



Marvell PXA Platforms

Linux SWDownloader

User Guide

v2.0

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Document Conventions



Note: Provides related information or information of special importance.



Caution

Caution: Indicates potential damage to hardware or software, or loss of data.



Warning: Indicates a risk of personal injury.

Document Status

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1 About This Document

1.1 Purpose

Describe the guide of Linux SWDownloader tool

1.2 Abbreviations and Acronyms

Table 1.1: Abbreviations and Acronyms

Acronym	Description
SWD	Software Downloader
UE	User Equipment

1.3 Hardware Requirements

Table 1.2 Hardware Requirements

Communication Ports	USB port must be available on PC
Cables and Connectors	USB cable

1.4 Software Requirements

Table 1.3 Software Requirements

Operating Systems	Native Ubuntu Linux32/64bit machine
Applications	Not relevant
Drivers	Wtptp.ko

1.5 Features List

Table 1.4 Features Description

Feature name	Description
Full download	Download all images for full system
Partial download	Download partial images for a system
Single UE download	Download to a UE per PC one time
Multi-UE download	Download to multi-UEs parallel per PC
Upload Data from UE	Upload data from UE
Erase all Flash before download	Erase all flash before burning flash
Reset BBT	Reset BBT in burning flash
Erase all Flash only	Erase all flash only without burning flash

1.6 Components

Table 1.5 Components Description

Components	Description	Permission
Swdl_linux	Executable binary	Root account



2 Installation

Copy swdl_linux binary from SWDownloader release package to target folder

3

Run application

Run application, execute swdl_linux.



Note: Release swdl_linux **requires root permission** for it need to open usb port to do download

Swdl_linux is built on 32 bit system , if you want to run on 64 bit ubuntu system , please install ia-32 libs first to support it

Please use this command : `sudo apt-get install ia32-libs`

3.1 Preparations

Install wtptp.ko first on a native linux machine



Note: SWDownloader also support non-empty flash programming, if you can make sure this board is flashed by SWDownloader last time , then you don't need to erase with XDB

3.2 How to Run

3.2.1 Multiple Download Data to UE

1. Prepare download images folder
2. Go to swdl_linux directory then run swdl_linux like below command:
`sudo ./swdl_linux -D fuseburnt_emei.blf -T timeout(seconds)` (You can see its usage introduction when input `./swdl_linux`, it support absolute path and relative path)
 Please Set `-T` if you want to exit this binary after timeout, its unit is in **seconds**.
3. When you see below print in terminal , then please reset board to be download

```
Complete to Initilize parameter
Begin to detect wtptp device....
init_hotplug_sock
Please plug your USB device
```

4. You can see download and burning progress in terminal

```
/dev/wtptp0:Download percentage is:29 |
```

```
/dev/wtptp0:Burning Flash percentage is:1 |
```

5. When you see print below , download is completed and successfully

```
|/dev/wtptp0:Burn Successfully |
```

6. You can plug in multiple boards to do download at same time

3.2.2 Single download

Run `sudo ./swdl_linux -D fuseburnt_emei.blf -S -T timeout(seconds)` (You can see its usage introduction when input `./swdl_linux`, it support absolute path and relative path).

Please add `-S` in input parameter to do single download, it will exit automatically after download no matter download is failed or successfully.

Please Set `-T` if you want to exit this binary after timeout, its unit is in **seconds**.

```
|/dev/wtptp0:Burn Successfully |
```

```
TerminateBL.....
```

```
please wait .....
```

```
Quit from detect device.....
```

```
Deleting temp folder : /home/zqg/share/SWD_Linux_unicode/src/Linux/SWDownloader/  
AbsBlfTemp
```

```
Successfully to delete temp folder
```

```
Deleting temp folder : /home/zqg/share/SWD_Linux_unicode/src/Linux/SWDownloader/  
temp
```

```
Successfully to delete temp folder
```

```
root@ubuntu:/home/zqg/share/SWD_Linux_unicode/src/Linux/SWDownloader#
```


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How to report error

If there are some issues in download, please save wtptp.log, you can find it in swdl_linux path folder



5 Appendix

5.1 Report issues

Please send email to gqzhai@marvell.com with "SWDownloader Issue Report: ..." title.

Or visit webs: <http://support.marvell.com>.

Or submit an issue at CQ web: <http://sh2-cq01.marvell.com/cqweb/login>.

5.2 Update this document

Please send updated document to gqzhai@marvell.com with "SWDownloader document update: ..." title for merging, and you will receive merged latest version.

5.3 Revision History

Table 4.1: Revision History

Document No and Revision	Author	Description	Date
0.1	qqzhai	The initial version	06/06/2011
0.2	qqzhai	Update version	06/08/2013
2.0	qqzhai	Update version	28/11/2013



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