ENTERPRISE BROWSER 2.0 FOR ANDROID DEVICES

CONTENTS

DESCRIPTION

Thank you for selecting Enterprise Browser as your mobility solution tool. User friendly mobile applications are key to leveraging the power, value and return on investment of mobile solutions and Enterprise Browser can significantly reduce the time and cost associated with mobile application development.

Enterprise Browser allows creation of flexible, OS-independent, hardware-agnostic applications that look, feel and act the same on every supported device and that can include a wide range of advanced data capture capabilities. Whether you want to streamline your warehouse, delivery or service operations or enable more robust asset tracking and visibility, Enterprise Browser will help you get your enterprise mobility solution up and running.

RELEASE NOTES

Version 2.0

- See also Enterprise Browser 2.0 online documentation

- The Enterprise Browser 2.0 for Android package contains two APKs:
  - SAP Bundle- delivers a ready-to-use config file for SAP ITSmobile customers
  - Regular Bundle – includes the standard (default) config file

- Enterprise Browser 2.0 is now licensed through the Zebra License Manager
  - License Manager is part of device OS; there's nothing to install.
  For more information about EB licensing, see the Licensing Usage Guide.

- Please contact Zebra Support for assistance when Enterprise Browser 2.0 Licensing is needed on a device running Workforce Connect Voice Client version 8.2.774 & below.

- Enterprise Browser Shortcut feature will not work on Android Oreo and above as Shortcut support has been removed from Android Base operating System.
  Please refer to Android documentation link for details.

- Newly supported devices
  - New Device support added in July 2019
    - MC93 Oreo
    - TC83 Oreo
    - CC600 O/CC6000 Oreo

  - New Devices supported in Jan 2019
    - WT6000 Nougat
    - MC33X Oreo
    - TC51 Health Care Oreo

- o TC51 Oreo
- o TC56 Oreo
- o TC75X Oreo
- o TC70X Oreo
- o VC80X Oreo
- o TC52 Oreo
- o TC57 Oreo
- o TC72 Oreo
- o TC77 Oreo
- o TC20/TC25 Nougat
- o TC2X Oreo
- o PS20 Oreo

- Ultra-Rugged Scanner Support
  - DS2278 - With connected devices running Nougat & above.
  - LI3678 - With connected devices running Nougat & above.

New Features

SAP Support Bundle

- Now includes ready-to-use config files for SAP ITSmobile, simplifying device set-up for SAP customers
- SAP config files can be modified for specific use cases

SAP-specific features and inclusions:

- UI auto-customization via ViewPort
- SAP button height adjustment
- Ready-to-use function key layouts
- Transparent keyboards for WT6000
- Button keyboard show/hide feature mapped to hardware key
- Ready-to-use with DataWedge scanning
- Ready-to-use indicator buttons
- Hardware keys remapped to quit, back, zoom-in, zoom-out actions
- Orientation can be locked in portrait or landscape modes
- Option to hide the system/nav bar (HOME, BACK and RECENT buttons)

For more information see the updated SAP ITSmobile for Android Usage Guide.

Voice Support

Enterprise Browser now supports Voice APIs (ASR and TTS) as per W3C standards. Two new JavaScript interfaces are exposed:

- ASR-Automatic Speech Recognition (Voice Input)
- TTS-Text to Speech (Voice Output)

For more information, see the Voice I/O Usage Guide

For more information about API signatures, refer to the W3C Web Speech API.

The Google speech engines are supported for ASR and TTS as part of this release. However, third-party plug-ins also can be used with Enterprise Browser APIs.

Hardware Key Actions

Hardware keys can now be configured to execute predefined actions or JavaScript code blocks with no code changes required for server-side application code. For more information, see the Keycode Mapping Usage Guide.

Page Content Based Action(BETA*)

New feature that can execute JavaScript code or predefined page navigation commands based on unique HTML content on a page. This is useful, for example, for identifying specific SAP ITSmobile app pages (which do not each have a unique URL) and performing a desired action. For more information, see the Page-based Actions Usage Guide.

New Bluetooth API

A new Bluetooth API allows Enterprise Browser apps to connect, disconnect, read from and write to Bluetooth devices such as printers and scanners. For more information, see the Bluetooth API page.

RFID API Enhancements

The RFID API adds many new methods and properties, and now supports the following RFID readers:

- RFD8500
- RFD2000
- MC33 long- and mid-range RFID

For more information, see the RFID API page.

SAP WM/EWM Support

Now supports SAP applications running Warehouse Management or Extended warehouse management.

SAP UI5/Fiori Support

Now supports apps built with SAP's UI5 SDKs and Fiori UX tools.

Barcode Enhancements

The Barcode API has been enhanced with the following interfaces:

Multi-barcode

With support for the Multi-barcode feature, multiple barcodes can now be scanned in a single trigger press.

Aimtype

New Properties:

- barcodeCount
- characterSetSelection
- autoCharacterSetFailureOption
- triggerType
- aimType
    - AIMTYPE_PRESS_AND_SUSTAIN
- scanMode
    - MULTI_BARCODE

New Methods:

- setautoCharacterSetPreference()
- getautoCharacterSetPreference()

For details, see the Barcode API page. **Applies to devices with EMDK 6.8 and higher only**.

ButtonBar Feature Enhancements

Unicode

Now supports special keys and characters from other languages in Basic Multilingual Plane.

New config parameters:

- <ResizeOnButtonbar>
- <ButtonBarMaxHeight>

New Button XML tags:

- <buttonTextColor>
- <buttonTextStyle>

- <buttonFontSize>
- <buttonColor>
- <buttonColorPressed>
- <buttonTransparency>

New Properties:

Show or Hide the layout using the layout name

- buttonBarLayout
    - enabled
    - disabled

Buttonbar Designer Utility:

A new desktop tool (now in BETA*) provides graphical UI for creating and modifying buttonbar layouts in the device.
For more information, see the [ButtonBar Usage Guide](#).

WebView Feature Enhancements

New Method:

- captureWebPageScreen()

New Properties:

- useWideViewPort
- loadWithOverviewMode

Viewport Support
New configuration parameters for better screen fitting:

- <UseWideViewPort>
- <ViewPortWidth>
- <ViewPortInitialScale>

Other Webview configuration parameters:

- <ClearApplicationCacheOnLaunch >
- <ClearApplicationCacheOnExit >
- <DeleteCookiesOnLaunch >
- <VerifyClientCertificate>
- <DisplayZoomControls>

For details, see the [WebView API page](#).

SAP UI Autofit

New configuration tags automatically adjust UI elements in SAP ITSmobile apps without changing the SAP backend.

- <SapButtonHeight>
- <SapButtonFontSize >
- <MobileEditDisabledWidth>
- <SapForceFitToScreen>

For more information , see the [SAP ITSmobile for Android Usage Guide](#).

DOM Injection Enhancements

DOM injection feature has been further enhanced/simplified.

Page Content Action

A new pagecontent attribute allows DOM injection to occur only on HTML page(s) that contain unique text.

Substitution Variable Support

DOM injection now supports EB substitution variables, which simplifies the specification of file paths.

For more information, see the [SAP ITSmobile for Android Usage Guide](#).

<u>Other Configuration parametrs</u>

New configuration tags have been introduced to autofit the UI elements in EB apps.

- ▪ < LockOrientationvalue >

For more information, see the [Config.xml reference page](#).

BETA

*Early version to customers to get feedback. Customers will have to directly approach EB engineering for support.

[[Enterprise Browser 1.8 Release Information](#)]

[[Enterprise Browser 1.7 Release Information](#)]

[[Enterprise Browser 1.6 Release Information](#)]

[[Enterprise Browser 1.5 Release Information](#)]

[[Enterprise Browser 1.4 Release Information](#)]

[[Enterprise Browser 1.3 Release Information](#)]

[[Enterprise Browser 1.2 Release Information](#)]

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DEVICE COMPATIBILITY

Zebra Devices

This software release has been approved for use with the following Enterprise Mobility devices.

Note:

- Enterprise Browser 1.6 and higher versions do not support devices running Android Jelly Bean. For Android Jelly Bean support, please use Enterprise Browser 1.5 or lower versions.

Mobile Computers

	DEVICE FAMILY	DEVICE	OPERATING SYSTEM(S)	SUPPORTED WEB VIEWS
	PS20	PS20J Plus/Base	Android 8.0 (Oreo)	Chromium Webview
	MC33X	MC33X	Android 8.0 (Oreo) Android 7.0 (Nougat) BSP:01-01-49 with LG patch 13	Chromium Webview
	MC40	MC40	Android 5.0 (Lollipop) BSP: 03-07-03 with patch 7	Chromium Webview
	MC67	MC67	Android 4.4 (KitKat) BSP: 03-20-01 with LG patch 4	Chromium Webview
	MC9200	MC92N0	Android 4.4 (KitKat) BSP: 03-13-1006 with LG patch 3	Chromium Webview
	TC51	TC51, TC51 Health Care	Android 8.0 (Oreo) Android 7.0 (Nougat) BSP: 01-01-49 with LG patch 13 Android 6.0 (Marshmallow) BSP: 01-21-04 with LG patch 13	Chromium Webview
	TC56	TC56	Android 8.0 (Oreo) Android 7.0 (Nougat) BSP: 01-01-49 with LG patch 13 Android 6.0 (Marshmallow) BSP: 01-21-04 with LG patch 13	Chromium Webview
	TC70	TC70	Android 5.0 (Lollipop) BSP: 02-10-02 with LG patch 10	Chromium Webview
	TC70X	TC70X	Android 8.0 (Oreo) Android 7.0 (Nougat) BSP:01-01-49 with LG patch 13 Android 6.0 (Marshmallow) BSP: 01-21-04 with LG patch 13	Chromium Webview
	TC75	TC75	Android 5.0 (Lollipop) BSP: 02-10-02 with LG patch 10	Chromium Webview

	TC75X	TC75X	Android 8.0 (Oreo) Android 7.0 (Nougat) BSP:01-01-49 with LG patch 13 Android 6.0 (Marshmallow) BSP: 01-21-04 with LG patch 13	Chromium Webview
	TC8000	TC8000	Android 5.0 (Lollipop) BSP: 02-10-02 with LG patch 10	Chromium Webview
	TC52	TC52, TC52 Health Care	Android 8.0 (Oreo)	Chromium Webview
	TC57	TC57	Android 8.0 (Oreo)	Chromium Webview
	TC72	TC72	Android 8.0 (Oreo)	Chromium Webview
	TC77	TC77 O	Android 8.0 (Oreo)	Chromium Webview
	TC25	TC25	Android 8.0 (Oreo) Android 7.0 (Nougat) BSP: 04-14-30 with LG patch 6	Chromium Webview
	TC20	TC20, TC20K, TC20 with RFD2000 RFID Sled	Android 8.0 (Oreo) Android 7.0 (Nougat) BSP: 04-14-30 with LG patch 6	Chromium Webview
	MC93	MC9300	Android 8.0 (Oreo)	Chromium Webview
	TC83	TC8300	Android 8.0 (Oreo)	Chromium Webview
	CC600	CC600	Android 8.0 (Oreo)	Chromium Webview
	CC6000	CC6000	Android 8.0 (Oreo)	Chromium Webview

Vehicle Computers

	DEVICE FAMILY	DEVICE	OPERATING SYSTEM(S)	SUPPORTED WEB VIEWS
	VC80X	VC80X	Android 8.0 (Oreo) Android 7.0 (Nougat) BSP: 01-01-49 with LG patch 13	Chromium Webview

Wearable Computers

	DEVICE FAMILY	DEVICE	OPERATING SYSTEM(S)	SUPPORTED WEB VIEWS
	WT6000	WT6000	Android 7.0 (Nougat) BSP: 12-29 with LG patch 3 Android 5.0 (Lollipop) BSP: 04-10-03 with LG patch 6	Chromium Webview

Scanners

	SCANNER TYPE	MODEL	DEVICE
	Ultra- Rugged Scanner		TC70X, TC75X, VC80X – Android 7.0 (Nougat) MC33X, TC51, TC51-HC, TC56, TC70X, TC75X, VC80X – Android 8.0 (Oreo - 8956) Tc52, TC57, TC72, TC77 Android 8.0 (Oreo - SD 660)
	Corded Ring Scanner	RS4000	WT6000 - Android 5.0 (Lollipop) WT6000 - *Android 7.0 (Nougat)*
	Cordless Ring Scanner	RS507	TC70 - Android 4.4 (KitKat) TC75, TC8000 - Android 5.0 (Lollipop) TC51, TC51-HC, TC56, TC70X - Android 6.0 (Marshmallow) MC33X, TC51, TC51-HC, TC56, TC70X, TC75X, VC80X – Android 7.0 (Nougat) MC33X, TC51, TC51-HC, TC56, TC70X, TC75X, VC80X – Android 8.0 (Oreo - 8956) Tc52, TC57, TC72, TC77- Android 8.0 (Oreo - SD 660)
	Corded Ring Scanner	RS5000	WT6000 - Android 5.0 (Lollipop) WT6000 - Android 7.0 (Nougat)
	Bluetooth Ring Scanner	RS6000	TC75, TC8000 - Android 5.0 (Lollipop) TC51, TC56, TC70X - Android 6.0 (Marshmallow) MC33X, TC51, TC51-HC, TC56, TC70X, TC75X, VC80X – Android 7.0 (Nougat) MC33X, TC51, TC51-HC, TC56, TC70X, TC75X, VC80X – Android8.0 (Oreo -8956) Tc52, TC57, TC72, TC77Android 8.0 (Oreo -SD 660)
	Ultra- Rugged Scanner	Ll3678	MC33X, TC51, TC51-HC, TC56, TC70X, TC75X, VC80X – Android 8.0 (Oreo - 8956) Tc52, TC57, TC72, TC77 Android 8.0 (Oreo - SD 660)

	Ultra-Rugged Scanner	DS2278	MC33X, TC51, TC51-HC, TC56, TC70X, TC75X, VC80X - Android 8.0 (Oreo - 8956) Tc52, TC57, TC72, TC77 Android 8.0 (Oreo - SD 660)

Vibrators

	VIBRATOR TYPE	MODEL	DEVICE
	External Vibrator Cable	CBL-NGWT-HDVBAP-01	WT6000 - Android 5.0 (Lollipop) WT6000 - Android 7.0 (Nougat)

Memory Considerations

Supported devices span a range of performance capabilities; therefore, care should be taken when developing applications. The following points might help with this :

- JavaScript libraries such as Sencha touch or JQuery Mobile can use a significant amount of memory at runtime. The more JavaScript libraries loaded into the DOM the greater the RAM footprint of the web page will be.
- Resources are available from the Developer Community to help create great looking, streamlined apps.
- Online performance tests for JavaScript and CSS, particularly those involving DOM manipulation will often be written to target desktop computers and may not run on all supported devices.

COMPONENTS OF ENTERPRISE BROWSER

Windows Desktop PC Components

Enterprise Browser components are installed in the following folders on the Windows Desktop machine:

COMPONENT	LOCATION
Runtimes	C:\EnterpriseBrowserForAndroid\Runtimes\EnterpriseBrowser_signed_v[version#].apk C:\EnterpriseBrowserForAndroid\Runtimes\EnterpriseBrowser_SAP_signed_v[version#].apk
JavaScript Files (New EnterpriseBrowser API)	C:\EnterpriseBrowserForAndroid\JavaScriptFiles\EnterpriseBrowser*.js
JavaScript Files (Backwards Compatibility)	C:\EnterpriseBrowserForAndroid\JavaScriptFiles\BackwardCompatibility*.js
Installer	C:\EnterpriseBrowserForAndroid\Installer\EnterpriseBrowserForAndroid.exe
Feature Demo	C:\EnterpriseBrowserForAndroid\Feature-Demo\
Configuration Editor	C:\EnterpriseBrowserForAndroid\Configuration Editor\
Shortcuts Utility	C:\EnterpriseBrowserForAndroid\Shortcut Utility\
ButtonBarUtility	C:\EnterpriseBrowserForAndroid\ButtonBarUtility\

Mac OS X PC Components

Enterprise Browser components are extracted to the application folder on the host Mac OS X machine:

COMPONENT
Runtimes

JavaScript Files (New EnterpriseBrowser API)
JavaScript Files (Backwards Compatibility)
Feature Demo
Printing CAB file
EB Online Help.webloc
Feature Demo ReadMe.webloc

INSTALLATION

Windows Desktop

Enterprise Browser is installed by running the MSI project. The MSI is available on Zebra Support Portal and on Zebra Licensing Portal also. The MSI project can be used to deploy variants of the Enterprise Browser executable to the target device.

Mac OS X

The Enterprise Browser is installed by running the DMG project. The DMG is available on Zebra Support Portal and on Zebra Licensing Portal also. The DMG provides access to the Enterprise Browser device executables along with other resources.

USAGE NOTES

- Enterprise Browser **Shortcut feature** will not work on Android Oreo and above as Shortcut **support has been removed from Android Base operating System.**

  Please refer to Android documentation link for details.

- Enterprise Browser 2.0 is now licensed through the Zebra License Manager

  License Manager is part of device OS; there's nothing to install.

  For more information about EB licensing, see the Licensing Usage Guide.

  Please contact Zebra Support for assistance when Enterprise Browser 2.0 Licensing is needed on a device running **Workforce Connect Voice Client version 8.2.774 & below.**

- **On TC83, MC93, CC6000, CC600, PS20 devices**, maintain backward compatibility with scanner meta tags by adding the following to the Config.xml file of EB apps running on those devices:

  <MetaTag value="Scanner~enumerate;enabled:SCN2"/>
- On **CC600** devices using the EB SAP package, ensure the correct screen orientation by adding the following to the Config.xml file:**<LockOrientation value= "LANDSCAPE"/>**
- It is **not recommended** to use **alert boxes** to display any information in Enterprise Browser in a production environment.
- Enterprise Browser CardReader API is not available on MC32 Android, MC33X Android Nougat, TC70X Android Nougat and TC75X Android Nougat devices.

- **Debug buttons/Addressbar** are not designed to be used in **production code** and may cause undesirable side effects.

- Capturing a **signature in full screen** mode is not compatible with the device auto rotation function.

- The ScannerType property of the Barcode API should not be relied upon to accurately report the type of Scanner in use.

- Discovery of printers is unreliable running on Enterprise Browser supported devices. The most reliable way to connect to a printer is by calling **'searchPrinters'** and providing the Bluetooth or IP address of the desired printer.

- Device having **'EMDK For Android' version below 6.0** experience slight delay on every enable if the custom decode sound is set either via config tag <ScanDecodeWav> or via 'decodeSound' property of Barcode API.

- WriteConfigSetting and ReadConfigSetting of Generic module is not supported on Android.

- UsPlanetReportCheckDigit and UsPostNetReportCheckDigit have no effect on Android.

- The Code128IsBtTable Barcode symbology is not supported on Android.

- When using the Native TabBar on Android, ensure the enablePageLoadingIndication property is set to 'true' in Java Script to avoid potential issues on load.

- To turn off the beeper notification when using 2.2 Notification API on Android, set the 'setBeeperDuration' parameter before calling the 'stateOff' parameter.

- Within Enterprise Browser, key pressing will work properly if and only if the keycode mapping file is not empty and the content is properly written/captured as per the keycode mapping guidelines.

- The callback parameter 'TagIDHexa' of enableRead method of EzNFC API will now return the hexacode of NFC Tag ID in left to right order.

- **On MC93 devices using the EB SAP package**, prevent the custom keyboard to show by default by updating the JavaScript file in the SAP package (specified below) as follows:

  File Name: sapconfigreader.js

  Path: "\Internal shared storage\Android\data\com.symbol.enterprisebrowser\android_sap"

  Replace line 66 with the line below:

```
if(-1 != deviceModel.indexOf("mc92") || -1 != deviceModel.indexOf("mc33") || -1 !=
deviceModel.indexOf("mc67") || -1 != deviceModel.indexOf("tc20k") || -1 != deviceModel.indexOf("mc32") ||
-1 != deviceModel.indexOf("mc93")  )
```

Configuration Options

- On reinstalling Enterprise Browser on Android, the previous config.xml file will not be overwritten.
- The <LogUser /> log severity has no effect if <LogInfo /> is disabled, disabling <LogInfo /> will have no effect on info logs.
- To navigate to secure web pages, it is necessary to specify both the HTTP and HTTPS proxies.

Upgrading Enterprise Browser

Settings are not preserved automatically when updating Enterprise Browser. To preserve previous settings, please perform the following steps:

- Save a copy of the Enterprise Browser Config.xml file(s) with existing settings from "/<mass storage location>/Android/data/com.symbol.enterprisebrowser/Config.xml" location to the below locations:
  - o /<mass storage location>/EnterpriseBrowser/Config.xml or
    /<internal device storage root directory>/EnterpriseBrowser/
- Uninstall Enterprise Browser from the device.
- Install the new version of Enterprise Browser.

Data Persistence

Users have a number of options when choosing to persist their data locally including Web Storage and Web SQL databases.

- On Android, Enterprise Browser depends on the OS implementation of the storage solution and will persist across a re-install of Enterprise Browser. More detail on storage solutions can be found here: http://www.html5rocks.com/en/features/storage

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ISSUES FIXED IN THIS RELEASE

- [SPR- 34994] Scanner issue observed when EB resumed from suspend is now fixed.
- [SPR- 34157] Scanner Trigger response issue when Soft trigger is used is now fixed.
- [SPR- 33990] Crash issue when Turkish language used is now fixed.
- [SPR-34546] Crash issue due to recent app button long press is now fixed.
- [SPR- 34981] Cert Store access popup when server request for client cert is now configurable.
- [SPR- 35296] Barcode setProperty method will now take effect when there are more than 1 properties.
- [SPR- 35220] userAgent concatenate issue when page refreshed is now fixed.
- [SPR- 35579] Crash when setRecentAppDisable enabled is now fixed.
- [SPR- 36188] File Not Found Exceptions related to Web Page Capture feature of EB and Socket Exception found in failure case is now fixed.

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KNOWN ISSUES

- When network connectivity is not available, EB sometimes navigates to a "Webpage not available" error page.
- Enterprise Browser application icon does not appear in SOTI Lockdown mode.

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License SKUs

The following table lists the License SKUs for Enterprise Browser

SKU	DESCRIPTION	FIRST RELEASE DATE	COMMENTS
SWA-EB0SA00-0D01	Enterprise Browser Android Device License	17 Dec 2018	Version 2.0.1.0
SWA-EB0TA00-MDA1	Enterprise Browser Android Device Evaluation License	17 Dec 2018	Version 2.0.1.0

PART NUMBERS

The following table lists the part numbers for Enterprise Browser

PART NUMBER	DESCRIPTION	FIRST RELEASE DATE	COMMENTS
EBAMSI2010	Windows MSI installer for Enterprise Browser for Android devices	17 Dec 2018	Version 2.0.1.0

EBADMG2010	MAC DMG package for Enterprise Browser for Android devices	17 Dec 2018	Version 2.0.1.0
EBAPK2010	Enterprise Browser Regular Bundle for Android devices	17 Dec 2018	Version 2.0.1.0
EBSAPAPK2010	Enterprise Browser SAP Bundle for Android devices	17 Dec 2018	Version 2.0.1.0

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