

# TC75 OPERATING SYSTEM BSP 20.02 GMS RELEASE NOTES

## 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 TC75 is the professional-grade Android device built from the ground up for the enterprise.

- 4G/LTE (TC75 only) and 8.02.11a/b/g/n connectivity for anywhere, anytime access to information
- 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

## DESCRIPTION

TC75 Lollipop REV A v20.02 with GMS

### Special Note:

- Reboot after FactoryReset or EnterpriseReset will take a longer time than KitKat.
- Lollipop has built in mechanism to update the scan firmware automatically.
- A Separate downgrade package is released in support central to downgrade smoothly to Kitkat via recovery method. This package contains the Enterprise Reset Embedded in it.
- Downgrade from Lollipop to KitKat through MSP is not supported.
- Button\_L1 (SCAN BTN) cannot be remapped with Recent Apps key.

### Component Description and Version

Component / Description	Version
Product Build Number	01-20-02-LG-00-MV
Android Version	5.1.1
Linux Kernel	3.4.0
Android SDK Level	22
Android security patch level	2016-08-01
Platform (TI/MPA/ etc)	QC 8960 Pro
Flash Size	8GB
RAM Size	1GB
MSP Package	7.08.85
Scanning	16.08.32.00
SimulScan	2.6 SimulScanEngine 1.13.6
Datawedge	5.0.17
EMDK	Service 5.0.3.0
OSX / Mx	OSX 51.5.2.6 / MXMF version:5.3.0.0
Wi-Fi	FUSION_QA_2.00.0.0.011
PTT	3.1.27
Touch FW	STYLUS-80_GLOVE-105, FW:1.2.AA
RxLog	4.58.0.0
Mlog	v06.54 / Service v06.54
B2M	1.0.0.297

Bluetooth Pairing Utility	3.4
DataAnalytics	1.0.2.1768
File Browser	Ver 1.17
Stage Now	2.4.1.1139
App Gallery	2.3.8
Tech Docs	1.0.0
WLAN	WLAN-1240294.1
NFC	NFC_NCIHAL_AR3.5.0_Lollipop, FW:122
Sensors (Accel, Gyro, Light, Prox)	1, 1, 1, 1
Camera	CAM-FRONT-1.0.0 CAM-REAR-1.0.0
MSRN	0.94
MobiControl	12.2.0. Build 23469
WWAN	QP200-W150502A-6102076
RIL	Qualcomm RIL 1.0
TS.25	MAY022016
GPS	GPS-1.0.0
ZVC	1.1.22
NFC Payment Manger	2.0.1
IST	App:1.00 build 3/Service: 1.00 build 1/Firmware:1.00
Battery Manger	1.30

## CONTENTS

File	Description
T75N0LXXARGE02002.zip	Full Software Update
T75N0LXXAREXX02002.zip	Enterprise Reset - Wipes all partitions/data except On Device Storage (/sdcard)
T75N0LXXARFXX02002.zip	Factory Reset - Wipes all partitions/folders including Device Storage (/sdcard)
T75N0LXXAAGEF02002.apf	Used by MSP/AW – Full Package update
T75N0LXXAAEEX02002.apf	Used by MSP/AW – Enterprise reset
T75N0LXXAAFXX02002.apf	Used by MSP/AW – Factory reset

## DEVICE COMPATIBILITY

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

Device	Operating System
TC75BH-GA11ES	Android 4.4.3, Android 5.1.1
TC75BH-GA11ES-TW	Android 4.4.3, Android 5.1.1
TC75BH-GA11ES-IA	Android 4.4.3, Android 5.1.1
TC75BH-GA11ES-BR	Android 4.4.3, Android 5.1.1

## INSTALLATION REQUIREMENTS

This Software has to be used with compatible devices listed above. Internal SD Card should have 500 MB of free space.

How to find the Internal SD card free Space? Here are the methods:

### Method 1:

1. Connect the device to a PC using Snap-on and allow the PC to access the device storage.
2. Check the Free storage available in “Internal Storage”. Make sure the free storage is more than 500MB.
3. Factory reset or Enterprise Reset can be performed to free up internal storage space.

**Method 2:**

1. In the device, Open “Storage” under “Setting” menu and look for Available space under “Internal Storage” section (which has total space as 1GB).
2. The Available memory should be more than 500MB.
3. Factory reset or Enterprise Reset can be performed to free up internal storage space

## INSTALLATION INSTRUCTIONS

1. Plug the TC75 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. T75N0LXXARGE02002.zip (Full Package Update v20.02)
  - b. T75N0LXXARFXX02002.zip (Factory Reset Package v20.02)
  - c. T75N0LXXAREXX02002.zip (Enterprise Reset Package v20.02)
4. Now, copy the .zip files (and the Optional files too) to your TC75’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 “PTT Key”

d. Follow same procedure and select the **T75N0LXXARGE02002.zip** (the Full Package Update v20.02), with “PTT Key”

e. Upon completion, the device will reboot to Recovery Mode screen.

f. 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 **T75N0LXXARFX02002.zip** (Factory Reset, this will give complete OOB experience) or at Minimum, please do a **T75N0LXXAREXX02002.zip** (Enterprise Reset).

g. If you are going to install the optional packages, then do so now with the same procedure used above.

h. Upon completion of all of the updates, the device will reboot to Recovery Mode screen. Select, “reboot system now” with the “PTT Key”, you will see device reboot to Android Home Screen, then

6. Go to “Settings” and scroll down to “About phone” and look at the “Build number”. It should end with “01-20-02-LG-00-MV”. Now, you can start using the TC75, please manually set the date and time. Go to “Settings” and scroll down to “Date & time” and set the correct Date/Time by un-checking “Automatic date & time” and “Automatic time zone” and then select “Select time zone”, “Set date”, “Set time” to set the desired values. Lastly, put check marks back in “Automatic date & time” and “Automatic time zone”.

7. Now you are all set to use your updated TC75 with GMS.

### **Downgrade instruction from Lollipop to KitKat:**

Follow the same steps mentioned above to downgrade but replace the package with latest Kitkat packages. The latest version for Kitkat GMS is available [here](#). When downgrading via Recovery method, make sure to use OS Recovery package followed by enterprise Reset together. This is a must step to downgrade smoothly. A special recovery package is released to downgrade to Kitkat GMS v14.04 which contains the Enterprise Reset Embedded to it. The same should be used for downgrading via MDMs (SOTI & Airwatch).

## **CHANGES AND FIXES**

### **Feature added/supported**

#### **SPR fixes:**

SPR Number	Details
26919	Video Capture fixed Duration does not take effect
30095	HostMgr is not setting the hostname on device
29115	Customer sees devices lock and wipe even though end user has not exhausted
29048	NPObjct deleted error while using iframes in the html page
29618	TC75 Key programmer configs are not consistently functional
29726	TC75 device shows minor sluggishness when opening apps/navigating after A
29030	While deploying key-config.xml into device over the air it is not consumed on
29355	Audio volume cannot be adjusted while PTT Pro is active on TC70/ TC75.  TC70 and TC75 with the 2.5MM headset dongle and standard Zebra PTT sing make any effect.
29099	Fixed The battery percent is shown incorrectly after doing a battery swap

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

#### Fusion\_QA\_2.00.0.0.011

##### Change Details

- Added Support for SmartMU feature.
- Fix for Fast Mschapv2 connection failures.
- Resolves the issue where MU was unable to connect to 802.11k enabled WIFI profile
- Resolves the issue where fusion logger page will either be left blank (in some cases) or it will not be updated on roaming to different BSSID's (only observed for CCKM roam).
- Resolves the issue where after Long press on connected profile to select modify network option and if we select advanced options, it should display the previous proxy auto config details as we configured before. It was failing update that info.

- Resolves the issue where DhcpInfo is not properly updating when gateway is disabled
- Resolves the issue where Mac Address is not displaying in Fusion Status
- Pre-Certification requirement to pass P2P power save test cases. Fix provided to enable P2P Power Save
- Fix for reducing the connection time delays.
- Fix for PNO (Preferred Network Offloading) when only DFS channels are enabled. On suspending the device, Host driver offloads the network info to firmware for handling scan operations.

Details	Description
Wireless LAN Radio	802.11a/b/g/n/d/h/i/k/r
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 certification agency
Security and Encryption	WEP, WPA – TKIP, WPA2- TKIP, WPA2-TKIP AES EAP-FAST, EAP-TLS, EAP-FAST, LEAP
Multimedia Wi-Fi Multimedia™	(WMM)
Certifications	WFA (802.11n,WMM), WMM-PS, CCXv4, Wi-Fi Direct
Fast Roam	PMKID caching, Cisco CCKM, OKC, 802.11r
Network Connections	Bluetooth; USB 2.0 OTG Host docking interface; 802.11r for enterprise voice roaming included

**Mx / OSX: QC.51.5.2.6/MXMF: 5.3.0.0**



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
Enable/Disable Enterprise Reset in Settings App	API to Enable/Disable the Enterprise Reset UI in Settings
Display OSX Version	OSX version can be seen in Settings => About Phone 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 Submit XML to MxMgtFw
Enable Disable UMS/PTP/MTP	MassStorage, MediaTransfer and PTP modes can be enabled/Unblocked
Enable Disable External USB Storage	Enable/Disable Mounting of External USB Pen-drive 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

Wi-Fi	Enable/Disable Wi-Fi
WWAN	Enable/Disable WWAN
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
SD card Usage	Enable/Disable SD card 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
Hide/unhide Power button menu	Hide/Unhide menu displayed when power button is di
Enable/ Disables Settings Icon on Notification drag-down page	Enable/ Disables Settings Icon on Notification drag-d
Turn On/Off Notification Bar (whether the bar shows and can be "pulled down")	Turn On/Off Notification Bar (whether the bar shows a "pulled down")

### Scanning Framework Version: 16.08.32.00

#### Features:

- Firmware and Decoder versions are now displayed in DW.
- Support for DCA added.
- Support for Picklist, LCD mode, AimTimer.

- Support for Imaging APIs.
- Support for scan Inverse Aztec barcodes.
- Mail mark 09 decoder kit added
- ImagerCamera support
- Simulscan and Imaging through Scanning API
- Added support for BT RS507 and camera scanning.

### **Datawedge**

#### Features:

- Two new actions to Advance data formatting actions namely "Remove characters" and "Stop remove chars".
- Wake on trigger support for RS429 pluggable scanner.
- RS6000 support with new parameters.
- Enhanced UI navigation performance.
- Added pluggable serial SSI scanner connection disconnection notification support.

### **SimulScan**

#### Features:

- Add the raw barcode data to the ProcessedRegion ExtraData1 field (previously unused)
- Prevent exception due to empty template path in SimulScanDemo LandingActivity
- Unable to save manually modified data after scan capture in simulscan for "Structured\_European.xml" Template.
- Fix SS-191 - Remove flexiscript source from SimulScan default templates

- ImgKit Update SS\_6.6.5\_CD\_1.6.2\_OCR\_1.6.0.
- OCR Engine update (v3.1.5)
- Upgraded the OMR engine for BAXI form.
- Add barcode detection for Freeform OCR to avoid recognizing a barcode as a string of "IIIIIIII".
- Modified SimulScanView to just extend RelativeLayout and the view/layout.

## **EMDK**

### Features:

- Enhanced the EMDKManager > ProfileManager to support simultaneous usage in multiple applications. Refer to the Usage Notes for a complete description and restriction on using this feature.
- Added support for the MX v6.0 in the Profile Manager:
- Clock
- Added new feature to manage Auto Time Zone - whether to automatically acquire time zone from the network.
- Added new feature to manage Military Time - whether to use Military (24 hour) time format.
- Updated to allow Manual Time Zone setting when Auto Time is On.
- Camera Manager - Some of the latest devices can now be used to take pictures using Imager. The Camera manager is enhanced to block the Imager from taking pictures.
- Analytics Manager - Added new capability to enable or disable features such as File Upload, ANR (Application Not Respond) Info Collection, Ruggedness Info Collection, Feature Usage Info Collection, Restrict SelfUpdate Wi-Fi Only, Device Info Collection and custom feature.
- Enhanced the Notification Manager APIs with the following features:

- Added support for using the pluggable External Vibrator with WT6000 device. The earlier version of EMDK Notification Manager API supported only RS6000.
- Enhanced the NotificationDevice class for canceling the active notifications on the remote device.
- Enhanced the Password fields in the Profile Manager to accept special characters.
- Added support for the MX v5.1 in the Profile Manager:
- UI Manager
- Added new feature to set the language to localize the device to match the preferred language of the intended Device User.
- Added new feature to enable or disable pulling down the Notification Panel.
- Added new feature to display or hide the Settings icon in the Notification Panel.
- App Manager - Added new feature to launch an application by specifying the application name.
- Host Manager - Added new feature to set the device host name to identify device both locally and within any DNS-enabled IP-based network.
- Bluetooth Manager - Added new feature to allow or disallow the mobile device to pair with new remote devices.
- Analytics Manager - Added new capability to control the data captured by the analytics engine such as data transportation, type of information to collect and data collection scheduling.
- Updated Barcode Manager APIs with the following features.
- Enhanced the ScannerInfo class for selecting the scanner:
- Updated the DataCapture feature in the Profile Manager.
- Added support for additional scanner devices:
- Bluetooth Imager 1 (please note this value is for use with RS507 only)

- Added support for controlling the barcode decode notifications:
- Aim Mode - Enable/Disable scanner aim during scanning.
- Illumination Brightness - Controls illumination brightness of the imager.
- Added support for new WT6000 Lollipop (Android 5.1.1) devices along with RS4000 and RS6000 scanner support.
- Added support for Notification APIs to send notifications to remote devices. This feature currently supports RS6000 only. The Notification APIs can be used for controlling following notifications:
  - Line Of Sight LED, Beeping & Vibration
  - Updated Barcode Manager APIs for the following features.
  - Added support for new pluggable scanner RS4000 to be used with WT6000 device
  - Added support for new Bluetooth Scanner RS6000 to be used with WT6000 device
  - Added new scanner configurations parameters in ScannerConfig.ScanParams
- Added support for the MX v5.2 in the Profile Manager:
- Added support for the following MX v4.4 features in the Profile Manager:
- Updated DataCapture feature in the Profile Manager:
- Added support for choosing the remote scanners such as RS507, RS4000 and RS6000. Following are the expected values:
  - Pluggable Laser 1
  - RS6000 Bluetooth Imager
- Added support for controlling the barcode decode notifications:
  - Decode Audio Feedback Mode - Controls the Audio feedback mode to be given by the host device (WT6000) and remote scanner (RS6000) upon barcode decode.

- Decode LED Feedback Mode - Controls the LED feedback mode to be given by the host device (WT6000) and remote scanner (RS6000) upon barcode decode.
- The BarcodeSample1 has been modified to support WT6000 and new scanners (RS4000 and RS6000). Now it works with default/native device orientation. In WT6000, it is working in Landscape mode.

## **RxLog**

### Features:

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

### Fixes:

- 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 plug-in.
- Fixed the issue in backup now feature where it was getting disabled once main screen goes away

## **AppGallery**

### Features:

- Push Notification
- When a New Gallery is created a notification is sent to the devices which belong to the same organization.
- When a App is added to a Gallery a notification is sent to the devices which contains the Gallery.
- When a New User is added to a Gallery, a notification is sent to the device where the user has logged in.
- DataFile Configuration

- Allows multiple file to be uploaded for a single app.
- Also Configuration file can be changed, while adding to the app to Gallery from showcase.
- Silent Install
- Apps get installed silently when AG is closed based on force install settings.
- Updates App silently when AG is closed.
- Push AppGallery configurations silently to the device.
- Scan To Stage
- Allows user to scan a Barcode and login to AppGallery.
- Allows Org Admin to share the Gallery easily to all the users.
- Applicable only on Zebra Devices.
- Showcase Edit Functionality
- Option to Update most of the info present in showcase without adding a new version

Known problems and suggested workarounds:

Description	Workaround
It is taking around 2-3 min to apply the updates. Update progress is not shown.	After clicking on “update” button wait for 2-3
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.



## PART NUMBER AND RELEASE DATE

Part Numbers
T75N0LXXARGE02002
T75N0LXXARFXX02002
T75N0LXXAREXX02002
T75N0LXXAAGE02002
T75N0LXXAAFXX02002
T75N0LXXAAEXX02002

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