

How to update U-Boot on an SD card

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This page explains how to manually update the [U-Boot](#) binaries on an SD Card.

1 Copying a binary to an SD card with the Linux dd command

When you have access to the device (with the card reader of a PC, or the [UMS command](#) on a target), the [3 first partitions on the SDCard](#) are:

1. FSBL1
2. FSBL2
3. SSBL

See [Boot_chains_overview](#), for the bootloader definitions.

You can use the Linux dd command to copy the FSBL and SSBL directly to the correct partition:

```
PC $> dd if=<file> of=/dev/<dev> conv=fdatasync
```

<dev> is:

- mmcblk<X>p<n> : PC-embedded card reader case
- sd<X><N> : USB-connected SD card reader case

where <X> is the ID of the device, and <n> the ID of the partition.

Note: the dd option conv=fdatasync is used to force synchronous copying.

2 Trusted boot chain update example

The internal card reader is /dev/mmcblk0, partition <n> is /dev/mmcblk0p<n>:

```
PC $> dd if=tf-a.stm32 of=/dev/mmcblk0p1 conv=fdatasync
PC $> dd if=tf-a.stm32 of=/dev/mmcblk0p2 conv=fdatasync
PC $> dd if=u-boot.stm32 of=/dev/mmcblk0p3 conv=fdatasync
```

3 Basic boot chain update example

The USB card reader is /dev/sdb, partition <n> is /dev/sdb<n>

```
PC $> dd if=u-boot-spl.stm32 of=/dev/sdb1 conv=fdatasync
PC $> dd if=u-boot-spl.stm32 of=/dev/sdb2 conv=fdatasync
PC $> dd if=u-boot.img of=/dev/sdb3 conv=fdatasync
```

SD memory card (<https://www.sdcard.org>) - NEW

Second Stage Boot Loader

First Stage Boot Loader