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# Release Notes – Zebra TC51, TC56, TC70x and TC75x Android M – Update 13 Release for Non-GMS

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## Description

This release contains the following software package which is compatible with the TC51, TC56, TC70x and TC75x products.

LifeGuard patches are cumulative and include all previous fixes that are part of earlier patch releases.

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## Component Contents

Component / Description	Version
Product Build Number	01-21-04.1-MN-00-UPDATE013
Android Version	6.0.1
Linux Kernel	3.10.84
x-loader	NA
u-boot	NA
Android SDK Level	23
Platform	QC 8956
Bluetooth Stack	NA
Partition Table	NA
Flash Size	16GB
RAM Size	2GB
Active Edge	2.5.13
Airwatch / Rapid Deployment	1.01.04
Analytics Mgr	2.4.0.1140
App Gallery	3.0.1.7

Audio (Microphone and Speaker)	0.31.3.0
Battery Management	1.3.8
Bluetooth Pairing Utility	3.7.1
Data Analytics Engine	1.0.2.2091
DataWedge	7.0.4
Elemex-B2M	1.0.0.347
EMDK	7.0.0.2000
Enterprise Keyboard	1.9.0.9
GMS	R12
MX version	8.2.4.2
NFC	4.3.0_M
OSX	QCT.60.6.8.1
PTT	3.1.32
RxLogger	4.60.2.0
Scanner	18.8.20.5
SimulScan	SimulScanDemo: 2.9 SimulScanRes: 1.14.11
SMARTMU	2.1
SOTI / MobiControl	13.3.0 Build 1059
StageNow	3.1.1.1019
Touch Panel	1.8-Stylus-2-0, 1.8-Glove-2-0 (TC51/56) 1.9-Stylus-1-0, 2.0-Glove-1-0 (TC75X/70X)
WLAN	FUSION_BA_2_10.0.5.012_M
WWAN (Data or Voice)	FALCON-W160411A-228.1-00101.47
Zebra Device Diagnostic Tool	1.5
Zebra Volume Control (ZVC)	2.0.0.12
File Browser	1.19.1.5

**1. CFE v13 Updates:**

- ❖ CFE-TC51\_TC56\_TC70x\_TC75x-M-XX-21-04.01-N-00-13.zip (Non-GMS)

**2. Android Security Patch Level: July 1, 2018 (Critical Patch Level:2018-10-01).**

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

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

**3. Updated below mentioned components:**

- MXMF - Version 8.2.4.2
- EMDK - Version 7.0.0.2000
- StageNow - Version 3.1.1.1019
- Scanner – Version 18.8.20.5
- DataWedge - Version 7.0.4
- EKB – Version 1.9.0.9
- WLAN - Version FUSION\_BA\_2\_10.0.5.012\_M
- Analytics Mgr – Version 2.4.0.1140
- OSX - Version QCT.60.6.8.1

For more detail please refer <http://techdocs.zebra.com>

1. SPR33207 - Resolved an issue wherein the Device Diagnostic tool had an issue with reading the Battery Cycles in the application for PP+ batteries.

2. SPR35021 - Resolved an issue where Auto PAC Proxy settings are not preserved after Android desert update.
3. SPR35577 - Resolved an issue where WiFi connection is affected because of Bluetooth scanner operation.
4. SPR34771 - Resolved a synchronization issue in Mx.
5. SPR35188 - Disabled QC Quick Charge 3.0 which allows the device to charge at 9v (since many 3rd party cables are rated for only 5v use).
6. SPR34441 - Resolved an issue where inline images were not being displayed in Email.
7. SPR35288 - Fixed an issue wherein initialization of scanner was taking ~1sec.
8. SPR35665 - Resolved an issue wherein Google keyboard settings was not persisting through a reboot when configured directly after factory reset.
9. SPR34771 - Resolved a synchronization issue in Mx.
10. SPR34429 - Resolved an issue wherein DataWedge failed to load "default Profile0".
11. SPR34972 - Implemented new parameters in scanner\_input\_plugin API so that the API takes considerable less time to suspend/re-enable of the scanner.
12. SPR34844 - Fixed and issue wherein Multiple Scanner Enable Calles were allowed by same application.
13. SPR35491/35856 - Resolved an issue where in Analytics Manager was throwing "Index out of bound error " when a StageNow Barcode is scanned
14. CPR24889 - Resolved an issue wherein device was overheating when placed in a cradle.
15. CVE-2018-5383 was corrected preventing unauthenticated BT pairing.
16. Included Zebra Software License Manager v3.1.1.
17. Added new APN for Telstra-M2M.
18. Data Analytics changes:
  - o DataAnalytics has been renamed to Zebra Data Service.
  - o DAInBuiltDCA has been renamed to Zebra Data Service Plugin.
  - o SettingsEULA has been renamed to Zebra Data Services.

## 2. CFE v12 Updates:

- ❖ CFE-TC51\_TC56\_TC70x\_TC75x-M-XX-21-04.01-N-00-12.zip (Non-GMS)
1. Resolved an issue wherein DataWedge ANR was seen on enrolling to SOTI DO mode via Hash tagging method.
  2. SPR35216/SPR35025: Fixed an issue where Auto Proxy PAC (Pac Service and Proxy Service) was not recovering properly if killed for any reason.
  3. SPR35062: Fixed an issue wherein setting Default Launcher was failing when more than one third party launcher was installed in the device

## 3. CFE v11 Updates:

- ❖ CFE-TC51\_TC56\_TC70x\_TC75x-M-XX-21-04.01-N-00-11.zip (Non-GMS)

### 1. Android Security Patch Level: July 1, 2018.

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

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

4. Updated below mentioned components:
  - MXMF - Version 8.0.2.0
  - EMDK - Version 6.9.16.1216
  - StageNow - Version 3.0.1.1038
  - File Browser - Version 1.19.1.5
  - Scanner – Version 18.8.20.2
  - DataWedge - Version 6.8.54
  - EKB – Version 1.8.0.8
  - WLAN - Version FUSION\_BA\_2\_10.0.0.4.011\_M
3. SPR35116 - Resolved an issue wherein the data limit and warning couldn't be set through the UI.
4. SPR34784 - Fixed an issue wherein Programmatic OS Updates via MDM used to fail after a battery swap.
5. SPR34760/34417 - Resolved an issue wherein device did not respond for any incoming traffic when kept in low coverage area for longer duration.
6. SPR34353 - Fixed an issue wherein logging used to get truncated with unexpected EOF error.
7. SPR34810 - Resolved an issue wherein there was an audio latency during a VOIP call due to buffering limit.
8. SPR34308 - Added support for generic margin-less barcode decoding and reduced quiet zone.
9. SPR34300 - Enabled Screen rotation in the Lock Screen.
10. SPR34046 - Resolved an issue wherein there were Bluetooth scanner disconnections noticed while audio was being played simultaneously on BT headset.
11. SPR34448 - Resolved an issue wherein sdcard was not being detected after a suspend/resume.
12. SPR34627 - Resolved an issue wherein devices are unable to enroll into Soti as DO using Hashtag Method.
13. SPR34277 - Resolved an issue with the battery swap procedure wherein an incorrect removal of the battery didn't restore few settings to its original state.
14. SPR34338 - Resolved an issue where device did not respond for EAP packets because of false framework event.
15. SPR34310 - Fixed an issue wherein CancelRead API was not working when Continuous Mode was enabled.
16. SPR34432 - Resolved an issue wherein NTP was not able to sync time based on the interval.
17. SPR33936 – Fixed an issue wherein Camera shutter sound was audible even when the device was in Mute or Vibrate mode.
18. SPR33298 - Resolved scanner picklist performance issues.
19. SPR34036 - Resolved an issue wherein device did not connect to Aruba Infra because of a DHCP Infra issue.
20. SPR34717 - Added support for new method of creating the Applock Whitelist.
21. CPR24801 - LEAP Profile support is added.
22. SPR34716 - Resolved an issue wherein MX Framework did not restart after being killed due to Backup.
23. SPR34816 - Fixed an issue in DataWedge wherein scanner could not be enabled due to quick enabling and disabling of scanner through Intents.

24. SPR34307/33607 - Resolved an issue wherein few fresh devices were unable to stage after unboxing the device.
25. SPR34083/34014/32519 - Resolved an issue wherein disabling WWAN radio via Airwatch using StageNow XML fails.
26. SPR33599 - Resolved an issue wherein few system apps were being disabled after Applock whitelist mode was enabled.
27. SPR33299 - Fixed an issue wherein a device's battery percentage displayed 255% indefinitely and the device would not charge while in this state.
28. SPR33818 - Fixed an issue wherein certain decoder type values were not persisting across a scanner enable/disable cycle.
29. SPR33755 - Resolved an issue wherein the Whitelisted apps were unable to submit XML to MX.
30. SPR33671 - Resolved an issue wherein the profile creation used to fail if the username included “\” character.
31. SPR34267 - Resolved an issue wherein user was not able to enable USB debugging option using StageNow.
32. SPR33862/33876 - Fixed an issue wherein user could not set Display Timeout value of 30 min using StageNow.
33. SPR33848 - Added a new category field in the Intent Manager.
34. SPR33639 - Resolved an issue wherein the customer app install and launch during device sleep state and device stopped emitting scan beam after awake from suspend.
35. SPR33977 - Fixed an issue wherein user would see duplicate time zone entries after configuring date and time using StageNow.
36. SPR33981 - Fixed an issue wherein Czech Republic could not be set as Regulatory country while configuring WLAN profile using StageNow.
37. SPR34213 - Resolved an issue wherein shared preference initialization without launching EKB.
38. SPR34179 - Resolved an issue wherein there was a delay in data transfer in 5GHz network.
39. SPR34278 - Resolved an issue wherein WLAN was disconnecting during BT connection establishment.

#### 4. CFE v10 Updates:

- ❖ CFE-TC51\_TC56\_TC70x\_TC75x-M-XX-21-04.01-N-00-10.zip (Non-GMS)

##### 1. Android Security Patch Level: March 5, 2018.

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

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

5. Updated below mentioned components:
  - MXMF – Version 7.2.1.0
  - DataWedge – Version 6.7.39
  - EMDK – Version 6.8.21
  - StagingClient – Version 2.10.1.1389
  - File Browser --1.19.1.2
  - DDT -- 1.15.0.11
6. SPR 33558 – Resolved an issue wherein wakeup sources were not working correctly.

7. SPR 34145 – Resolved an issue wherein WEP Key Index does not persist after device reboot or Wi-Fi restart.
8. SPR 33729 - Resolved an issue wherein device does not behave consistently with respect to the “Same Symbol Timeout” setting.
9. SPR 33639 - Resolved an issue wherein the device stops emitting scan beam after waking up from suspend.
10. SPR 33709 – Intercharacter delay has been added in the DW.
11. SPR 33311/34046 – Resolved an issue wherein audio loss in Bluetooth headset is observed when ring scanner is disconnected during the audio record.
12. SPR 33538 – Resolved an issue wherein scanner beam stuck off when pressing scanner button.
13. SPR 33799 - Resolved an issue wherein DW incorrectly sends char 10 instead of char13.
14. SPR 33812 – Resolved an issue wherein screen lock none choice is not visible when using an Australian SIM.
15. SPR 33862/34493 – Resolved an issue wherein device screen timeout setting using display manager is not working correctly.

#### **Known Issues and Fixes:**

1. SPR 34303 – JS keyevents are not working in CFE v7 or higher  
Push a file named "CustomFeatures.ini" with value "persist.sys.custom.unbuffered=true" (without quotes) to /enterprise/usr/persist and reboot to get the JS keyevents working.
2. SPR 34353 - Rxlogger can throw an EOF error  
Change buffer size using Settings -> Developer Options / Logger Buffer Sizes from 256K to 4M or via an adb command adb logcat -G 5M

#### **5. CFE v9 Updates:**

- ❖ CFE-TC51\_TC56\_TC70x\_TC75x-M-XX-21-04.01-N-00-09.zip (Non-GMS)

##### **1. Android Security Patch Level: January 5, 2018.**

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

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

2. Spectre and Meltdown (CVE-2017-5753, 5715, 5754) remediation provided by updates to timer access for CVE-2017-13218.

#### **6. CFE v8 Updates:**

- ❖ CFE-TC51\_TC56\_TC70x\_TC75x-M-XX-21-04.01-N-00-08.zip (Non-GMS)

##### **1. Android Security Patch Level: January 5, 2018.**

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

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

2. SPR33463 - Resolved an issue wherein device receives the PTT Event but not scan key event.
3. SPR33599 – Resolved an issue wherein few system apps were being disabled after Applock whitelist mode was enabled.

4. SPR33521 – Resolved an issue wherein PingID application was failed to run.
5. SPR33755 - Resolved an issue wherein Whitelisted Apps were unable to submit XML to MX.
6. SPR33462 – Resolved an issue wherein the Key remapping was not working properly during suspend/resume.

#### 7. CFE v7 Updates:

- ❖ CFE-TC51\_TC56\_TC70x\_TC75x-M-XX-21-04.01-N-00-07.zip (Non-GMS)

##### 1. Android Security Patch Level: December 5, 2017.

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

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

2. Added support for Wi-Fi Direct and Miracast features.
3. Resolved an issue wherein IsoDep and MifareClassic dual interface cards were not read properly.
4. SPR33302 – Resolved an issue wherein disabling the oval capacitive key via StageNow fails on TC70x and TC75x SKUs.
5. SPR33153 – Resolved an issue wherein device scans "phantom" barcodes.
6. SPR33049 – Resolved an issue wherein device asking for boot password when password is set via API.
7. SPR32872 – Resolved an issue wherein keystroke output is not received when input is taken off input field.
8. Added APN Settings for AT&T Mexico.

#### 8. CFE v6 Updates:

- ❖ CFE-TC51\_TC56\_TC70x\_TC75x-M-XX-21-04.01-N-00-06.zip (Non-GMS)

##### 1. Android Security Patch Level: November 6, 2017

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

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

2. Corrections for KRACK vulnerabilities applied.
3. SPR33303 - Updated File Browser v1.19.1.0 that resolves an APK installation issue through File Browser.
4. SPR33306 - Updated File Browser v1.19.1.0 that resolves an alignment problem of files and folders in list view.
5. SPR33307 - Updated File Browser v1.19.1.0 that resolves an issue where file copy was not working through File browser.
6. SPR32880 - Fixed an issue wherein it was not possible to remap the right-side trigger button (SCAN\_R) through Stage Now.

#### 9. CFE v5 Updates:

- ❖ CFE-TC51\_TC56\_TC70x\_TC75x-M-XX-21-04.01-N-00-05.zip (Non-GMS)

##### 1. Android Security Patch Level: September 5, 2017

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

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

2. SPR32387 Resolved an issue where in TC51 failed to join multicast group.
3. SPR32894 Resolved an issue wherein the Airwatch Agent is denied permission to use MX.
4. Included fix for BlueBorne Vulnerability.
5. Resolved an issue in MX to prevent leakage of configuration parameters.
6. SPR31931 Resolved an issue where in TC75x doesn't get IP address.
7. SPR32781 Resolved an issue wherein wrong APN is selected sometimes after reset.

**IMPORTANT NOTE:**

CFE v1, v2, v3, v4 are not posted as it was used internally by Zebra & not released to any customers.

## Device Compatibility

This software release has been approved for Android TC51, TC56, TC70x and TC75x Marshmallow Non-GMS models mentioned below.

Device	Operating System
TC510K-2PAZU2P-US	Android M
TC510K-2PAZU2P-A6	Android M
TC510K-2PAZU4P-US	Android M
TC510K-2PAZU4P-A6	Android M
TC510K-2PAZU4P-FT	Android M
TC510K-2HDZU4P-FT	Android M
TC510K-2HDZU2P-US	Android M
TC510K-2HDZU4P-US	Android M
TC510K-2HDZU2P-A6	Android M
TC510K-2HDZU4P-A6	Android M
TC56CJ-2PAZU2P-A6	Android M
TC56CJ-2PAZU4P-A6	Android M
TC56DJ-2PAZU2P-A6	Android M
TC56DJ-2PAZU4P-A6	Android M
TC56DJ-2PAZU2P-IA	Android M
TC56DJ-2PAZU4P-IA	Android M
TC56DJ-2PAZU4P-BR	Android M
TC56DJ-2PAZU2P-BR	Android M
TC56DJ-2PAZU2P-CN	Android M
TC56DJ-2PAZU4P-CN	Android M
TC56DJ-2PAZU4P-ID	Android M
TC56DJ-2PAZU2P-ID	Android M
TC56CJ-2PAZU4P-FT	Android M
TC56CJ-2PAZU2P-US	Android M
TC56CJ-2PAZU4P-US	Android M
TC75FK-22B22AD-A6	Android M
TC75FK-22B24AD-A6	Android M
TC75FK-22B22AD-BR	Android M
TC75FK-22B22AD-IA	Android M
TC75FK-22B22AD-ID	Android M
TC75FK-22B22AD-TN	Android M
TC75FK-22F22AD-A6	Android M
TC75FK-22B22AD-TW	Android M



TC75GK-22B22AD-A6	Android M
TC75GK-22B24AD-A6	Android M
TC75GK-22F22AD-A6	Android M
TC700K-02B22B0-A6	Android M
TC700K-02B24B0-A6	Android M
TC75EK-22B22AB-US	Android M
TC75EK-22F22AB-US	Android M
TC75EK-22B22AF-US	Android M
TC75EK-22B24AB-US	Android M

## Installation Requirements

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- ADB installed on the PC (including adb drivers)
- USB debugging turned ON (from Developer options)
- TC51/TC56/TC70x/TC75x has at least:
  - Version 01-21-04.1 build

## 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 TC51, TC56, TC70x and TC75x:

1. Plug the TC51/TC56/TC70x/TC75x into the USB & Charging Cable and then the Cable to the PC. If you have a Cradle with USB connectivity, connect it now.
2. You may need to pull down the top menu and if you see “USB for charging”, touch it and then change it to “File transfers”.
3. Open Command Prompt, run “*adb devices*” and check to see if you are able to see the device’s serial number... If yes, proceed... if not you will need to get the PC set up with the proper drivers or install an External SD Card.
4. On device you will see “USB for Charging” USB applet popup, once connected to any windows PC, click on this and change to “File Transfer” this way your PC will see Internal Storage Folder of the Device.
  - a. *Note:* If you have an External SD Card installed, you can drag & drop the files on that card to perform the Recovery update that way... if not, continue with the ADB Sideload.
  - ❖ Download Image CFE-TC51\_TC56\_TC70x\_TC75x-M-XX-21-04.01-N-00-13.zip
5. Entering into Recovery Mode
  - a. Choice 1: In Command Prompt, type “*adb reboot recovery*” and click enter.
  - b. Choice 2:
    - Reset and hold PTT key

- When Zebra Technologies logo appears on the screen Release the PTT Key
- 6. Your TC51/TC56/TC70x/TC75x will reboot and put you on the Android Recovery screen.
- 7. if applying update via Sideload Method
  - a. Use the Volume + and – to highlight, *“Apply update from ADB”* and press the Power Key to select it
- 8. if applying update via External SD card
  - a. Use the Volume + and – to highlight *“Apply update from SD card”* and press the Power Key to select it
  - b. Use the Volume + and – to highlight package *CFE-TC51\_TC56\_TC70x\_TC75x-M-XX-21-04.01-N-00-13.zip* and press the Power Key to select it.
  - c. Go to Step 10 once above steps are completed
- 9. With your Command Prompt open, type *“adb sideload”* and add a space and then drag and drop the *CFE-TC51\_TC56\_TC70x\_TC75x-M-XX-21-04.01-N-00-13.zip* on to it and click enter.
  - a. 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.
- 10. *“Reboot system now”* is highlighted. Press the Power Key to Reboot.
- 11. At the Home Screen, we need to verify that the BSP upgrade took place and set the Date & Time.
  - Go to *“Settings”* and scroll down to *“About phone”* and look at the *“Build number”*. It should display **“01-21-04.1-MN-00-UPDATE013 release keys”**. Now you are on the correct BSP.
- 12. Now you are all set to use your **TC51/TC56/TC70x/TC75x**.

## Downloadable Software Included in this Release

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Filename	Description
CFE-TC51_TC56_TC70x_TC75x-M-XX-21-04.01-N-00-13.zip	OTA incremental CFE v13 update software for Non-GMS build compatible for TC51, TC56, TC70x & TC75x products.

Last Revised: <12-21-2018>