Release Notes – Zebra TC51, TC51-HC, TC70x, TC56 and TC75x Android N Update003 based on 01-01-49-NG-00-A (GMS)

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 TC51/TC51-HC/TC70x/TC56/TC75x 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

Description

Zebra TC51, TC51-HC, TC56, TC70x and TC75x Update 003 based on 01-01-49-NG-00-A (GMS)
This patch addresses below critical changes.

Device Compatibility

This software release has been approved for use with the following Zebra devices. All devices listed below are on Android M or N when they leave the factory.

Device	Operating System
TC510K-1PAZU2P-US	Android M &N
TC510K-1PAZU2P-A6	Android M &N
TC510K-1PAZU4P-US	Android M &N
TC510K-1PAZU4P-A6	Android M &N
TC510K-1HDZU2P-US	Android M &N
TC510K-1HDZU4P-US	Android M &N
TC510K-1HDZU2P-A6	Android M &N
TC510K-1HDZU4P-A6	Android M &N
TC510K-1PAZU2P-IA	Android M &N
TC510K-1PAZU4P-IA	Android M &N
TC56DJ-1PAZU2P-A6	Android M &N
TC56DJ-1PAZU4P-A6	Android M &N
TC56CJ-1PAZU2P-A6	Android M &N
TC56CJ-1PAZU4P-A6	Android M &N
TC56DJ-1PAZU2P-IA	Android M &N
TC56DJ-1PAZU4P-IA	Android M &N
TC56DJ-1PAZU4P-ID	Android M &N
TC56DJ-1PAZU2P-ID	Android M &N
TC56DJ-1PAZU2P-TN	Android M &N
TC56DJ-1PAZU4P-TN	Android M &N
TC56DJ-1PAZU4P-BR	Android M &N
TC56DJ-1PAZU2P-BR	Android M &N
TC75FK-2MB22AD-A6	Android M &N
TC75FK-2MB24AD-A6	Android M &N
TC75FK-2MB22AD-IA	Android M &N
TC75FK-2MB22AD-ID	Android M &N
TC75FK-2MB22AD-TN	Android M &N
TC75FK-2MF22AD-A6	Android M &N
TC75FK-2MB22AD-TW	Android M &N
TC75FK-2MB22AD-BR	Android M &N
TC75GK-2MB22AD-A6	Android M &N
TC75GK-2MB24AD-A6	Android M &N

TC75GK-2MF22AD-A6	Android M &N
TC75EK-2MB22AB-US	Android M &N
TC75EK-2MF22AB-US	Android M &N
TC75EK-2MB22AF-US	Android M &N
TC75EK-2MB24AB-US	Android M &N
TC700K-0MB22B0-A6	Android M &N
TC700K-0MB24B0-A6	Android M &N
TC700K-0MB22B0-US	Android M &N
TC700K-0MB24B0-US	Android M &N
TC700K-0MB22B0-IA	Android M &N

Component Contents

Package Name	Description
CFE-TC51_TC51HC_TC56_TC70x_TC75x-01-01-49-NG-00-A-03.zip	Update 003 based on Android N 01-01-49-NG-00-A (GMS)

Component Version Info

Component / Description	Version
Product Build Number	01-01-49-NG-00-A
Android Version	7.1.2
Linux Kernel	3.10.84
Android SDK Level	25
Platform	QC8956
Bluetooth Stack	1.1
Flash Size	16GB/32GB
RAM Size	2GB/4GB
Scanning	19.0.22.0
SimulScan	2.9.2 SimulScanEngine 1.15.6

Datawedge	6.6.50
EMDK	6.7.10.1010
MXMF / OSX	MXMF-7.1.2.1 / OSX-QCT.71.7.4.7
WiFi	FUSION_BA_2_10.0.1.012_N Application: BA_2_10.0.0.008_N Radio: BA_2_10.0.0.012_N Middleware: BA_2_10.0.1.008_N Firmware: 7.35.205.8_20171114
PTT	3.1.35
Touch FW	TC70x/TC75x = 1.9-Stylus-1-0 & TC51/TC56 = 1.8-Stylus-2.0
RxLog	5.2.10.0
B2M	NA
Bluetooth Pairing Utility	3.10
DataAnalytics	3.0.0.1217
File Browser	1.19.1.0
Stage Now	2.9.1.1362
App Gallery	3.0.1.7
Battery Swap	1.0
User Guide	1.0
WWAN	FALCON-W171221A-170.1-00172.4
RIL	Qcalcomm RIL 1.0
TS.25	10/30/2017
Sensors (Accel, Gyro, Light, proximity)	2061000, 2061000, 1, 2
Camera	2.0.002
MSRN	0.01
MobiControl	NA
ZVC	2.0.0.12
Battery Manger	1.3.8

ActiveEdge	2.5.16
SmartMU	2.3.12
Device Central	1.0.4.8
Audio	0.19.0.0
Diagnostic Tool	1.15.0.6
FingerPrint	Zebra/TC75x/TC75x:7.1.2/01-01-49-NG-00-A/1:user/release-keys Zebra/TC75x/TC75xDF:7.1.2/01-01-49-NG-00-A/1:user/release-keys Zebra/TC70x/TC70x:7.1.2/01-01-49-NG-00-A/1:user/release-keys Zebra/TC56/TC56:7.1.2/01-01-49-NG-00-A/1:user/release-keys Zebra/TC51/TC51:7.1.2/01-01-49-NG-00-A/1:user/release-keys Zebra/TC51HC/TC51HC:7.1.2/01-01-49-NG-00-A/1:user/release-keys
Security Patch Level	Dec 5,2017

Installation Requirements

Install baseline 01-01-49-NG-00-A (GMS) build.

Installation Instructions

Using ADB Sideload

The installation instructions assume you have ADB installed on your PC (the adb drivers and such) and your TC51/TC51-HC/TC56/TC70x/TC75x has Developer options enabled and USB debugging ON:
Instructions on HOW TO enable ADB is also captured in user guide.

1. Plug the TC51/TC51-HC/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 if you can 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. You may also get a pop up on your PC (Win 7) that you will be connected as a Portable MediaPlayer… this can be ignored.

❖ **Download Image**
   a. CFE-TC51_TC51HC_TC56_TC70x_TC75x-01-01-49-NG-00-A-03.zip listed above in content section
   b. Reset files (Optional)

5. Entering 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/TC51-HC/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. 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.
   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 (could be 10+ minutes if installing GMS) it should be done and you should be back at the Android Recovery screen.

   b. Repeat above steps for all mandatory packages
9. *"Reboot system now"* is highlighted. Press the Power Key to Reboot.

10. Device reboots and you see Zebra on top and POWERED BY android at the bottom and after about 1 minute will transition to the TC51/TC56/TC70x/TC75x Touch Computer splash screen with 5 dancing white dots at bottom… it will stay at this screen for a little over another minute *(could be another 7+ minutes if installing GMS)* and then you are at the Factory "Welcome" screen.

11. If you installed a GMS BSP, you will need to complete the process by setting up Wi-Fi and E-mail accounts and such. If on AOSP (non-GMS), there is no process to follow.

12. At the Home Screen, we need to verify that the BSP upgrade took place and set the Date & Time.

   a. Go to "Settings" and scroll down to "About phone" and look at the "Build number". It should start with "01-01-49-NG-00-A". Now you are on the correct BSP.

b. Setting the Date and Time. If you associate to a WLAN AP, do so now, as it should automatically set the time and date… the only thing left is to set the time zone. Go to "Settings" and scroll to and select "Date & time". Scroll down to and select "Select time zone", and scroll down to and select the appropriate time zone and you are done.

13. To Check the Android Patch Level after installing the CFE package in the device,
    a. Settings->About Phone->SW Components: Device Update Version: **3**
    b. ADB Shell method: Execute following command from PC's command prompt:
       $ adb shell getprop ro.device.patch.version
       $ **3**

14. Now you are all set to use your TC51/TC51-HC/TC56/TC70x/TC75x

Using External SD card

1. Plug the TC51/TC51-HC/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. Download "*CFE-TC51_TC51HC_TC56_TC70x_TC75x-01-01-49-NG-00-A-03.zip*" file and Reset Files (Optional) and drag & drop the files on External SD card

4. Entering Recovery Mode

   a. Reset and hold PTT key
   b. When Zebra Technologies logo appears on the screen, release the PTT Key

5. Your TC51/TC51-HC/TC56/TC70x/TC75x will reboot and put you on the Android Recovery screen.

6. Applying update via External SD card

   a. Use the Volume + and – to highlight select option to "Apply update from SD card" and press the Power Key to select it.

   b. Use the Volume + and – to highlight package to be installed (CFE-TC51_TC51HC_TC56_TC70x_TC75x-01-01-49-NG-00-A-03.zip) and press the Power Key to select it.

   c. Repeat above steps for all mandatory packages

7. *"Reboot system now"* is highlighted. Press the Power Key to Reboot.

8. Device reboots and you see Zebra on top and POWERED BY android at the bottom and after about 1 minute will transition to the TC51/TC51-HC/TC56/TC70x/TC75x Touch Computer splash screen with 5 dancing white dots at bottom… it will stay at this screen for a little over another minute *(could be another 7+ minutes if installing GMS)* and then you are at the Factory "Welcome" screen.

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        $ **3**

12. Now you are all set to use your TC51/TC51-HC/TC56/TC70x/TC75x.

Special Note:

1. In TC56 & TC75x the SIM slot switching will not initiate a device reboot, instead it will perform the Carrier switching seamlessly without a device reboot. After performing the SIM slot switch, allow a minimum of 1 minute for the device to perform the action without initiating any other functionality
2. Batch manager DSD should be used to create a profile to deploy proxy settings on the device
3. A minimum of 1 minute is required for the scan engine to settle down after the first boot for performing the Skip setup wizard via barcode.
4. Remote Control option in Airwatch Remote Management will not work.
5. On performing Enable/Disable SD card via MX would result un-successful though internally the requested action is performed correctly
6. Screen Capture settings will not persist after a reboot in Device Owner Mode only.

7. Enable/Disable of USB debugging via StageNow or MX will not work
8. Sometimes Bluetooth tethering to share Internet will not work
9. When Enterprise Reset is performed along with OS Upgrade and not using AW console as a trigger point, the AW agent will not perform the persistence activity on a boot up. Recommended to always use the AW console as trigger point.

Change Notes:

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

Last Revised: February 05, 2018