

# Image Install Guide (Debix Model A)

## Software Installation

### ① Download Image

1. Download the latest system image from the [software download page](#) of DEBIX official website;

#### IMPORTANT

- The memory version of the Ubuntu 20.04 image downloaded depends on the memory size of the DEBIX board and must correspond one to one, e.g., if the board's memory is 4GB, you can only download the image with 4GB DDR Version;
- The boot type of the image downloaded depends on which boot mode image you choose to install, and whether or not the board contains eMMC, etc. For example, if you need to install an image with eMMC boot mode, and the board has an eMMC module, you can choose the image name with (boot from eMMC).

2. If the downloaded image file is a zip file, you need to decompress it into an .img file;
3. Write the .img file into the Micro SD card by [balenaEtcher](#) tool.

### ② System Boot

DEBIX has two boot modes: Micro SD card (default), eMMC.

#### A. Boot from Micro SD Card

- **Component Preparation**
  - ✓ DEBIX board
  - ✓ Micro SD card, and card reader

- ✓ DC 5V/3A power adapter
- ✓ PC (windows 10/11)

- **Micro SD Card Installation Boot from Micro SD Card Image**

On the DEBIX official website, choose to download Ubuntu 22.04 Boot from SD Card image link: Debix-SD-V3.5-202XXXXX.img, as shown below.



Figure 27

1. Install and open the Etcher tool on your PC, insert the Micro SD card, select the img file to be installed and the disk partition corresponding to the Micro SD card;

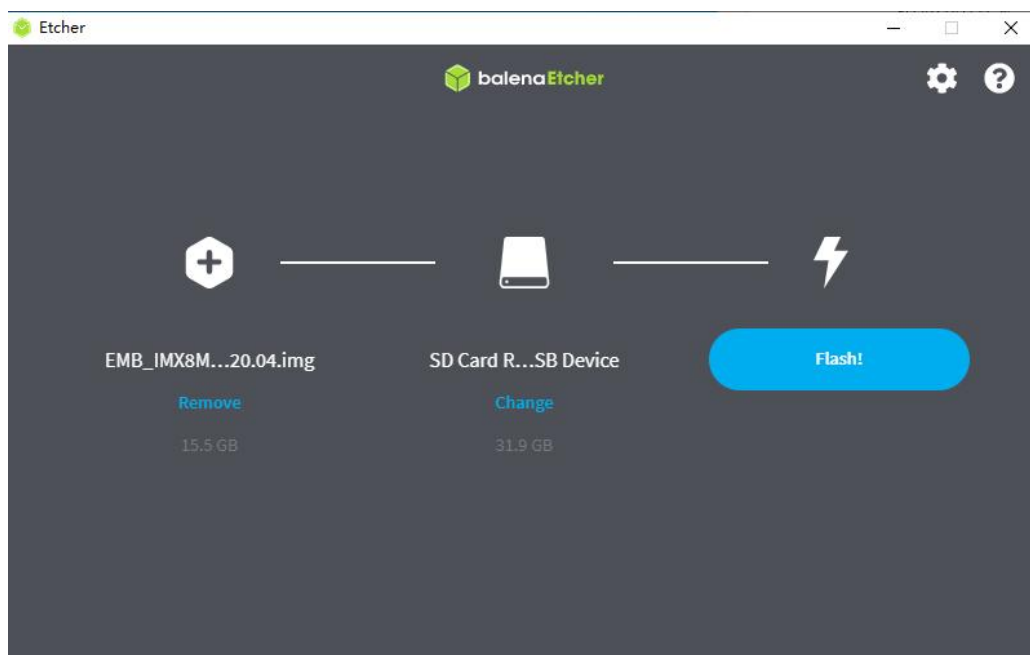


Figure 28

2. Click **Flash!** Wait patiently and the program will write the system to the Micro SD card;

**NOTE**

The system may prompt you that the disk is unavailable and needs to be formatted, please ignore it, it is not an error!

3. When **Flash Complete!** appears, it means the system has been successfully programmed to the Micro SD card;

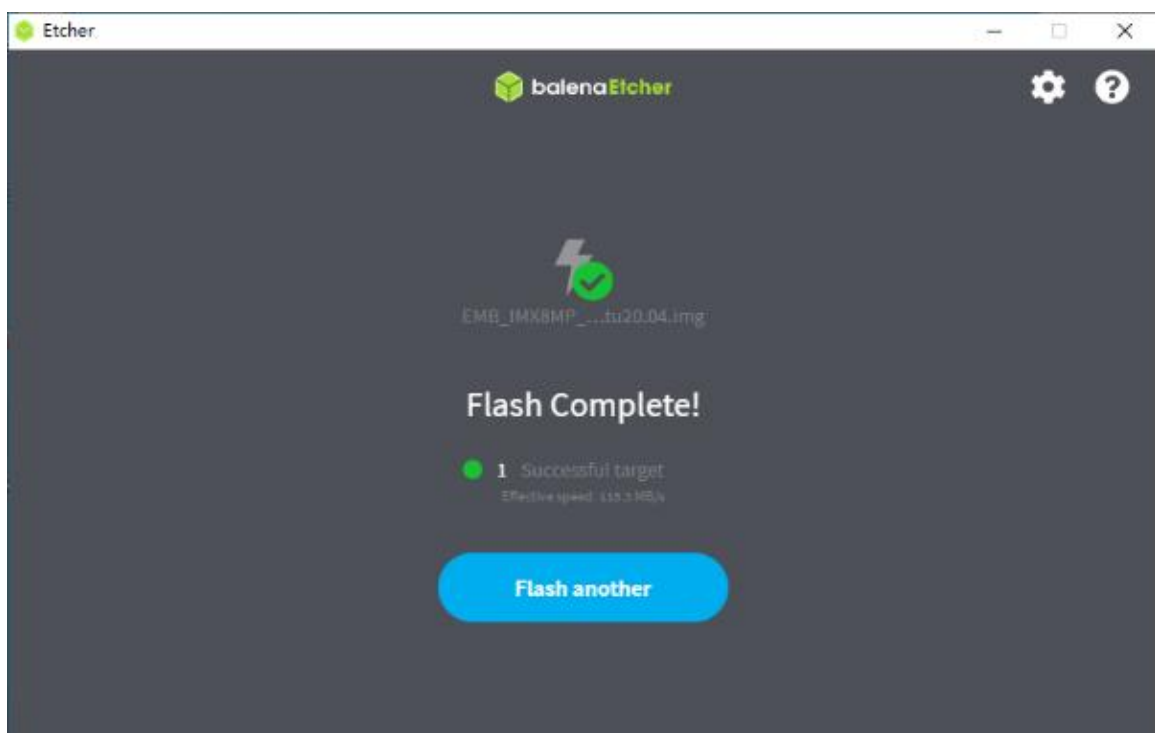


Figure 29

4. Insert the Micro SD card into the slot of DEBIX, connect the display and power on, then you can see the boot screen.

**B. Boot from eMMC**

● **Component Preparation**

- ✓ DEBIX board
- ✓ Micro SD card above 16GB, and card reader

- ✓ DC 5V/3A power adapter
- ✓ PC (windows 10/11)

- **Micro SD Card Installation Boot from eMMC Image**

**IMPORTANT**

For DEBIX Model A with default configuration, you need to select a set of DIP switch and eMMC module when purchasing.

Choose to download Boot from eMMC: Debix-SD-UPGRADE-EMMC-V3.5-202XXXXX.img, as shown below.

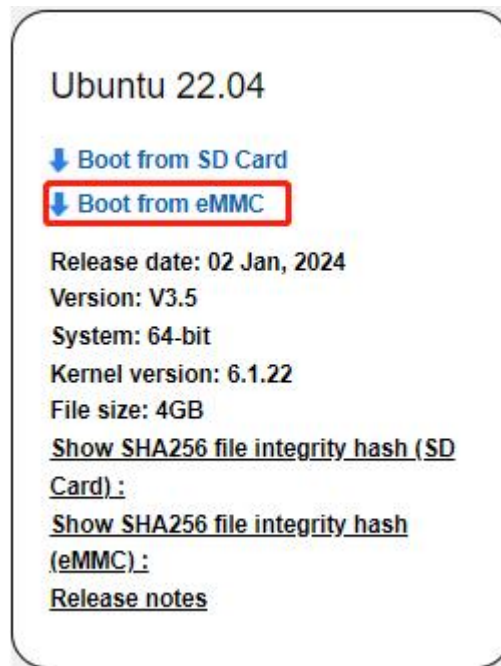


Figure 30

Write the downloaded system image to the Micro SD card according to the steps 1-3 operation of "[Boot from Micro SD Card](#)". Then burn it to eMMC with the following steps:

1. Insert the Micro SD card into DEBIX and set the onboard DIP switch to "11", the system will boot from the Micro SD card, then power on.

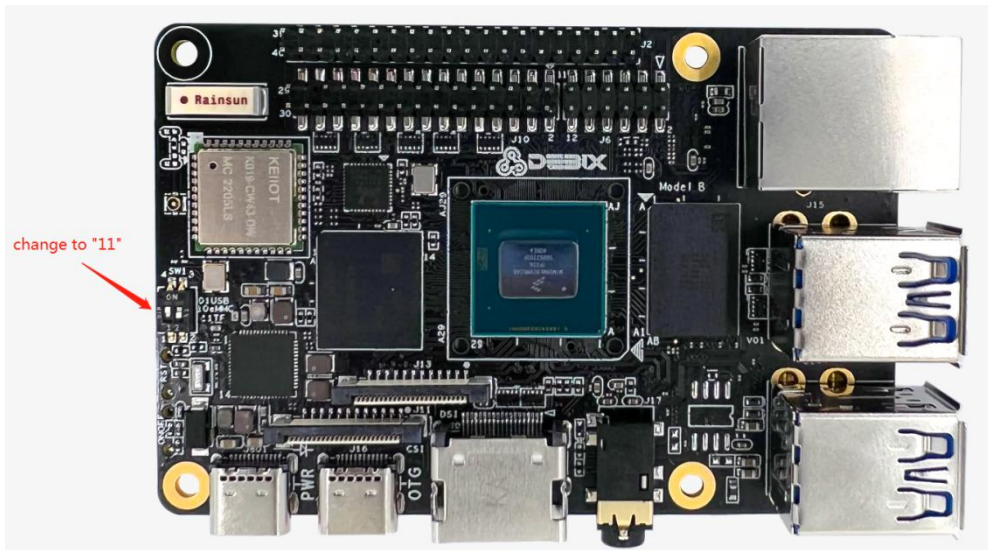


Figure 31

2. After booting, the system will automatically write to eMMC through the Micro SD card, this burn process will not be displayed on screen. When burning, the red LED on the motherboard will flash quickly, please wait. When the red LED changes from fast flash to slow flash, that is, the programming is complete.

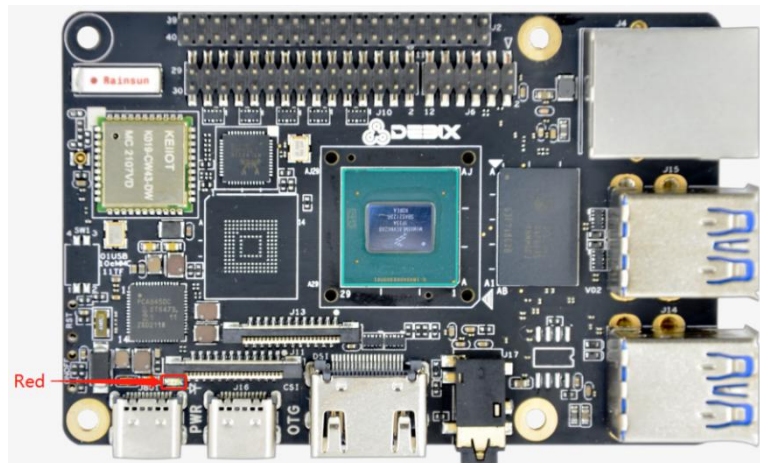


Figure 32

**IMPORTANT**

If the system with the same version as the Micro SD card has been burned to eMMC, the system will not be burned again, and the indicator light will not flash quickly.

If you need to flash the eMMC system again, you need to format the eMMC first. Proceed as follows:

- 1) Connect the motherboard to the keyboard, mouse and HDMI display, set the DIP switch to "11" to start the system from the Micro SD card, and power on.
- 2) In the Terminal, enter the default username "debix" and password "debix" to enter the command line, and run the following commands (as shown in the figure below):

```
#sudo su (password: debix)
```

```
#fdisk /dev/mmcbk2
```

```
d
```

```
d
```

```
w
```

- 3) Repeat step 2 to burn the system to eMMC again.

```
root@imx8mpevk:/home/debix# fdisk /dev/mmcbk2
mmcbk2      mmcbk2boot1  mmcbk2p2
mmcbk2boot0 mmcbk2p1    mmcbk2rpmb
root@imx8mpevk:/home/debix# fdisk /dev/mmcbk2p
mmcbk2p1   mmcbk2p2
root@imx8mpevk:/home/debix# fdisk /dev/mmcbk2

Welcome to fdisk (util-linux 2.34).
Changes will remain in memory only, until you decide to write them.
Be careful before using the write command.

Command (m for help): p
Disk /dev/mmcbk2: 14.58 GiB, 15636365312 bytes, 30539776 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0xc84cc398

Device      Boot  Start      End  Sectors  Size Id Type
/dev/mmcbk2p1  20480  1024000  1003521  490M 83 Linux
/dev/mmcbk2p2 1228800 30539775 29310976 14G  83 Linux

Command (m for help): d
Partition number (1,2, default 2):

Partition 2 has been deleted.

Command (m for help): d
Selected partition 1
Partition 1 has been deleted.

Command (m for help): w
The partition table has been altered.
Calling ioctl() to re-read partition table.
Syncing disks.

root@imx8mpevk:/home/debix#
```

3. Disconnect the power supply, and set the DIP switch to "10", the system will boot from eMMC, connect to HDMI and power on, then you can see the boot screen.

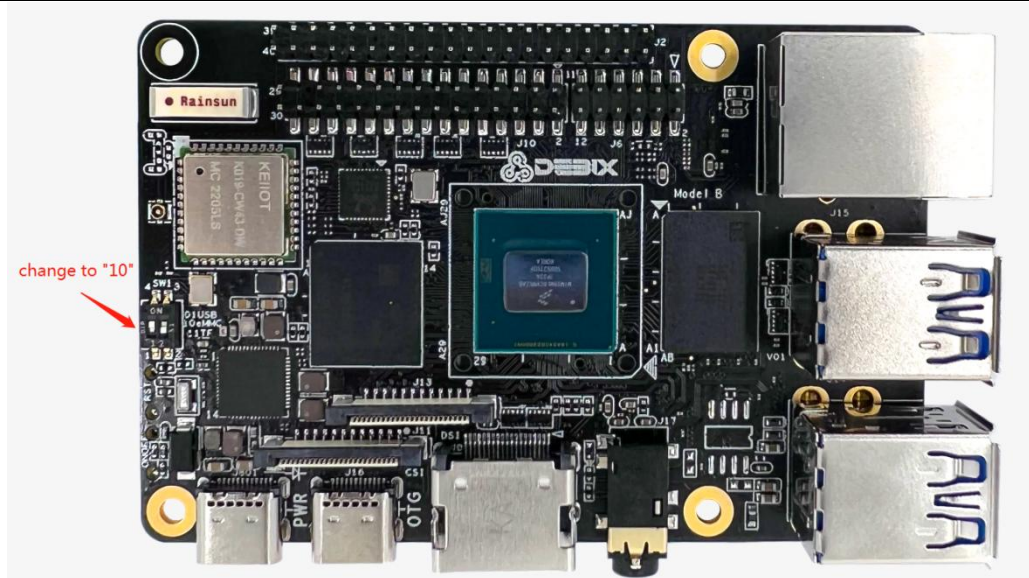


Figure 33

### C. USB Flash

- **Component Preparation**

- ✓ DEBIX board
- ✓ USB Type-C data cable
- ✓ DC 5V/3A power adapter
- ✓ PC (windows 10/11)

- **Burning to eMMC via USB**

#### **IMPORTANT**

For DEBIX Model A with default configuration, you need to select a set of DIP switch and eMMC module when purchasing.

1. Download the system installation package we provided to DEBIX, check the MD5 match after downloading, and then unzip it to PC;
2. Use USB cable to connect the OTG port of DEBIX to the USB port of PC, set the DIP switch to "01", connect the power supply, the system will enter the **USB burning** mode;
3. Run **Windows PowerShell** as administrator;

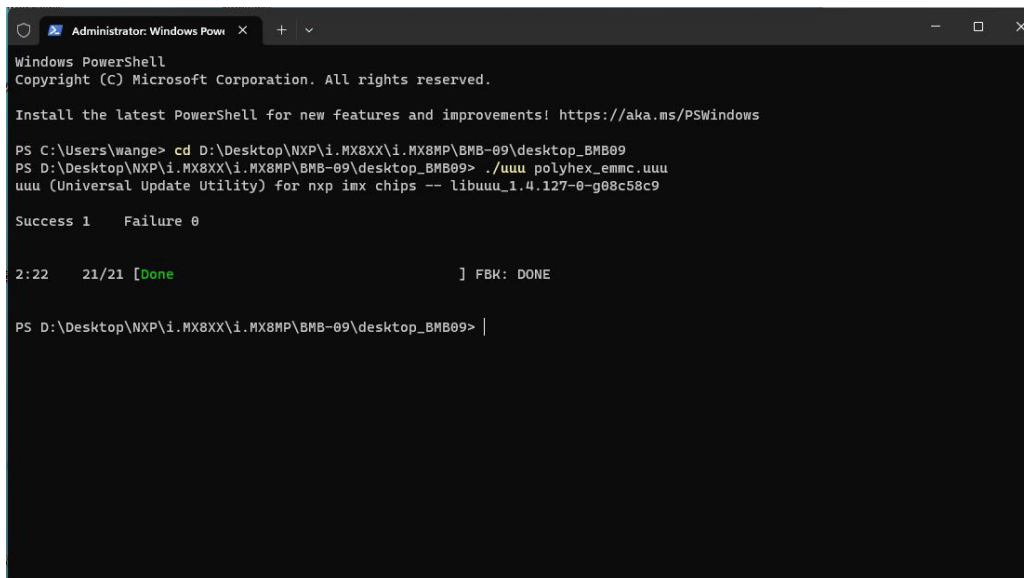
4. Type `cd` command to enter the root directory of the system installation package, for example:

```
cd D:\Desktop\NXP\i.MX8MP\BMB-09\desktop_BMB09
```

5. Run the following command to download the file and start burning the system to eMMC;

```
./uuu polyhex_emmc.uuuu
```

6. Wait for the system burning to finish; when the terminal shows green "Done", it means the burning is finished;



```
Administrator: Windows PowerShell
Windows PowerShell
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Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users>wange> cd D:\Desktop\NXP\i.MX8XX\i.MX8MP\BMB-09\desktop_BMB09
PS D:\Desktop\NXP\i.MX8XX\i.MX8MP\BMB-09\desktop_BMB09> ./uuu polyhex_emmc.uuuu
uuu (Universal Update Utility) for nxp imx chips -- libuuu_1.4.127-0-g08c58c9

Success 1   Failure 0

2:22  21/21 [Done] FBK: DONE

PS D:\Desktop\NXP\i.MX8XX\i.MX8MP\BMB-09\desktop_BMB09> |
```

7. After burning, disconnect the power supply and OTG USB cable, make sure the DEBIX is completely powered off, and then connect the power supply to start.