Release Notes - Zebra TC75x, TC56 Android Oreo 02-13-15.00-OG-U08-STD Release (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 TC75x and TC56 are professional-grade Android devices 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 data capture capability

• Rugged and ready for every day enterprise use inside and outside the four walls

Description

02-13-15.00-OG-U08-STD (GMS) is the first Android Oreo release to support TC75x and TC56. The software update for TC75x and TC56 will deliver fixes, updated security and many feature enhancements listed in the next sections. This release documentation contains the details of the OS release – features, instructions, component details, part numbers supported and known issues/limitations.

Zebra Value Add Feature List from Nougat to Oreo

Components	New Features	Comments
Scanner	1. Differentiate GS1 Datamatrix and GS1 QR Code 2. Digimarc decoding 3. Character Set selection 4. Basic MultiBarcode Support 5. PRESS_AND_SUSTAIN AimType	
Wi-Fi	EAP-PWD authentication support.	
Zebra Software License Manager		ZSL manages licensing for MTW, EB 2.0 and above. ZSL does not manage the licensing of the WFC-Voice client.
Smart MU		SmartMU is renamed as WorryFree WiFi Analyzer
BT	1. BT additional setting, BT CSP features, are moved to ZebraBluetooth application	
Audio		Following SPR fix is included: SPR 35763 & SPR 35305: "one-way audio" one end of the call hears conversation while the other hears no sound
ZVC	1. Accessibility volume control bar support 2. OEM Config support	
EMDK	1. Differentiate GS1 Datamatrix and GS1 QR Code 2. Digimarc decoding 3. Character Set selection 4. Bluetooth Scanner DS2278 5. PRESS_AND_SUSTAIN AimType	

WAN	VOLTE support for Telstra	
Data wedge	1. Enhanced intent API support 2. Voice Input plugin 3. Differentiate GS1 Datamatrix and GS1 QR Code 4. Digimarc decoding 5. Character Set selection 6. Bluetooth Scanner DS2278 7. PRESS_AND_SUSTAIN AimType	

Component Contents

Package Name	Package Description
FPU_ATLAS_02-13-15.00-OG-U08-STD.zip	Full Package Update includes all components
ATLAS_OG_ENT_RESET.zip	Enterprise Reset (Erases Data Partitions)
ATLAS_OG_FACT_RESET.zip	Factory Reset (Erases Data & Enterprise Partitions)

Component Version Info

Component / Description	Version
Product Build Number	02-13-15.00-OG-U08-STD
Android Version	8.1.0
Linux Kernel	3.10.84
Android SDK Level	27
Platform	QC8956
Bluetooth Stack	4.1
Flash Size	16/32GB
RAM Size	2/4GB
Scanning	20.0.38.0
SimulScan	3.0.6 SimulScanEngine 2.0.9
DataWedge	7.0.4
EMDK	7.0.0.2000
MXMF / OSX	MXMF : 8.2.1.0 / OSX : QCT.81.8.6_3
WiFi	FUSION_BA_2_11.0.0.024_O

	Radio: BA_2_11.0.0.017_O
	Application: BA_2_11.0.0.012_O
	Middleware: BA_2_11.0.0.015_O
	Firmware: 7.35.205.8_20181002
NFC	NFC_NCIHALx_AR003C.8.3.0_O_OpnSrc
PTT	3.1.39
Touch FW	TC70x/TC75x = 1.9-Stylus-1-0 & TC51/TC56 = 1.8-Stylus-2.0
RxLog	5.4.12.0
Bluetooth Pairing Utility	3.14
Zebra Data Service	3.4.0.1180
Files	8.1.0
Stage Now	3.1.1.1019
Battery Swap	1.0
User Guide	1.0
Camera	2.0.002
MSRN	2.01
ZVC	2.1.0.12
Battery Manger	1.4.2
ActiveEdge	2.5.16
WorryFree WiFi Analyzer	3.2.18
Device Central	1.0.6.0
Zebra Software License Manager	3.1.1
Audio	0.8.0.0
Diagnostic Tool	1.16.0.1
Finger Print	Zebra/TC75x/TC75x:8.1.0/02-13-15.00-OG-U08-STD/309:user/release-keys
	Zebra/TC75x/TC75xDF:8.1.0/02-13-15.00-OG-U08-STD/309:user/release-keys
	Zebra/TC56/TC56:8.1.0/02-13-15.00-OG-U08-STD/309:user/release-keys
Security Patch Level	Feb 01, 2019
GMS Version	8.1_201809

Following is the list of SPRs which are either fixed new in Oreo or fixed in earlier OS versions and carried forward to Oreo OS version:

SPR-32125 -- Resolved out of memory issue observed in firmware .

SPR-32320 -- Resolved an issue wherein WIFI disconnects

SPR-32403 -- Resolved an issue wherein Scanning Invokes toggling between tab in google chrome

SPR-32611 -- Resolved an issue wherein device disconnects from WLAN network

SPR-32626 -- Resolved an issue wherein remap capacitive buttons BACK HOME MENU SEARCH using EMDK or StageNow results in Unsupported Key error

SPR-32647 -- Resolved an issue wherein Radio Driver fails, unbale to answer the calls.

SPR-32684 -- Resolved an issue wherein FTOverDS setting via StageNow was disabled

SPR-32699 -- Resolved an issue wherein device takes 4 minutes to connect WIFI after undocking from Ethernet cradle

SPR-32732 -- Resolved an issue wherein decoded data unable to display in TC56 device pages programmatically

SPR-32880 -- Resolved an issue wherein Keymapping StageNow GUI cannot handle remap PTT and ScanR and Rear_Button remapping for TC51 TC56 devices

SPR-32965 -- Resolved an issue wherein TC75x device using puck adaptor for MC95 cradle and older cradle CRD9500-4000ER (ADMTech 8513 Ethernet chipset)

SPR-33049 -- Added API to set the pin screen lock

SPR-33207 -- Resolved an issue wherein DDT was showing battery Cycles always Zero and a Green OK flag

SPR-33311/34046 -- Resolved Voxware issue with MODCOM ONE HS3000/BTH 430) with OpenSLES Audio SCO Channel and Mic when RS507 BT Disconnects

SPR-33317 -- Resolved an issue wherein the BT pair app in HID mode is not supported for TC70X device

SPR-33425 -- Resolved an issue wherein Mx Framework was not working properly after installing previous patch

SPR-33462 -- Resolved an issue wherein Keymapping CSP is being suspended when device locks

SPR-33521 -- Resolved an issue wherein PingID Failed to run

SPR-33671 -- Resolved an issue wherein EMDK profile update failed to add WIFI profile if username contains backslash followed by number

SPR-33729 -- Resolved an issue wherein the TC56 device does not read the same symbiology's within the timeout configure

SPR-33799 -- Resolved an issue wherein data wedge is sending char 10 instead of char 13 in TC51 device

SPR-33812 -- Resolved an issue wherein NONE selection is not available when SIM card is in device

SPR-33862 -- Resolved an issue wherein screen Time off settings using display manager CSP was not working

SPR-33936 -- Resolved an issue wherein TC56 device was unable to turn off camera shutter sound

SPR-33981 -- Resolved an issue wherein Czech Republic Regulatory Country cannot be set using Wifi config profile via StageNow

SPR-34028 -- Resolved a Microphone performance issue when device is in speakerphone mode.

SPR-34083 -- Resolved an issue wherein Disable WWAN Radio via AirWatch using StageNow XML Failing to Bind

SPR-34123 -- Resolved an issue wherein TC75 device suppress key not working

SPR-34145 -- Resolved an issue wherein indexing of the WEP key was not handled correctly in framework as well as in WifiConfig.csp

SPR-34175 -- Resolved an issue wherein device information is missing when used with right-to-left languages

SPR-34179 -- Resolved an issue wherein TC70x device exhibiting delays to complete association to close-range AP.

SPR-34213 -- Resolved an issue wherein error message seen during staging in TC75 device

SPR-34221 -- Resolved an issue wherein TC51 device not responding to WLAN EAP Request

SPR-34259 -- Resolved an issue wherein limit USB usage to allow external storage only using UsbMgr

SPR-34267 -- Resolved an issue wherein TC51 device failed to enable USB debugging via Stage Now

SPR-34278 -- Resolved an issue wherein 2.4 GHz Connectivity on WLAN lost after few minutes

SPR-34300 -- Resolved an issue wherein lock Screen does not allow for Inverted Use Case in TC51 device

SPR-34308 -- Resolved an issue wherein TC70x device SE4750-SR has difficulty scanning poor quality barcodes

SPR-34311 -- Resolved an issue wherein Fully Qualified Domain Name (FQDN) blocks the device to acquire IP address due to parsing error

SPR-34313 -- Resolved an issue wherein the device generates keyScanCode 228 automatically after it goes to standby

SPR-34338 -- Resolved an issue wherein the Device was not able to process received EAP request even after multiple attempts from AP resulting in DEAUTH from AP

SPR-34346 -- Resolved an issue wherein Velocity app installation was not persisting after reboot

SPR-34349 -- Resolved an issue wherein large audio gaps and some generic network issues seen in device

SPR-34353 -- Resolved RxLogger issue

SPR-34420 -- Resolved Enterprise keyboard issue on TC75 device

SPR-34429 -- Resolved an issue wherein Data Wedge did not load the "default Profile0" as per the expectation

SPR-34432 -- Resolved an issue wherein NTP is not able to sync time based on the interval

SPR-34441 -- Resolved an issue wherein each mail content Sync Feature is causing the issue

SPR-34445 -- Resolved a DS3678-ER no beam issue

SPR-34448 -- Resolved an issue wherein the device was unable to detect external SDCARD post suspend

SPR-34472 -- Resolved an issue wherein framework is unable to throw transaction too large exception

SPR-34578/34579 -- Resolved an issue wherein headset audio volume is too low when used with VoIP applications

SPR-34590 -- Resolved an issue wherein MX Framework does not restart after being killed by lowmemkiller

SPR-34595 -- Resolved an issue wherein StageNow failed to locate xml file in sdcard

SPR-34614 -- Resolved an issue wherein data Wedge goes into a condition where scanner cannot be enabled due to quick enable and disable the scanner via intent APIs

SPR-34627 -- Resolved an issue wherein the TC51 device Unable to Enroll into Soti as DO using Hashtag Method

SPR-34633 -- Resolved a WIFI issue in TC51 device

SPR-34648 -- Resolved an issue wherein DHCP Client was crashing

SPR-34676 -- Resolved an issue wherein AirWatch launching error seen on TC51 and TC56 device

SPR-34679 -- Resolved an issue wherein error seen when setting Band Selection to Auto via StageNow

SPR-34695 -- Resolved an issue wherein Play Protect setting not boot Persistent in TC51 device.

SPR-34757 -- Resolved an issue wherein reboot loop - issue manifests during DHCP assignment on VC80 device

SPR-34781 -- Resolved an issue wherein data wedge is sending char 10 instead of char 13 in TC20 device

SPR-34784 -- Resolved an issue wherein safe battery swap leads to Recovery process failure with battery reported as 0% on TC51 device

SPR-34810 -- Resolved an issue wherein Vocera VCS Client is seeing delays on TC51 device

SPR-34816 -- Resolved an issue wherein DHL GCA application scanner beam disabled on TC56 device

SPR-34888 -- Resolved an issue wherein Key programmer app fails to launch

SPR-34894 -- Resolved an issue wherein DATAWEDGE PROFILE RANDOMLY DISABLING CAUSING SCANNER TO STOP

SPR-34906 -- Resolved an issue wherein the TC51 device stuck at splash screen after velocity installation

SPR-34970 -- Resolved Speech Quality issue.

SPR-34972 -- Added DW new implementation to avoid delay in enable and disable the scanner

SPR-35021 -- Resolved an issue wherein the TC51 device Update not preserving Proxy Auto-PAC setting.

SPR-35054 -- Resolved an issue wherein the device Unable to scan MSI barcode due to insufficient quiet zone

SPR-35062 -- Resolved Default Launcher issues when MX configures whitelist or installs 3rdparty Launcher - through AirWatch on TC70X device

SPR-35090 -- Resolved an issue wherein the device connected to network, but Wi-Fi icon shows an "X"

SPR-35116 -- Resolved data limit setting issue on TC56

SPR-35231 -- Resolved an issue wherein SIP call experiencing choppy audio when call transferred to TC51 WFC

SPR-35414 -- Method to differentiate scanners support has been added

SPR 35763 -- Resolved an issue wherein "one-way audio" one end of the call hears conversation while the other hears no sound

SPR-3485--Resolved an issue wherein Wrong Retry Count is shown on the device when the we enter the wrong SIM PIN for certain SIM cards

SPR-34978--Resolved an issue wherein unable to set Private APN with EMDK or Stage Now

SPR-36897--Request amendment to the default Telstra-M2M APN settings

Installation Requirements

Download both Full Package and Reset Packages (Optional). Read specific notes on OS-Upgrade and OS-Downgrade scenarios for more details.

Specific notes on OS-Upgrade Scenarios:

1. OS Upgrade behavior for normal upgrade is same as in previous releases. Data persistence is maintained for the normal upgrade scenarios.
   Following are the examples of the <u>normal upgrade</u> scenarios:
   a. Marshmallow (GMS) -> Oreo (GMS)
   b. Marshmallow (NGMS) -> Oreo (NGMS)
   c. Nougat (GMS) -> Oreo (GMS)
   d. Nougat (NGMS) -> Oreo (NGMS)
   e. Oreo (GMS) -> Oreo (GMS)
   f. Oreo (NGMS) -> Oreo (NGMS)

2. When user performs **cross upgrade** from Nougat to Oreo, **system performs automatic enterprise reset**.
   Following are the examples of **cross upgrade** scenarios where automatic enterprise reset is performed by the system:
   a. Nougat (GMS) -> Oreo (NGMS)
   b. Nougat (NGMS) -> Oreo (GMS)

3. When user performs **cross upgrade** from Marshmallow to Oreo, he needs to perform manual enterprise reset. For this, he needs to download enterprise reset package.

   Following are the examples of **cross upgrade** scenarios where manual enterprise reset is required to be performed by the user:
   a. Marshmallow (GMS) -> Oreo (NGMS)
   b. Marshmallow (NGMS) -> Oreo (GMS)

Specific notes on OS-Downgrade Scenarios:

OS downgrade behavior has changed in Oreo. Automatic enterprise data reset is performed when the system detects OS downgrade operation.

Following are the examples of OS downgrade operations:

a) Oreo (GMS/NGMS) -> Nougat (GMS/NGMS)

b) Oreo (GMS/NGMS) -> Marshmallow (GMS/NGMS)

c) Downgrading to lower level patch versions within Oreo

General notes:

There is a new feature **"Data reset screen"** introduced in Android Oreo to handle error scenarios while updating OS. This data reset screen is triggered when the system encounters error situations like continuous system service crash or any application crash during the OS update process.

The data reset screen prompts user to select one of the following options

a) "Try again"

b) "Factory Reset"

Select option (a) "Try again" to continue the OS update process. Do not select option (b) "Factory Reset", as it will erase the user data.

Installation Instructions

Using ADB Sideload

The installation instructions assume you have ADB installed on your PC (the adb drivers etc..) and your TC75x/TC56 has developer options enabled and USB debugging ON. Instructions on HOW TO enable ADB is also captured in the Integrator guide.

1. Plug the TC75x/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 Media Player… this can be ignored.

❖ **Download Image**
   a) FPU_ATLAS_02-13-15.00-OG-U08-STD.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 TC75x/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 for applying OS upgrade package

   b. Use the Volume + and – to highlight, "Apply downgrade from ADB" and press the Power key to select it for applying OS downgrade package

8. With your Command Prompt open in the Host machine, type *"adb sideload"* command and add a space and then drag and drop the Full Package Update zip file 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 TC75x/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 Email

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 **"02-13-15.00-OG-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. Now you are all set to use your TC75x/TC56.

Using External SD Card

1. Plug the TC75x/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 FPU_ATLAS_02-13-15.00-OG-U08-STD.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 TC75x/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 for applying a OS upgrade package.
    Note: If you want to apply a downgrade package, select option "Apply downgrade from SD card".
    b. Use the Volume + and – to highlight package to be installed (FPU_ATLAS_02-13-15.00-OG-U08-STD.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 TC75x/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.

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

10. 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 **"02-13-15.00-OG-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.

11. Now you are all set to use your TC75x/TC56.

Device Compatibility

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

TC56
Device Part Number
TC56CJ-1PAZU2P-US
TC56CJ-1PAZU2P-A6
TC56DJ-1PAZU2P-A6
TC56DJ-1PAZU2P-BR
TC56DJ-1PAZU2P-IA
TC56DJ-1PAZU2P-CN
TC56DJ-1PAZU2P-TN
TC56DJ-1PAZU2P-ID
TC56CJ-1PAZU4P-US
TC56CJ-1PAZU4P-A6
TC56DJ-1PAZU4P-A6
TC56DJ-1PAZU4P-BR
TC56DJ-1PAZU4P-IA
TC56DJ-1PAZU4P-TN
TC56DJ-1PAZU4P-CN
TC56DJ-1PAZU4P-ID

TC75x
Device Part Number
TC75EK-2MB22AB-US
TC75EK-2MB24AB-US
TC75EK-2MF22AB-US
TC75EK-2MB22AF-US
TC75FK-2MB22AD-A6
TC75FK-2MB24AD-A6
TC75FK-2MB22AD-BR
TC75FK-2MB22AD-IA
TC75FK-2MB22AD-ID
TC75FK-2MB22AD-TN
TC75FK-2MF22AD-A6
TC75FK-2MB22AD-TW
TC75GK-2MB22AD-A6
TC75GK-2MB24AD-A6
TC75GK-2MF22AD-A6

Supported FIPS and TAA Compliant SKUS:

FIPS and TAA Compliant SKUS
Device Part Number
TC56CJ-1PAZU4P-FT

FIPS and TAA Compliant SKUS
Device Part Number
TC75EK-2MB24AB-FT

Known Issues and Limitations

1. For an existing Data wedge profile which is configured for Image barcode scanning, if the user updates the profile for SimulScan data capture and reboots the device, the decoder list is shown as blank under DataWedge settings. As a workaround, user needs to use two different Data wedge profiles one for Imager barcode scanning and other profile for Simul scan data capture.

2. Velocity application stops if user use the Android Recent button to close Velocity app. As a workaround, user can close the application from the velocity application client menu.

3. Ethernet shows Connected state when device is configured with Static IP and placed in multi-slot cradle without Ethernet cable.

4. Sometimes elongated reboots lasting almost an hour is observed after Sprint Carrier HFA triggered during SIM switch. Fix is available in and integrated in LG branch, LG release is going to happen in two days from WAN release.

5. The Sprint carrier HFA activation does not occur when switching from Verizon [SIM2] to Sprint [SIM1]. Fix is available in and integrated in LG branch, LG release is going to happen in two days from WAN release.