Release Notes – Zebra TC51, TC51-HC, and TC56 Android N – LifeGuard Update 08 for 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/TC56 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

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

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

1. **CFE v8 Updates:**
   ❖ CFE_ATLAS_P08_NG_01-01.49.zip (GMS)

   1. **Android Security Patch Level:** June 1, 2018
      Use the link below to see the Android Security bulletin for more information:
      https://source.android.com/security/bulletin/
   2. Resolved an issue wherein KeyProgrammer fails to open via Device settings.
   3. Build Number format has been updated.

2. **CFE v7 Updates:**
   ❖ CFE_ATLAS_P07_NG_01-01.49.zip (GMS)

   1. **Android Security Patch Level:** May 1, 2018
      Use the link below to see the Android Security bulletin for more information:
      https://source.android.com/security/bulletin/
   2. Fix for Zebra setup wizard popup after OS upgrade.
   3. **Updated below components:**
      o MX: 8.0.0.10
      o StageNow client: 3.1.0.1037
      o DataWedge: 6.8.50
      o Enterprise Keyboard: 1.8.0.8
      o EMDK: 6.9.16.1216
   4. Build ID format has been updated.
   5. Included Zebra Software License Manager v3.0.1.
   6. SPR34179 – Resolved an issue wherein device connects slowly to an AP.
   7. SPR34175 – Resolved an issue wherein device does not show preview information in Messaging App when language toggles from right-to-left.
   8. SPR34259 – Added support to use USBMgr CSP to limit the standard 4 options on device to only allow UsbExternalStorageUsage.
   9. SPR34307 – Resolved an issue wherein the device was unable to be staged via StageNow.
   10. SPR34083/34014/32519 – Resolved an issue wherein disabling WWAN radio via Airwatch using StageNow XML fails.
   11. SPR33977 – Resolved an issue wherein set time zone issue observed with StageNow.
   12. SPR34213/31491 – Resolved an issue wherein the device was unable to stage via StageNow.
   13. SPR34420 – Resolved an issue wherein floating scan bubble issue observed with Enterprise Keyboard.

14. SPR33755 - Resolved an issue wherein the Whitelisted apps were unable to submit XML to MX.
15. SPR33207 - Resolved an issue wherein the Device Diagnostic tool had an issue with reading the Battery Cycles in the application for PP+ batteries.
16. SPR33671 - Resolved an issue wherein user was unable to create WIFI profile with username as backslash followed by number.
17. SPR33862 - Resolved an issue wherein the Screen Time off settings using Display manager CSP was not working.
18. SPR34145 - Resolved an issue wherein indexing of the WEP key was not handled correctly.
19. SPR33973 - Resolved an issue wherein erroneously loading default profile by providing feature to ignore disabled profiles in DataWedge.
20. SPR33848 - Added support to included category field in intent profile in StageNow.
21. SPR34189 - Resolved an issue wherein low ram and oom limit adjustments to provide more free memory.
22. SPR33876 - Resolved an issue wherein Display Timeout was unable set via StageNow.
23. SPR33607 - Resolved an issue where few fresh devices were unable to stage after unbox the device.
24. SPR33538 - Resolved an issue wherein the Scanner beam stuck off and No LED beam while pressing scanner button.
25. SPR33981 - Resolved an issue Czech Republic Regulatory Country could not be set using Wifi config profile.
26. Added Enterprise Browser package (com.symbol.enterprisebrowser) to white listed apps.
27. Resolved an issue wherein Settings App crashes while performing "Network Settings Reset".
28. Resolved an issue wherein Bluetooth tethering was not working.
29. Added support for RS507x.
30. Fixed Bluetooth scanner firmware update failure.
31. Fixed "SignalOccurrenceOfThreat" parm is not added in threatStep.
32. SPR34579 – Resolved an issue wherein headset audio volume is too low when used with VoIP applications.
33. New Audio tuning for TC51/56 devices. This is a general enhancement to the original tuning to increase VoIP headset volume and to satisfy new regulatory requirements. The changes improve audio performance for telephone use cases

such as VoIP, PTT, WAN, and VoLTE. Note that these changes are not applicable to TC51 HC SKUs.

3. **CFE v4 Updates:**
   - ❖ CFE-TC5X_TC7Xx-01-01-49-NG-00-A-04.zip (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/
   2. **Updated below components:**
      - o Datawedge: 6.7.34
      - o StageNow: 2.10.1.1386
      - o EMDK: 6.8.20.1120
      - o MX: 7.2.0.6
      - o File browser: 1.19.1.2
   3. Added support for FIPS.
   4. SPR33311 – Resolved an issue wherein RS507 is unable to connect via Bluetooth using Voxware voice application.
   5. SPR33302 – Resolved an issue wherein disabling the oval capacitive key via StageNow fails.
   6. SPR34267 - Resolved an issue wherein the device was failed to enable USB debugging when a barcode was scanned.
   7. 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.
   8. SPR33799 – Resolved an issue wherein DataWedge was sending char 10 instead of char 13.

4. **CFE v3 Updates:**
   - ❖ CFE-TC5X_TC7Xx-01-01-49-NG-00-A-03.zip (GMS)

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

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
TC56CJ-1PAZU2P-US	Android M &N
TC56CJ-1PAZU4P-US	Android M &N

Supported FIPS SKUs

Device	Operating System
TC510K-1PAZU4P-FT	Android N
TC510K-1HDZU4P-FT	Android N
TC56CJ-1PAZU4P-FT	Android N

Component Contents

Component / Description	Version
Product Build Number	01-01-49-NG-00-U08-STD
Android Version	7.1.2
Linux Kernel	3.10.84
Android SDK Level	25

Platform	QC8956
Flash Size	16GB/32GB
RAM Size	2GB/4GB
Security Patch Level	June 1,2018

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 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 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_ATLAS_P08_NG_01-01.49.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 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/TC51-HC/TC56 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-U08-STD**". 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: **8**

b. ADB Shell method: Execute following command from PC's command prompt:

$ adb shell getprop ro.device.patch.version

$ **8**

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

Using External SD card

1. Plug the TC51/TC51-HC/TC56 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_ATLAS_P08_NG_01-01.49.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 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_ATLAS_P08_NG_01-01.49.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 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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   b. ADB Shell method: Execute following command from PC's command prompt:
      $ adb shell getprop ro.device.patch.version
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12. Now you are all set to use your TC51/TC51-HC/TC56.

Downloadable Software Included in this Release

Package Name	Description
CFE_ATLAS_P08_NG_01-01.49.zip	OTA incremental LifeGuard CFE v8 update software for GMS build compatible for TC51, TC51-HC and TC56 products.

Last Revised: June 14, 2018