

Release Notes MC40N0-KK-Voice-SKU v01.12.0720

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Introduction:

Today, it's important to provide an experience that will impress demanding and technology savvy customers and end-users. The MC40N0 Mobile Computer is a sleek, customizable device that puts all the needed information at the customers' fingertips.

With an MC40N0, they can scan an item bar code to look up price, inventory availability or item location; ring up the sale; look up product information or a gift registry; present a comparison of multiple products; call others in the store for help with a question; and even complete a loyalty card application — anywhere in the store, without ever leaving the customer. The MC40N0 offers technology with an impressive look that can be customized in almost limitless ways to become an extension of your brand.

Recovery update package v01.12.0720 contains the software required to update MC40N0 Voice or Non-Voice SKU device to KitKat OS.

This software is intended to be loaded and run on the MC40N0 Non-Voice or Voice SKU devices. MC40N0 device with Voice JB OS or Non-Voice JB OS can be directly updated to Voice KK OS using the recovery upgrade package. It is important that care be taken to match the device configuration with the appropriate Recovery update package. If an incorrect Recovery update package is loaded, the device may not boot.

Component Description and version

| Component / Description | Version |
|-------------------------|-------------------------------|
| Product Build Number | 01-12-03-4AJ22-K-V0-M1-072015 |
| Android Version | 4.4.4 |
| Linux Kernel | 3.4.48 |
| Android SDK Level | 19 |
| Bluetooth Stack | 4 |
| Flash Size | 2 GB |

| Flash Size | Version |
|--------------------|--|
| RAM Size | 1 GB |
| MSP Agent/RD | 7.08.85 |
| Scanning Framework | 5.25.0 |
| Datawedge | 3.1.20 |
| DWDemo | 2.0.6 |
| Camera | 5.25.0 |
| OSX/MXMF | TI_OSX_4.4-3 , 4.4.3.6 |
| Wi-Fi | FUSION_A_4.00.0.0.033 |
| PTT | 3.1.19 |
| RxLogger | 3.0.0.51 |
| MLogManager | MLogManager v06.52 |
| Touch FW | 0.14(RevB), 19 (RevC TPK),38(RevB+) |
| EA | 2.54 |
| SPAM | 0.6 (NA for RevC HW, only for RevA/B HW) |
| StageNow | 2.1.1.1306 |
| B2M Elemesz | 1.0.0.238 |
| Data Analytics | 1.0.1.2107 |
| App Gallery | 2.1.0.1 |
| SOTI | 12.2.0 Build 23434 |
| EMDK | 3.1.38 |
| ZVC | 1.1.5 |

Features Added/Supported

- Added support for MC40N0 RevB+ & RevC HW
- Included rebranding changes for Zebra/Symbol namespace
- Included changes for APA v1 feature content
 - Storage and non-storage path guidelines
 - Navigation Keys
 - DHCP Options
 - Key remapping guidelines
 - Battery Extras
- Support Bluetooth 4.0 (Supports both Classic and Bluetooth LE) with Broadcom Bluetooth Stack (Bluedroid)
- Included

- StageNow client
- B2M Elemez
- Data Analytics
- App Gallery
- SOTI MobiControl Stage
- Zebra Volume Control
- Improved Imager scan response
- Improved battery swap timing
- Support for PD40 Payment module

Component Release Notes:

FUSION A_4.00.0.0.033 :

1. New features:
 - a. 802.11k: Fusion A4.00 adds support for 802.11k. Using 802.11k Neighbor Report, MC40 will retrieve details of neighboring APs from current AP if AP also support this feature. This is used for improving roam performance. 802.11k is enabled on MC40 by default.
 - b. Null Data Power save: Fusion A4.00 supports Null Data Power save method. In this method, Wi-Fi will go to sleep state only if there were no Tx or Rx packets in the last 100ms. If AP indicates a buffered frame for device in TIM element of beacon, MC40 will exit Wi-Fi sleep mode by sending 802.11 NULL data packet to retrieve buffered frames from AP. By default, MC40 uses WMM-PS as the default power save mode. Power save mode can be changed using Wi-Fi CSP.
 - c. Band Preference: Band Preference 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.
 - d. Updated regulatory rules: Fusion A4.00 uses updated regulatory rules. 5GHz channels 120—132 are opened up for USA and countries following US rules.
 - e. Zebra Mobility Extensions

Zebra Mobility Extensions make use 802.11 specifications and Zebra 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 Zebra APs. 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 Zebra proprietary extensions, MC40 can report gaps in Wi-Fi coverage to Zebra 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 Zebra 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 Zebra wireless LAN infrastructure without doing scans. This is used for improving roam.

2. SPR fixes

Fixes for following SPRs are available in Fusion A4.00

- a. SPR 27679 [Occasionally Wi-Fi stop scanning and hence failed to roam]
- b. SPR 27019 [Add support for subnet roam]
- c. SPR 28080 [Unable to create TLS profile after changing language]
- d. SPR 26581 [Sometimes Wi-Fi stops or device hangs when connected to Ruckus AP]

MX4.4 Feature List:

| Feature | Brief Description |
|---|--|
| Clear Clipboard | Clearing the data copied into clipboard |
| Enable/Disable Clipboard | Enable/Disable the clipboard features to cut/copy/paste |
| Factory Reset | Wipe - Data+Enterprise+Cache |
| Enterprise Reset | Wipe - Data+Cache |
| Full Device Wipe | Wipe - Data+Enterprise+Cache+Internal SD+External SD |
| Enable/Disable Enterprise Reset in Settings App | API to Enable/Disable the Enterprise Reset UI in Settings Application |
| Display OSX Version | OSX version can be seen in Settings => About Phone => SW Components => OSX version |

| | |
|--|---|
| Enable Disable AppInfo Access | Enabling and disabling , App info from settings |
| Allow/Disallow App to submit XML | Add/delete/query packages which are allowed to SubmitXML to MxMgtFw |
| Enable Disable PTP/MTP | MediaTransfer and PTP modes can be Blocked and Unblocked |
| Enable Disable External USB Storage | Enable/Disable Mounting of External USB Pen-drive storage with device |
| Enable/Disable Browser | Enable/Disable Native Browser Address Bar |
| Enable/Disable access to Applications Section of Settings UI | Hide Apps section of Settings Application |
| Initiate NTP Sync | Enable/Disable/Initiate NTP |
| Ethernet Settings | Enable/Disable & TurnOn/TurnOff |
| Enable/Disable Use of Background Data | Enable/Disable Background data in SIM devices |
| Auto Correction | Enable/Disable the ability of auto correction of words in soft keyboard |
| Wifi | Enable/Disable Wifi |
| Safe Mode | Enable/Disable Safe mode |
| Unknown sources | Enable/Disable Unknown sources UI |
| Enable/Disable Home Key | Enable/Disable Home Key |
| BT Pairing Pop up | Enable/Disable BT pairing pop up |
| Sdcard Usage | Enable/Disable Sdcard Usage |
| Enable/Disable Power button instantly lock | Enable/Disable Power button instantly lock UI |
| Turn On/Off Power button instantly lock | Turn On/Off Power button instantly lock |
| Enable Disable Airplane mode | Enable/Disable Airplane mode UI |
| Turn On/Off Airplane Mode | Turn On/Off Airplane Mode |
| Enable/Disable Power button menu items | Enable/Disable menu displayed when power button is long pressed |
| Hide/unhide Power button menu | Hide/Unhide menu displayed when power button is displayed |

Scanner Framework 5.25.0

Major Features

1. Added support for Mailmark, HAN XIN symbologies
2. Support for Reduced Quiet Zone for Code128, Code 39, UPCA/EAN symbologies
3. Picklist Mode. Support of Software picklist has been newly added
4. Added support for Continuous Read Aim Type
5. Separate volume control for Scan Beep with ZVC
6. Support to turn illumination on/off.

SPR Fixes

1. SPR 26580 : MC40 JB Rev B DWDemo no longer displays Symbologies of scanned barcodes
2. SPR 26729 : DPM barcode scan improvements in Avalanche IK version 6.02T02.24_COD_7
3. SPR 26305 : Fix for GS1 Databar Decoding issue.

DataWedge 3.1.20

Major Features

1. Added support for RS507 Bluetooth scanner.
2. Added Continuous scanning support.
3. Added Data Capture Panel as a virtual scan button on the screen.
4. Extend the scanner enumeration intent API.

Now an application can query the connected scanners as well as supported scanners.

5. Now DataWedge allows to configuration exporting only to DataWedge folder in the internal or external storage.

(i.e /storage/sdcard0/Android/data/com.symbol.datawedge/files)

6. DWDemo now shows the scanner firmware version if the scanners supports the feature.

Issues Fixed

1. Fixed issues related DataWedge configuration auto importing.
2. SPR 23137 – Multiple decodes performed if soft and hardware trigger pressed with the DWDemo.
3. SPR 25359 - DataWedge crashes when string at criteria is set in the ADF configuration.

Known Issues and Workarounds

Broadcast Intent Activity not working in MC40 Rev B as opposed to Rev A Jellybean.

This can be overcome by modifying the DataWedge configuration without changing the application.

In the profile that configured to receive intent data, clear the “Intent category” value

and save the configuration.

This needs to be done if the data receiving application has an intent filter without an intent category.

Also this behavior won't be seen if the application is written according to the standards where,

Intent Filter added to the application with intent action and intent category.

PTT Express 3.1.19

1. Major Features

- a. After changing the talk-group or changing the status, the PTT Express user interface would be on the fore-ground to facilitate confirmation of the changed talk group and to allow user to continue making PTT calls when CallKeyConfig is 0 (on-screen buttons).
- b. Recovery update procedure : Copy the Recovery update package for PTT Express installation/uninstallation for KK to the internal storage of respective device and perform the recovery update as per the procedures mentioned in the OS recovery update guidelines
- c. To change the settings of the PTT Express client, modify the ptt_settings.xml file located at /enterprise/device/settings/ptt.
- d. To enable Debug Logs, follow below steps:
 1. Pull ptt_settings.xml from /enterprise/device/settings/ptt/ folder.
 2. Edit <setting name="logLevel">Debug
 3. Check for /storage/sdcard0/PTT folder.
 4. Logs will be created with
DEVICE_MODEL_MAC_ADDRES_PTT_log.txt
- e. The previous log file is saved as
DEVICE_MODEL_MAC_ADDRES_PTT_log.txt.bck.
- f. The default log level is set to 'None' (to avoid issue 74744). Update value of 'log_level' in ptt_settings.xml to enable the logging.
- g. Log file should not be renamed or deleted while logging is active. Copy the log file to PC or other folder if snapshot log file has to be created.
- h. Use 'adb' to copy the logs to PC.
- i. CDR log file will be created, if not exist, only when enableCDR is true and the first call happens on channel whose CDR is true or Private call.
- j. PTT HEADSET Usage Notes:
- k. Group call is initiated by pressing (and holding) headset button. Due to special PC implementation, there will be 600ms delay after user presses the headset button. User shall start speaking only after talk permit tone is played.
- l. Private call is initiated by pressing headset button in following sequence: Down, Up and Down (and hold). These 3 clicks shall occur within 600ms. If there are more than 3 clicks within 600ms, then the clicks will be discarded and nothing will happen.
- m. Enabling display of call statistics - The PTT Express client provides a toggling option on the settings page to enable/disable the display of toast

- messages showing call statistics.
- n. Mute functionality - The PTT express client allows itself to be muted and un-muted using the mute button on the main dialog, or using the key configured in the ptt_settings.xml or using intents. When the client is muted, it is indicated on the UI and on the status bar. While in Mute state, the client's audio and tones are muted and PTT key events ignored. The Mute functionality is not persistent across the reboots or application restarts. However the Mute functionality is persistent across Enable and Disable of the service.
 - o. Audio feedback Functionality – The PTT Express client allows voice feedback on Channel and Profile Switch. The configuration “audioFeedback” should be set as Default to enable the Audio feedback. Based on the language value set in the profiles, the audio would be played, in that specific language. The value of the language is set as locale string defined in <http://developer.android.com/reference/java/util/Locale.html>. Only installed languages are supported and the language list would be listed in accessibility settings on the device.
 - p. PTT supports Airwatch and SOTI MDM for deploying configuration changes.
 - q. Full-duplex client co-existence - The PTT Express client supports a configurable option “fullDuplexClientCoexistence” to coexist with full duplex WAN or VOIP client. There is another configurable option “vibrateOnVoiceCall” which allows full duplex incoming calls to vibrate when PTT is in call. The following is applicable when “fullDuplexClientCoexistence” is set to true:
 - r. When there is an outbound call made or when an inbound call is accepted on the full duplex client, PTT Express enters into co-existence mode by muting itself and showing yellow icon on the status bar. It also stops playing out any tones or calls and ignores key requests for PTT calls.
 - s. When a full duplex call terminates, PTT Express exits the co-existence mode to resume normal operations.
 - t. Few full duplex clients allows PTT Express to exit coexistence mode when its call is put on hold and then enter back to coexistence mode when the call moves out of hold state.
2. SPR fixes
- a. SPR 28025 Disabling PTT express via SOTI.
3. Known issues
- a. The coexistence solution is dependent on the announcement of states done by the full duplex client. Few variations mentioned beneath have been observed in which case PTT Express client may not be able to enter or exit from coexistence mode.
 - b. While coexisting with few versions of VOIP clients and the WAN client, PTT Express cannot come out of coexistence state when a call is put on hold.

- c. Specific version of Jabber client is not seen to announce MODE_RINGTONE due to which PTT Express cannot honor “vibrateOnVoiceCall” settings.
- d. Certain full-duplex clients are at times seen to fail in announcing their call states which can result in PTT Express not entering/exiting coexistence mode as expected. It can be recovered when a succeeding inbound/outbound established call is terminated. In some cases, a warmboot might be required
- e. After Reset (or) reboot key presses will not be detected for initial 30 secs.

DataAnalytics 1.0.1.2107

1. Major features:
 - a. Provides ability to enable and disable Data Collection
 - This feature can be used to disable/enable Data Analytics and B2M services on the device, thus disabling Data Collection
 - b. Enables collection of Level based metrics from devices and made available in Cloud to be visualized in the Analytics Platform
 - Metrics Supported are
 - Low Collection Frequency (Collected every 1 hour)
 - AcChargeCount
 - ACLineStatus
 - BatteryLevel
 - BatteryStatus
 - BatterySerial
 - BatteryPartNumber
 - BatteryManufactureDate
 - BatteryTemperature
 - BatteryVoltage
 - BatteryBackupVoltage
 - BatteryRatedCapacity
 - BatteryUsageNumber
 - DisplayOnTime
 - DeviceCpuTimeDelta
 - ProcessCpuTimeDelta
 - DataAnalyticsVersion
 - DeviceModel
 - DeviceSerial
 - AndroidVersion
 - BuildNumber
 - AvailablePhysicalMemory

- AvailableStorageMemory
- TotalPhysicalMemory
- TotalStorageMemory
- TotalMemory
-
- Medium Collection Frequency (Collected every 30 minutes)
 - AcChargeCount
 - ACLineStatus
 - BatteryLevel
 - BatteryStatus
 - BatterySerial
 - BatteryPartNumber
 - BatteryManufactureDate
 - BatteryTemperature
 - BatteryVoltage
 - BatteryBackupVoltage
 - BatteryRatedCapacity
 - BatteryUsageNumber
 - DisplayOnTime
 - DeviceCpuTimeDelta
 - ProcessCpuTimeDelta
 - DataAnalyticsVersion
 - DeviceModel
 - DeviceSerial
 - AndroidVersion
 - BuildNumber
 - AvailablePhysicalMemory
 - AvailableStorageMemory
 - TotalPhysicalMemory
 - TotalStorageMemory
 - TotalMemory
 - WlanRadioOnTime
 - IncomingCallAttempt
 - IncomingCallDuration
 - OutgoingCallAttempt
 - SuccessIncomingCall
 - WwanSignalQuality
 - WwanRadioOnTime

- High Collection Frequency (Collected every 10 minutes)
 - AcChargeCount
 - ACLineStatus
 - BatteryLevel
 - BatteryStatus

- BatterySerial
- BatteryPartNumber
- BatteryManufactureDate
- BatteryTemperature
- BatteryVoltage
- BatteryBackupVoltage
- BatteryRatedCapacity
- BatteryUsageNumber
- AcChargeTime
- DisplayOnTime
- DeviceCpuTimeDelta
- ProcessCpuTimeDelta
- DataAnalyticsVersion
- DeviceModel
- DeviceSerial
- AndroidVersion
- BuildNumber
- AvailablePhysicalMemory
- AvailableStorageMemory
- TotalPhysicalMemory
- TotalStorageMemory
- TotalMemory
- WlanRadioOnTime
- WlanReceiveByteDelta
- WlanReceivePacketDelta
- WlanSignalQuality
- WlanTransmitByteDelta
- WlanTransmitPacketDelta
- IncomingCallAttempt
- IncomingCallDuration
- OutgoingCallAttempt
- SuccessIncomingCall
- WwanSignalQuality
- WwanRadioOnTime
- WwanErrorRate
- AltitudeWRTSeaLevel
- DeviceState
- DeviceStateOnTimeDelta
- GPSAccuracy
- GPSLocation
- Heading
- MaxSatellitesCount
- PositionalDilutionOfPrecision
- SatellitesCount
- Speed
- UTCTime

- c. Enables Self Update of Data Analytics Client on the device
New versions of Data Analytics Client can be updated on the device using this mechanism

Fixes Included:

Included following SPR fixes in MC40 KK RevA release

| SPR | Description |
|----------|---|
| SPR27423 | MC40 - Unable To Programmatically Control LED's |
| SPR26112 | VoIP distorted audio when called and calling party speaking simultaneously |
| SPR26707 | MC40/JB Rev B datawedge export files do not save/import i2of5 length fields |
| SPR26189 | MC40 Touch Screen has poor response compared to TC55 |
| SPR27767 | Touch stops responding when two touch points active and proximity sensor is triggered during the call |
| SPR24697 | Does not detect proximity properly in sunlight |
| SPR26531 | Poor Decoding Performance for Attached I2OF5 barcodes. |
| SPR26729 | Avalanche IK version 6.02T02.24_COD_7 |
| SPR25675 | Datawedge MC40 is missing an option which is ?Ean Zero Extend? |

Exclusions:

- USB Mass Storage support deprecated in KK
- Card Swipe demo application not included OOB
- Device-Config utility not supported

Contents

1. M40N0KXXXRE0000001.zip – Enterprise Reset Recovery Package
2. M40N0KXXXAE0000001.apf – Enterprise Reset AirBeam Package
3. M40N0KXXXRF0000001.zip - Factory Reset Recovery Package
4. M40N0KXXXAF0000001.apf - Factory Reset AirBeam Package
5. M40N0KXXVRUxx10720.zip - Voice KK Recovery OS update package
6. M40N0KXXVAUxx10720.apf - Voice KK AirBEAM OS update package
7. M40N0KXXVRBxx10720.zip - Recovery package for KK OS upgrade (Non-Voice/Voice JB to Voice KK) & Voice KK

OS update, which updates OS along with firmware binaries for EA & Touch.

8. M40N0KXXVABxx10720.apf - AirBEAM package for KK OS upgrade (Non-Voice/Voice JB to Voice KK) & Voice KK

OS update, which updates OS along with firmware binaries for EA & Touch.

Device Compatibility

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

| Device P/N | Device P/N | Operating System |
|----------------|----------------|------------------|
| Voice SKU | Non-Voice SKU | KitKat 4.4.4 |
| MC40N0-BCG3R01 | MC40N0-BCG3R00 | - |
| MC40N0-BCG3RM1 | MC40N0-BCG3RM0 | - |
| MC40N0-RCG3R01 | MC40N0-RCG3R00 | - |
| MC40N0-RCG3RM1 | MC40N0-RCG3RM0 | - |
| MC40N0-SCG3RM1 | MC40N0-SCG3RM0 | - |
| MC40N0-SCG3R01 | MC40N0-SCG3R00 | - |
| MC40N0-BCJ3R01 | MC40N0-BCJ3R00 | - |
| MC40N0-BCJ3RM1 | MC40N0-BCJ3RM0 | - |
| MC40N0-RCJ3R01 | MC40N0-RCJ3R00 | - |
| MC40N0-RCJ3RM1 | MC40N0-RCJ3RM0 | - |
| MC40N0-SCJ3RM1 | MC40N0-SCJ3RM0 | - |
| MC40N0-SCJ3R01 | MC40N0-SCJ3R00 | - |
| MC40N0-HCJ3R01 | MC40N0-HCJ3R00 | - |
| MC40N0-SLK3R01 | | - |
| MC40N0-SLK3RM1 | | - |
| MC40N0-HLK3R01 | | - |

Installation Requirements

1. The Software update requires Voice or Non-Voice SKU hardware device
2. Enterprise Reset and Factory Reset package files are available on the MC40 Software Download section on Support Central

Installation Instructions

Recovery Update procedure:

1. Connect the USB cable from your PC to the device
2. Make sure MTP mode is selected in the USB settings in the device and MTP drivers are installed in your PC
3. The internal SD card of MC40 will be seen in your PC as mounted drive MC40N0.
4. Copy the recovery update zip file to the root folder on internal SD card
5. Press and hold the Power button on the device until the Device options menu appears
6. Tap on Reset to reboot the device
7. When the device is rebooting hold the left Scan/Action button to enter Recovery update mode
8. When the Recovery Mode home screen (Android logo) appears then release the left Scan/Action button.
9. Touch Home button to enter Recovery menu screen
10. Click on Vol+ or Vol- to navigate to the "apply update from sdcard" option
11. Click on on PTT key to select the option
12. Click on Vol+ or Vol- to navigate to the recovery update zip file
13. Click on on PTT key to select the recovery update zip file
14. Click on Vol+ or Vol- to navigate "reboot system now" and Click on PTT key to reboot the device

- OS AirBEAM Update package

Please refer Mobility Service Platform deployment guide for instruction.

Note: Battery must be 30% charged to perform update

Recovery Downgrade procedure:
(To downgrade from MC40 KK to MC40 JB)

1. Copy released MC40 JB OS recovery package & KK EnterpriseReset package to the root folder on internal SD card
2. Reset to recovery mode and update the JB OS recovery package followed by EnterpriseReset package using the recovery Update procedure
3. Reboot the device

Known issues:

- On first boot after FactoryReset or FullFactoryReset it is observed randomly on certain devices that using DW Demo only scanner Aimer is ON whereas the Illumination is OFF and the corresponding UI option (Flash) for Illumination shows disabled 'x'.

Recoverability:

Option1: In DW Demo application, press the bottom leftmost icon (flash/lightning) to

toggle the illumination state to ON state

Option2: Open DataWedge > MENU > Settings > Restore (Restore to factory defaults), Select Yes to confirm.

- On first boot after FactoryReset or FullFactoryReset it is observed randomly on certain devices that volume controls shows empty
Recoverability: Perform FactoryReset or FullFactoryReset and on first boot the user has to wait at least 60s from when the launcher screen is shown, and then only access volume controls.
- On first boot after FactoryReset or FullFactoryReset it is observed randomly on certain devices sometimes that Camera icon is missing.
Recoverability: Perform EnterpriseReset/FactoryReset

Part Numbers

1. M40N0KXXXRE0000001.zip
2. M40N0KXXXAE0000001.apf
3. M40N0KXXXRF0000001.zip
4. M40N0KXXXAF0000001.apf
5. M40N0KXXVRUxx10720.zip
6. M40N0KXXVAUxx10720.apf
7. M40N0KXXVRBxx10720.zip
8. M40N0KXXVABxx10720.apf

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