

Release Notes – Zebra Android Pie

02-21-09.00-PG-U22-STD Release (GMS)

Highlights

The details of the Android GMS Pie release 02-21-09.00-PG-U22-STD that covers PS20x. Please see, Device Compatibility under Addendum 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_02-21-09.00-PG-U22-STD.zip | LG Package Update |

Security Updates

This build is Compliant up to [Android Security Bulletin](#) of November 05, 2021.

LifeGuard Update 22:

➤ This LG patch is applicable for 02-21-09.00-PG-U00-STD BSP version.

- This LG Patch includes following updated components.

- **New Features**

- None

- **Resolved Issues**

- Fixed intermittent abnormal display behavior during initial device bootup on Zebra splash screen.

- **Usage Notes**

- None

LifeGuard Update 20:

➤ This LG patch is applicable for 02-21-09.00-PG-U00-STD BSP version.

- This LG Patch includes following updated components.

- **WLAN Firmware** : 1.0.1.629.0

○ New Features

- Added support for WLAN Front End Module 45868 on TC72, PS20, and TC52 devices.
- Added support for BT Module 22545 on TC72 & TC52 devices.
- Added support for LSM6DSM Gyroscope/accelerometer Sensor on PS20 devices.

○ Resolved Issues

- SPR- 43818 : Resolved an issue where WiFi advanced option was wrongly translated to Korean.
- 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

- LG CFE Patch U20 & above 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 12:

➤ This LG patch is applicable for 02-21-09.00-PG-U00-STD BSP version.

- This LG Patch includes following updated components.

- **WLAN Firmware** : 1.0.1.599.0
- **PTT Express** :3.1.54

- **New Features**

- None

- **Resolved Issues**

- SPR-43314 : Resolved an issue wherein PS20 not able to use scanner after update to LG06
- Added fix for multiple vulnerability issues (FragAttack) with respect to Fragmentation and Forging attacks.

- **Usage Notes**

- None

LifeGuard Update 10:

➤ This LG patch is applicable for 02-21-09.00-PG-U00-STD BSP version.

- This LG Patch includes following updated components.

- Google Play Services : 21.15.15

- **New Features**

- Added support for LSM6DSM Gyroscope/accelerometer Sensor on TC72 and TC52 .

- **Resolved Issues**

- None

- **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.
- Devices with LSM6DSM sensor will have [ro.config.device.gyro] = 8. ○ Devices with LSM6DSM sensor will list sensor type as LSM6DSM on "Settings-->About phone-->SW components-->Gyroscope" or "Settings-->About phone-->SW components >Accelerometer".
- **Not advised to install on TC52 ,TC52-HC devices.**

LifeGuard Update 09:

➤ This LG patch is applicable for 02-21-09.00-PG-U00-STD BSP version.

The LG Patch includes the following updated components.

- **WLAN** Firmware: 1.0.1.510.0
- **MXMF** 9.4.0.4
- **OSX** release version QCT_90_9.6.44
- **Google Chrome/Google WebView** 87.0.4280.101

o Resolved Issues

- SPR- 41891: Resolved an issue wherein network was getting permanently disabled
- SPR- 43087 : Resolved an issue wherein Screen Stays black when power key is pressed.

LifeGuard Update 06:

➤ This LG patch is applicable for 02-21-09.00-PG-U00-STD BSP version.

The LG Patch includes the following updated components.

- **WLAN** FUSION_QA_2_1.1.0.022_P
- **MXMF** 9.4.0.3

LifeGuard Update 02:

➤ This LG patch is applicable for 02-21-09.00-PG-U00-STD BSP version.

The LG Patch includes the following updated components.

- **WLAN FUSION_QA _2.1.1.0.021_P**
- **MXMF 9.4.0.2**
- SPR40289– Resolved an issue where disconnection is bluetooth audio connection with HS3100.
- SPR 37883 – Resolved an issue where PAC file with toLowerCase/toUpperCase were failing.

LifeGuard Update 01:

➤ This LG patch is applicable for 02-21-09.00-PG-U00-STD BSP version.

The LG Patch includes the following updated components.

- **WLAN FUSION_QA _2_1.1.0.020_P**
- **DataWedge 7.4.56**
- **EMDK 7.4.26.2426**
- **Osx QCT.90.9.6.43**
- **MXMF 9.4.0.1**
- **Stagenow 3.4.1.5**

Version Information

Below Table contains important information on versions

| Description | Version |
|----------------------|------------------------|
| Product Build Number | 02-21-09.00-PG-U22-STD |

| | |
|----------------------|---|
| Android Version | 9 |
| Security Patch level | November 05, 2021 |
| Linux Kernel | 4.4.153 |
| Component Versions | Please see Component Version under Addendum section |

New Features

- Added support for Tianma display panel for TC72. This image is backward compatible with existing Innolux display.

Important Links

- **Requirements and Instructions**
- [Installation and setup instructions](#)
 - ✦ [Zebra Techdocs](#)
 - ✦ [Developer Tools](#)

Upgrade Options

Below table provides detailed information on shortest path to upgrade based on current version of software.

| Current Version on Device | Software | Steps to get to this Release | Comments |
|---------------------------|----------|--|----------|
| 02-11-01.00-PG-Uxx | | Apply Full Package Update HE_FULL_UPDATE_02-21-09.00-PG-U00-STD.zip Followed by Apply Delta Update HE_DELTA_UPDATE_02-21-09.00-PG-U22-STD.zip | |

| | | |
|--------------------|--|--|
| 02-21-09.00-PG-Uxx | Apply Delta Package Update HE_DELTA_UPDATE_02-21-09.00-PG-U22-STD.zip | |
|--------------------|--|--|

NOTE: The TC72 devices with Tianma display are not allowed to downgrade to Android P BSP 2.11.01 or older Oreo versions below BSP 01.30.04. To identify the display type on TC72 devices user can check the ro.config.device.display property using getprop command from adb shell – For TC72 Innolux device – [ro.config.device.display]: [900] For TC72 Tianma device – [ro.config.device.display]: [512]

Known Constraints and Workarounds

Below are Known Constraints and workaround if applicable.

- If VPN is configured with 'Always On' on a device, on a reboot, there is an intermittent occurrence of device not connecting to VPN server. User can work around the issue by configuring the VPN as not 'Always On'.
- As per SPR40881 "Android P does not supports RS5100. Customer needs to upgrade to Android 10".

Addendum

Device Compatibility

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

| | | |
|------|--|--------------------------------|
| PS20 | PS20J-P4G1A600 PS20J-P4G1NA00 PS20J-B2G1A600 PS20J-B2G1NA00 PS20J-P4H1A600 PS20J-P4H1NA00 | PS20 Home Page |
|------|--|--------------------------------|

Component Versions

| Component / Description | Version |
|--------------------------------|---------------------------------|
| AnalyticsMgr | 2.4.0.1251 |
| Audio (Microphone and Speaker) | 0.12.0.0 |
| Battery Manager | Version: 1.4.2 |
| Bluetooth Pairing Utility | Version 3.16 |
| PS20 Cradle | Utility 1.01 FWUpdater : 1.0 |
| DataWedge | 7.4.56 |
| Device Central | 2.2.0.8 |

| | |
|-----------------------------------|---------------------------------------|
| EMDK | 7.4.26.2426 |
| Enterprise Keyboard | 2.2.2.3 |
| License Manager and License Agent | version 3.2.0 and version 3.2.0.3.2.0 |
| MX | MXMF version:9.4.0.4 |
| OSX | QCT.90.9.6.44 |
| Rxlogger and RxLoggerUtility | Version 6.0.0.0 and Version: 2.0.5.0 |
| Scanning Framework | 22.1.17.0 |
| WorryFree Wifi Analyzer | WFW_QA_2_3.0.0.009_P |
| StageNow | 3.4.1.5 |

| | |
|----------------------|-------------------------|
| Touch Panel | PS20 : v08 |
| WLAN | FUSION_QA_2_1.1.0.024_P |
| Zebra Bluetooth | 2.1 |
| Zebra Data Service | 9.0.0.1210 |
| Zebra Volume Control | 2.2.0.8 |
| Zebra Folders | 9.1 |
| GMS Version | 9_201907 |

Revision History

| REV | DESCRIPTION | DATE |
|-----|---|------------|
| 1.0 | Initial draft release | 10/29/2021 |
| 2.0 | Retriggered Build Patched the use-after-free security vulnerability which could allow code execution and local elevation of privilege to the kernel from an untrusted application | 11/29/2021 |
| 3.0 | Fix Music app Crash | 12/22/2021 |
| 4.0 | PS20 flickering issue resolved | 05/25/2023 |