Ultimate Switch Overclocking Guide

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> **⚠ Disclaimer**
>
> This guide is made to be as safe as possible, but in case you damage your console, we bear no responsibility for doing so. To protect your console, do not use 4IFIR, and test your settings for stability, and finally follow the guide carefully. Make sure to also keep a NAND backup, as unstable RAM overclocking can cause corruption

> **Fully safe overclocking**
>
> If you want to be 100% safe, follow the guide on Nintendo Hombrew for using stock sys-clk

What is overclocking

Overclocking is the process of increasing a system's clock speeds to achieve better performance. On the Nintendo Switch, the SoC (NVIDIA Tegra X1 for V1, NVIDIA Tegra X1+ for V2, Lite and OLED) contains the CPU and GPU. In order to achive better battery life and lower heat output, Nintendo underclocks the chips significantly. Overclocking allows us to increase these speeds for significantly better performance. RAM can also be overclocked, however Nintendo ships different RAM types per console, which impact how much RAM can be overclocked.

Jailbreaking your switch

> **emuMMC**
>
> Note that it is **highly reccomended** to follow the emuMMC path on the guide, especially if you are going to overclock your ram, to prevent NAND corruption and bans

> **Modchips**
>
> Hacking patched Erista and Mariko consoles REQUIRES a modchip. If you do not have the skills to install one, you can contact a installer to do it for you. Some reputable modchip installers can be found here.

> **Patched Eristas**
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> If you have a patched Erista and want to overclock, buy a Mariko console, as patched Eristas have bad battery life, produce more heat, and require the same modchip as a Mariko for less gain

The best guide to jailbreak your console is the Nintendo Homebrew Guide

Installing the Homebrew App Store

Since the Nintendo Homebrew Guide does not include the Homebrew app store, we will set it up here

1. Download the appstore.nro file by clicking this link
2. Drag and drop appstore.nro to the `switch` folder on your SD card

Installing SaltyNX and FPSLocker

> **For people using ARCopolis and CTGP Deluxe**
>
> After installing SaltyNX, open the `SaltySD/exeptions.txt` file, and add these entries depending on which mods you are using. Note that you will have to redo this step whenever you update SaltyNX
> `01006A800016E000` for ARCopolis
> `0100152000022000` for CTGP Deluxe

1. Boot into CFW
2. Load the Homebrew Menu by taking over a title (holding **R** while launching a title)
3. Find the Homebrew App Store
4. Open it
5. Search for SaltyNX
6. Install SaltyNX
7. Search for FPSLocker
8. Install FPSLocker

Installing OC Switchcraft EOS

OC Switchcraft EOS is the tool used to overclock consoles. It is a modification of another tool, sys-clk, which allows other features which can improve battery life, performance and heat output.
To install EOS, follow these simple steps

Information

You can skip step 4 if you have nx-ovlloader installed, and step 5 and 6 if you have UltraHand installed

1. Download EOS from GitHub
2. Copy over the "Copy_To_SD" folder into the root of your SD Card, overwriting any files if prompted
3. Open your "hekate_ipl.ini" file, and under the sysMMC and emuMMC boot options, add this line if a kip1 entry is not present
   `kip1=atmosphere/kips/*`
4. Follow this guide to install nx-ovlloader, but DO NOT install the ovlMenu.ovl file
5. Download the UltraHand overlay from this link
6. Drag the "ovlMenu.ovl" file into the `switch/.overlays/` folder, overwriting any files present.
7. Boot into emuMMC CFW via Hekate

Opening OC Switchcraft EOS

To open the OC-Switchcraft-EOS package, press ZL+ZR+DOWN to open UltraHand. Then press RIGHT to open the packages menu
Select OC Switchcraft EOS, and then press A.
You are now ready to fine-tune your overclocking parameters based on your console

Which guide to follow?

Mariko Switches

If you have a Switch Lite or OLED, it is a Mariko console. If not, follow this guide to determine which console you have

To find out the revision and speedo of your console, open Hekate, and go into the HW and Fuses info page
Locate the SoC line, and note it down. Then, locate the three speedos, and note them down, and finally locate the RAM type, and note it down.

If your SoC is a Erista, follow the Erista guide
If your SoC is a Mariko, follow the Mariko guide