



# TC55 OPERATING SYSTEM FOR GSM GMS DEVICES BSP 01.74.00 RELEASE NOTES

## INTRODUCTION

TC55 is a ruggedized device based on Android for the enterprise market that blends the capabilities of a smart phone with those of a traditional enterprise PDA. TC55 has a number of enterprise-grade features, including a touch-screen that can be used with gloves, support for stylus input for signatures, barcode capture capability and IP67 rating for dust and water protection. It also features Zebra Extensions to make the Android operating system more enterprise ready, with security enhancements and hooks for device management tools, and is designed for a longer lifecycle than the typical smart phone. TC55 is designed in response to customer feedback from using consumer-grade smart phones in the workplace, especially with the bring-your-own-device (BYOD) trend, where employees use their own choice of device for work. With TC55 the workers can capture practically any type of data — from bar codes and signatures to photos, videos and NFC — improving on the job efficiency and customer service. The screen is optimized for Enterprise viewing, helping ensure the battery lasts a full shift. And with a drop, tumble and environmental sealing specification you can count on, it has the durability required to serve your field workers for years

## NEW FEATURES IN THIS RELEASE

Add GMS (Google Mobile Service) package. TC55 with Google GMS function is named as Standard Configuration and TC55 without GMS like previous release is named as Professional Configuration.

GMS package includes:

### New Applications

- Chrome – Google’s WWW browser
- Google - Search and Google Now
- Gmail – email client for gmail
- Google Docs / Drive – Access to Google Drive files
- Google Settings – Control Panel for Google apps, also Android Device Manager Access
- Google + - Google Social Networking



- Hangouts - Extension of Google+ for calls and videos and pictures
- Maps – Google Maps and Navigation
- Play Games – Buy games and play
- Play Magazines – Buy multimedia magazines and newspapers
- Play Books – Buy, Store, and Read Books
- Play Music – Store, Play, Buy Music
- Play Movies and TV – Buy, Play, and Store Movies/TV Shows
- Play Store – Store and purchase Android Applications
- Voice Search – Voice driven web search
- IME Search – Keyboard driven search
- YouTube – Video Sharing

#### Updated Applications

- Calendar – Same as the AOSP Calendar application except it includes synchronizing Google Calendar Events.
- People - Same as the AOSP People application except it includes synchronizing Google Contacts.

#### Enterprise Mode

TC55 standard configuration (GMS build) is by default (out of box) configured as:

- 100% Google CTS requirement compliant
- Enterprise Mode disabled

MSI provides EnterpriseEnabler package to grant full permissions to MSI enterprise features (e.g., MX, Datawedge, etc). **It is required to apply EnterpriseEnabler package to access full MSI enterprise features!**

Options to enable Enterprise Mode:

- Manual Activation from the UI (EnterpriseEnabler.apk / T55N0JXUVPKEN17400.apk )



- Activation via recovery mode (EnterpriseEnabler.zip / T55N0JXXVRPEN17400.zip)
- Scripted via USB (ADB) installation without UI – Silent Installation

(EnterpriseEnabler-SilentNoUI.apk / T55N0JXSVPKEN17400.apk)

- 3rd Party MDMs (EnterpriseEnabler-SilentNoUI.apk / T55N0JXSVPKEN17400.apk)
- RD/MSP (EnterpriseEnabler.apf / T55N0JXXVAPEN17400.apf )

Note:

1. **FactoryReset package** (T55N0JXXVRFEN17400.zip or T55N0JXXVAFEN17400.apf) will set device back to Enterprise Mode disabled status (default Enterprise mode).

2. **EnterpriseEnabler is only for GMS build.** Though it is no harm to apply it on professional configuration (non-GMS build), EnterpriseEnabler will check the OS version that device is running in recovery mode and skip to do anything if the running OS is non-GMS version.

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## DESCRIPTION

1. JellyBean 4.1.2



2. Kernel v3.4.0
3. DataWedge v1.7.5
4. Scanning Framework 1.18.P03
5. MSP v7.08.67
6. MX 3.2.2-6
7. WiFi/BT FW M8960AAAAANAZW1040010
8. RIL 1.0.14
9. Modem 20015326.28

## CONTENTS

### OS Packages

1. T55N0JGMVRUEN17400.zip – TC55 OS Recovery Update package
2. T55N0JB0VAUEN17400.apf – TC55 OS Update package file for deployment using MSP

### EnterpriseEnabler Packages

1. T55N0JXUVPKEN17400.apk – EnterpriseEnabler Manual Activation from the UI
2. T55N0JXSVPKEN17400.apk – EnterpriseEnabler Scripted installation without UI (Silent Installation) via USB (ADB) or via MDMs like SOTI
3. T55N0JXXVRPEN17400.zip – EnterpriseEnabler Manual Activation in recovery mode
4. T55N0JXXVAPEN17400.apf – EnterpriseEnabler for RD/MSP deployment

### Reset Packages

#### Factory Reset packages

1. T55N0JXXVRFEN17400.zip – Recovery package to perform **Factory reset**
2. T55N0JXXVAFEN17400.apf – MSP deployment package to perform **Factory reset**

#### Enterprise Reset packages

1. T55N0JGMVREEN17400.zip – Recovery package to perform Factory reset in recovery mode, it will not erase the Enterprise folder and will not change Enterprise mode.
2. T55N0JGMVAEEN17400.apf – MSP deployment package to perform Factory reset on the terminal and it will not erase the Enterprise folder and will not change Enterprise mode.

## DEVICE COMPATIBILITY

This software release has been approved for use with the following devices: TC55

### **Vendor information**

ShelterGMS certified by Google via 3rd party partner and related changes including:

- `ro.product.manufacturer(android.os.Build.MANUFACTURER) = GIGABYTE`

(Apps/services who rely on property to be “Zebra Solutions” need to be modified according. For example, EHS 1.2 or later versions should be used for this change)

- `USB VID changed in 01.74G`

(Zebra Android USB Driver v1.2 or later versions should be used to support ADB)



## INSTALLATION REQUIREMENTS

- This SW is intended for the TC55 device
- When install 01.74G onto a TC55 device that is running **non-GMS** build (e.g., 01.65.04 or 01.45) and vice versa:
  1. Factory reset v01.74G ( T55N0JXXVRFEN17400.zip or T55N0JXXVAFEN17400.apf ) should be applied before the OS Image Upgrade

## INSTALLATION INSTRUCTIONS

1. OS Recovery Update
  - Connect the USB cable from your PC to the device and enable USB mass storage mode on the device.
  - On your PC you should see an internal and external USB mass storage drive (SD card) appears in the File Explore and copy the recovery update (T55N0JGMV RUEN17400.zip), factory reset(T55N0JXXVRFEN17400.zip) and EnterpriseEnabler (T55N0JXXVRPEN17400.zip) file to any storage
  - Press and hold on the device the Power button, Scan/Action button and Vol+ until the screen is turned OFF
  - Release the Power and Scan/Action buttons and continue to hold Vol+ button
  - The device should enter to Recovery update mode
  - Release Vol+
  - Click on Vol+ or Vol- to navigate and select appropriated storage
  - Click on on Scan/Action button to select the option
  - Click on Vol+ or Vol- to navigate to the factory reset zip file
  - Click on Scan/Action button to select the factory reset zip file
  - Click on Vol+ or Vol- to navigate to the recovery update zip file
  - Click on Scan/Action button to select the recovery update zip file
  - **Do following steps to enable enterprise mode to access full MSI enterprise features**
  - Press and hold on the device the Power button, Scan/Action button and Vol+ until the screen is turned OFF
  - Release the Power and Scan/Action buttons and continue to hold Vol+ button
  - The device should enter to Recovery update mode
  - Release Vol+
  - Click on Vol+ or Vol- to navigate and select appropriated storage
  - Click on Vol+ or Vol- to navigate to the EnterpriseEnabler zip file.
  - Click on Scan/Action button to select the EnterpriseEnabler zip file
  - Click on Vol+ or Vol- to navigate to reboot and select it
  - After reboot and device will be ready to use.
1. MSP OS package update
  - Please refer Mobility Service Platform deployment guide for instruction.
  - The requirement for factory reset is the same when install 01.74G to non-GMS build and vice versa

## NOTES

Known issues, Tips and Workarounds

Description	Notes/Recovery
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Charging may fail on the first attempt (rarely) the LED will blink red quickly to indicate this (114388)	To recover, reinsert the charger.
Charging a deeply-discharged battery will cause the LED to blink red slowly... this is normal and can last up to 8 minutes until the normal charging green LED is seen (114428)	This is normal behavior.
USB printing on a ZebraMZ220 doesn't work (100574)	This printer is not supported by Android.
After inserting a T-mobile SIM (rarely) data service cannot be obtained (115307)	To recover, turn Airplane Mode On/Off.  Note: this is a T-mobile network issue.
When in Silent Mode the volume button does not work while in the Decode Audio Feedback of Data Wedge (116535)	Workaround:  User can go to any other screen, and can move out of silent mode with Vol+/-
Exchange and G-mail account folders are not localized when switching from one language to another (117486)	This is Android behavior.  Workaround: Close the application and reopen language is refreshed.
For a mixed deployment comprising broadcast and hidden SSID's, the device	To workaround this problem, there are two solutions:  1. Manually add the profile using the "Add

<p>cannot connect to a hidden SSID if the profile was added manually by selecting a broadcast SSID listed in “WiFi” Settings Page (114289)</p>	<p>network” option (Click on “+” in “WiFi” Settings Page)</p> <p>2. To configure programmatically, use the <a href="#">wifiConfiguration</a> class to create a profile that has the hidden SSID field parameter set to true. Here is a code sample to do this:</p> <pre>import android.net.wifi.WiFiConfiguration;  WiFiConfiguration configuration = new WiFiConfiguration();  Configuration.hiddenSSID = true;</pre>
<p>Google play keeps loading and no response when first time launch it after factory reset (122096)</p>	<p>This issue happened with the combination of following conditions:</p> <ol style="list-style-type: none"> <li>1. User skip setup Google account in setup wizard (Setup wizard shows up during first boot or after factoryReset)</li> <li>2. Launch Google play store and use it to setup Google account (If user skip setup Google account in setup wizard, anytime a Google application is launched the account selection wizard will be prompted to user)</li> </ol> <p>To workaround this problem, there are several solutions:</p> <ol style="list-style-type: none"> <li>1. Setup Google account in setup wizard when first time boot into device or after factory rest</li> <li>2. Use other Google application to setup Google account then launch play store</li> </ol> <p>Manually kill Google play and launch it again (User can press and hold menu key to launch Recent App list, and then kill play store by swipe out play store icon)</p>
<p>Device shows error - unfortunately Google+</p>	<p>When attempting to sync the device in order to transfer files from the device to the computer, the device showed the following error: unfortunately Google+ has stopped.</p>



has stopped (124895)	<p>This happened as the user enabled the USB mass storage option.</p> <p>This issue is caused by user enable mass storage during test (MEDIA_EJECT according to logs), so Google search+ which is running in this case was fail to access SD card and then it report the error</p> <p>The MTP mode is suggested to be used for transfer data with USB. (Though Google provided MTP to replace USB mass storage, TC55 still support both MTP and USB mass storage)</p>
Gmail connection limitation.	<p><a href="https://support.google.com/mail/answer/97150?hl=en">https://support.google.com/mail/answer/97150?hl=en</a></p> <p>If you have multiple users frequently accessing the same account or more than one IMAP client accessing Gmail at the same time, you may reach a connection threshold and receive the error message, 'Too many simultaneous connections.'</p> <p>Gmail currently has a limit of 15 simultaneous IMAP connections per account.</p> <p>Please note that your mail client may actually open multiple connections in the background. This means it's possible to reach a connection threshold simply by using only two mail clients to access the same account at the same time.</p>

## PART NUMBER RELEASE DATE

T55N0JGMVRUEN17400  
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