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# Release Notes – Zebra TC20 and TC25 Android O LifeGuard Update 05 for 01-11-09.00-OG-U00-STD (GMS)

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## Introduction

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Zebra is providing an OS upgrade release for its TC25 and TC20 product families.

TC25 is a WWAN device ideal for customers who need proof of delivery, voice communications, and basic tracking, navigating and messaging applications.

The TC20 enterprise mobile computer is designed for small-medium sized businesses in the retail, hospitality and small footprint warehousing industries! TC20 is a WLAN only device ideal for customers who need inventory management, price checking, and basic clientele applications.

TC25 and TC20 series of devices are positioned as the durable everyday business tool, in the entry-level segment of Zebra's mobility portfolio, with a differentiated and comprehensive set of new features including:

- Two scan engine options to meet SMB needs with SE2100 and SE4710
- Ergonomic smartphone-like form factor that is small enough to fit in your pocket, yet powerful enough to multi-task, manage inventory, price check, and perform back of store applications
- High capacity 3000 mAh internal battery designed to support a full shift plus an optional snap on PowerPack for continuous use
- Pre-installed Workforce Connect Push-To-Talk Express communication solution
- Ambidextrous scan buttons on left and right side of the device
- Initially launched with Android 7.1.2 (Nougat) OS at launch with the ability to upgrade to Android 8.1.0
- Extensive accessory eco-system, including 1-Slot cradles for charging and data communication, 5-slot cradles for large charging deployments, a field detachable trigger handle and a unique snap on PowerPack

# Description

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This is the first Android 8.1.0 software release for TC25 and TC20 Mobile Computers. This release contains software packages for Android OREO-GMS operating system for TC20 and TC25.

**Note:** Devices manufactured after 20MAR19 should be flashed with LifeGuard update 2 (CFE-TC2X-O-XX-011109-G-00-02.zip) or higher.

## 1. CFE v5 Updates:

❖ CFE-TC2X-O-XX-011109-G-00-05.zip (GMS)

### 1. Android Security Patch Level: July 01, 2019

Use the below link to see the Android Security bulletin for more information: <https://source.android.com/security/bulletin/>

2. SPR36865 – Resolved an issue wherein upon pressing Hardware trigger used to switch between tabs, while Chrome was in foreground with multiple tabs open.
3. Updated below mentioned components:
  - Wifi – FUSIONLIFTEQA\_1\_0.0.0.019\_O
    - SPR36702 – Resolved an issue wherein the MU was not able to connect to WLAN profile randomly after few reboots.

## 2. CFE v4 Updates:

❖ CFE-TC2X-O-XX-011109-G-00-04.zip (GMS)

### 1. Android Security Patch Level: June 01, 2019

Use the below link to see the Android Security bulletin for more information: <https://source.android.com/security/bulletin/>

4. SPR36970 – Resolved an issue wherein period key was not working when used in RDP on Linux CentOS 7 server.
5. SPR36457 – Resolved an issue wherein scanner was not working intermittently on few units after factory reset.
6. Updated below mentioned components:
  - Wifi – FUSIONLIFTEQA\_1\_0.0.0.018\_O
  - OSX – version QCT.81.8.4.UL

## 3. CFE v3 Updates:

❖ CFE-TC2X-O-XX-011109-G-00-03.zip (GMS)

### 1. Android Security Patch Level: May 01, 2019

Use the below link to see the Android Security bulletin for more information: <https://source.android.com/security/bulletin/>

7. SPR36906 - Resolved an issue wherein performing Factory reset using StageNow resulted in formatting of cache.

## 4. CFE v2 Updates:

❖ CFE-TC2X-O-XX-011109-G-00-02.zip (GMS)

### 1. Android Security Patch Level: April 01, 2019

Use the below link to see the Android Security bulletin for more information: <https://source.android.com/security/bulletin/>

8. Updated below mentioned components:
  - Scanning\_Framework – version 22.0.5.0
  - Wifi – FUSIONLIFTEQA\_1\_0.0.0.016\_O
  - OSX – version QCT.81.8.3.3UL
  - BT\_Pairing\_Utility – 3.15
  
9. SPR35855/35695 - Resolved an issue wherein scanned data was being delivered as individual characters to the applications.
10. SPR36117/36095 – OSx provisioning properties were getting intermittently reset causing device to be in a non-provisioned state causing below symptoms.
  - When scanning a barcode it does not decode into the targeted application.
  - A long press on the power key does not bring up the “Airplane” menu item.
  - HOME and RECENT keys were not functional.
11. SPR36220 - resolved an issue where-in Google Play services were getting disabled after bypassing GMS Setup wizard.
12. SPR36685 - Resolved an issue wherein image distortion issue was observed while scanning a barcode using any application.

## 5. CFE v1 Updates:

❖ CFE-TC2X-O-XX-011109-G-00-01.zip (GMS)

### 1. Android Security Patch Level: February 01, 2019

Use the below link to see the Android Security bulletin for more information: <https://source.android.com/security/bulletin/>

13. SPR36021 - Resolved an issue wherein voice call quality was getting degraded when phone is slightly moved away from the mouth area.

## Device Compatibility

This software release has been approved for Android TC20 OREO GMS models mentioned below.

Device	Operating System
TC200J-10C112A6	Android O GMS ROW – EMEA, LATAM, APAC & Canada
TC200J-10C112US	Android O GMS US Only
TC200J-10A111US	Android O GMS US Only
TC200J-10A111A6	Android O GMS ROW – EMEA, LATAM, APAC & Canada
TC200J-10C213A6	Android O GMS ROW – EMEA, LATAM, APAC & Canada (Premium SKU)
TC200J-10C213US	Android O GMS US Only (Premium SKU)
TC200J-10A111TN	Android O GMS TUNISIA Only

TC200J-10C112TN	Android O GMS TUNISIA Only
TC200J-10C213IA	Android O GMS INDIA (Premium SKU)
TC200J-10C112IA	Android O GMS INDIA
TC200J-10A111IA	Android O GMS INDIA
TC200J-1KC111A6	Android O GMS ROW EMEA, LATAM, APAC & Canada (Keyboard SKU)
TC200J-1KC111IA	Android O GMS INDIA (Keyboard SKU)
TC200J-1KC111TN	Android O GMS TUNISIA (Keyboard SKU)
TC200J-1KC111US	Android O GMS US (Keyboard SKU)
TC200J-10C213AZ	Android O GMS Australia/New Zealand (Premium SKU)

This software is also approved for Android TC25 OREO GMS models mentioned below

<b>Device</b>	<b>Operating System</b>
TC25AJ-10C102A6	Android O GMS ROW – EMEA
TC25AJ-10B101A6	Android O GMS ROW – EMEA
TC25BJ-10C102A6	Android O GMS ROW – EMEA & APAC
TC25BJ-10B101A6	Android O GMS ROW – EMEA & APAC
TC25BJ-10C102IA	Android O GMS ROW - INDIA
TC25BJ-10B101IA	Android O GMS ROW - INDIA
TC25BJ-10C102BR	Android O GMS ROW - BRAZIL
TC25BJ-10B101BR	Android O GMS ROW - BRAZIL
TC25BJ-10C102TN	Android O GMS ROW - TUNISIA
TC25BJ-10B101TN	Android O GMS ROW - TUNISIA
TC25BJ-10C102JP	Android O GMS ROW - JAPAN
TC25BJ-10B101JP	Android O GMS ROW - JAPAN
TC25AJ-10C102US	Android O GMS NORTH AMERICA - US
TC25AJ-10B101US	Android O GMS NORTH AMERICA - US
TC25BJ-10B101ID	Android O GMS ROW - INDONESIA
TC25BJ-10C102ID	Android O GMS ROW - INDONESIA

## Component Contents

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Component	Version
Build_version	01-11-09.00-OG-U05-STD
Android_version	8.1.0
Android_SDK_Level	26
Android Security Patch Level	July 1, 2019
Linux_kernel	3.18.71
Wifi	FUSIONLITE_QA_1_0.0.0.019_O Application: QA_1_00.0.0.008_O Middleware: QA_1_00.0.0.011_O Radio: QA_1_00.0.0.015_O
Platform	Qualcomm MSM8937
Scanning_Framework	22.0.5.0
DWDEMO	2.0.13
OSX	QCT.81.8.4.UL
MXMF	8.2.3.1
Touch	Focaltech V1.1 20161103 (fw:0x24)
Bluetooth_Stack	CNSS-PR-4-0-552-166444-1/01050102
Flash_Size	16G /32G
RAM_Size	2G
GPS	MPSS.JO.3.0-00431-8937_GENNS_PACK-1
MMS	8.1.0
RIL_Version	Qualcomm RIL 1.0
BT_Pairing_UTILITY	3.15
DataWedge	7.0.4
Camera	2.0.002
PTT	3.1.39
RxLogger	5.4.12.0
StageNow	3.1.1.1019
Zebra Data Service	3.4.0.1180
EMDK	7.0.0.2000
IMEI SV Number	09

OEM Config	8.1.0.9
DDT	V1.16.0.11
Audio SW Version	0.3.0.0
Acoustic Profiles	General: CO4.2 Cellular: CO4.2
Finger prints	Zebra/TC25/TC25FM:8.1.0/01-11-09.00-OG-U05-STD/190617:user/release-keys, Zebra/TC20/ TC20RT: 8.1.0/01-11-09.00-OG-U05-STD/190617:user/release-keys, Zebra/ TC20/ TC20RD: 8.1.0/01-11-09.00-OG-U05-STD/190617:user/release-keys, Zebra/ TC20/ TC20KB: 8.1.0/01-11-09.00-OG-U05-STD/190617:user/release-keys

## Installation Requirements

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### HW Requirements

- Windows PC running Windows 7/10 32/64 bits
- USB Type C Cable
- Micro SD Card with at least 2GB capacity (optional)

### SW Requirements

Please make sure following components are installed on your computer before commencing OS installation.

- Zebra Android USB Driver V2.2 or higher
- Android Debug Bridge (ADB) version 1.0.39 or higher
- TC20/TC25 GMS Android OS Release Images

### Image Compatibility

Please note that GMS full package update file is not compatible with China based SKUs hence China based SKUs will not allow to download GMS images. Attempt to install GMS Image on China based SKUs will gracefully fail and report image incompatibility error.

# Installation Instructions

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## Using the “adb sideload” method

### Assumptions

1. ADB installed on PC
2. TC20/TC25 has Developer options enabled
3. USB debugging ON

### Procedure

1. Plug the TC20/TC25 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 notification bar, and tap on the notification which says, “USB charging this device”, and change it to “Transfer files”.
3. Open Command Prompt on PC, run “adb devices” and check to see 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.
5. Entering Recovery Mode
  - a. Choice 1: In Command Prompt, type “adb reboot recovery” and click enter.
  - b. Choice 2:
    - i. Reboot and hold PTT key
    - ii. When Zebra Technologies logo appears on the screen Release the PTT Key
6. Your TC20/TC25 will reboot and take you to Android Recovery screen.
7. To select Sideload Method
  - a. Use the Volume + and – to highlight, “Apply upgrade from ADB” and press the Power Key to select it
8. With your Command Prompt, open, type “adb sideload” and add a space and then drag and drop the zip file which you want to apply to the device and press enter.
  - a. When the file download starts, the command window will show progress with a percentage completed.
  - b. Device display will show a series of messages indicating it is downloading, verifying and installing the image on to the device.
9. After successful update, the device will auto reboot and you see Zebra on top and POWERED BY android at the bottom and after about 10 second will transition to the TC20/TC25 Touch Computer splash screen with 5 dancing white dots at bottom... it will stay at this screen for up to 4 minutes and then present the “Welcome Screen”.
10. After this you will need to complete the process by setting up Wi-Fi and E-mail accounts and such.
11. To make sure the OS Update took place, once the initial setup is complete;
  - a. Go to “Settings” and scroll down to “System” and navigate to “About phone” and look at the “Build number”. It should state “01-11-09.00-OG-U05-STD”.
12. Setting the Date and Time. If you associate the device to a WLAN AP, it should automatically set the date and time. 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 TC20/TC25.

## Using External SD Card

1. Plug the TC20/TC25 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 notification bar, and tap on the notification which says “USB charging this device”, and then change it to “Transfer files”.
3. 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.
4. Copy the required files to the SD Card. This can be done in two ways
  - a. Copy the files to the Micro SD card with the help of a SD Adapter which gets inserted to the SD slot of your PC/Laptop/SD Writer.
  - b. Directly transfer files to the Micro SD card which is inserted in to the back of the device. Please refer to the user guide on how to open the back door and inserting the SD card to the device.
5. Entering Recovery Mode
  - a. Choice 1: In Command Prompt, type “adb reboot recovery” and click enter.
  - b. Choice 2:
    - i. Reboot and hold PTT key
    - ii. When Zebra Technologies logo appears on the screen Release the PTT Key
6. Your TC20/TC25 will reboot and take you to Android Recovery screen.
7. Applying update via External SD card
  - a. Use the Volume + and – to highlight select option to “Apply upgrade from SD card” and press the Power Key to select it
  - b. Use the Volume + and – to highlight package to be installed (downloaded Zip file) and press the Power Key to select it.
8. After successful update the device will auto reboot and you see Zebra on top and POWERED BY android at the bottom and after about 10 second will transition to the TC20/TC25 Touch Computer splash screen with 5 dancing white dots at bottom... it will stay at this screen for up to 4 minutes and then present the “Welcome Screen”.
9. After this you will need to complete the process by setting up Wi-Fi and E-mail accounts and such.
10. To make sure the OS Update took place, once the initial setup is complete;
  - a. Go to “Settings” and scroll down to “System” and navigate to “About phone” and look at the “Build number”. It should state “01-11-09.00-OG-U05-STD”.
11. Setting the Date and Time. If you associate the device to a WLAN AP, it should automatically set the date and time. 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.
12. Now you are all set to use your TC20/TC25.



## Downloadable Software Included in this Release

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Filename	Description
CFE-TC2X-O-XX-011109-G-00-05.zip	OS Update LG patch for BSP 01-11-09.00-OG-U00-STD

Last Revised: 06-27-2019