

# Release Notes – Zebra Android 10

## 10-16-10.00-QN-U142-STD-HEL-04 Release (NGMS)

### Highlights

This Android 10 NGMS release 10-16-10.00-QN-U142-STD-HEL-04 covers TC72, TC77, TC52, TC52 HC, TC57, TC21, TC21 HC, TC26, TC26 HC, TC52x, TC52x HC, EC50, EC55, TC57x, MC3300x, MC3300xR, L10A, TC8300, MC93, VC83, EC30, WT6300, MC2200, MC2700, PS20, ET51 and ET56 family of products. Please see, Device Compatibility under Device Support Section for more details.

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

### Software Packages

| Package Name                                       | Description       |
|--|-------------------|
| HE_DELTA_UPDATE_10-16-10.00-QN-U142-STD-HEL-04.zip | LG Package Update |

### Security Updates

This build is Compliant up to [Android Security Bulletin](#) of February 05, 2023 (Critical Patch Level: July 01, 2023).

### LifeGuard Update 142

➤ This LG patch is applicable for 10-16-10.00-QN-U00-STD-HEL-04 BSP version.

#### ○ New Features

- None.

#### ○ Resolved Issues

- SPR52480 – Resolved an issue wherein the device entered Rescue Party Mode, due to platform bug in Android 10 which was exposed during the one of the system app upgrade processes from Google Play Store on 18th December 2023.

#### ○ Usage Notes

- To ensure full NFC functionality Zebra recommends not to downgrade to images older than below BSP's except for non-NFC products PS20, EC30, and VC83.
  - A11: 11-23-13.00-RN-U00.
  - A10: 10-16-10.00-QN-U120-STD-HEL-04
  - A8: 01-30-04.00-ON-U44-STD.

- A9: 02-21-09.00-PN-U22-STD
- Downgrading to older versions than listed above may result in NFC functionality issues. However, downgrading to older OS versions can be done if NFC functionality is not needed..

## LifeGuard Update 141

- This LG patch is applicable for 10-16-10.00-QN-U00-STD-HEL-04 BSP version.
  - This LG Patch includes following updated components.
    - MXMF: 10.5.1.1
  - **New Features**
    - None.
  - **Resolved Issues**
    - SPR50446 - Resolved an issue wherein Devices were still enabling DST for Mexico even though it's no longer used.
    - SPR48173 - Resolved an issue wherein GPS location data not available on random reboots.
    - SPR48159 - Resolved an issue wherein TC26, TC21 devices had an echo problem during the VOIP call.
    - SPR47822 - Touch inputs were being missed or not recognized in colder temperatures on ET51\ET56 in Glove and Finger mode.
    - SPR48783 - Resolved an issue wherein on TC52, TC57, TC57x, TC52x HC devices speaker grill was getting detached due to heat generated internally when charging in charge cradle.
    - SPR48128 - Resolved an issue of unable to Initialize error for WFC 9.0.22110-20220615.045224.
    - SPR48681 - Resolve an issue where Android display API results 8-inch screen size for 10-inch display.
    - SPR50189 - Fix to avoid PMK caching in framework for FT and WPA3.
    - SPR48371 - Resolved an issue wherein the device doesn't restart - Power on doesn't run after doing battery swapping.
    - SPR48536 - Resolved an issue wherein device will be in reboot-loop after applying BatteryManager Stagenow configurations and restarted.
  - **Usage Notes**
    - None

## LifeGuard Update 138

- This LG patch is applicable for 10-16-10.00-QN-U00-STD-HEL-04 BSP version.
  - This LG Patch includes following updated components.

- Zebra Software License Manager: 6.0.13
- WorryFree WiFi Analyzer: WA\_A\_2\_7.4.0.003\_Q
- RxLogger: 6.0.7.0
- EMDK: 9.1.6.3206
- OSX: QCT.100.10.13.70
- MXMF: 10.5.0.99
- Scanning Framework: 28.13.2.0
- Webview & Chromium: 107.0.5304.105

#### ○ **New Features**

- Added support to bypass and programmatically accept the immersive mode display message for full screen applications using custom feature CSP.
- Added support for Corded Adapter (CBL-RS5X6-ADPWT-01) in WT6300 for RS5100.

#### ○ **Resolved Issues**

- SPR46924 - Resolved an issue wherein Datawedge ADF was not working as expected.
- SPR45930 - Resolved an issue wherein PS20 would not charge intermittently while placed in cradle.
- SPR46953/46575 - Resolved an issue wherein data connection was not working when proxy is used in APN settings.
- SPR46893 - Resolved an issue wherein it was not possible to set user defined APN as default using StageNow.
- SPR47262 - Resolved an issue wherein VoLTE feature was not enabled for a German carrier.
- SPR47522/47409 - Resolved an issue wherein poor voice quality was observed in VoLTE connections at Nordic carrier.
- SPR47143 - Resolved an issue wherein few additional log messages were enabled.
- SPR47527 - Resolved an issue wherein screensaver functionality is enabled to avoid display retention issues in CC6x devices.
- SPR47484 - Resolved an issue wherein volume would become low intermittently while using headset in WT6300.
- SPR47683 - Resolved an issue wherein Teams App was not working in Turkey TC26 BK SKU.
- SPR47308 - Resolved an issue wherein setting volume using AudioVolMgr was not working using OEMConfig.

#### ○ **Usage Notes**

- Under Usage Notes of LifeGuard Update U133, constraint on 'Creating staging profile for battery manager, Mx version 10.4 or below should be selected' has been removed.

## **LifeGuard Update 133**

- This LG patch is applicable for 10-16-10.00-QN-U00-STD-HEL-04 BSP version.

### ○ New Features

- Added support in MX to enable/disable the charging indicator LED (PS20 supported this since MX 8.1)

### ○ Resolved Issues

- SPR45116/44265 - Resolved an issue wherein Rxlogger was not able to capture memory and battery related information.
- SPR44931 - Resolved an issue wherein device would experience intermittent reboots due to UsageStats API in Rxlogger.
- SPR46067 - Resolved an issue wherein slowness was observed while capturing pictures.
- SPR46630 - Resolved an issue wherein pre-filter was not working in Datawedge RFID plugin.
- SPR46244 - Resolved an issue wherein soft navigation panel keys were less responsive.
- SPR46415 - Resolved an issue wherein device would not resume after performing hot swap.
- SPR46655 - Resolved an issue wherein key event was getting dropped intermittently when both L2 and R2 keys are simultaneously pressed.
- SPR46799 - Resolved an issue wherein Stagenow profile would fail to apply due to corruption in downloaded files.
- SPR45727/46434/46396 - Resolved an issue wherein echo and feedback was observed when both devices were on speaker mode and in the vicinity of each other.
- SPR45951 - Resolved an issue wherein country support were not available for 14 countries
- SPR45277 - Resolved an issue wherein noise and cracking sound was observed on EC55 during voice calls in SWB.
- SPR46422 – Resolved an issue wherein after performing long battery hot swap, ringer becomes silenced without notification after reboot.
- SPR47075/47299/47334 – Resolved an issue wherein NFC functionality was impacted on WT6300 after updating to Lifeguard that included an updated NFC firmware.
- SPR47710 -- Resolved an issue wherein device randomly boots into the android recovery screen with an error – ‘Can't load Android system. Your data may be corrupt’.

### ○ Usage Notes

- To create staging profile for battery manager, Mx version 10.4 or below should be selected. Selecting MX version 10.5 or later will result in Staging Error "DSD version invalid: The profile uses a newer MX version that is not present on the device".

## LifeGuard Update 120

- This LG patch is applicable for 10-16-10.00-QN-U00-STD-HEL-04 BSP version.

### ○ New Features

- Added DEX support for TC52, TC57, TC52x, TC57x devices.
- Added support for querying touch mode, MX version and WLAN properties in OEM Info.

#### ○ Resolved Issues

- SPR46220 - Resolved an issue wherein intermediate files were being retained along with snoop logs when BT Snoop logging was enabled in Rxlogger.
- SPR45910 - Resolved an issue wherein user was not able to enable Hotspot using EMDK/Stage Now after SIM card was removed.
- SPR44932 - Resolved an issue wherein battery level was not increasing even though devices were kept in charging.
- SPR45898 - Resolved an issue wherein battery would not charge at 2 degrees Celsius through device.
- SPR45464 - Resolved an issue wherein touches/taps around bottom area of the screen was not very responsive on MC33x devices.
- SPR46231 - Resolved an issue wherein upon scanning while in chrome browser resulted in tab switching instead of displaying barcode data.
- SPR46101/45372 - Resolved an issue wherein Velocity App updated via play store was getting deleted post an OS update on a device enrolled with MS INTUNE.
- SPR46227 - Resolved an issue wherein BT headsets were experiencing distorted audio when it was operating in Narrow band frequencies.
- SPR 46130/46172 - Resolved an issue wherein battery level would fluctuate upon restart of the device.
- SPR46016 - Resolved an issue wherein USB connection would not work post suspend and resume when RFD40 was connected to the device.
- SPR46162 - Resolved an issue wherein user was not able to use USB keyboard when access to USB storage from computer was disabled using MX Access Mgr.
- SPR45688 - Resolved an issue wherein BLE scanning would stop after few seconds if scanning was performed with any filter.

#### ○ Usage Notes

- None

### **LifeGuard Update 114 (Not Released for MC2200 and PS20).**

- This LG patch is applicable for 10-16-10.00-QN-U00-STD-HEL-04 BSP version.

#### ○ Resolved Issues

- SPR45082 - Resolved an issue wherein the DS3608 scanner was resetting when connected to ET51/56 devices in SSI over USB CDC mode.

- SPR45041 - Resolved an issue wherein a delay was observed in detecting Tire Tread Reader accessory on TC77.
- SPR44618/44765 - Resolved an issue wherein Audio was intermittently getting routed via device mic instead of BT headset.
- SPR44212 - Resolved an issue wherein device would reboot if specific Camera 2 App was used together with a DO App.
- SPR45159 - Resolved an issue wherein DisAllowApplicationUpgrade was leading to Apps getting crashed.
- SPR44619 - Resolved an issue wherein TC77/72 device was experiencing random touch events.
- SPR44810 - Resolved an issue wherein NFC bump used to fail after using Camera on Non Scanner SKUs.
- SPR44338 - Resolved an issue wherein scanned barcode data was intermittently getting reported incorrectly.
- SPR45099 - Resolved an issue wherein the check digit rule was not working as expected on MSI barcode symbology with newer ZBACK scanner.
- SPR44971 - Resolved an issue wherein BT Audio gateway codec was not working at 8kHz.
- SPR45423 - Resolved an issue wherein user was unable to update to recent LGs using StageNow.
- SPR45237 - Resolved an issue wherein device was unable to reach Max BLE transmit power.
- SPR43888/SPR45016 - Resolved an issue wherein disabling status bar via MX was not hiding/blocking the status bar completely when used with full screen Apps.
- SPR45265 - Resolved an issue wherein RFID Wedge App was not working on L10 running A10 and above.
- SPR46050 - Resolved an issue wherein Datawedge allowed multiple scanner sources to be selected at same time causing the scanning to stop working.
- SPR44942 - Resolved an issue wherein inconsistent touch inputs with Glove/Stylus/Finger mode observed on TC77.
- SPR45110 - Resolved an issue to reduce the noise generated by the touch panels.

## ○ New Features

- Added BLE battery support for TC52, TC57, TC52x and TC57x devices.
- Updated the new launcher icon and splash screen for VOD app.
- Added support for new EB v3.3 & EKB v4.0 releases in Google Play Store.
- Added support to define custom beep notifications under ADF criteria in DataWedge.
- Added support for BMI270/ICM42607 Gyroscope/accelerometer Sensors.
- Added support for Automatic License Activation/Deactivation notification.
- Added support for WorryFreeWifi Roam Analysis Additional params support.
- Added support for WorryFreeWifi Voice Analysis Call ID to Identify Analysis Events related to Specific VoIP call.
- Added support for Zebra software licensing to persist license over enterprise reset without having an internet connectivity.

## ○ Usage Notes

- 10-16-10.00-QN-U114-STD-HEL-04 is not applicable for L10A devices with Display ZBR\_R47 and touch EXC86H82.
  - To identify display type, users can check 'ro.config.device.display' property using getprop command from adb.
    - Devices with new display ZBR\_R47 will have [ro.config.device.display]: [513]
    - Devices with display EP101R1912N1000TG will have [ro.config.device.display]: [2001]
  - To identify touch type, users can check 'ro.config.device.touch' property using getprop command from adb.
    - Devices with new touch EXC86H82 will have [ro.config.device.touch]: [32770]
    - Devices with touch EXC3161 will have [ro.config.device.touch]: [32768]
- BMI270/ICM42607 Gyroscope/accelerometer sensor devices require 10-16-10.00-QN-U114-STD-HEL-04 or higher to ensure full G-sensor functionality.
- The installed Gyroscope/Accelerometer sensors can be identified either in SETTINGS or via ADB command:

### SETTINGS

- Devices with BMI270/ ICM42607 Gyroscope/accelerometer sensor will list sensor type as BMI270/ ICM42607 on "Settings-->About phone-->SW components-->Gyroscope" or "Settings-->About phone-->SW components -->Accelerometer".

### ADB

- Check the ro.config.device.gyro & ro.config.device.accelerometer property using getprop command from adb.
- Devices with BMI270 Gyroscope/accelerometer sensor will have ro.config.device.gyro = 32 ro.config.device.accelerometer=120
- Devices with ICM42607 Gyroscope/accelerometer sensor will have ro.config.device.gyro = 260 ro.config.device.accelerometer=2052.

## LifeGuard Update 112 (Only Released for MC3300x, MC3300xR and MC93)

- LifeGuard Update 112 contains security updates only.
- This LG patch is applicable for 10-16-10.00-QN-U00-STD-HEL-04 BSP version.

## ○ New Features

- None

## ○ Resolved Issues

- SPR45793 - Resolved an issue wherein scanned data was appearing twice.

## ○ Usage Notes

- None

## LifeGuard Update 111 (Not Released for MC3300x, MC3300xR and MC93)

- LifeGuard Update 111 contains security updates only.
- This LG patch is applicable for 10-16-10.00-QN-U00-STD-HEL-04 BSP version.
  - **New Features**
    - None
  - **Resolved Issues**
    - None
  - **Usage Notes**
    - None

## LifeGuard Update 106

- LifeGuard Update 106 contains security updates only.
- This LG patch is applicable for 10-16-10.00-QN-U00-STD-HEL-04 BSP version.
  - **New Features**
    - None
  - **Resolved Issues**
    - CVE 2021-1048 Patched the use-after-free security vulnerability which could allow code execution and local elevation of privilege to the kernel from an untrusted application (SPR 45273).
  - **Usage Notes**
    - None

## LifeGuard Update 104

- This LG patch is applicable for 10-16-10.00-QN-U00-STD-HEL-04 BSP version.
  - This LG Patch includes following updated components.
    - Scanning Framework: 28.11.4.0
    - WiFi: FUSION\_QA\_2\_1.3.0.040\_Q
    - Audio: 0.35.0.0
    - DataWedge: 8.2.505
    - EMDK: 9.1.3.3203
    - MXMF: 10.5.0.60
    - OSX: QCT.100.10.11.64



- StageNow: 5.3.0.2
- Bluetooth Pairing Utility: 3.25
- Zebra Software License Manager: 6.0.7
- WorryFree WiFi Analyzer: WFW\_A\_2\_6.0.0.012\_Q
- NFC controller Firmware: 11.01.22
- Android WebView and Chromium: 93.0.4577.62

## ○ New Features

- Added support to set the BLE channel mask via OEMConfig and StageNow to prevent usage of channels that are known to be impacted by interference.
- Added support where admin can set partition name of Local License Server on ZSL configuration.
- Added Additional Analysis Params to the Roam Analysis events e.g., SSID, BSSID, RSSI, Channel.
- Added support for WLAN Front End Module 45868 on TC72, TC77, PS20, TC52, TC57, TC52-HC, MC93, TC83, L10A, EC30, ET51 8" & 10", ET56 8", VC83, TC52x, TC57x, CC600 and CC6000 devices.
- Added support for BT Module 22545 on TC72, TC77, TC52x, TC57x, TC52 and TC57 devices.
- Added localization support in BTPairingUtility app for French-CA, Polish, Dutch, German, Italian, Spanish, Japanese and Chinese locales.
- Added Key double click functionality and double click remapping capability for SCAN and Trigger keys on MC3300x and MC9300.
- Added support for SHIFT and ALPHA key behavior changes, W1 and W2 keycode changes for 53-key custom keypad, on MC9300.

## ○ Resolved Issues

- SPR44235 - Resolved an issue wherein the SUW device provisioning was not able to update WLAN SSID using scanner.
- SPR44151 - Resolved an issue wherein inconsistent touch inputs with gloves observed on ET51/ET56.
- SPR44065 - Resolved an issue wherein the touch was non-responsive towards lower left portion of screen for L10A.
- SPR44460 - Resolved an issue wherein Microsoft Teams was crashing on launch on data only SKU devices.
- SPR44265 - Resolved an issue wherein Bluetooth module was showing incorrect battery usage.
- SPR44031 - Resolved an issue wherein device was experiencing random touch events intermittently.
- SPR43402 - Resolved an issue wherein echo was being heard while both parties are in speaker phone mode.
- SPR44015 - Resolved an issue wherein WT6300 extended battery with 0% level was not charging via cradle.
- SPR44429 - Resolved an issue wherein L10 was unable to wake from deep sleep mode.

- SPR44530 - Resolved an issue wherein Ethernet communication was not working on some 100Mbps ethernet hub.
- SPR44335/44185 - Resolved an issue wherein Apps were receiving Null value when requesting NFC adapter prior to Boot complete event.
- SPR44551 - Resolved an issue wherein Apps using camera intent APIs to fetch images from camera would be turned upside on ET51 and ET56 devices.
- SPR44262 - Resolved an issue wherein Scanner beam was not coming intermittently while using EMDK based App.
- SPR44833 - Resolved an issue wherein Ethernet configuration was not getting applied when the device was connected to ethernet cradle.
- SPR44426 - Resolved an issue wherein WFC Voice client encountered an error sometimes that required termination of call.

#### ○ Usage Notes

- LifeGuard update U104 is a Mandatory patch for devices with WLAN Front End Module 45868 & BT Module 22545

WLAN Front End Module can be identified using adb shell getprop ro.config.device.wlan\_fem  
[ro.config.device.wlan\_fem]: [QM45868]

BT Module can be identified using adb shell getprop ro.bluetooth.bt\_filter  
ro.bluetooth.bt\_filter=QM22545

## LifeGuard Update 98

- This LG patch is applicable for 10-16-10.00-QN-U00-STD-HEL-04 BSP version.

- This LG Patch includes following updated components.

- Scanning Framework: 28.11.3.0
- WiFi: FUSION\_QA\_2\_1.3.0.037\_Q
- Audio: 0.34.0.0
- DataWedge: 8.2.400
- EMDK: 9.1.3.3203
- MXMF: 10.5.0.49
- OSX: QCT.100.10.11.62
- StageNow: 5.3.0.2
- Bluetooth Pairing Utility: 3.24
- Zebra Software License Manager: 5.0.1
- Android Webview and Chromium: 92.0.4515.105

#### ○ New Features

- Added support for SHT4x humidity Sensor on MC93.
- Added support for LSM6DSM Gyroscope/accelerometer Sensor on MC3300x/MC3300xR, MC93, TC8300, and PS20 devices.

- Added support for freefall detection for TC21/TC26 Devices.
- Added support to enable SPoC (ZebraPay) and power management.
- Added support for Secondary BLE Licensing for EC50/EC55.
- Added support to configure Secondary BLE TX power to a specified value.
- Added support for admin to configure the Altbeacon Manufacturing byte of the secondary BLE.
- Adding correct protocol type for APR in tcpdump for decoding.
- Added UNII-3 band support for EU region on TC52x and TC52x-HC devices.
- Updated default display brightness and adaptive brightness is turned off OOB for EC50/EC55 devices.
- Enabled dark display theme OOB for EC50/EC55 devices.
- Haptic feedback is disabled OOB for EC50/EC55 devices.
- Updated default wallpaper for EC50/EC55 devices OOB.
- Launcher icon outline shape is updated to look rounded OOB for EC50/EC55 devices.
- Notification sound played at boot up or low battery is set to "Lalande.ogg" as default tone for EC50/EC55 devices.
- Bordered keys Gboard setting is enabled OOB for EC50/EC55 devices.
- Added support for VoWiFi for Orange.
- Added support for Vodafone UK.
- Added support for Erillisverkot Public Safety MVNO.
- Updated the APN details for Spark operator.

#### o Resolved Issues

- SPR42999 - Added support to enable ADB over Wi-Fi in Settings App.
- SPR43012 - Resolved an issue wherein USB based bin file staging was intermittently not working.
- SPR43592 - Resolved an issue wherein application flickering is observed when enabling/disabling RxLogger using adb command.
- SPR43683 - Resolved an issue wherein USB to Serial Port converter was not working on a 3rd party cradle.
- SPR41910 - Resolved an issue wherein first touch was not working correctly after resume.
- SPR43738 - Updated the APN details for Telenor operator.
- SPR43291 - Resolved an issue wherein Advertising BLE beacons were not able to reach Max power.
- SPR43841 - Resolved an issue wherein PTT calls would sometimes not terminate with the release of the button.
- SPR43800 - Resolved an issue wherein scanner was not working after resume when Time release was set.
- SPR43627 - Resolved an issue wherein device was rebooting after pairing to an unsupported scanner.

- SPR43931 - Resolved an issue wherein scanning into chromium browser with multiple tabs open would switch between tabs.
- SPR41882 - Resolved an issue wherein it was not possible to provision the device using QR code with EXTRA\_PROVISIONING\_WIFI\_PROXY\_HOST and EXTRA\_PROVISIONING\_WIFI\_PROXY\_PORT details.
- SPR43802 - Resolved an issue wherein OS update initiated through StageNow immediately after boot use to fail intermittently.
- SPR44265 - Resolved an issue wherein a modem restart would acquire wakelock and cause battery consumption.
- SPR43940/43916 - Resolved an issue wherein DNS alias could not be resolved.
- SPR44260/44261 - Resolved an issue wherein PTT call was not getting released when the PTT headset button was released.
- SPR44078 - Resolved an issue wherein ET51 device with powerpack battery inserted is sometimes cycling quickly between charging/discharging from AC or expansion battery.
- SPR43236 - Resolved an issue wherein device Intermittently not able to get GPS Location after reboot.
- SPR44059 - Resolved an issue wherein creating a new WEP-encrypted SSID from StageNow Wi-Fi Manager, "WEP-104" (128bit) cannot be configured correctly on MX 10.2.
- SPR43907 - Resolved an issue wherein NTP Sync interval was not getting updated through StageNow.
- SPR43148 - Resolved an issue wherein configuring WLAN Channels in range format through OEMConfig use to fail.
- SPR43358 - Resolved an issue wherein first created profile after deleting the default profile, does not connect automatically.

## ○ Usage Notes

- To identify the LSM6DSM Gyroscope/accelerometer sensor on the device users can check the **ro.config.device.gyro** property using getprop command from adb.
  - a. Devices with LSM6DSM sensor will have [ro.config.device.gyro] = 8.
  - b. Devices with LSM6DSM sensor will list sensor type as LSM6DSM on "Settings-->About phone-->SW components-->Gyroscope" or "Settings-->About phone-->SW components -->Accelerometer".
- To identify the SHT4x humidity sensor on the device users can check the **ro.config.device.sku** property using getprop command from adb.
  - a. Devices with for SHT4x humidity sensor will have [ro.config.device.sku] = 522 or 523.
  - b. Devices with SHT4x humidity sensor will list HW ID as 522 or 523 on "Settings-->About phone -->SW components-->HW ID".
- MC3300x/MC3300xR LSM6DSM G-sensor devices require 10-16-10.00-QN-U98-STD-HEL-04 or higher to ensure full G-sensor functionality.

- The MC93 devices with SHT4x Humidity Sensor require 10-16-10.00-QN-U98-STD-HEL-04 or higher to ensure full humidity sensor functionality.
- While downgrading MC93 SHT4x humidity sensor devices from Android 10 to Oreo, only the 01.30.04 Lifeguard Update 35 & above is supported. The Full image of 01.30.04 and the Lifeguard Update 35 must be installed together using the UPL process.

## LifeGuard Update 90 (Not Released for ET51 and ET56)

- This LG patch is applicable for 10-16-10.00-QN-U00-STD-HEL-04 BSP version.
  - **New Features**
    - None
  - **Resolved Issues**
    - Added fix for multiple vulnerability issues (FragAttack) with respect to Fragmentation and Forging attacks.
  - **Usage Notes**
    - None

## LifeGuard Update 86 (Released only for ET51 and ET56)

- This LG patch is applicable for 10-16-10.00-QN-U00-STD-HEL-04 BSP version.
  - **New Features**
    - Added support for display IC G101QAN01.1 on ET51/ET56 10" devices.
  - **Resolved Issues**
    - None
  - **Usage Notes**
    - ET51/ET56 10" devices with display IC G101QAN01.1 cannot be downgraded to BSPs below 10-16-10.00-QN-U00-STD-HEL-04 and require 10-16-10.00-QN-U86-STD-HEL-04 as a mandatory update.

To identify display type, users can check 'ro.config.device.display' property using getprop command from adb.

      - Devices with display IC G101QAN01.1 will have [ro.config.device.display] = 702
      - Devices with display IC G101QAN01 will have [ro.config.device.display] = 701

## LifeGuard Update 79

- This LG patch is applicable for 10-16-10.00-QN-U00-STD-HEL-04 BSP version.
  - This LG Patch includes following updated components.
    - Scanning Framework: 28.11.2.0
    - WiFi : FUSION\_QA\_2\_1.3.0.032\_Q
    - WorryFree WiFi Analyzer : WFW\_QA\_2\_6.0.0.006\_Q
    - Audio: 0.33.0.0
    - DataWedge: 8.2.308
    - EMDK: 9.1.0.3200
    - MXMF: 10.4.0.18
    - OSX: QCT.100.10.6.58
    - StageNow: 5.2.0.4
    - Zebra Data Service: 10.0.3.1001
    - MSRN: 2.02
    - OemInfo: 9.0.0.331
    - Bluetooth Pairing Utility: 3.23
  - **New Features**
    - Added support for LSM6DSM Gyroscope/accelerometer Sensor on TC72/TC77, TC52/57 and TC52x/TC57x devices. This LifeGuard patch supports the different pin configuration of the new G-sensor (LSM6DSM). In testing, the combination of new G-sensor with earlier versions of Android has not shown any performance, functionality, or device degradation.
    - Dotcode Erasure Parameter Support is added.
    - Dot Code Decoder Support is Added for RS5100 BT Scanner.
    - Added Support for NG SimulScan using Camera.
    - PL5000 Zback Scanner support is added for ET51/ET56 devices.
    - Added support for Integrated Scanner Frame SKU ET51CE-L21E-SFCN with Zebra PL5000 decoder, which replaces Zebra PL3307 decoder.
    - Added Feature in ZDS to support the collection of top RAM consumption per application.
    - Added Feature in ZDS to support the collection of identity of the application that initiated the scan.
    - Remove dependency on Enterprise partition in OEMInfo application to reduce the security risk.
    - Added integrated licensing feature for VoD Application. User needs to apply valid license to use the app.
    - WFW VoIP Analysis - SIP-RTP Enhancement.
    - Granting Special permissions for EMM Device Owner application while Provisioning device.
    - Added support to provide location updates based on the specified minimum distance travelled for both WGS84 and non WGS84 formats.
    - Integration of custom feature CSP to add ability to enable or disable custom features.
    - Added a feature to handle the network issue of ARP Requests not getting response from backend network.

- Added a feature to detect low RSSI conditions and scenarios and allow device to do quick recovery from the low RSSI state.
- Added support to enable/disable eSIM provisioning feature using CellularMgr CSP.

## ○ Resolved Issues

- SPR41891 - Resolved an issue where device disables the profiles permanently when wrong credentials are entered.
- SPR41911 - Resolved an issue where it was not possible to set “false” value to protector param in TouchMgr CSP.
- SPR41725 - Resolved an issue where intermittently DataWedge would scan barcodes even when in suspend state.
- SPR41886 - Resolved an issue where Latin character set QR barcodes were not being decoded.
- SPR41912 - Resolved an issue where Intermittent print failures were observed using LinkOS SDK application.
- SPR42980 - Resolved an issue where device was not able to read Mifare classic 4K card.
- SPR40219 - Resolved an issue where MSI barcodes were not getting decoded.
- SPR41824 - Resolved an issue where WWAN data connection failures were reported due to incorrect APN configuration settings.
- SPR43359 - Resolved an issue where display would intermittently fail to turn on upon power key press.
- SPR41623 - Resolved an issue where TC52 was displaying incorrect magnetometer values.
- SPR41881 - Resolved an issue where a permission that was not supported originally on OS was not regranted to application upon newer OS update that supported those permissions.
- SPR41003 - Resolved an issue where BlueParrott headset connected to ET51 was picking up voice from a farther distance.
- SPR43717 - Resolved an issue where intermittently Airplane mode was enabled after an improper Battery Swap.
- SPR41841 - Resolved an issue where Keyboard volume notification level icon was missing in MC33 Brick SKUs.
- SPR43358 - Resolved an issue where first created profile using WIFI CSP after deleting the default profile, does not connect automatically.
- SPR41400 - Resolved an issue where key remapping was not working for modifier keys in Bundle mode for OEMCONFIG.
- SPR41116 - Resolved an issue where user was unable to configure Code128 Ignore FNC4 param from Datawedge on ET51, ET56 with Zback and Integrated Scanner.
- SPR43533 - Resolved an issue where display goes black on TC72 and TC77 with 4770 scan engines.
- Integrated a VPN security fix for Common Criteria mode.

- Default password for MSRN App has been set to empty.
- **Usage Notes**
  - To identify the LSM6DSM Gyroscope/accelerometer sensor on the device users can check the **ro.config.device.gyro** property using getprop command from adb.
    - c. Devices with LSM6DSM sensor will have [ro.config.device.gyro] = 8.
    - d. Devices with LSM6DSM sensor will list sensor type as LSM6DSM on "Settings-->About phone-->SW components-->Gyroscope" or "Settings-->About phone-->SW components ->Accelerometer".
  - Support for Zebra PL5000 decoder with integrated scanner frame requires 10-16-10.00-QN-U79-STD-HEL-04 or higher to ensure full scanner functionality.

### **LifeGuard Update 72 (Released only for ET51 and ET56)**

- This LG patch is applicable for 10-16-10.00-QN-U00-STD-HEL-04 BSP version.
  - This LG Patch includes following updated components.
    - Scanning Framework: 28.10.0.0
  - **New Features**
    - Added support for Zebra Scanner Expansion Back - ZBK-ET5X-10SCN7-02, ZBK-ET5X-8SCN7-02, that supports the SE4770 scan engine.
  - **Resolved Issues**
    - None
  - **Usage Notes**
    - None

### **LifeGuard Update 44 (Not Released for ET51 and ET56)**

- This LG patch is applicable for 10-16-10.00-QN-U00-STD-HEL-04 BSP version.
  - This LG Patch includes following updated components.
    - Audio: 0.31.0.0
    - Bluetooth Pairing Utility: 3.20
    - DataWedge: 8.2.211
    - EMDK: 9.0.3.3003
    - License Manager and License Agent: 5.0.0 and version 5.0.0.5.0.0
    - MXMF: 10.3.0.18
    - OSX: QCT.100.10.5.58
    - Scanning Framework: 28.9.8.0
    - StageNow: 5.1.0.1



## ○ New Features

- Added support for Keyboard Audible Feedback feature on MC3300x, MC3300xR, MC9300, MC2200, MC2700 and VC8300 and ability to control volume of Keyboard Audible Feedback by MDM.
- Added support to enable/disable DHCPv6 feature using DHCPOptionMgr CSP. Stateful DHCPv6 helps Admins track and block network abuses. With stateful DHCPv6 a client is likely to keep a stable IP as long as it stays on the same network.
- Added support to see SAM Bridge FW Version in SW Component.
- Added support to enable Low level NFC NCI Logging to get detailed logs for NFC scenarios for debugging purpose, logs are included as part of RxLogger logs.
- Added support in OemInfo to allow customer applications and sideloaded applications to read BT MAC address.
- Provided additional option for the user to change the touch panel mode configuration from Power Menu without going into settings menu once it is enabled using the CSP file.
- Added support for Multibarcode - Automatic group identification.
- Added support for Multibarcode - Read only specific barcodes.
- Added support to remove Bluetooth pairing list.

## ○ Resolved Issues

- SPR-40819 : Resolved an issue wherein 7-bit ASCII encoded data matrix code was not getting decoded.
- SPR-41039 : Updated the APN details for Bulgarian operator A1.
- SPR-40216 : Resolved an issue wherein flash LED temperature was very high when torch was turned ON for a longer duration.
- SPR-38667 : Resolved an issue wherein user was unable to remotely browse files over VPN.
- SPR-40400 : Resolved an issue wherein device was losing WWAN connectivity at higher temperatures.
- SPR-41255 : Resolved an issue wherein devices were getting stuck in recovery screen during MDM enrollment.
- SPR-41056 : Resolved an issue wherein SIM not detected toast message used to appear even with a valid SIM.
- SPR-39513 : Resolved an issue wherein intermittently display would not turn on upon wakeup from suspend.
- SPR-39544 : Resolved an issue where eMMC health was not being retrieved correctly on certain flash part.
- SPR-41094 : Resolved an issue wherein during a call, user gets echo while the other user was on speaker mode.
- SPR-41144 : Resolved an issue wherein the EMM Enrollment was not working over ethernet connection.

- SPR-41622 : Resolved an issue wherein additional touch events were occurring for a single touch press.
- SPR-38739 : Resolved an issue wherein streaming of certain MP3 files used to fail.
- SPR-41400 : Resolved an issue wherein key remapping was not working for CTRL and other advanced key modifiers using OemConfig.
- SPR-41578 : Added support for enabling/disabling “key press sounds” via StageNow.
- SPR-41397 : Resolved an issue wherein intermittently WLAN failed to turn On.
- SPR-39082 : Resolved an issue wherein Intermittent loss of Ethernet connection is observed.
- SPR-41260 : Resolved an issue wherein third-party VPN Apps were unable to access certificates (installed via StageNow/MX) on the device resulting in not able to connect to the server.
- SPR-41915 : Enabled Serial Port Comm API support.
- Fixed an issue wherein device crash was seen when STC SIM was inserted.

○ **Usage Notes**

- None

**LifeGuard Update 16 (Not Released for ET51 and ET56)**

➤ This LG patch is applicable for 10-16-10.00-QN-U00-STD-HEL-04 BSP version.

○ **New Features**

- None

○ **Resolved Issues**

- None

○ **Usage Notes**

- None

**Version Information**

Below Table contains important information on versions

| Description          | Version   |
|----------------------|---|
| Product Build Number | 10-16-10.00-QN-U142-STD-HEL-04                          |
| Android Version      | 10  |
| Security Patch level | February 05, 2023 (Critical Patch Level: July 01, 2023) |

|                    |  |
|--------------------|--|
| Component Versions | Please see Component Versions under Addendum section |
|--------------------|--|

## Known Constraints

- Picture quality of the image taken with 'Night Mode' in low-light conditions is poor.
- Trigger Modes: Presentation Read Mode is preferred over Continuous Read Mode. If using Continuous Read mode, use a lower illumination brightness setting (e.g. 2) to ensure the scanner can work without interruption.
- "Red Eye Reduction" feature disables the camera flash in the device. Hence, to enable the camera flash please disable the 'Red Eye Reduction' feature.
- EMM does not support agent persistence in OS dessert downgrade scenario.
- Reset packages of Oreo and Pie should not be used on devices running with A10 software.
- In-order to avoid any inconsistencies in Settings UI it is recommended to wait for a few seconds after the device boots up.
- Transparent blue overlay in camera view –numeric, character or ENTER key presses in camera view will make this blue overlay appear. The camera is still functional; however, the view is covered with the blue overlay. To clear this, press the TAB key to move the control to a different menu item or close the camera app.
- In case of an OS upgrade from a s/w version having higher security patch level to a s/w version having lower security patch level, user data will be reset.
- TC5x flash LED temperature is too high when torch is on for long time.
- Unable to scan remote company network using ES file explorer over VPN.
- In case USB flash drives are not getting detected on VC8300 after reboot on USB-A port, re-insert the USB flash drive after the device is fully powered up & on home screen.
- On WT6300 with RS4000 & RS5000 usage, the DataWedge option "Keep enabled on suspend" (in Profiles > Configure scanner settings) shall NOT be set, user can set "Trigger Wakeup and Scan"(in Profiles > Configure scanner settings > Reader params) for single trigger wake and scan functionality.
- When phone app is being disabled using MDM and user tries to reboot the device, user might see **Recovery Screen** with "Try again" and "Factory data reset" options. Select option "Try again" to continue the reboot process. Do not select option "Factory data reset", as it will erase the user data.
- After upgrading from Oreo to A10, Device shows "SD card setup" notification, which is expected behavior from AOSP.
- After upgrading from Oreo to A10, staging fails on few packages, user must update package names accordingly and make use of the profiles or create new staging profiles.
- At the very first time, DHCPv6 enable through CSP is not reflecting until user disconnect/reconnect to the WLAN profile.
- Support for ZBK-ET5X-10SCN7-02 and ZBK-ET5X-8SCN7-02 (SE4770 scan engine devices) is not available with software released before 10-16-10.00-QN-U72-STD-HEL-04.
- Stagenow package name has been changed to com.zebra.devicemanager, This can cause issues with AE enrollments and locking down an unit like with EHS or EMM lockdowns. This Issue will be fixed on June 2022 LifeGuard Release.

## Important Links

[Installation and setup instructions](#) (if the link does not work please copy It to browser and try)

Note: "As part of IT security best practices, Google Android enforces that the Security Patch Level (SPL) for the

new OS or patch must be the same level or a newer level than the OS or patch version currently on the device. If the SPL for the new OS or patch is older than the SPL currently on the device, then the

device will enterprise reset and wipe all user data and settings including user network configurations and remote management tools which would render the device inaccessible over a network.”

[Zebra Techdocs](#)

[Developer Portal](#)

## Device Support

### Device Compatibility

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

| Device Family | Part Number   | Device Specific Manuals and Guides  |                                    |
|---------------|---|---|------------------------------------|
| TC21          | TC210K-02A222-CN<br>TC210K-02B212-CN  | TC210K-02B412-CN<br>TC210K-02A423-CN  | <a href="#">TC21 Home Page</a>     |
| TC21 HC       | TC210K-06B224-CN  |   | <a href="#">TC21 HC Home Page</a>  |
| TC26          | TC26CK-12A222-CN<br>TC26CK-12B212-CN  | TC26CK-12A423-CN<br>TC26CK-12B432-CN  | <a href="#">TC26 Home Page</a>     |
| TC26 HC       | TC26CK-16B224-CN  |   | <a href="#">TC26 HC Home Page</a>  |
| PS20          | PS20J-B2G2CN00<br>PS20J-P4G2CN00  | PS20J-P4H2CN00  | <a href="#">PS20 Home Page</a>     |
| MC3300x       | MC330L-SL3EA3CN<br>MC330L-SH3EA3CN<br>MC330L-GL3EA3CN<br>MC330L-GH3EA3CN<br>MC330L-GE3EA4CN<br>MC330L-GJ2EA4CN<br>MC330L-GJ3EA4CN<br>MC330L-GJ4EA4CN<br>MC330L-GL3EA4CN | MC330L-SE3EA4CN<br>MC330L-SK3EA4CN<br>MC330L-SA3EA4CN<br>MC330L-SJ4EA4CN<br>MC330L-SJ2EA4CN<br>MC330L-SJ3EA4CN<br>MC330L-RL2EA4CN<br>MC330L-RL3EA4CN<br>MC330L-SG3EA4CN | <a href="#">MC3300x Home Page</a>  |
| MC3300xR      | MC339U-GF4EA4CN<br>MC333U-GJ4EA4CN  | MC339U-GE4EA4CN   | <a href="#">MC3300xR Home Page</a> |
| TC52          | TC520K-2PEZU4P-CN   |   | <a href="#">TC52 Home Page</a>     |
| TC52 HC       | TC520K-2HEZU4P-CN   |   | <a href="#">TC52 HC Home Page</a>  |
| TC52X         | TC520K-2XFMU6P-CN   |   | <a href="#">TC52X Home Page</a>    |

|          |  |   |                                  |
|----------|--|---|----------------------------------|
| TC52x HC | TC520K-1HCMH6P-CN  |   | <a href="#">TC52X Home Page</a>  |
| TC57X    | TC57HO-3XFMU6P-CN  |   | <a href="#">TC57X Home Page</a>  |
| L10A     | RTL10B1-xxxxxxxxxxCN<br><i>Note: 'x' Stands for wild card for different configurations</i>   |   | <a href="#">L10A Home Page</a>   |
| TC8300   | TC83B0-6005A510CN<br>TC83B0-2005A510CN<br>TC83B0-3005A510CN<br>TC83B0-2005A61CCN<br>TC83B0-3005A61CCN  | TC83BH2205A710CN<br>TC83BH3205A710CN<br>TC83B0-4005A610CN<br>TC83B0-5005A610CN  | <a href="#">TC8300 Home Page</a> |
| MC9300   | MC930B-GSEEG4CN<br>MC930B-GSCDG4CN<br>MC930B-GSEEDG4CN<br>MC930B-GSADG4CN<br>MC930B-GSACG4CN<br>MC930P-GFADG4CN<br>MC930P-GFEDG4CN<br>MC930B-GSHDG4CN<br>MC930P-GFCDG4CN<br>MC930P-GFCBG4CN<br>MC930P-GSFDA4CN | MC930P-GFEBG4CN<br>MC930P-GFABG4CN<br>MC930P-GFHBG4CN<br>MC930P-GFHGDG4CN<br>MC930P-GSGBA4CN<br>MC930P-GSGDA4CN<br>MC930P-GSWBA4CN<br>MC930P-GSWDA4CN<br>MC930P-GSFDG4CN<br>MC930B-GSECG4CN | <a href="#">MC9300 Home Page</a> |
| VC8300   | VC83-08SOCQBABBACN   | VC83-08FOCQBABBACN  | <a href="#">VC8300 Home Page</a> |
| EC30     | EC300K-2SA2ACN   |   | <a href="#">EC30 Home Page</a>   |
| TC72     | TC720L-0ME24B0-CN<br>TC720L-02E24B0- CN  | TC720L-0ME24B0-CN<br>TC720L-02E24B0- CN   | <a href="#">TC72 Home Page</a>   |
| TC77     | TC77HL-5ME24BG-CN  | TC77HL-52E24BDCN  | <a href="#">TC77 Home Page</a>   |
| TC57     | TC57HO-2PEZU4P-CN  |   | <a href="#">TC57 Home Page</a>   |
| WT6300   | WT63B0-TS0ANECH  | WT63B0-KS0ANECH   | <a href="#">WT6300 Home Page</a> |
| MC2200   | MC220K-3B3S4CN   | MC220J-3A3S2CN  | <a href="#">MC2200 Home Page</a> |
| MC2700   | MC220J-3A3S2CN<br>MC220K-3B3S4CN   | MC27CJ-3A3S2CN<br>MC27CK-3B3S4CN  | <a href="#">MC2700 Home Page</a> |
| EC50     | EC500K-02B223-CN<br>EC500K-02B243-CN   | EC500K-02B112-CN<br>EC500K-02B132-CN  | <a href="#">EC50 Home Page</a>   |
| EC55     | EC55CK-12B112-CN<br>EC55CK-12B132-CN   | EC55CK-12B223-CN<br>EC55CK-12B243-CN  | <a href="#">EC55 Home Page</a>   |

## Addendum

### Component Versions

| Component / Description           | Version                                 |
|-----------------------------------|---|
| Linux Kernel                      | 4.4.205                                 |
| AnalyticsMgr                      | 2.4.0.1254                              |
| Android SDK Level                 | 29                                      |
| Audio (Microphone and Speaker)    | 0.35.0.0                                |
| Battery Manager                   | 1.1.7                                   |
| Bluetooth Pairing Utility         | 3.25                                    |
| Camera                            | 2.0.002                                 |
| DataWedge                         | 8.2.708                                 |
| EMDK                              | 9.1.6.3206                              |
| Files                             | 10                                      |
| License Manager and License Agent | version 6.0.13 and version 6.0.45.5.0.3 |
| MXMF                              | 10.5.1.1                                |
| NFC                               | NFC_NCIHALx_AR18C0.a.3.0                |
| OEM info                          | 9.0.0.699                               |
| OSX                               | QCT.100.10.13.70                        |
| RXlogger                          | 6.0.7.0                                 |
| Scanning Framework                | 28.13.2.0                               |
| StageNow                          | 5.3.0.4                                 |
| WLAN                              | FUSION_QA_2_1.3.0.051_Q                 |
| Baseband                          | W220714A_024.1-00895                    |
| Zebra Bluetooth Settings          | 2.3                                     |
| Zebra Data Service                | 10.0.3.1001                             |
| Android Webview and Chromium      | 107.0.5304.105                          |

## Revision History

| Rev | Description     | Date              |
|-----|-----------------|-------------------|
| 1.0 | Initial release | December 22, 2023 |