**Android10 Unlock Bootloader Guideline**

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**版本历史**

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| 版本 | 日期 | 作者 | 备注 |
| V1.0 | 2019.6.27 |  | 初始版本 |
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# Introduction

This document is to present guideline of unlock bootloader in secure boot mode for UNISOC platform.

## Request & Purpose

The secure boot in Unisoc platform should support unlock bootloader feature. According to Android Verified boot requirement, We upgrade the unlock bootloader feature. If you want to find more, please find documents in Android Verified BOOT website.

## Definitions & Abbreviations

|  |  |
| --- | --- |
| **Name** | **Description** |
| CA | Certificate authority |
| PUK | Public key |
| OEM | Original Equipment Manufacture |

## Reference

1. http://en.wikipedia.org/wiki/Digital\_signature
2. Secure Structure spec
3. Android8.1\_Secure\_Boot\_Integration\_Guide
4. Android10\_Unlock\_Bootloader\_Guide

# Unlock Bootloader In Linux Environment

If you hope that device may be flashed freely and is not intended to be verified,please firstly unlock bootloader. The following steps should be executed :

you need enter fastboot mode, so execute:

$adb reboot bootloader

The step 2.2 is only a demo. It is better for OEM to provide website to generate certificate.

## Get Device identifier

Use <fastboot oem get\_identifier\_token> command to get device identifier:

Run sudo ./fastboot oem get\_identifier\_token.

The terminal will display(for example):

./fastboot oem get\_identifier\_token

(bootloader) Identifier token:

(bootloader) **30313233343536373839414243444546**

**343339**

OKAY [ 0.075s]

Finished. Total time: 0.075s

The Command Prompt will spit out a token in the form of a very long string of characters. Select it, copy it, and paste it into a identifier token string–make sure there are no spaces!

## Generate Identifier Signature

Use signidentifier\_unlockbootloader.sh to generate signature with rsa4096\_vbmeta.pem for device identifier:

Enter

vendor/sprd/proprietories-source/packimage\_scripts

Run ./signidentifier\_unlockbootloader.sh identifier\_token rsa4096\_vbmeta.pem signature\_file.

Thc script will generete file to save signature for device identifier.

For example:

./signidentifier\_unlockbootloader.sh 30313233343536373839414243444546343339 rsa4096\_vbmeta.pem sign.bin

Note:

The signidentifier\_unlockbootloader.sh is in

vendor/sprd/proprietories-source/packimage\_scripts directory.

The rsa4096\_vbmeta.pem is private key signed vbmeta image in

vendor/sprd/proprietories-source/packimage\_scripts/signimage/sprd/config directory.

## Unlock Bootloader

Use <sudo fastboot flashing unlock\_bootloader signature\_file> command to unlock device.

Run sudo fastboot flashing unlock\_bootloader signature\_file.

For example:

sudo ./fastboot flashing unlock\_bootloader sign.bin

The terminal will display(for example):

downloading 'unlock\_message'...

OKAY [ 0.042s]

unlocking bootloader...

At the same time, The lcd screen will display:

Warning: Unlock device may erase user data.

Press volume down button to confirm that.

Press volume up button to cancel.

You can press ‘volume down’ key to confirm that unlock operation, and user data will be erased, of course, you also may press ‘volume up’ key to cancel this operation.

At the unlocked state, device may be flashed freely and is not intended to be verified.

You also can use <fastboot flashing lock\_bootloader> commmand to lock device when device is in unlocked state.

For example:

sudo ./fastboot flashing lock

Note：The fastboot is from “out/host/linux-x86/bin/” directory in this board.