

Bitmain has closed the ability to install third-party firmware starting from March 2024, you need to downgrade the factory firmware to an earlier version in order to install the VNISH firmware

For the L7 and 19 series you can download an SD recovery image for the required miner model and control board type (Xilinx, amlogic, BB, cvitek) from **our website:** <https://vnish-firmware.com/en/bitmain-firmware-stock/> and then use the **VNISH TOOLKIT** to flash without an SD card directly to NAND.

For the 21st series this archive contains a stock bitmain recovery image for S21,T21,S21hydro from February 2024, after installing which you can install the vnish firmware via a toolkit.

For S21pro/S21xp/S21\_imm/S21xp\_imm models need to use S19xp image

1. You must use a flash drive or SD card with a capacity of up to 16GB and must format it in FAT32 format. It is not recommended to use an SD card with an OTG adapter for AMLOGIC control boards instead of a flash drive .
2. Unpack the archive for your type of control board into the root of the flash drive ( SD card).
3. Connect an SD card or OTG adapter with a flash drive to the turned off miner .
4. Turn on the power of the miner and wait for the green LED on the front panel to light up (and remain constantly lit) miner This will mean that the firmware process was completed successfully. This process takes no more than one minute.
5. Turn off the power of the miner and remove the SD card or OTG adapter with a flash drive from the control board.
6. Turn on the power of the miner and wait for it to load, then use **VNISH TOOLKIT** following the manual located in the archive with utility in step 8, you need to choose manually in the field "MINER MODEL " indicate the model of your miner . If the required model is not available, then you must leave DETECT AUTOMATICALLY and the firmware for S19 XP will be installed. In this case, it will be necessary to additionally update the Vnish firmware for your model and type of control board via the Web interface using **WEB NAND UPDATE** version

Official Vnish firmware: <https://vnish-firmware.com/en/>