

Release Notes – Zebra MC3300R Android N LifeGuard Update 20 for NGMS

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Introduction

Zebra MC3300R is the next generation key-based, rugged mid-range hand-held mobile computing device that supports RFID UHF tag reading and writing. MC3300R is available with a Mid-range or Long-range and offers different physical key layouts. Running on a stable Android-N (7.1.2) OS, MC3300R offers the Zebra Value Add software solutions to enhance your Enterprise workflow.

The MC3300R is the professional-grade Android device built from the ground up for the Enterprise. It includes:

- Pre-installed RFID Applications and Manager
- Zebra's Mobility Extensions (Mx)
- Mobility DNA, a suite of mobility enabling applications, development tools and utilities
- Most advanced scan engine with longer range data capture capability.
- Rugged and ready for every day Enterprise use inside and outside the four walls

Description

This release contains the following software package which is compatible with the MC3300R NGMS product.

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

Note:

MC3300R RFID devices are now supported with LifeGuard Update 14 and newer. **Please do not attempt to download older versions (prior to Update 14).**

Component Contents

Component / Description	Version
Product Build Number	01-01-49.00-NN-U20-STD
Android Version	7.1.2
Linux Kernel	3.10.84
Android SDK Level	25
Platform	QC8956
Bluetooth Stack	1.1
Flash Size	32GB
RAM Size	4GB
Scanning	19.58.37.0
DataWedge	7.3.26
EMDK	7.3.21.2321
MXMF / OSX	MXMF-9.0.4.3 / QCT.71.7.11
Enterprise Keyboard (EKB)	2.1.1.3
WiFi	FUSION_BA_2_10.0.4.026_N Application: BA_2_10.0.1.012_N Radio: BA_2_10.0.4.023_N Middleware: BA_2_10.0.1.014_N Firmware: 7.35.205.8 (r)
PTT	3.1.35

Touch FW	N/A
RxLogger Utility	5.4.13.0
B2M	N/A
Bluetooth Pairing Utility	3.11
Zebra Data Services	3.5.0.1145
File Browser	1.19.1.5
Stage Now	3.3.1.2000
App Gallery	3.0.1.7
User Guide	N/A
Sensors (Accel, Gyro)	2061000, 2061000
MobiControl	N/A
Zebra Volume Control (ZVC)	2.0.0.16
Battery Manager	1.3.8
ActiveEdge	2.5.16
WorryFreeWiFi (SmartMU)	3.0.3
SimulScan Demo App (only on Imager input on SE4750/SE4850 configurations)	3.0.2
SimulScan Engine (only on Imager input on SE4750/SE4850 configurations)	2.0.3
Device Central	2.1.0.9
Zebra Software License Manager	3.1.1
Audio	0.24.0.0
Diagnostic Tool	1.17.0.9
Webview	73.0.3683.90
Zebra Folder	8.1

RFID Manager Application	2.0.10.2
RFID System Service	2.0.4.1
RFID Module	PAAEES00-001-R03
RFID Radio	2.0.30.0
Zebra RFID Mobile (Demo App)	2.2.7.2
Scan Scan Write (Demo App)	2.2.3.0
FingerPrint	Zebra/MC33/MC33:7.1.2/01-01-49.00-NN-U20-STD/170:user/release-keys
Security Patch Level	September 01, 2019

1. CFE v20 Updates:

❖ CFE_ATLAS_01-01-49.00-NN-U20-STD.zip (NGMS)

1. **Android Security Patch Level:** September 1, 2019
Use the link below to see the Android Security bulletin for more information:
<https://source.android.com/security/bulletin/>
2. MX, StageNow, EMDK, Datawedge, Enterprise keyboard component updates:
 - MX: v9.0.4.3
 - a. SPR36581 - Resolved an issue wherein MX was returning invalid package name error when SOTI was being enrolled as DO.
 - EMDK: v7.3.21.2321
 - Datawedge: v7.3.26
3. OSX - Version QCT.71.7.11
4. SPR37601 - Resolved an issue wherein user was unable to set en_IE locale using UIMgr CSP.
5. SPR37150/37520 - Resolved an issue wherein devices with SOTI were stuck at the boot animation screen.
6. SPR36163 - Resolved an issue wherein DHCP Option exception causing device reboot.
7. SPR36961 - Resolved an issue wherein Zebra RFID Mobile app (APK) disappears from app menu after reboot.
8. SPR38042 - Resolved an issue wherein disabling Doze mode through Stage now was failing.
9. SPR37462 - Resolved an issue wherein invalid battery swap would leave the device in Airplane mode.
10. SPR36967 – Resolved an issue wherein downgrading from Latest patch (LG20) to older patch (LG19) causing ZDS crash.

Known issue:

"Zebra Data Service Plugin has stopped" Pop-up has been observed while downgrading from latest patch (LG20) to older patches (LG18 downwards).

2. CFE v19 Updates:

❖ CFE_ATLAS_01-01-49.00-NN-U19-STD.zip (NGMS)

1. **Android Security Patch Level:** June 1, 2019

Use the link below to see the Android Security bulletin for more information:

<https://source.android.com/security/bulletin/>

2. MX, StageNow, EMDK, Datawedge, Enterprise keyboard component updates:

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

- MX: v9.0.3.1
 - a. SPR36994 – Resolved MX initialization issue wherein EHS was calling MX before completion of MX initialization process.
 - b. SPR36768 – Resolved an issue wherein EHS Hostname in title was not reflecting updated HostName after device reboot.
 - c. SPR36581 - Resolved an issue wherein MX was returning invalid package name error when SOTI was being enrolled as DO.
 - d. SPR36479 - Resolved an issue where mapping a key using Key Manager CSP to trigger an intent was not working.
- StageNow: v3.3.1.2000
- Datawedge: v7.3.22
 - a. SPR37124 – Resolved an issue where in ADF rule with crunch spaces was removing last character from barcode data with space.
- EMDK: v7.3.18.2318
- DDT: v1.17.0.9
- Enterprise Keyboard: v2.1.1.3
- Scanner Framework: v19.58.37.0
 - a. SPR37064 - Resolved wrong property.
 - b. SPR36685 - Resolved an issue wherein scan engine was failed to initialize during powerup.
 - c. SPR37175 - Resolved an issue where in multiple application can enable the same scanner without one app releasing it.
 - d. SPR-37014 - Disable firmware update on 8956 N Products.
 - e. SPR 37201 – Resolved an issue wherein scan HardTrigger stops working once Language Settings are modified.
 - f. SPR36927 - Resolved an issue where scanner was not available for any app when multiple apps enable the scanner and any app among disable the scanner when it moves to background.
 - g. 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.
 - h. SPR36925 - Resolved an issue wherein scanner was not available for second app when an ANR or crash occurred on the first app
 - i. Integrated new imgkit version IMGKIT_8.02T01.16.
- Wifi: FUSION_BA_2_10.0.4.026_N
 - a. SPR36741 - Resolved an issue wherein device is taken long time to connect in case of failure scenario.
 - b. SPR36855 - Resolved an issue where WiFi becomes disabled after reboot because of a GPS module exception.
- RxLogger – Version 5.4.13.0
- Diagdaemon – Version 5.4.16.0
- WebViewGoogle – Version 73.0.3683.90
 - a. SPR35943 - Updated Chromium Webview for NGMS releases.
- OSX - Version QCT.71.7.10
- Zebra Data Services - Version 3.5.0.1145
- Device Central: v2.1.0.9
 - a. Added support to start scan and pair by squeezing hardware scan trigger.

3. SPR36961 - Resolved an issue wherein Zebra RFID Mobile app (APK) disappears from app menu after reboot.
4. SPR36958 - Resolved an issue wherein disabling Airplane Mode using PowerKey Manager is not working
5. SPR37152 - Resolved an issue wherein devices has trouble reading and connecting to devices over NFC.
6. SPR36691 - Resolved an issue wherein location gets turned off on every reboot.
7. SPR36600/37084 - Resolved an issue wherein device would not boot to the OS due to an exception while removing packages.
8. SPR36897 - Updated Telstra M2M APN with DUN type.
9. SPR36658 - Made a change to perform correction on unsealed batteries.
10. SPR36294 - Resolved an issue with scanner wherein the imager was not configured correctly during boot up.
11. SPR36396 - Resolved an issue wherein device not connecting to network with China Unicom SIM.
12. SPR36879 - Adding scan code POUND and STAR.
13. SPR36347 - Resolved an issue wherein SIP was showing irrespective of "Show Virtual Keyboard" on first launch of chrome browser.
14. SPR36691/37039 - Resolved an issue wherein Airplane mode gets greyed out after reboot.
15. SPR37380 - Resolved an issue wherein "Memory" in Settings app was translated wrongly in Deutsch(Deutschland).
16. SPR36778 - Resolved an issue wherein Static IP address was not being set using Ethernet Manager.
17. SPR37404 – Resolved an issue wherein Airplane mode gets greyed out after reboot.

Known issue:

"Zebra Data Service Plugin has stopped" Pop-up has been observed while downgrading from latest patch (LifeGuard 19) to other patches.

3. CFE v18 Updates:

❖ CFE_ATLAS_01-01-49.00-NN-U18-STD.zip (NGMS)

1. **Android Security Patch Level:** March 1, 2019
Use the link below to see the Android Security bulletin for more information:
<https://source.android.com/security/bulletin/>
2. Updated below mentioned components:
 - OSX – Version QCT.71.7.9.1
 - a. SPR35906 – Resolved an issue in EHS system restricted settings.
 - Scanner Framework: Version 19.54.37.0
 - a. SPR36333 – Resolved an issue wherein enabling DW simulscan option locks up device after suspend/resume.
3. SPR36262 - Resoled an issue wherein NTP parameters were not updated when applied through Stagenow.
4. SPR36165 - Added Supported LTE bands in the specific hardware.
5. Enabled Native Screen Blanking service.

4. CFE v17 Updates:

❖ CFE_ATLAS_01-01-49.00-NN-U17-STD.zip (NGMS)

CFE v16 numbering is skipped for public posting and reserved for LGE-FOTA Beta.

1. **Android Security Patch Level:** February 1, 2019

Use the link below to see the Android Security bulletin for more information:

<https://source.android.com/security/bulletin/>

2. MX, StageNow, EMDK, Datawedge, Enterprise keyboard component updates:

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

- MX: v8.4.1.3
 - a. SPR35491/35856 - Resolved an issue where in Analytics Manager was throwing "Index out of bound error " when a Stagenow Barcode is scanned.
 - b. SPR35928 - Resolved an issue where Clock Manager CSP accepts timezone id in "/Etc" Olson format.
 - c. SPR35908 - Resolved an issue wherein admin and user generated certificates could not be downloaded from external server.
 - d. SPR35855 - Resolved an issue where in Google Keyboard settings was not persisting.
 - Enterprise Keyboard: v2.0.1.9
 - StageNow: v3.2.1.0
 - EMDK: v7.2.2.2202
 - DataWedge: v7.2.5
 - DDT: v1.16.1.3
 - Oem Config: v8.4.0.1
 - WorryFreeWiFi (SMARTMU): v3.0.3
 - a. Added support for WorryFree WiFi CSP
 - Device Central: v2.0.22.1
 - a. SPR36473 - Show the Battery percentage on the Device Central App main screen when DS3678-ER connected to the mobile device.
 - Wifi: FUSION_BA_2_10.0.4.025_N
 - a. SPR36248 - Resolved an issue where StageNow configuration will not work with TC75x HW ID 33 device.
 - b. SPR35982 - Resolved an issue where roaming failure is observed in disconnect suppression state.
 - c. SPR36361 - Enhanced device performance by increasing the value of wlan retries to 12 from the current value of 7.
 - d. SPR35825 - Resolved an issue wherein one-way audio is observed during a call sometimes.
 - e. SPR36075 - Fixed an issue wherein voice packets were not tagged with correct QoS category sometimes which might have caused choppiness in audio call.
3. SPR36275 - Resolved an issue where-in Camera swap option was still visible in camera App even after disabling one of the camera [Front/Rear] in TC7x devices via StageNow.
4. SPR36344 - Resolved an issue wherein device radio states are not recovered if incorrect Battery Swap is performed.
5. SPR36213 - Resolved an issue wherein device would reboot upon enabling data saver when Bluetooth tethering is enabled in DO mode.
6. SPR35347 – Resolved an issue wherein device would not boot to the OS after enabling data saver in DO mode.
7. SPR35950 - Resolved an issue wherein SwiftKey Keyboard Breaks Scanning After Reboot.
8. SPR35991 - Resolved an issue wherein when soft-keyboard is switched, sometimes Scan data stops to transmit to apps.
9. SPR35523 – Resolved an issue where on disabling Airplane Menu in power key menu, this caused Cellular network settings to be greyed out in settings.

5. CFE v15 Updates:

- ❖ CFE_ATLAS_01-01-49.00-NN-U15-STD.zip (NGMS)

1. **Android Security Patch Level:** January 1, 2019
Use the link below to see the Android Security bulletin for more information:
<https://source.android.com/security/bulletin/>
2. Updated below mentioned components:
 - WiFi: FUSION_BA_2_10.0.3.020_N:
 - a. SPR35628 - Resolved an issue where validation of Radius server certificate fails.
 - b. SPR35593 - Resolved a device reboot issue where DHCP Option received with more than expected length.
 - Scanner Framework: Version 19.50.37.0
 - a. SPR35288 - Fixed an issue wherein initialization of scanner was taking ~1sec.
 - b. SPR35054 - Added support for reduced quiet zone barcode decoding.
 - c. SPR34844 – Resolved an issue wherein multiple open calls are prevented when multiple application tries to open scanner without releasing previous instance.
 - OSX – Version QCT.71.7.9
 - a. SPR36117/36095 – Resolved an issue wherein the scanned data would not come to the Apps, Airplane menu item was missing in the Power key menu and Home and recent buttons were not functional
3. SPR35414 - Resolved an issue to differentiate BT scanners and to avoid multiple pairing and un-pairing events.
4. SPR36019 - Resolved an issue wherein serial port control signals were not working as expected.
5. SPR36143 - Resolved an issue wherein remapping of control modifier keys were not persisting across a reboot.

6. CFE v14 Updates:

- ❖ CFE_ATLAS_01-01-49.00-NN-U14-STD.zip (NGMS)

1. **Android Security Patch Level:** December 1, 2018
Use the link below to see the Android Security bulletin for more information:
<https://source.android.com/security/bulletin/>
2. MC3300R RFID Devices are now supported. The following RFID Components will be preinstalled on MC3300R devices:
Note: For more information on RFID, RFID SDK and Demo application, please refer to MC3300R support located at <http://www.zebra.com/support>
 - RFID Manager: v2.0.10.2
 - a. Supports RFID configuration, FW download, RFID Debug, RFID Status and Version information.
 - Zebra RFID Mobile Demo Application: v2.2.7.2
 - a. Full featured Demo application.
 - b. Preinstalled, launch icon is available on Home screen
 - Scan & Write Application: 2.2.3.0
 - a. Application that demonstrates how to program tags based on barcode input.

Device Compatibility

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

Device Part Number	Operating System
MC333R-GI2HA4IL	Android N
MC333R-GI2HA4CN	Android N
MC333R-GI4HA4CN	Android N
MC339R-GF4HA4CN	Android N

Device Part Number	Operating System
MC339R-GE2HA4CN	Android N
MC339R-GF2HA4CN	Android N
MC339R-GE4HA4CN	Android N

Installation Requirements

The MC3300R Factory Installed Rev A OS or the LifeGuard Update 14 (Non-GMS) Full Package Update is a sufficient baseline to use for future LifeGuard Update releases.

IMPORTANT NOTE:

- Downgrade to older OS versions (01-01-49.00-NN-U13-STD LG patch v13 or earlier) will not work and should not be attempted on MC3300R devices.

Installation Instructions

Using ADB Sideload

The installation instructions assume you have ADB installed on your PC (the adb drivers and such) and your MC3300R has Developer options enabled and USB debugging ON: Instructions on HOW TO enable ADB is also captured in Integrator guide.

1. Connect the MC3300R to the PC using the USB data cable or through the cradle.
2. You may need to pull down the top menu and if you see "USB for charging", touch it and then change it to "File transfers".
3. Open Command Prompt, run "*adb devices*" and check to see if you are able to see the device's serial number.
If yes, proceed to next step
If not please 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 MediaPlayer. This can be ignored.
5. Download Image

- a. **CFE_ATLAS_01-01-49.00-NN-U20-STD.zip** listed above in content section
 - b. Reset files (Optional)
6. Entering into Recovery Mode
 - a. Option 1: In Command Prompt, type *“adb reboot recovery”* and click enter.
 - b. Option 2:
 - Gun device: Reboot the device and keep the GUN (grip) trigger held.
 - Brick device: Reboot the device and hold both scan triggers on either side of device simultaneously.
 - When Zebra Technologies logo appears on the screen release the trigger
7. MC3300R will reboot and land up on the Android Recovery screen.
8. If applying patch via sideload method
 - a. Use UP and DOWN keys on the keypad to navigate up/down highlight item
 - b. Use ENTER key on the keypad to select menu item – *“Apply update via adb sideload”*
9. With your Command Prompt, open, type *“adb sideload”* and add a space and then drag and drop the patch file on to it and click enter.
 - a. Your PC screen will show files being installed and a little blue horizontal progress bar on your device will show status... And after about 6 minutes (could be 10+ minutes if installing GMS) it should be done and you should be back at the Android Recovery screen.
 - b. Repeat above steps for all mandatory packages
10. *“Reboot system now”* is highlighted. Press the Power Key to Reboot.
11. Device reboots and you see Zebra on top and POWERED BY android at the bottom and after about 1 minute will transition to the MC3300R splash screen with 5 dancing white dots at bottom... it will stay at this screen for a little over another minute (*could be another 7+ minutes if installing GMS*) and then you are at the Factory *“Welcome”* screen.
12. If you installed a GMS BSP, you will need to complete the process by setting up Wi-Fi and E-mail accounts and such. If on AOSP (non-GMS), there is no process to follow.
13. At the Home Screen, we need to verify that the BSP upgrade took place and set the Date & Time.
 - a. Go to *“Settings”* and scroll down to *“About phone”* and look at the *“Build number”*. It should start with **“01-01-49.00-NN-U20-STD”**. Now you are on the correct BSP.
 - b. Setting the Date and Time. If you associate to a WLAN AP, do so now, as it should automatically set the time and date... 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.
14. To Check the Android Patch Level after installing the CFE package in the device,
 - a. Settings->About Phone->SW Components: Device Update Version: **20**
 - b. ADB Shell method: Execute following command from PC's command prompt:


```
$ adb shell getprop ro.device.patch.version
$ 20
```

15. Now you are all set to use your MC3300R.

Using External SD card

1. Plug the MC3300R into the USB & Charging Cable and then the Cable to the PC. If you have a Cradle with USB connectivity, you may use that as well.
2. You may need to pull down the top menu and if you see “USB for charging”, touch it and then change it to “File transfers”.
3. Download **CFE_ATLAS_01-01-49.00-NN-U20-STD.zip** and drag & drop the file on External SD card.
4. Entering into Recovery Mode
 - Gun device: Reboot the device and keep the GUN (grip) trigger held.
 - Brick device: Reboot the device and hold both scan triggers on either side of device simultaneously.
 - When Zebra Technologies logo appears on the screen release the trigger
5. Your MC3300R will reboot and land up on the Android Recovery screen.
6. Applying update via External SD card
 - a. Use UP and DOWN keys on the keypad to navigate up/down highlight item
 - b. Use ENTER key on the keypad to select menu item – “Apply update from External SDCard”
 - c. Repeat above steps for all mandatory packages
7. “*Reboot system now*” is highlighted. Press the Power Key to Reboot.
8. Device reboots and you see Zebra on top and POWERED BY android at the bottom and after about 1 minute will transition to the MC3300R splash screen with 5 dancing white dots at bottom... it will stay at this screen for a little over another minute (*could be another 7+ minutes if installing GMS*) and then you are at the Factory “Welcome” screen.
9. If you installed a GMS BSP, you will need to complete the process by setting up Wi-Fi and E-mail accounts and such. If on AOSP (non-GMS), there is no process to follow.
10. At the Home Screen, we need to verify that the BSP upgrade took place and set the Date & Time.
 - a. Go to “Settings” and scroll down to “About phone” and look at the “Build number”. It should start with “**01-01-49.00-NN-U20-STD**”. Now you are on the correct BSP.
 - b. Setting the Date and Time. If you associate to a WLAN AP, do so now, as it should automatically set the time and date... 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.
11. To Check the Android Patch Level after installing the CFE package in the device,
 - a. Settings->About Phone->SW Components: Device Update Version: **20**
 - b. ADB Shell method: Execute following command from PC's command prompt:

```
$ adb shell getprop ro.device.patch.version
$ 20
```
12. Now you are all set to use your MC3300R.

Downloadable Software Included in this Release

Package Name	Description
CFE_ATLAS_01-01-49.00-NN-U20-STD.zip	OTA incremental LifeGuard CFE v20 update software for Non-GMS build compatible for MC3300R products

Last Revised: September 20, 2019