

***Inforce 6560™***

***Android Software Release Note V1.1***

***003486 Rev A***

***May 24, 2019***

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## Revision History

Revision	Date	Description	Author
A	24/May/2019	Initial Release	PH

## Approval Record

Function	Name	Date
Reviewed By	VK/MSS	24/May/2019
Approved By	DR	24/May/2019

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# 1. INTRODUCTION

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This document describes the feature set supported on Android BSP Software Release Version 1.1 running Oreo 8.1.0 on Inforce 6560 development platform. The Inforce 6560 is a SBC based on the latest 64-bit Qualcomm® Snapdragon™ 660 processor (SDA660 SoC).

## Test Configuration used for Validation

- SBC – IFC6560-01-P1
- Camera Modules – ACC-1H70-00-P1

## Software Platform Version

This release is based on the following software platforms:

- Linux Kernel – Version 4.4.78
- Android Oreo – Version 8.1

## Memory Platform Information

The following has been validated in this release:

- 32GB eMMC
- 3GB LPDDR4

Instructions to build this software is available on the following link:

<https://source.android.com/source/requirements.html>

## 2. REFERENCES

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This section lists any parent and/or supplementary documents for the Inforce 6560 development platform. This document supersedes previous versions. This document should be read along with:

- IFC6560 User Guide

# 3. SOFTWARE RELEASE INFORMATION

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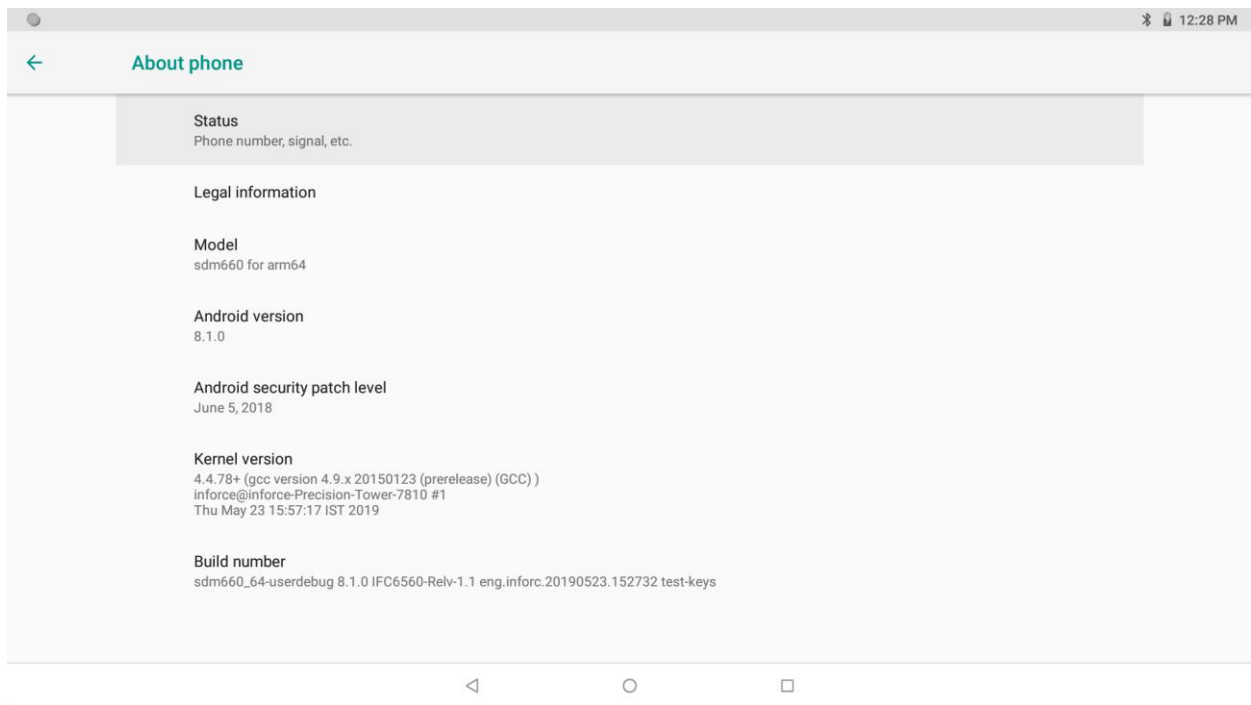
## 3.1 SOFTWARE RELEASE PACKAGE

This software release package consists of the following items:

- **Binaries** – Pre-built binary files that can be flashed directly to the Inforce 6560 platform.
- **Inforce Computing Patches** – These are adaptations and customizations done by Inforce Computing to ensure that the software works on the Inforce 6560 platform.
- **README.txt** – Instructions for building and flashing the Android Images.
- **MAC Programming Files** – Support files required for Bluetooth MAC Address programming.
- **Application\_Apk** – Chrome browser
  - `com.android.chrome-v47.1.1.2526.76-252607600-Android-4.1.apk`
  - `GPSTest.apk`
- **Release Note** – This document describes the software capabilities and features, and any known issues/limitations in the release.

### 3.2 SOFTWARE RELEASE IDENTIFICATION

This Software Release Version 1.1 is based on Oreo 8.1.0 for use with the Inforce 6560 (CAF tag LA.UM.6.2.r1-10500-sdm660.0.xml release) with adaptations and customizations from Inforce Computing.





## 3.3 FEATURES SUPPORTED IN THIS RELEASE

The following features are validated in this release:

1. **Android Oreo 8.1.0:** This release is based on Android Oreo 8.1.0.
2. **Frequency:**
  - **CPU Frequency:** CPU core frequency of 1.843GHz (4 cores) and 2.2GHz (4 cores).
  - **GPU Frequency:** GPU frequency up to 647 MHZ
3. **USB :** This release supports the following USB features
  - **USB Type-C:** USB-based input devices (Mouse and Keyboard).
  - **USB 2.0:** USB-based input devices (Mouse and Keyboard).
  - **USB Mass Storage:** USB mass storage auto mount. The files can be accessed from UI using third party File Manager application (ES File Explorer File Manager).
  - **OTG Port:** USB type-C OTG port functionality by using an input device.
  - **USB Camera:** 1080p image capture and preview using the Microsoft LifeCam HD 5000 on the USB 2.0 port.
  - **MTP Device:** This release is validated for MTP device support.
4. **Display**
  - **HDMI:** HDMI output resolutions up to and including 1080p@60 along with audio.
  - **Display Port:** DP output resolutions up to 4K@60 fps along with audio on USB type-C.



### NOTE

*Both displays can render simultaneously.*

5. **Wi-Fi:** Wi-Fi 2.4 GHz and 5 GHz client functionality. MAC address is pre-programmed and comes printed on the board in the form of a QR code.



### NOTE

*As there is no default browser available, install the Chrome browser provided along with the software package for browsing. Use the following commands for installing the apk:*

```
adb root
adb remount
adb install <location where apk is stored>/
com.android.chrome-v47.1.1.2526.76-252607600-Android-4.1.apk
```

6. **Micro SD Card Interface:** Access to micro SD card interface (up to 64GB) has been validated.
7. **Serial UART:** This release supports serial UART at a baud rate of 115200.
8. **Bluetooth:** Bluetooth 5.0 and Bluetooth low-energy host functionalities. MAC address is pre-programmed and comes printed on the board in the form of a QR code.
9. **MIPI CSI:** This release is validated for MIPI CSI camera interface on CAM0 and CAM1 ports using ACC-1H70 accessory for recording at 4K-DCI@24fps resolution.

- **Dual camera support:** Dual camera support using two ACC-1H70 accessories on CAM0 and CAM1 ports has been validated in this release. Simultaneous preview/capture from both cameras is not enabled.
10. **Audio:** This release supports one input/output combo jack. Audio jack detection is validated in this release.
  11. **Android Recovery:** Recovery mode operation is verified with adb access in this release
  12. **Hexagon SDK:** Hexagon SDK 3.3.3 package.
  13. **FastCV SDK:** Fast CV SDK 1.7 package.
  14. **SNPE SDK:** This release enables the use of SNPE SDK.
  15. **Network Configuration:** Bluetooth and Wi-Fi MAC address programming is maintained in persist partition and its value will be retained even after re-flashing the board.

**NOTE**

*For Bluetooth and Wi-Fi MAC address programming, please refer to the **README.txt** provided as part of this release package.*

16. **Miracast:** This release supports Miracast. Casting of FullHD resolution has been validated in this release.
17. **RTC:** Real Time Clock (RTC) feature with Coin-cell.
18. **Android verified boot (dm-verity):** Android Verified Boot is enabled by default in this release.

**NOTE**

*To allow 'adb remount' to succeed, verified boot has to be disabled. Use the commands listed below to disable verified boot.*

```
adb root
adb disable-verity
adb reboot
```

## 3.4 NEW FEATURE/BUG FIXES OF THIS RELEASE

1. **GPS:** GPS feature with an external active antenna.

**NOTE**

*GPS feature is verified using the GPS Test application provided within this release package. Follow the below commands to install the apk:*

```
adb root
adb remount
adb install GPSTest.apk
```

2. The limitation of connecting DP before boot is resolved.

## **3.5 LIMITATIONS/BUGS**

1. HDMI hot plug is not supported in this release.
2. Mira-cast on Display Port is not supported.
3. USB Mouse click is not accurate on some menus like Ring-tone selection, Camera and Settings.  
Use USB Keyboard for navigation and selection.

## 4. CONTACT INFORMATION

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