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# Release Notes - Zebra TC70 Android L NGMS – LifeGuard Update 13 Release

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## Description

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This release contains the following software package which is compatible with the TC70 NGMS product. LifeGuard patches are cumulative and include all previous fixes that are part of earlier patch releases.

## Component Description and Version

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Component / Description	Version
Product Build Number	02-10-02-L-00-A release-keys
Android Version	5.1.1
Linux Kernel	3.4.0
Android SDK Level	22
Android security patch level	2018-03-05 (Critical Patch Level: 2019-07-01)
Platform	QC 8960 Pro
Bluetooth Stack	01.018.00
Flash Size	8GB
RAM Size	1GB
MSP Package	7.08.85

Scanner Framework	19.56.37.2
SimulScan Demo App	2.6
SimulScanEngine	1.13.6.5
Datawedge	6.7.48
EMDK	6.8.21.1121
OSX/ Mx	OSX QC.51.5.2.14 / MXMF version:7.2.10.2
Wi-Fi	FUSION_QA_2.00.0.0.021
PTT	3.1.27
Touch FW	STYLUS-80_GLOVE-105, FW:1.2.AA
RxLog	4.58.5.0
Mlog	v06.54 / Service v06.54
B2M	1.0.0.297
Bluetooth Pairing Utility	3.7
Data Analytics	1.0.2.1859
File Browser	Ver 1.19.12
Stage Now	2.10.1.1389
App Gallery	2.8.4.13
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
Zebra Volume Control	1.1.23
NFC Payment Manger	2.0.1
IST	App:1.00 build 3/Service: 1.00 build 1/Firmware:1.00 build 5
Battery Manger	1.3.6
DDT	1.15.0.11
FingerPrint	Zebra/TC70/TC70:5.1.1/02-10-02-L-00-A/180316:user/release-keys
ZSL	3.1.1

Zebra Data Service	1.0.0.1002
EKB	1.7.0.5
WifiConfigCSP	7.0.1

## 1. CFE v13 Updates:

❖ CFE-TC70-L-XX-021002-N-00-13.zip (NGMS)

❖ **Android Security Patch Level:** March 05, 2018 (Critical Patch Level: July 01, 2019)

Use the below link to see the Android Security bulletin for more information:

<https://source.android.com/security/bulletin/>

- SPR36654 - Resolved an issue where TC7X experiences BT audio disconnect when WLAN 11d set to Auto.
- SPR37104 - Resolved a Framework reboot issue when user tries to access missed call message notification on user screen in EHS (MMS is disabled).
- SPR36971 - Resolved an issue wherein the device was sometimes sticking to Wi-Fi Access Points even at very low signal levels
- SPR36633 - Resolve a scan failure issue when application using EMDK Timed Release api to scan the barcodes.
- SPR37258 - Resolved an issue where DNS Resolution fails when device roams to different subnet.
- Updated below mentioned components:
  - Scanner Framework: 19.56.37.2
  - WLAN: FUSION\_QA\_2.00.0.0.021

## 2. CFE v12 Updates:

❖ CFE-TC70-L-XX-021002-N-00-12.zip (NGMS)

❖ **Android Security Patch Level:** March 05, 2018 (Critical Patch Level: April 05, 2019)

Use the below link to see the Android Security bulletin for more information:

<https://source.android.com/security/bulletin/>

- SPR35912 - Resolved an issue wherein 11k operation depends on 11r functionality
- SPR36265 - Fix an issue where scanning is not working after reconnecting the out of range RS507 by Bluetooth
- SPR35288 - Fixed an issue wherein initialization of scanner was taking ~1sec.
- SPR35054 - Added support for reduced quiet zone barcode decoding.
- SPR34844 - Resolved an issue wherein multiple open calls are prevented when multiple application tries to open scanner without releasing previous instance.
- Updated below mentioned components:
  - Scanner Framework: 19.53.37.0
  - Bluetooth: 01.018.00

## 3. CFE v11 Updates:

❖ CFE-TC70-L-XX-021002-N-00-11.zip (NGMS)

❖ **Android Security Patch Level:** March 05, 2018 (Critical Patch Level: December 05, 2018)

Use the below link to see the Android Security bulletin for more information:

<https://source.android.com/security/bulletin/>

- SPR36118 – Resolved an issue wherein patch version was not updating in cfe.ini.
- SPR34738 – Resolved an issue wherein device reboots when VPN connection established over Cellular (AT & T).
- SPR35368 – Resolved an issue wherein scanner crash while scan the barcode just before suspend or after resume the device.
- SPR35362 – Resolved an issue to set hardware picklist to scan barcodes which are very close to each other.
- SPR33709 – Implemented the intercharacter delay functionality in Datawedge to support RDP session scan data transfer.
- SPR34191 – Resolved an issue where Devices not sending the hostname to the DHCP server.
- Updated below mentioned components:
  - MX: 7.2.10.2 (For detail please refer <http://techdocs.zebra.com>)
  - Scanner Framework: 19.12.35.0
  - EKB:1.7.0.5
  - Bluetooth: 01.015.00

#### 4. CFE v10 Updates:

❖ CFE-TC70-L-XX-021002-N-00-10.zip (NGMS)

❖ **Android Security Patch Level:** March 05, 2018 (Critical Patch Level: September 05, 2018)

Use the below link to see the Android Security bulletin for more information:

<https://source.android.com/security/bulletin/>

- SPR35025 – Resolved an issue where Proxy Auto Config (PAC) did not work properly following stops/restarts of the PacService.
- SPR33977 – Resolved an issue wherein set time zone issue observed with StageNow.
- SPR34716 – Resolved an issue wherein the MX Framework did not restart properly following events where the service was stopped.
- SPR34679 – Resolved an issue wherein setting WiFi Band selection to Auto was not working properly with StageNow.
- SPR34936 – Resolved an issue wherein Datawedge used to crash on bootup.
- SPR31195 – Resolved an issue wherein pressing trigger key while in chrome browser with multiple tabs used to result in switching to a different tab.
- SettingsEULA has been renamed to Zebra Data Services.
- Updated below mentioned components:
  - MX: 7.2.9.0 (For detail please refer <http://techdocs.zebra.com>)
  - Scanner Framework: 19.10.35.1
  - ZSL:3.1.1
  - WifiConfigCSP:7.0.1

#### 5. CFE v9 Updates:

❖ CFE-TC70-L-XX-021002-N-00-09.zip (NGMS)

❖ **Android Security Patch Level:** March 05, 2018 (Critical Patch Level: June 05, 2018)

Use the below link to see the Android Security bulletin for more information:

<https://source.android.com/security/bulletin/>

- SPR33755 – Resolved an issue wherein the Whitelisted apps were unable to submit XML to MX.
- SPR33207 – Resolved an issue wherein the Device Diagnostic tool had an issue with reading the Battery Cycles in the application for PP+ batteries.

- SPR34267 – Resolved an issue where-in user was not able to enable USB debugging option using StageNow.
- SPR33862 – Fixed an issue where-in user could not set Display Timeout value of 30min using StageNow.
- SPR34145 – Fixed an issue wherein user was unable to connect to WLAN network due to WEP Key Index issue.
- SPR34307 – Resolved an issue wherein device out of the box intermittently failed to get staged via StageNow.
- SPR34083/34014/32519 – Resolved an issue wherein disabling WWAN radio via Airwatch using StageNow XML fails.
- SPR33639 – Resolved an issue wherein the customer app install and launch during device sleep state and device stop emitting scan beam after awake from suspend.
- SPR33876 – Resolved an issue wherein Display Timeout was unable set via StageNow.
- SPR33607 – Resolved an issue where few fresh devices were unable to stage after unbox the device.
- SPR33538 – Resolved an issue wherein the Scanner beam stuck off and No LED beam while pressing scanner button.
- SPR33981 – Resolved an issue Czech Republic Regulatory Country could not be set using Wifi config profile.
- SPR34429 – Resolved an issue wherein device failed to emit scan beam if the application was launched during device suspend.
- SPR34614 – Fixed an issue in DataWedge wherein scanner could not be enabled due to quick enabling and disabling of scanner through Intents.
- SPR34716 – Resolved an issue wherein the MX was getting killed by Backupmanager and didn't restart properly.
- SPR34213 – Resolved an issue wherein shared preference initialization without launching EKB.
- Added support for Enterprise Lockdown feature.
- Updated below mentioned components:
  - Datawedge: 6.7.48
  - EKB: 1.7.0.2 (Added as an System application with this CFE 09)
  - MX: 7.2.8.2

## 6. CFE v8 Updates:

❖ CFE-TC70-L-XX-021002-N-00-08.zip (NGMS)

❖ **Android Security Patch Level:** March 05, 2018

Use the below link to see the Android Security bulletin for more information:

<https://source.android.com/security/bulletin/>

- Spectre & Meltdown correction for variant 1 and variant 2
- SPR33599 - Resolved an issue wherein few of the system applications are getting disabled after enabling whitelist.
- SPR33799 - Resolved an issue wherein scanner was unable to read '\n' and '\r'.
- SPR33930 - Resolved an issue wherein dhcp address was not acquired by the device, while hostname is greater than 32 characters.
- SPR33823 - Resolved an issue wherein black screen occurred in DataWedge application.
- SPR33973- Resolved an issue wherein erroneously loading default profile by providing feature to ignore disabled profiles in DataWedge.
- SPR33671- Resolved an issue wherein user was unable to create WIFI profile with username as backslash followed by number.
- Updated below mentioned components:
  - Datawedge: 6.7.47

- StageNow: 2.10.1.1389
- EMDK: 6.8.21.1121
- MX: 7.2.1.0
- File Browser: 1.19.12
- Diagnostic Tool: 1.15.0.11
- Scanner Framework: 19.9.35.0
- Radio: 2.00.0.0.009
- Bluetooth: 01.12.00

## 7. CFE v7 Updates:

- ❖ CFE-TC70-L-XX-021002-N-00-07.zip (NGMS)

❖ **Android Security Patch Level:** January 05, 2018

Use the below link to see the Android Security bulletin for more information:

<https://source.android.com/security/bulletin/>

## 8. CFE v6 Updates:

- ❖ CFE-TC70-L-XX-021002-N-00-06.zip (NGMS)

❖ **Android Security Patch Level:** December 05, 2017

Use the below link to see the Android Security bulletin for more information:

<https://source.android.com/security/bulletin/>

- SPR32825 - Resolved an issue wherein BT headset volume up/down was not working during Bluetooth call scenario.
- SPR33233 - Resolved an issue wherein the DataWedge 6.2.24 could not replace separator or non-printable ascii character with \$.
- SPR32463 - Resolved an issue wherein the StageNow File Manager downloads frequently fails due to Sockettimeout exception.
- SPR31745 - Added support for AOSP native browser implementation.
- Updated below mentioned components:
  - a. Datawedge: 6.6.49
  - b. StageNow: 2.9.1.1344
  - c. EMDK: 6.7.10.1010
  - d. MX: 7.1.1.0

## 9. CFE v5 Updates:

- ❖ CFE-TC70-L-XX-021002-N-00-05.zip (NGMS)

❖ **Android Security Patch Level:** September 05, 2017

Use the below link to see the Android Security bulletin for more information:

<https://source.android.com/security/bulletin/>

- Corrections for KRACK vulnerabilities applied.
- SPR30400/31340 – Added support to enable/disable Network Monitoring Notification.

## 10. CFE v4 Updates:

- ❖ CFE-TC70-L-XX-021002-N-00-04.zip (NGMS)

❖ **Android Security Patch Level:** September 05, 2017

Use the below link to see the Android Security bulletin for more information:

<https://source.android.com/security/bulletin/>

- Updated below mentioned components:
  - MXMF - Version 7.0.2.1
  - DataWedge - Version 6.5.61
  - EMDK - Version 6.6.14.914
  - Staging Client - Version 2.8.1.1221
- Resolved an issue in MX to prevent leakage of configuration parameters.
- Included fix for BlueBorne vulnerability.
- Included fix for blank screen seen during boot.
- SPR32385 - Resolved an issue wherein Simulscan API fails to read Chinese passports.
- SPR32582 – Added support for Netherlands - Belgium language.
- SPR32008\_SPR31820 – Resolved an issue wherein scanning PDF417 barcodes which contain embedded 0x0D characters resulted in continuous line of data instead of displaying in different lines.
- SPR32666 - Resolved an issue wherein device reboots when it roams from secured to open Wi-Fi network.
- SPR32676 – Resolved an issue wherein DataWedge App crashes when Velocity App tries to send an Intent to enable the scanner plugin.
- SPR32775 – Resolved an issue wherein the notification class created with FLAG\_INSISTENT was not getting cleared upon pulling down the notification drawer.

## 11. CFE v3 Updates:

❖ CFE-TC70-L-XX-021002-N-00-03.zip (NGMS)

❖ **Android Security Patch Level:** August 05, 2017

Use the below link to see the Android Security bulletin for more information:

<https://source.android.com/security/bulletin/>

- SPR29912 - Resolved an issue wherein certificates installation failed through stagenow.
- SPR30401 - Added support to get the CFE version via MDM clients.
- SPR31954 - Resolved an issue wherein dhcpd was not able to start due to lengthy host name.
- SPR31686 - Resolved an issue wherein dhcpd was not able to start due to lengthy host name.
- SPR32135 - Resolved an issue wherein Settings screen does not revert to its normal state even though the locale language is changed from Arabic to English via EMDK.
- SPR32240 - Resolved an issue wherein the scanner service was not responding while switching between applications.
- SPR32193/SPR32230 - Resolved an issue wherein devices experiencing authentication failures, and were not able to recover.
- SPR32539 - Resolved an issue wherein build certificates were lost randomly even though certificates were not expired.
- SPR32326 - Resolved an issue wherein Settings application crashed while trying to set enterprise keyboard as the default keyboard and disable AOSP keyboard through the stageNow profile.
- SPR32413 - Resolved an issue wherein after selecting the static option in the ethernet settings, changes are not reflecting in interface and the interface was always dhcp.

## 12. CFE v2 Updates:

❖ CFE-TC70-L-XX-021002-N-00-02.zip (NGMS)

❖ **Android Security Patch Level:** July 05, 2017

Use the below link to see the Android Security bulletin for more information:

<https://source.android.com/security/bulletin/>

- Added Zebra patch version value in Settings to identify the CFE Patch version.

## Device Compatibility

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This software release has been approved for Android TC70 L NGMS models mentioned below.

Device	Operating System
TC700H-KC11ES-NA	Android 5.1.1
TC700H-KC11ES-IN	Android 5.1.1
TC700H-KC11ES-IA	Android 5.1.1

## Installation Requirements

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- The Software update requires SKU hardware device.
- Enterprise Reset and Factory Reset package files are available on the TC70 Software Download section on Zebra.com

## Installation Instructions

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BEFORE UPDATING THE OS IMAGE, EXTERNAL POWER MUST BE APPLIED TO THE TERMINAL VIA USB CHARGING CABLE OR CRADLE.

PLEASE ENSURE BATTERY LEVEL IS > 30%

### CFE software update procedure for TC70 L NGMS:

1. Connect the USB cable from your PC to the device and enable USB mass storage mode on the device.
2. On your PC you should see an internal and external USB mass storage drive (SD card) appears in the File Explore and copy "**CFE-TC70-L-XX-021002-N-00-13.zip**" file to any storage.
3. Press and hold on the device Power button, click on power off and wait until the screen is turned OFF.
4. Press and hold power, Vol+ button and Scanner button.
5. Keep holding all three buttons until the device vibrates.
6. Device should enter recovery mode.
7. if applying update via Sideload Method
  - a. Use the Volume + and – to highlight, “Apply update from ADB” and press the PTT Key to select it
  - b. With your Command Prompt open in the Host machine, type “adb sideload” command and add a space and then drag and drop the CFE on to it and click enter.
  - c. Your PC screen will show files being installed and a little blue horizontal progress bar on your device will show status... and after about 6~ minutes it should be done and you should be back at the Android Recovery screen.
  - d. “*Reboot system now*” is highlighted. Press the PTT Key to Reboot.



8. If applying update via SD card.
  - a. Click on Vol+ or Vol- to navigate and select SD card or internal storage. Press PTT button to select it.
  - b. Click on Vol+ or Vol- to navigate to the recovery update zip file.
  - c. Click on PTT button to select and start the recovery update process.
  - d. Device will automatically reboot and will be ready to use.
9. To Check the Android Patch Level after installing the CFE package in the device,
  - a. Settings->About Device->SW Components: Device Patch Version: 13
  - b. ADB Shell method: Execute following command from PC's command prompt:
 

```
$ adb shell getprop ro.device.patch.version
          $ 13
```
10. Now you are all set to use your **TC70**.

## Downloadable Software Included in this Release

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Filename	Description
<b>CFE-TC70-L-XX-021002-N-00-13.zip</b>	OTA incremental CFE v13 update software for NGMS build

Last Revised: <02-08-2019>