

Release Notes - MC40L v02.11.04

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Introduction

The MC40N0 Mobile Computer is a sleek Enterprise mobile computer that is designed for the retail and hospitality vertical markets.

With an MC40N0, customers can perform a wide range of important tasks and run multiple Line of Business applications – to help drive increased productivity and throughput. They can scan a bar code to look up price, inventory availability or item location. They can look up product information or a gift registry item. They can assist shoppers in their search for products, and help them compare the prices and features of multiple products. They can also use “*Push to Talk*” to communicate with other employees in the store for help with a question — all on the same device.

This software release marks the first time that Android 5.X (Lollipop) OS is available on MC40 devices. Among the notable features that Lollipop offers (vs. KitKat) are

- Notifications display on screen with Priority Mode choices (Email)
- ART (Android Runtime Environment) for better performance
- New Power Save Mode

Description

This software is intended to be loaded and run on the MC40N0 Voice or Non-Voice models. This version does not support FIPS hardware models. It is important to match the device configuration with the appropriate Recovery update package. If an incorrect Recovery update package is loaded, the device may not boot.

Recovery update package MC40 L v02.11.04 contains the software required to update an MC40N0 Voice/Non-Voice model device to Lollipop OS.

Component Description and Version

Components/Description	Version
Build_version	02-11-04-L-V0-M1
Android_version	5.1.1
Android_SDK_Level	22
Android Security Patch Level	2016 -10- 01
OSX	TI.51.5.2.10
Linux_kernel	3.4.48
Wifi	FUSION_A_5.00.0.0.017
X_loader	1.1.4(2016-Dec-19)
U_boot	1.41.0(2016-Dec-19)
Platform	TI - omap4430- 4AJ22
Scanning_Framework	16.13.34.0
DWDEMO	2.0.8
MXMF	5.3.2.0
Touch	0.14(RevB), 19(RevC TPK), 38(RevB+)
Spam	0.6 (NA for RevC HW, only for TRS/B HW)
Bluetooth_Stack	4
Partation_table	NA
Flash_Size	8G
RAM_Size	1G
GPS	NA
MMS	NA
RIL_Version	NA
BT_Pairing_Utility	3.7
MSP_Agent_RD	7.08.86
Datawedge	5.1.13
Camera	2.0.002 (151207-30)
PTT	3.1.27

RxLogger	4.58.5.0
StageNow	2.4.1.1139
B2M_Elemez	1.0.0.297
Data_Analytics	1.0.2.1813
App_Gallery	2.8.4.12
SOTI	12.2.0 Build 23469
EMDK	5.0.3.0
ZVC	1.1.23
BatteryManager	1.3

Key Exclusions in MC40L

- MLogManager
- FIPS DAR & DIM

Known issues/limitations:

- First boot after OS update takes more time compared to MC40 KK
 - OS update through "ADB Side Load" is takes approximately 3 minutes as it uses block mode transfer introduced in L.
 - OS upgrade reboot time is more in L (approximately 6 mins) when compared to KK (approximately 2 mins) as Android L pre-compilation (AOT- Ahead of Time Compilation) takes considerable time
- Zebra Volume Control feature by default is disabled and only AOSP sound settings will be seen. ZVC may be enabled/disabled through CSP.
- RS507 will not reconnect automatically after BSM suspend resume. Similar behavior is observed on MC40 KK. By pressing the pair button on RS507, reconnects the device successfully.
- Invalid progress percentage (i.e. 111%) is displayed while updating the "FullFactoryReset" package through ADB side load
- Panorama feature of camera is not supported in MC40 L.
- Unable to share captured picture/video via email in MC40L (In Gallery Application)
- Wide Band Audio (BT) is not supported.
- MC40L OS is configured as low_ram to improve the overall device stability. This setting may be overridden by setting the system property *persist.lowram_override* to "true".
- After upgrading MC40 from a KK OS to this release (v02.11.04), the "Enterprise reset" option in "Backup & Reset Settings" will be in disabled state (greyed out). The option will be enabled, after doing an Enterprise Reset. The option can be enabled via MDM or an EMDK application.
- After enabling battery-saver option, color of status bar doesn't change to orange, as expected.
- Data persistence not maintained while migrating from JB to L.

Functional differences compared to KK:

- In "About Device" page when the user taps on "Battery Information", it navigates to "Battery Manager" page. The battery information displayed in About Device Info is the same as Battery Manger Application's Advanced Info.
- "Battery Percentage Display" option to show the battery % in notification bar icon is not available in MC40 L. Workaround - if a user drags the status bar down battery percentage is visible.

- Developer Options will be disabled by default. Manually enable Developer Options by tapping 7 times on “Settings->About Device->Build number” option.
- Out of the box, PTT private calls will not work with the left scan trigger. In order to configure this, please refer to the mapping procedure mentioned in the Integrator Guide.
- Keyremap import/export feature not supported.
- Wallpaper is not visible in the lock-screen mode.

Component Release Notes:

FUSION_A_5.00.0.0.017

1. Major Features:

- Regulatory - FUSION_A_5 supports all operating channels/frequencies depend on Regulatory Rules.
- Band Selection (Auto, 2.4, 5) - Ability to change the operating bands, 2.4 GHz or 5 GHz
- FAPI
- Support for Battery Swap
- Fusion Advance logging
- Auto Time Config
- Security LEAP FAST support
- Band Preference – This feature allows device to prefer one frequency band over the other during initial connection and roam. By default, MC40 will prefer 5GHz band. If there are no good APs available for connection/roam in 5GHz, MC40 will look for APs in 2.4GHz frequency band. Band Preference settings can be changed using Wi-Fi CSP to prefer either 5GHz or 2.4GHz band, or to disable preference.
- Fusion logger, Fusion Status, Profile status
- Extreme Networks AP specific Features (previously called Zebra Mobility Extensions) - These features make use of 802.11 specifications and Extreme Networks proprietary extensions to achieve the highest level of performance, efficiency and reliability. These features are available only when MC40 is deployed in a WLAN infrastructure that uses former Zebra AP’s (now part of Extreme Networks) . These features are enabled by default on MC40. It can be turned off using Wi-Fi CSP.
 - I. Coverage Hole Detection: Using 802.11k and Extreme Networks proprietary extensions, MC40 can report gaps in Wi-Fi coverage to Extreme Network WLAN infrastructure so that administrator can take corrective actions.
 - II. Aggregated Fast Transition (Aggregated FT): Aggregated FT improves on IEEE 802.11r, Over-the-DS fast roaming in conjunction with Extreme Networks wireless LAN infrastructure. Using this feature, MC40 can achieve reliable and consistent fast roams.
 - III. Scan Assist: Using this feature, MC40 retrieves roaming related information from the Extreme Networks wireless LAN infrastructure without doing scans. This is used for improving roam.
- Auto Proxy Config feature - A PAC file or Proxy Auto-Configuration file defines how web browsers can automatically select an appropriate proxy for accessing a given URL
- Profile Roaming - Profile Roaming is a technique by which the MU decides how to move on to another profile for connection on an auth failure/assoc –reject/disconnect
- Subnet roam

Scanning Framework v16.13.34.0

1. Major Features

- Improved trigger-to-beep performance

2. Known issues

- Intermittently, even if the device is set to mute state, the very first scan beep is audible.
- Intermittently, scan beep is not audible in the headset

OSx vTI.51.5.2.10

1. Major Features

- Disable Notification Bar
- Hide/Unhide Quick settings icon in notification tray
- Hide/Unhide Quick settings tiles

AppGallery v2.8.4.12

1. Major Features

- AG rewritten as native app
- Features:
 - Self-Update
 - AG Login
 - Market Place
 - App Open, Install & Uninstall.
 - Categories page and App search by Category.
 - App Details without review.
 - Logout.

2. Known issues/limitations

- App Management for system app is not supported
- “Load more on swipe” in applist page show the loading symbol twice
- “Open” and “Uninstall” buttons are updated for the app that is in foreground but installation happens for the app for which “install” was clicked.
- Multiple parallel installation of apps is supported in this version.

Fixes Included:

Included following MC40KK SPR fixes in MC40 L v02.11.04 release

SPR	Description
SPR-29115	Fixed an issue wherein the devices used to incorrectly calculate no. of incorrect attempts to unlock the device resulting in factory reset of the device.
SPR-29735	Fixed an issue wherein few devices used to get into continuous reboots upon upgrading to KK from JB.
SPR-29349	Fixed an issue wherein the audio packets were missing at the very beginning of the call on REV B/REVB+ hardware.
SPR-29232	Fixed an issue wherein devices used to get randomly struck in black screen upon performing animations.
SPR-29184	Fixed an issue where users were not able to scan RSS14 barcodes with RS507.
SPR-30757	Fixed an issue with scanning of small AZTEC barcode.
SPR-30916	Fixed an intermittent issue where display goes blank while using camera application.
SPR-30417	Fixed the issue wherein the device was randomly getting stuck to splash screen while going through a reboot
SPR-30472	Fixed an issue wherein the device would show incorrect date & time after a critical suspend
SPR-30157	Fixed an issue wherein device experienced reboot due to null pointer dereference
SPR-30259	Fixed an issue wherein device encounters random reboots while roaming in 802.1x infrastructure.

SPR-30435	Fixed an issue where fails to roam to Avaya APs
SPR-29349 SPR-29390	Fixed an issue wherein the audio packets were missing at the very beginning of the call on REV B/REVB+ hardware
SPR-29945	Fixed an issue wherein there was a delay in the output when scanning QR code which have 100 characters onwards when using Keystroke output option

Contents

M40NOLXXXRE0000002.zip	Enterprise Reset Recovery Package. Wipes userdata (/data) partitions. Persists Enterprise, OnDeviceStorage (/sdcard) and factory partitions.
M40NOLXXXAE0000002.apf	Enterprise Reset AirBeam Package. Wipes userdata (/data) partitions. Persists Enterprise, OnDeviceStorage (/sdcard) and factory partitions.
M40NOLXXXRF0000002.zip	Factory Reset Recovery Package. Wipes userdata (/data) and enterprise partitions Persists OnDeviceStorage (/sdcard) and factory partitions.
M40NOLXXXAF0000002.apf	Factory Reset AirBeam Package Wipes userdata (/data) and enterprise partitions Persists OnDeviceStorage (/sdcard) and factory partitions.
M40NOLXXXRW0000002.zip	Full Factory Reset Recovery Package. Wipes userdata (/data), enterprise and OnDeviceStorage (/sdcard) partitions. Persists factory partition.
M40NOLXXXAW0000002.apf	Full Factory Reset AirBeam Package Wipes userdata (/data), enterprise and OnDeviceStorage (/sdcard) partitions. Persists factory partition.
M40NOLXXVRBxx21104.zip	MC40N0 L v02.11.04 Voice SKU Recovery OS FullPackageUpdate for JB/KK to L OS upgrade & L to L OS Update, along with FW Binaries updates for EA/Touch. Note – If upgrading from JB, its mandatory to perform an enterprise reset post upgrading.
M40NOLXXVABxx21104.apf	MC40N0 L v02.11.04 Voice SKU AirBEAM OS FullPackageUpdate for KK to L OS upgrade & L to L OS Update, along with FW Binaries updates for EA/Touch. JB to L direct airbeam os updte is not supported.
M40NOLXXVRDXX00001.zip	MC40N0 L recovery update package to convert to recovery of KK, to allow downgrade to KK OS.

Device Compatibility

This software release has been approved for use with the following devices:

Voice SKU	Non-Voice SKU
MC40N0-SCG3RM1	MC40N0-SCG3RM0

MC40N0-SCG3R01	MC40N0-SCG3R00
MC40N0-SCJ3RM1	MC40N0-SCJ3RM0
MC40N0-SCJ3R01	MC40N0-SCJ3R00
MC40N0-HCJ3R01	MC40N0-HCJ3R00
MC40N0-SLK3R01	MC40N0-HCG3R00
MC40N0-SLK3RM1	
MC40N0-HLK3R01	
MC40N0-SCJ3RM102	

Installation Requirements

1. **Note:** Battery must be **30%** charged to perform update.
2. The Software update requires Voice or Non-Voice model hardware device.
3. Enterprise Reset and Factory Reset package files are available on the MC40 Software Download section on www.zebra.com.
4. MTP drivers are installed in the PC.

Installation Instructions

1. OS Recovery Update Package

- a. Connect the USB cable from your PC to the device
- b. Make sure MTP mode is selected in the USB settings in the device
- c. The internal SD card of MC40 will be seen in your PC as mounted drive MC40N0.
- d. Copy the recovery update zip file to the root folder on internal SD card
- e. Press and hold the Power button on the device until the Device options menu appears
- f. Tap on Reset to reboot the device
- g. When the device is rebooting hold the left Scan/Action button to enter Recovery update mode
- h. When the Recovery Mode home screen (Android logo) appears then release the left Scan/Action button.
- i. Touch Home button to enter Recovery menu screen
- j. Click on Vol+ or Vol- to navigate to the "apply update from sdcard" option
- k. Click on on PTT key to select the option
- l. Click on Vol+ or Vol- to navigate to the recovery update zip file
- m. Click on on PTT key to select the recovery update zip file
- n. Click on Vol+ or Vol- to navigate "reboot system now" and Click on PTT key to reboot the device

2. OS AirBEAM Update package

- a. Please refer Mobility Service Platform deployment guide for instruction.

Note: If upgrading from JB OS (voice or non-voice), its **mandatory to perform an enterprise reset post upgrading**. Post upgrading from JB to L (using M40NOLXXVRBxx21104.zip), reboot to the recovery mode of upgraded unit and apply the enterprise reset package of L - M40NOLXXXRE0000002.zip.

Downgrade instruction for MC40 Lollipop to KitKat using Recovery

1. Download the " M40NOLXXVRDXX00001.zip" file to you local PC
2. Download the KitKat "FullPackageUpdate" zip file to your PC. Please refer to the respective KitKat release notes to get the file name corresponding to the FullPackageUpdate for KitKat OS release.
3. Copy all of the above files to **on device storage**
4. Go to Recovery mode of the device using Volume Up + Power Key + left scan trigger immediately followed by left trigger
5. Select Apply update from on Device Storage
6. First install " M40NOLXXVRDXX00001.zip".
7. Reboot to recovery again
8. Then install Kit Kat "FullPackageUpdate" zip file.
9. Then reboot.
10. Now device should boot to KitKat

Part Number and Release Date

1. M40NOLXXXRE0000002
2. M40NOLXXXAE0000002
3. M40NOLXXXRF0000002
4. M40NOLXXXAF0000002
5. M40NOLXXXRW0000002
6. M40NOLXXXAW0000002
7. M40NOLXXVRBxx21104
8. M40NOLXXVABxx21104
9. M40NOLXXVRDXX00001

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