Release Notes – Zebra VC80x

01-01-48-NG-00-A Release for GMS

Introduction

With the VC80x, you can easily migrate your material handling vehicles to the next generation platform for warehouse mobility — Android. You get a well-proven mobility platform, guaranteed security support with Zebra's LifeGuard™ for Android, as well as a common solution platform with other Zebra Android handheld and wearable devices in the warehouse. You can migrate from Windows to Android without changing the experience you have in place today. Designed for the most extreme environments, the VC80x can go everywhere your vehicle operators need to go, including the freezer. And the VC80x is packed with features and options to boost productivity and task accuracy — including the fastest wireless connections and fastest processor in its class, an optional super bright 1,000 NIT screen that's easy to see outside, an optional rugged keyboard and more. The VC80x — ultra-rugged, Android-powered for a smarter warehouse.

Description

Android Nougat 01-01-48-NG-00-A (GMS) is the first OS release to support VC80x.

This release documentation contains the details of this OS release – features, instructions, component details, part numbers supported and known issues/limitations.

Zebra Value Adds Feature List

Components	New Features	Comments
BT	Bluetooth Silent pairing CSP	
Rxlogger	Chathead Overlay for Log Viewing & RX Logger Utility Logging VC80x heater performance data	
WLAN	WPS Wi-Fi Direct	
Data Analytics	DCA's added: Battery, WWAN, WWAN Location, Device info, Application, Traffic, WLAN, App usages, GPS, Flash Stats and Scanner.	Replaces B2M
Audio	Quick sound Control	
MX		
APPMGR	1. Battery Optimization (New API), Add/Remove Apps for Battery Optimization	
BluetoothMgr	1. AllowSilentPairing (New API)	1) Specify whether to allow silent pairing of certain configured remote Bluetooth devices
	2. SilentPairingAction(New API)	2) Silent pairing action to take

	3. SilentPairingName(New API)	3) Bluetooth Device Name, Provide Name along with CoD/UAP for adding a new rule
	4. SilentPairingCoD (New API)	4) Class of Device of Silent Pairing device. Bluetooth settings lists CoD for each available device
	5. SilentPairingUAP (New API)	5) Upper Address Part - First 3 bytes of Bluetooth MAC Address, of Silent pairing device. Bluetooth settings lists UAP for each available device
BugReportMgr	1. EnableScreenshot(New API)	1) Specify whether to enable taking screenshot
	2. EnableIntent(New API)	2) Specify whether to enable triggering bug report via intent
FileMgr	1. SourceURI (No API only DSD Change)	Modification to Existing API Enable Encryption in SourceURI
Intent	1. QueryDeviceOwner (New API implementation)	1) Query to get the Details of the Device Owner
Wi-Fi	1. 802.11ac	Enhancements for Very High Throughput(802.11ac)
DataWedge	1. Cross device configuration importing support.	

	2. Extend DataWedge Intent APIs	a. Get disabled application list
		b. Set disabled application list
		c. Switch scanner
		d. Switch scanner params at runtime
		e. Get configuration of a profile
		    i. Barcode input
		    ii. Intent output
		    iii. Keystroke output
		    iv. Basic data formatting for each output plugin

	3. Configuration import reporting	
	4. RS232 scanner support.	New Datawedge RS232 input plugin.
	5. Extend DataWedge Intent APIs.	a. Introduced scanner type to set and get configuration intent api b. Switch scanner intent API can use the scanner type instead of the scanner index c. Enumerate scanners api returns the scanner type for each scanner supported in the device. d. Configure multiple plugin configuration by single intent.
EMDK	Serial port API	a. List supported serial ports b. Open seral port 1 or 2. c. Select data format and flow control method. d. Read state of modem signals
VC settings	Configuration for Vehicle Computer settings	a. Switchable internal/external antenna b. Peripheral power on/off c. Ignition detect d. Screen blanking
Heater Control settings	Configuration for internal heaters	a. Display b. Battery c. Serial port d. USB port

Device Compatibility

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

USA	
Warehouse GMS	VC80X-10SSRAAABA-U
Rest of the World	
Warehouse GMS	VC80X-10SSRAAABA-I

Component Contents

Package Name	Description
AT_N_FPU_GMS_48.00.zip	Full Package Update includes all components
Atlas_N_GMS_ENT_RESET_48.00.zip	Enterprise Reset (Erases Data Partitions)
Atlas_N_GMS_FACT_RESET_48.00.zip	Factory Reset (Erases Data & Enterprise Partitions)

Component Version Info

Component / Description	Version
Product Build Number	01-01-48-NG-00-A
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	19.0.22.0
Datawedge	6.6.50
EMDK	6.7.10.1010
MXMF / OSX	MXMF-7.1.2.1 / OSX-QCT.71.7.4.7

WiFi	FUSION_BA_2_10.0.1.012_N Application: BA_2_10.0.0.008_N Radio: BA_2_10.0.1.012_N Middleware: BA_2_10.0.1.008_N Firmware: 7.35.205.8_20171114
PTT	3.1.35
Touch FW	N/A
RxLogger	5.4.10.0
B2M	N/A
Bluetooth Pairing Utility	3.10
DataAnalytics	3.0.0.1217
File Browser	1.19.1.0
Stage Now	2.9.1.1362
App Gallery	3.0.1.7
User Guide	N/A
Sensors (Accel, Gyro)	2061000, 2061000
MobiControl	N/A
ZVC	2.0.0.12
Battery Manger	1.3.8
ActiveEdge	2.5.16
SmartMU	N/A
Device Central	1.0.4.8
Audio	0.19.0.0
Diagnostic Tool	1.15.0.6
FingerPrint	Zebra/VC80x/VC80x:7.1.2/01-01-48-NG-00-A/59:user/release-keys
Security Patch Level	Dec 5, 2017
GMS Version	N/A

Installation Requirements

Notes

1: OS update using MDM to download image to USB memory stick is not supported.

2: When switching between GMS and AOSP build, you need to install Factory or Enterprise reset after installing the Full Package update.

3: The internal battery must be charged to at least 30% to update using recovery mode.

4: The micro USB connector used for adb sideload is located under the antenna cover at the top of the unit. When a USB cable is plugged into the adb client port, the RS232 ports and USB ports on the bottom of the unit are disabled.

Installation Instructions

Using ADB Sideload

The installation instructions assume you have ADB installed on your PC (the adb tools and Zebra USB drivers) and your VC80x has Developer options enabled and USB debugging ON.

Instructions on how to enable ADB is in user guide.

1. Remove the radio antenna cover (four Torx T-10 screws)

2. Connect the VC80x to the PC using a USB data cable

3. Open Command Prompt, run *"adb devices"* and check to see if you can see the device's serial number.
    If yes, proceed to next step
    If not please install the Zebra USB drivers and set up Device Manager on your PC to recognize the VC80

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 update files to a folder on your PC.
    a. Full Package Update File and any applicable patches listed above in content section.
    b. Factory or Enterprise reset files (Optional)

6. Entering Recovery Mode
    a. Option 1: In Command Prompt, run *"adb reboot recovery"*
    b. Option 2:
    - Reboot the VC80x using the power button menu.

- When the screen goes black, hold the Power and + buttons.
- When the Zebra Technologies logo appears on the screen release the buttons

7. The VC80x will reboot and display the Android Recovery screen.

8. Apply update via sideload method
   - Use + and – buttons to move the highlight item up or down.
   - Use the Power button to select menu item "Apply update via adb sideload"

9. In the Command Prompt, type "adb sideload" and the filename of the update to install.
   a. Your PC screen will show files being installed and a blue horizontal progress bar on your device will show status. After several 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. Highlight the "Reboot system now" menu item and press the Power Key to reboot.

11. Device reboots and you will first see the "Zebra Powered by Android" boot screen followed by the VC80x boot screen. The boot process can take several minutes. (could be 7+ minutes if installing GMS).

12. If you installed a GMS BSP, you will need to complete the Setup Wizard by setting up Wi-Fi and E-mail accounts and such. If on AOSP (non-GMS), there is no process to follow.

Using External USB memory stick

This installation method does not require an adb connection between your PC and the VC80x. If the VC80x is connected to your PC via a USB cable, disconnect it so that the external USB host ports are enabled on the VC80x.

1. Download Images FullPackageUpdate.Zip file, any applicable patches listed above in content section and Reset Files (Optional) to your PC. Copy the files onto an external USB memory stick

2. Entering Recovery Mode
   - Reboot the VC80x using the power button menu.
   - When the screen goes black, hold the Power and + buttons.

- When the Zebra Technologies logo appears on the screen release the buttons

3. The VC80x will reboot and display the Android Recovery screen.

4. Applying update via USB memory stick
    - Use + and – buttons to move the highlight item up and down

    - Use the Power button to select menu item "Apply update from USB drive"
    - Select the update to apply

5. Highlight the "Reboot system now" menu item and press the Power Key to reboot.

6. Device reboots and you will first see the "Zebra Powered by Android" boot screen followed by the VC80x boot screen. The boot process can take several minutes. (could be 7+ minutes if installing GMS).

7. If you installed a GMS BSP, you will need to complete the Setup Wizard by setting up Wi-Fi and E-mail accounts and such. If on AOSP (non-GMS), there is no process to follow

Verified scanners

X indicates a verified configuration.

	Bluetooth Interfaces	
Scanner model	Bluetooth SSI	Bluetooth HID
LI3678-SR		X
DS3678-SR	X	X
DS3678-ER	X	X
DS3678-HP	X	X
DS3678-HD	X	X
RS6000	X	X
RS507	X	X
LS3578-ER		X
LS3578-SR		X
LS3578-HD		X

LS3578-FZ		X
DS3578-SR		X
DS3578-ER	X - Custom firmware	X
DS3578-HD		X

	Wired Interfaces			
Scanner model	USB SSI	USB HID	RS232 SSI	RS232 no protocol
LI3608-SR		X		X
DS3608-SR	X	X		X
DS3608-ER	X	X		X
DS3608-HP	X	X		X
DS3608-HD	X	X		X
DS3508-SR		X		X
DS3508-ER		X		X
DS3508-HD		X		X
LS3408-FZ		X		X
LS3408-ER		X		X

NOTE
The scanners above that support SSI protocol were tested with specific versions of firmware.
- DS3678 Bluetooth scanner should be using the firmware version CAACKS00-003-R00D0.DAT.

- DS3608 USB scanner should be using the firmware version CAACJS00-004-R00D0.DAT.

- DS3578 Bluetooth scanner should be using custom firmware version – "CAABRC17-001-R01D0.DAT". DataWedge will show the firmware version as "PAABRC17-001-R01". The DS3578 running the custom firmware advertises its name as RS507. As a result, the VC80x will display in notification bar that "RS507" is connected/disconnected.

Known Issues and Limitations

1. LI36x8 scanners not supported in SSI mode.
2. RS507x scanners not supported
3. When a USB cable is plugged into the adb client port, the RS232 ports and USB ports on the bottom of the unit are disabled.
4. The com.wavelink.velocity folder is not created by OS until the Velocity application is opened at least once. In order to push a wldep profile before launching velocity application, user needs to create the folder manually or via MDMs.

5. The Velocity ATTE console PC application cannot be used to configure serial scanners. Serial scanners must instead be configured in Datawedge.
6. The display on time is maximum 30 minutes. An "Always on" option is planned for an upcoming maintenance release.
7. Airwatch remote control of the device will not work when screen capture is disabled.
8. The feature to skip the GMS Setup Wizard by scanning a barcode does not work on VC80x. (GMS only).

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