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# Release Notes – Zebra TC20 and TC25 Android O LifeGuard Update 06 for 01-11-09.00-ON-U00-STD (NON-GMS) – Chinese Specific

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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 TC20 Mobile Computer. This release contains software packages for Android OREO NON-GMS operating system for TC20.

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

## 1. CFE v6 Updates:

❖ CFE-TC2X-O-XX-011109-N-00-06.zip (Non-GMS)

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

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

2. SPR37273 – Resolved an issue wherein EHS Hostname in title was not reflecting updated HostName after device reboot.
3. MX, StageNow, EMDK, Datawedge components update:

Note: For detailed release notes, please refer <http://techdocs.zebra.com>

- MX: v9.0.4.1
  - a. SPR36994 – Resolved MX initialization issue wherein EHS was calling MX before completion of MX initialization process.
- StageNow: v3.3.1.2000
- Datawedge: v7.3.24
  - a. SPR37124 – Resolved an issue where in ADF rule with crunch spaces was removing last character from barcode data with space.
  - b. SPR37060/SPR36880 - Resolved an issue wherein Datawedge was not disabling the scanner upon resume during app transition from background to foreground causing intermittent scanning failures.
- EMDK: v7.3.19.2319
- DDT: v1.17.0.9

## 2. CFE v5 Updates:

❖ CFE-TC2X-O-XX-011109-N-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\_0
    - SPR36702 – Resolved an issue wherein the MU was not able to connect to WLAN profile randomly after few reboots.

## 3. CFE v4 Updates:

❖ CFE-TC2X-O-XX-011109-N-00-04.zip (Non-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/>

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

#### 4. CFE v3 Updates:

❖ CFE-TC2X-O-XX-011109-N-00-03.zip (Non-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/>

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

#### 5. CFE v2 Updates:

❖ CFE-TC2X-O-XX-011109-N-00-02.zip (Non-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/>

2. 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
3. SPR35855/35695 - Resolved an issue wherein scanned data was being delivered as individual characters to the applications.
4. 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.
5. SPR36685 - Resolved an issue wherein image distortion issue was observed while scanning a barcode using any application.

#### 6. CFE v1 Updates:

❖ CFE-TC2X-O-XX-011109-N-00-01.zip (Non-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/>

2. 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 Non-GMS models mentioned below. Please note that GMS OS images are not compatible with China based SKUs. Attempt to install GMS Image on China based SKUs will gracefully fail and report image incompatibility error.

Device	Operating System
TC200J-20C112CN	Android O (Non-GMS Only) China Only
TC200J-20A111CN	Android O (Non-GMS Only) China Only
TC200J-2KC111CN	Android O (Non-GMS Only) Keyboard SKU - China Only
TC200J-20C213CN	Android O (Non-GMS Only) Premium SKU - China Only

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

Device	Operating System
TC25CJ-20B101CN	Android O (Non-GMS Only) China Only
TC25CJ-20C102CN	Android O (Non-GMS Only) China Only

## Component Contents

Component	Version
Build_version	01-11-09.00-ON-U06-STD (NON-GMS)
Android_version	8.1.0
Android_SDK_Level	26
Android Security Patch Level	August 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.81.8.8.1.UL
MXMF	9.0.4.1
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	7.3.24
Camera	2.0.002
PTT	3.1.39
RxLogger	5.4.12.0
StageNow	3.3.1.2000
Zebra Data Service	3.4.0.1180
EMDK	7.3.19.2319
IMEI SV Number	09
OEM Config	8.1.0.9
Zebra Folder	8.1
EIS	1.0.0.5
DDT	1.17.0.9
Audio SW Version	0.3.0.0
Acoustic Profiles	General: CO4.2 Cellular: CO4.2
Fingerprints	Zebra/TC25/TC25FM: 8.1.0/01-11-09.00-ON-U06-STD/190729:user/release-keys, Zebra/TC20/ TC20RT: 8.1.0/01-11-09.00-ON-U06-STD/190729:user/release-keys, Zebra/ TC20/ TC20RD: 8.1.0/01-11-09.00-ON-U06-STD/190729:user/release-keys,

	Zebra/ TC20/ TC20KB: 8.1.0/01-11-09.00-ON-U06-STD/190729:user/release-keys
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## 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 Non-GMS Android OS Release Images

### Image Compatibility

AOSP/Non-GMS image primarily meant for China SKUs hence only validated for Traditional Chinese and Simplified Chinese.

## 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-ON-U06-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-ON-U06-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-N-00-06.zip	OS Update LG patch for BSP 01-11-09.00-OG-U00-STD

Last Revised: 08-01-2019