



How to use USB mass storage in U-Boot



A quality version of this page, approved on *24 September 2020*, was based off this revision.

This page explains how to use the U-Boot command "ums" to update an SD card or eMMC on the device.



1 ums command

In U-Boot, you can directly export the available block devices (sd/mmc/usb) as USB mass storage devices with ums command:

```
Board $> help ums
ums - Use the UMS [USB Mass Storage]

Usage:
ums <USB_controller> [<devtype>] <dev[:part]> e.g. ums 0 mmc 0
devtype defaults to mmc
```

This U-Boot command "ums" is infinite (a loop in USB treatments), and the U-Boot console is blocked until user enters a Ctrl-C.



2 Exporting a block device

On ST boards, the OTG USB controller device index is 0, SD card = "mmc 0" and, when available, eMMC = "mmc 1". You can check the device connected on an SDMMC with the U-Boot command "mmc info".

You can also export a USB device connected to the USB host controller (USBH) = "usb 0".

Then execute one of the following commands:

```
Board $> ums 0 mmc 0 --> start ums on SD card
Ctrl-C
```

```
Board $> ums 0 mmc 1 --> start ums on eMMC
Ctrl-C
```

```
Board $> usb start --> start USB host controller
Board $> ums 0 usb 0 --> start ums on USB device 0 (USB key for example)
Ctrl-C
Board $> usb stop --> stop USB host controller
```

After a delay (of up to 15 seconds), the host sees the exported block device and you can use any command on the PC to access the partitions of the exported memory (dd, mount, cp, rsync). A Ctrl-C is needed to stop the command.

See also [How to update U-Boot](#).

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

former spelling for eMMC ('e' in italic)

Das U-Boot -- the Universal Boot Loader (see [U-Boot_overview](#))

User-space Mode Setting