Release Notes - EMDK for Android v7.3

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About EMDK for Android

EMDK for Android provides developers with a comprehensive set of tools to easily create powerful line-of-business applications for enterprise mobility devices. Designed for use with Google's Android Studio, EMDK for Android includes enterprise mobility Android class libraries such as Barcode, sample applications with source code, as well as all of the associated documentation to help your applications take full advantage of the capabilities that Zebra devices have to offer. It also embeds the exclusive Profile Manager technology within the Android Studio IDE, providing a GUI-based development tool designed specifically for Zebra devices. This allows you to develop apps more quickly with fewer lines of code and with less effort and fewer errors.

EMDK-A-070314
March, 2019

Important News

- **EMDK for Android support for legacy SecureNFC APIs has been terminated -** EMDK for Android v7.2 was the final version supporting legacy SecureNFC APIs. Starting from EMDK for Android v7.3, Zebra recommends to use new Secure Access Module (SAM) APIs for secure NFC transactions instead.

New in EMDK for Android 7.3

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:

   o 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)

   o 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

2. Support for MX v8.4 provides the following enhancements. Currently these features are supported only on Oreo (Android 8.1.0) devices:

   o GPRS Manager new features:

      i. Specify the APN MVNO Type
      ii. Specify the APN MVNO Match Data

   o 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

   o 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:

   o Enumerate available SAMs in the device
   o Connect to a SAM
   o Close the connection with a SAM
   o Send APDU commands
   o Retrieve the active SAM slot

- Check current SAM status whether the SAM is connected or not
- Check the type of the SAM (i.e. MIFARE, CALYPSO, FELICA)

Note: These APIs support only transceiver 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:

- 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.

- 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.

- 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.

   ○ Added new enum and reader parameter to support
     Presentation mode with scene detection. 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.

   ○ 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.

   ○ Added support for new Bluetooth Scanner DS8178:

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

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

5. Added support for [Android Studio](#) v3.4. **(Updated April 2019)***

6. Added support for CC600/CC6000, MC9300, TC25 and TC8300 Oreo
   (Android 8.1.0) devices. **(Updated May 2019)***

   * New device approval has been received for this package. The
   approval did not require any software changes. If you have
   already installed the package, there is no need to download and
   install it again.

Resolved Issues:

   None.

Usage Notes:

None.

None.

New in EMDK for Android 7.2

Supported Devices:

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

New Features:

1. EMDK for Android v7.2 was not publicly released on the Zebra Support Web site. If your device has EMDK 7.2, please refer to the v7.2 [TechDocs](#) web page for further details on new features.

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

   - 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

   - 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

- Cellular Manager new feature:

    i. Specify the APN authentication type

- Key Mapping Manager new feature:

    i. Select the key behavior in Diamond mode

- Wi-Fi new feature:

    i. Enable/Disable Wi-Fi verbose logging

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

    - 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.

    - 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.

Resolved Issues:

None.

Usage Notes:

None.

Known Issues:

None.

New in EMDK for Android 7.1

Supported Devices:

- Added - TC20 Oreo
- Dropped - ET5X Marshmallow, TC51 Marshmallow, TC56 Marshmallow, TC70X Marshmallow, TC75X Marshmallow
- For a complete list of supported devices, visit the [TechDocs](#) webpage.

New Features:

1. EMDK for Android v7.1 was not publicly released on the Zebra Support Web site. If your device has EMDK 7.1, please refer to the v7.1 [TechDocs](#) web page for further details on new features.

2. Added support for [Android Studio](#) v3.3.

3. Added support for Android Multi-user mode. See the [Multi-user Programming guide](#) for more information.

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

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

        i. decodeScreenNotification - Enables or disables decode screen notification.

    - Added support for Presentation mode. Scanning begins upon motion detection without any trigger press:

        i. 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 installer files for Windows and Mac OS X are now distributed differently** - Starting from EMDK for Android v7.0, The EMDK Profile Manager plug-in for Android Studio is distributed through JetBrains plugins repository. The EMDK SDK is distributed through JCenter repository. See TechDocs for complete installation instructions.

- **EMDK for Android support for all Marshmallow (Android 6.0.1) devices has been terminated -** EMDK for Android v7.0 was the final version supporting Marshmallow (Android 6.0.1) devices. Starting from EMDK for Android v7.1, only the Nougat (Android 7.1.2) or higher devices are supported.

- **EMDK for Android support for all Lollipop (Android 5.1.1) devices has been terminated -** EMDK for Android v6.9 was the final version supporting Lollipop (Android 5.1.1) devices. Starting from EMDK for Android v7.0, only the Marshmallow (Android 6.0.1) or higher devices are supported.

- **EMDK for Android support for all KitKat (Android 4.4.x) devices has been terminated** - EMDK for Android v6.6 was the final version supporting KitKat (Android 4.4.3 or higher) devices. Starting from EMDK for Android v6.7, only the Lollipop or higher devices are supported.

- **EMDK OS update package for KitKat devices will no longer be distributed** - The EMDK for Android v6.6 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 LifeGuard patch.

- **EMDK for Android support for all Jelly Bean (Android 4.1.2) and TC70 KitKat (Android 4.4.2) BSP version 112414 devices has been terminated -** EMDK for Android v5.0 was the final version supporting these devices.

- **EMDK for Android support for SecureNFC APIs has been deprecated -** The EMDK SecureNFC APIs which allow applications to perform secure communications with the NFC tags such as MifareDesfire, MifarePlus SL3 using the Secure Access Module (SAM) has been deprecated.

- **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. Please refer to DataWedge TechDocs web page for more information.

- **EMDK for Android support for Payment APIs has been terminated -** The EMDK for Android v5.0 is the final version that supports Payment APIs.

- **Support for ProfileConfig class has been deprecated -** The ProfileConfig class which can be used to access the profile data has been deprecated. It is recommended to use

the [name-value_pair](#) function of Profile Manager feature. The Profile XML can also be directly modified. Refer to the [Clock Sample](#) for information on modifying Profile XML data.

- **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.

- **Online Help:** The [EMDK for Android 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.

Device Compatibility

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

Installation Requirements

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