

# **Release Notes - SYMBOL TC70 KitKat GA3 v1803 with GMS**

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## **1 Introduction**

Work more efficiently and better serve your customers by giving your employees enterprise-class handheld computers that survive life in the field or shop floor, communicate and access information in real time.

The TC70 is the professional-grade Android device built from the ground up for the enterprise.

- Zebra's Mobility Extensions (Mx)
- Mobility DNA, a suite of mobility enabling applications, development tools and utilities
- Most advanced scan engine with longer range date capture capability
- Rugged and ready for every day enterprise use inside and outside the four walls

## **2 Description**

TC70 Kitkat Maintenance Release GA3 18-03 with GMS

## **3 Special Note:**

- **Downgrading from GA3 (v1803)/GA2 (v1504) GMS/non-GMS images to GA1(v1104) image**

- Airwatch MX service APK should have the latest v1803 Enterprise and Factory Reset packages to avoid a known issue if older reset packages (older than v1504) are used (If packages are used older than 15-march-2015, On applying enterprise reset / factory reset on new TC70 OS via Airwatch console will result in error, saying package is older than 15-03.2015 and cannot be applied).

#### 4 Component Description and Version

Component / Description	Version
Product Build Number	TC70-X1-23257-K-G-18-03-00-MV
Android Version	4.4.3
Linux Kernel	3.4.0
Android SDK Level	19
Android security patch level	2016-02-01
Platform (TI/MPA/ etc)	QC 8960 Pro
Flash Size	8GB
RAM Size	1GB
MSP Package	7.08.85
Scanning	6.21.0
SimulScan	2.5 SimulScanEngine 1.11.1
Datawedge	4.0.5
EMDK	Service 4.0.4.0
Mx / OSX	QC_OSX_4.4-4/MXMF: 4.4.4.0
WiFi	Fusion_QA_1.02.0.0.034
PTT	3.1.20
Touch FW	Stylus-80_GLOVE-105, FW:1.2.AA
RxLog	3.0.0.52
Mlog	v06.52 / Service v06.52
B2M	1.0.0.260
Bluetooth Pairing Utility	3.3
DataAnalytics	1.0.2.1456
File Browser	Ver 1.13
Stage Now	2.2.1.1445
App Gallery	2.2.1
Tech Docs	1.0.0
WLAN	WLAN-1240294.1
NFC	NFC_NCIHAL_AR2.4.0_KitKat, FW:122
Sensors (Accel, Gyro, Light, Prox)	1
Camera	CAM-FRONT-1.0.0 CAM-REAR-1.0.0
MSRN	0.94
MobiControl	12.2.0. Build 23469

## 5 Feature added/supported

### SPR fixes:

SPR Number	Details
SPR 28877	Serial DEX API intermittently fails to receive data from a remote terminal
SPR 28851	TC70 missing support for multiple languages
SPR 28906	System crashes when enterprise reset is triggered via MX
SPR 29036	Device Randomly reboots while in Ethernet cradle
SPR 29202	Add support for disabling the quick settings in the Status Bar
SPR 29039	Device not able to access INTERNET sites after proxy settings are applied
SPR 28244	VPN connection does not work when Always ON option is checked
SPR 29009	Scanner crash occurs when switching between soft and hard trigger
SPR 28905	AppMgr CSP crashes after several install/uninstall cycles
SPR 28854	PersistMgr fails to install the applications after OSUpgrade from GA1

### Component Release Notes (only major features since last release):

#### WLAN Fusion\_QA\_1.02.0.0.034

##### Change Details

- Added Deauth Roam changes to persist session on receiving deauth during Reassoc and Connected state - This is a fix to handle deauth during roam state
- Modified WIFI radio enable/disable when Airplane mode is enabled in Restricted UI.
- Fusion libpersistence AFM fixes

##### SPR Fixes

- SPR 28643: Unable to download country from the Zebra AP 7161

Details	Description
Wireless LAN Radio	802.11a/b/g/n/d/h/i
Data Rates	5GHz: 802.11a/n — up to 150 Mbps 2.4GHz: 802.11b/g/n — up to 72.2 Mbps
Operating Channels	Chan 36 - 165 (5180 - 5825 MHz); Chan 1 - 13 (2412 - 2472 MHz); Actual operating channels/frequencies depend on regulatory rules and certification agency

<b>Security and Encryption</b>	WEP, WPA – TKIP, WPA2- TKIP, WPA2-TKIP AES EAP TTLS, PAP, MSCHAP, MSCHAP v2, PEAPv0-MSCHAPv2, PEAPv1- EAP-GTC, EAP-TLS, EAP-FAST, LEAP
<b>Multimedia Wi-Fi Multimedia™</b>	(WMM)
<b>Certifications</b>	WFA (802.11n,WMM), WMM-PS, CCXv4, Wifi Direct, WPS2.0
<b>Fast Roam</b>	PMKID caching, Cisco CCKM, OKC, 802.11r
<b>Network Connections</b>	Bluetooth; USB 2.0 OTG Host docking interface; 802.11r and 802.11k for enterprise voice roaming included

## Mx / OSX: QC\_OSX\_4.4-4/MXMF: 4.4.4.0

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+InternalSD+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 UMS/PTP/MTP	MassStorage,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
Wwan	Enable/Disable Wlan
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

## Scanning Framework Version :06.21.00

### Features:

- Contains the ScannerDCA.apk with CTS passed; this was earlier released but included in this release too
- Imager scanner support for TC70CR KitKat
- Fail scan count in ScannerDCA is reported using 3 counters (UserInitiatedStopScanCount, TimedOutStopScanCount and ProcessDecodeFailedScanCount)

- Release of the ScannerDCA with support for counters ; actual scan count & failed scan count
- Supporting "Document Capture" Acquisition mode in SE47xx undecoded engine for "Image Capture only" mode selection
- Trigger modes "Timed Hold", "Timed Release", and "Press and Release" for imager scanners
- Image capture support with VF support
- Scanner framework support for Data Capture Analytics
- Added "Timed Hold", "Timed Release", and "Press and Release" trigger modes to SSI scanners and aim\_timer parameter
- Image Capture Support
- Firmware update method modification included
- Added Support for Auto firmware update in TC70-CR device (MC-120317)

#### Fixes:

- Fix for MC-120167 : [KK TC70] SPR 29184 - Unable to scan RSS14 barcodes
- Fix for MC-120842 : Beam light is on continuously and device stops responding and will reboot automatically after 1min 30 sec
- Fix for MC-113657 : Scanner beam fires on continuously after selecting imagecapture only in Datawedge
- Bug fix in the Auto firmware update feature based on code review comments.
- Fix for MC-116247 : RS507 connected is seen when pairing two devices using Bluetooth in RhodesTestApp.
- Fix for MC-114643 : In DWDemo changing scanner from "camera to Imager", Device black out and scan beam is fired continuously.
- Fix for MC-117488 : MC18 - Investigate increase in power consumption reported by product team during scanner stress
- EMBPD00184062 Contains fixes done to Royal Mail; BT Disconnect issue on Boundary.

- EMBPD00167726 issue fix
- Fix the MC-114825 : memleak fix
- Firmware update bug fixes related to UI
- EMBPD00185258 - Beam is not fired when the trigger type is changed from Soft to Hard in TC75
- EMBPD00184324 - Wrong barcode decoded when set Coupon Report Mode to New.
- Camera Scanner VF & Flash lock on Stage Now app fix added
- Bluetooth Scanner related fixes done to RM
- EMBPD00177204 - [TC70\_MR GMS/NonGMS]Beep Initiation value is able to exist Previous build in "Slow test"

## **Datawedge:**

### **Features:**

- Support for Android Lollipop.
- Support for new scanner framework version 15.
- Case #3383144 - Added an option under Keystroke output plug-in to configure a character delay for multi byte character dispatching via keystrokes. Set default value to 0ms to improve the performance in the default behavior.

### **Fixes:**

- MC-119285 - Fixed the DataWedge crash when suspend resume test was run with EMDK Barcode Sample with continuous scanning enabled.
- PT111665442: IP Address field doesn't show any special characters (dot) on the edit text field.

## **SimulScan**

### **Fixes:**

- Fixed failure in EMDK Sample App: Read->Capture Document->Read. Second read leads to failure. Engine does not start

## EMDK:

### Features:

- Add new payment device configuration parameters such as enableBTDiscoverableMode and enableSwipeOnNoAID
- Added support for multiple MX versions in EMDK Wizard. Previous EMDK versions supported MX version either 4.2 or 4.4. In this version, MX versions 4.2, 4.4 and 5.0 are supported. When creating or updating a profile, the targeted MX version must be selected. For more information on MX versions, refer to Choosing an MX Version.
  - An existing profile can be upgraded to a later of version of MX using the Profile Upgrade feature in the EMDK Profile Manager.
- Added support for the following MX v4.4 features in the Profile Manager:
  - Additional Locale - Updated UI Manager with Additional Locale Control support for SPANISH, US\_SPANISH, BRAZILIAN PORTUGUESE and PORTUGUESE.
  - Password Masking/ Encryption - PrivateKeyPassword/ KeystorePassword in Certificate Manager and AttPassword/ TmobilePassword/ CustomPasswordin GPRS Manager values can now be encrypted.
- Added support for the MX v5.0 in the Profile Manager:
  - Vendor Specific DHCP Options - Updated DHCP Manager that has the Vendor Specific DHCP Options support so that the device can be configured such that it will ask and set vendor specific attributes.
  - PAC File - Updated Wi-Fi feature that has the PAC file support so that it can be used for changing proxy settings centrally and the devices will change their settings accordingly.
  - Screen Capture Control - Updated Display Manager that has the Screen Capture Control support so that it can be used for controlling the ability to capture the device screen by users of the device specially when sensitive information is shown on the device.
- Added support for Payment APIs. The Payment APIs are designed for performing EMV and Magstripe Payment transactions when using the PD40 Payment device with MC40 JB, MC40 KK and MC67 KK devices. Please refer to help documentation for more details including additional device support.



- Added support for Serial Communication APIs. This feature provides simple APIs to enable/disable serial communication port, write and read data to/from remote devices attached to TC75 KK and TC70 KK (Android 4.4.3) devices. Please install the patch for SPR-28877 before using this feature.
- Added support for ScanData.getRawData() in EMDK Barcode API.
- Added support for AimType and IlluminationMode in ImagerSpecific configuration of Barcode API.
- Added new capabilities to Activity Selection when creating a Data Capture profile using EMDK Wizard:
  - Ability to define wildcard character “\*”. If a profile needs to be associated with all the activities in an application, “\*” can be used instead of defining each activity name. This was not supported in previous EMDK versions.
  - Ability to define activity names with any naming format. Earlier EMDK versions were supporting only the activity names that has application name as a prefix in their activity name. Now users can define any type of activity names.
  - Refer to the help documentation for detailed information on using activity selection.
- Added new method getInstanceAsync() to EMDKManager. The EMDK Feature Manager object returned by this method is guaranteed to be usable immediately. The feature manger object returned by the existing method getInstance(), may not be ready to be used immediately, especially after a device reboot.
- The EMDK for Android Help documentation is now available only online. The EMDK installation will no longer install the documentation on the development PC. The link to the online documentation is provided in the EMDK program group under the Start menu.
- The EMDK Samples are now available online for downloading to the PC. The EMDK installation will no longer install the samples on the development PC. The link to the online samples is provided in the EMDK program group under the Start menu.

## Fixes:

- Fixed: MC-113184 - EMDKService crash is observed with camera scanning due to file descriptor memory leaks.

- Fixed: Enhanced exception handling to avoid crashes in payment API when the PD40 payment device sends an incorrect response.
- Fixed: Return the correct error code as account number mismatch when application passes incorrect account number information in the promptPin method of Payment API
- Fixed: Removed the restriction on the firmware file format when flag isUpgradeOnly=false in remote firmware update of PD40 payment device.
- Fixed: Removed the dependency of placing the PD40 binary only on SDCard to update firmware and EMV parameter of PD40 payment device.
- Fixed: In the Barcode API, the WAITING and IDLE states were invoked twice instead of once.
- Fixed: Barcode API isContinuousScan flag would always return false even when the ContinuousScan feature is successfully set.
- Fixed: The emdkName with a hyphen character (-) could not be used in the CreateNameValuePair() in Profile API.
- Fixed: The paramValue cannot have period character (.) when using CreateNameValuePair() in Profile API.
- Fixed: Enhanced the exception handling in EMDK to avoid null pointer exceptions and data format exceptions.

## RxLog

### Features:

- Added LTS plugin support for Kernel logs
- Added 'per core cpu load' feature in RxLogger main logs

### Fixes:

- EMBPD00180753 : Fixed the issue where the snapshot logs were not getting generated when one or few options are selected
- Rectified main logs file name generated through LTS plugin

- SPR 28715 – Fixed issue where RxLogger gps logs do not get updated when device is used for long time in low accuracy GPS option
- Fixed the issue in backup now feature where it was getting disabled once main screen goes away

## AppGallery:

### Features:

- App Startup time – AppGallery optimized to decrease startup time.
- Improved Scrolling experience on devices (Showcase, Galleries, Apps)
- Gallery and App synchronization- – AppGallery optimized to decrease synchronization time

### Known problems and suggested workarounds:

Description	Workaround
It is taking around 2-3 mins to apply the updates. Update progress is not shown.	After clicking on “update” button wait for 2-3 mins. For the update to come
Opening app after self-update will logout the user.	User has to login again with his credentials.
[AGM/AGE]AppGallery client app doesn’t sync using proxy network	Use AppGallery with open network.

## 6 Contents

File	Description
T70N0KXXARUEF01803.zip	Full Software Update
T70N0KEXAREXX01803.zip	Enterprise Reset - Wipes all partitions/data except Enterprise folder/partition & On Device Storage (/sdcard)
T70N0KFXARFXX01803.zip	Factory Reset - Wipes all partitions/folders including enterpris except On Device Storage (/sdcard)

T70N0KXXAAUEF01803.apf	Used by MSP/AW – Full Package update
T70N0KEXAAEXX01803.apf	Used by MSP/AW – Enterprise reset
T70N0KFXAAFXX01803.apf	Used by MSP/AW – Factory reset

## 7 Device Compatibility

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

Device	Operating System
TC700H-GC11ES-NA	Android 4.4.3
TC700H-GC11ES-IN	Android 4.4.3

## 8 Installation Requirements

This Software has to be used with compatible devices listed above

## 9 Installation Instructions

1. Plug the TC70 to the USB Cable and then the Cable to the PC. If you have a Cradle with USB connectivity, connect it.
2. You will be connected as a media device.
3. Download following packages
  - a. T70N0KXXARUEF01803.zip ( Full Package Update v18-03)
  - b. T70N0KFXARFXX01803.zip (Factory Reset Package v18-03)
  - c. T70N0KEXAREXX01803.zip (Enterprise Reset Package v18-03)
4. Now, copy the .zip files (and the Optional files too) to your TC70's storage.
5. You will need to put your device into Recovery Mode.
  - a. Hold the “Power Key” until “Reset” option appears and then release
  - b. Tap “Reset” and then immediately hold the “PTT Key” until recovery mode is initiated (Let go after you feel the vibration 😊)
  - c. Once on the Recovery Screen, scroll down using “Volume Keys” +/- to the location where you copied the files and press the “Scan Key”

- d. Follow same procedure and select the T70N0KXXARUEF01803.zip (the Full Package Update v18-03), with “Scan Key”
  - e. Upon completion, you will be back at the Recovery Mode screen.
  - f. Note: Since Partition has changed, system by default will not backup user data partition. To end user this is similar to Enterprise Reset.
  - g. Next step only if you are switching between GMS and NON-GMS software, otherwise this step is not required.
    - If you are updating device from GMS to NON-GMS or Vice Versa, it is required to either use T70N0KFXARFXX01803.zip (Factory Reset, this will give complete OOB experience) or at Minimum, please do a T70N0KEXAREXX01803.zip (EnterpriseReset).
  - h. If you are going to install the optional packages (see 3e above), then do so now with the same procedure used above...
  - i. Upon completion of all of the updates, you will be back at the Recovery Mode screen. Select, “reboot system now” with the “PTT Key”, you will see it reboot, then you will see “Android is upgrading...” and then you will see the main screen, then...
6. Go to “Settings” and scroll down to “About phone” and look at the “Build number”. It should end with “K-G-18-03-00-MV”. Now... you can either start using the TC70 or if you are not going to install a working SIM (or at least not right away), please manually set the date and time. Go to “Settings” and scroll down to “Date & time” and set the correct date and time by unchecking “Automatic date & time” and “Automatic time zone” and then select “Select time zone” and do that. Then, select “Set date” and do that. Finally, select “Set time” and do that. Lastly, put check marks back in “Automatic date & time” and “Automatic time zone”.
  7. Please update latest Firmware for Scan Engine
  8. Now you are all set to use your updated **TC70 With GMS**.

## 10 Part Number and Release Date

Part Numbers
T70N0KXXARUEF01803
T70N0KEXAREXX01803
T70N0KFXARFXX01803
T70N0KXXAAUEF01803
T70N0KEXAAEXX01803

T70N0KFXAAFXX01803

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