APIs for secure NFC transactions. Currently these APIs are supported only with Android Oreo (Android 8.1.0) TC77 and TC72 devices with SAM hardware. SAM APIs can be used to:
   a. Enumerate available SAMs in the device
   b. Connect to a SAM
   c. Close the connection with a SAM
   d. Send APDU commands
   e. Retrieve the active SAM slot
   f. Check current SAM status whether the SAM is connected or not
   g. Check the type of the SAM (i.e. MIFARE, CALYPSO, FELICA)

Note: These APIs supports only for transceive commands with the SAM. NFC tag reading and Tag transactions should be done with standard Android APIs.

4. Enhanced Barcode Manager API with following features. Currently these features are supported only on Oreo (Android 8.1.0) devices:
   a. Added support for new Symbology and Label type GridMatrix:
      i. Added new enum GridMatrixInverse under ScannerConfig - Describes Enable/Disable/Auto options for decoding GridMatrix barcodes with inverse reflectance.

  ii. Added new enum GridMatrixMirror under ScannerConfig - Describes Enable/Disable/Auto options for decoding mirrored GridMatrix barcodes.

  iii. Added new parameter inverse under ScannerConfig.DecoderParams.GridMatrix - This allows to select one option from GridMatrixInverse enum.

  iv. Added new parameter mirror under ScannerConfig.DecoderParams.GridMatrix- This allows to select on option from GridMatrixMirror enum.

 b. Added new decoder parameters under ScannerConfig.DecoderParams.Signature:

  i. width - Use to set width of the image. The aspect ratio of Width to Height must match the aspect ratio of the signature capture barcode to avoid distortion in captured image.

  ii. height - Use to set height of the image. The aspect ratio of Width to Height must match the aspect ratio of the signature capture barcode to avoid distortion in captured image.

  iii. format - Use to set format of the image.

  iv. jpegQuality - Use to set jpeg quality of the image. A value between 5 and 100 with a step of 5. 100 is the highest quality image and 5 means optimize for image size.

  v. bpp - Use to set bits per pixel for a black and white image. This parameter is not applicable to JPEG format.

 c. Added new decoder parameter under ScannerConfig.DecoderParams.I2of5:

  i. febraban - This allows to enable or disable inserting special check characters in the transmitted data stream of Interleaved 2 of 5 barcodes which are of length 14 and meet specific Febraban criteria.

 d. Added new scanner parameters under ScannerConfig.ScanParams:

  i. decodeScreenNotificationTime - Sets the length of time (in milliseconds) to display the screen overlay upon successful decode.

  ii. decodeScreenTranslucencyLevel - Sets the percentage of translucency of decode screen notification overlay. This value can be from 20 to 50 with a step of 5.

 e. Added new parameter under ScannerConfig.MultiBarcodeParams:

  i. instantReporting - Enables/Disables instantaneous reporting of unique barcodes. Enabling this parameter will ignore the value of multiBarcodeParams.barcodeCount param and will report the scanned data to the user instantaneously, without waiting to end the scanning session.

 f. Added support for new Bluetooth Scanner DS8178:

  i. Added new enum under BarcodeManager.DeviceIdentifier for selecting the DS8178 Bluetooth Scanner.

 g. Added Digimarc decoding support for Rear Camera. Earlier, this feature was supported on internal imagers only

5. Support for MX v8.3 provides the following enhancements. Currently these features are supported only on Oreo (Android 8.1.0) devices:

 a. New NFC Manager feature:

  i. Select the NFC state to be set

  ii. Check to reset all NFC settings to their system-defined Default values

      iii.   Select whether NFC Type A tags should be read

      iv.   Select whether NFC Type B tags should be read

       v.   Select whether NFC Type F tags should be read

      vi.   Select whether NFC Type V tags should be read

     vii.   Select whether NFC Data Exchange Format (NDEF) should be used

    viii.   Select the Polling Mode that should be used

      ix.   Select whether CPU speed should be boosted during NFC transactions

       x.   Select Baud Rate for Type A Tags

      xi.   Select Baud Rate for Type B Tags

     xii.   Select whether Peer to Peer (P2P) Mode should be used

    xiii.   Select whether Card Emulation Mode should be used

    xiv.   Select whether NFC should be used when on the Lock Screen

b. Access Manager new features:

       i.   Select the Action to perform related to Access to Protected Services

      ii.   Enter the Service Identifier for the Service

     iii.   Enter the Package Name of the Caller

     iv.   Provide the File for the Signature of the Caller

c. Cellular Manager new feature:

       i.   Specify the APN authentication type

d. Key Mapping Manager new feature:

       i.   Select the key behavior in Diamond mode

e. Wi-Fi new feature:

       i.   Enable/Disable Wi-Fi verbose logging

6. Enhanced Barcode Manager API with following features. Currently these features are supported only on Oreo (Android 8.1.0) devices:

a. Added support for new Symbology and Label type DotCode:

       i.   Added new enum DotCodeInverse under ScannerConfig - Describes Enable/Disable/Auto options for decoding DotCode barcodes with inverse reflectance.

      ii.   Added new enum DotCodeMirror under ScannerConfig - Describes Enable/Disable/Auto options for decoding mirrored DotCode barcodes.

     iii.   Added new parameter inverse under ScannerConfig.DecoderParams.DotCode - This allows to select one option from DotCodeInverse enum.

     iv.   Added new parameter mirror under ScannerConfig.DecoderParams.DotCode - This allows to select on option from DotCodeMirror enum.

      v.   Added new reader parameter zoom in ScannerConfig.ReaderParams.ReaderSpecific.CameraSpecific - sets the zoom level for camera. Supported value ranges from 1 to 8 in steps of 1. It is recommended to set Camera Zoom value to 2 for decoding DotCode symbology.

b. Added support for Decode Screen Notification. Enabling this feature displays a screen overlay as a notification on a successful decode. The following new scanner parameters added in ScannerConfig.ScanParams:

       i.   decodeScreenNotification - Enables or disables decode screen notification.

c. Added support for Presentation mode. Enabling this feature activates continuous scene detection, scanning begins upon motion detection without any trigger press:
  i. Added new enum SceneDetectionQualifier under ScannerConfig - Acts as a qualifier for starting scene detection when Presentation is selected as Aim Type.
  ii. Added new reader parameter sceneDetectionQualifier in ScannerConfig.ReaderParams.ReaderSpecific.ImagerSpecific - Activates the Presentation mode of scanning based on a Scene Detection Qualifier.
  iii. Updated enum AimType in ScannerConfig - Added new option Presentation to enable this mode.

Resolved Issues:
None.
Usage Notes:
None.
Known Issues:
None.

Previous Announcements

- **EMDK for Xamarin support VS for MAC-** Now supports Visual Studio for Mac OS

- **EMDK for Xamarin NuGet Support-** Fully supports Xamarin NuGet package management.

- **Online Help:** The [EMDK for Xamarin](#) Help documentation is now available only online. The EMDK installation will no longer install the documentation on the development computer.
- **Online Samples:** The [EMDK Samples](#) are now available only online. The EMDK installation will no longer install the samples on the development computer. The online samples can be downloaded and used on the development computer.
- **Supported Devices:** For a complete list of supported devices, visit [TechDocs](#) webpage.
- **Added support:** Zebra PS20, TC52, TC57, TC72 and TC77 devices running Android 8.1 (Oreo)
- **EMDK for Xamarin Profile Manager:** EMDK Xamarin supports Profile Manager features of MX 8.1 and MX 8.2 (details below)
- **Applications accessing EMDK for Xamarin APIs:** are required to use the Symbol.XamarinEMDK component.

- **EMDK for Xamarin support for VS2013 has been terminated-** EMDK for Xamarin v2.7 was the last version for VS2013.

- **EMDK for Xamarin support for Xamarin Studio (on Mac/Windows) has been terminated-** EMDK for Xamarin v2.7 was the last version for Xamarin Studio (On Mac/Windows)

- **EMDK for Xamarin support for VS2015 will be terminated**-EMDK for Xamarin v2.7 will be the last version for VS2015

- **Support for configuring DataWedge using EMDK Profile Manager has been deprecated -** Profile Manager capabilities categorized under Data Capture has been deprecated. Zebra recommends using DataWedge intent-based APIs to configure DataWedge profiles going forward.

- **EMDK OS update package for KitKat devices will no longer be distributed –** The EMDK for Xamarin v2.5 was the final version distributing EMDK OS update package with the PC/MAC installations for KitKat devices. For all Lollipop or higher devices, the EMDK update for a specific device will be distributed with the latest BSP or security incremental patch

- **Support for ContinuousRead class has been deprecated -** The ContinuousRead class which can be used to enable the continuous scanning has been deprecated. It is recommended to use the aimType, sameSymbolTimeout, differentSymbolTimeout of camera, imager and laser specific reader parameters.

- **Support for picklist field has been deprecated -** The picklist field used for enabling the picklist mode has been deprecated and it is replaced by the field picklistEx.

- **EMDK for Xamarin support for all KitKat (Android 4.4.3 or higher) devices has been terminated. -** The EMDK for Xamarin v2.5 was the final version distributing EMDK OS update package with the PC/MAC installations for KitKat devices. For all Lollipop or higher devices, the EMDK update for a specific device will be distributed with the latest BSP or security incremental patch

- **EMDK for Xamarin support for all Lollipop (Android 5.0 or higher) devices has been terminated. -** The EMDK for Xamarin v2.7 was the final version for all Lollipop Devices.

Device Compatibility

For a complete list of supported devices, visit the [TechDocs](#) webpage.

Installation Requirements

For installation requirements and setup, visit the [TechDocs](#) webpage..