



Instructions to Upgrade U50 Ultrasound Systems

U50 V2.23 application SW

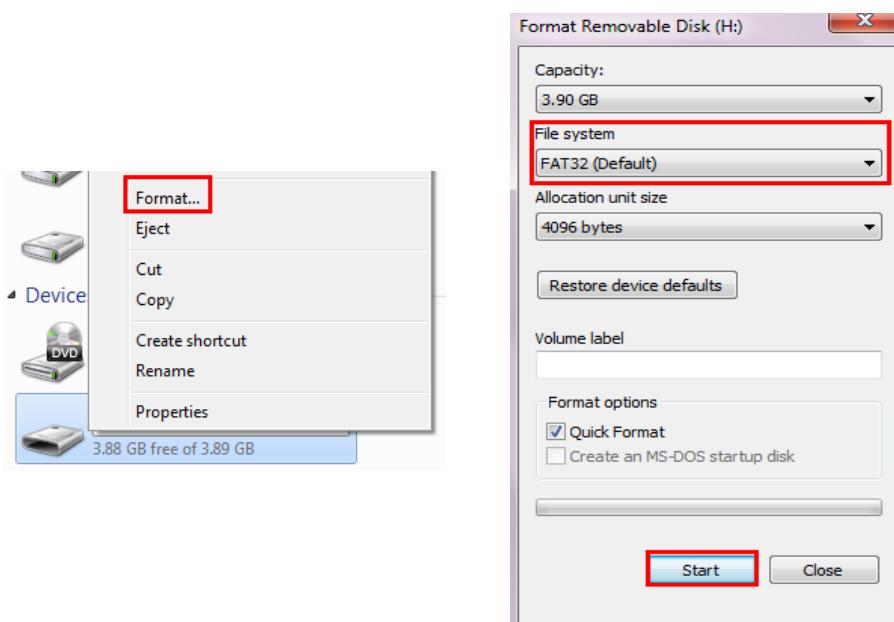
1. Things needed:

- a) U50
- b) Computer
- c) Upgrade Software
- d) USB Drive (The capacity of the USB drive must be smaller than 8 gigabytes.)

2. Upgrade Procedures:

2.1 Prepare the Upgrade USB Driver

- a) Plug your USB drive into your computer → Right click the icon of your USB drive → Select **Format** → Change the file system into **FAT32(Default)** → Click **Start**



- b) Copy the upgrade program into the folder which should be named as **U50**. Make sure there is no **TAB** or **SPACE** in the folder name. Then Plug the USB drive to the ultrasound scanner USB port.



2.2 Update the Operation System to Linux

U50 under V2.20 need to be implemented this step. Or else, skip this step and follow the next step: 2.3 Update the Application software.

- a) Switch on the ultrasound scanner and then keep on tapping the **Shift** and **Enter** buttons on the ultrasound scanner keyboard simultaneously until interface below turns up.

Note: If you fail to enter the interface below, please reboot the machine to try again.

- b) Press [3]Erase internal NAND flash data to erase the previous data.

```
Bootloader V1.0 (Jan 4 2012 - 09:31:36) : Make a choice
[ 1 ] Update programs from TFTP
[ 2 ] Update programs from USB
[ 3 ] Erase internal NAND flash data
[Esc] Reboot
```

- c) Select [2]Update programs from USB

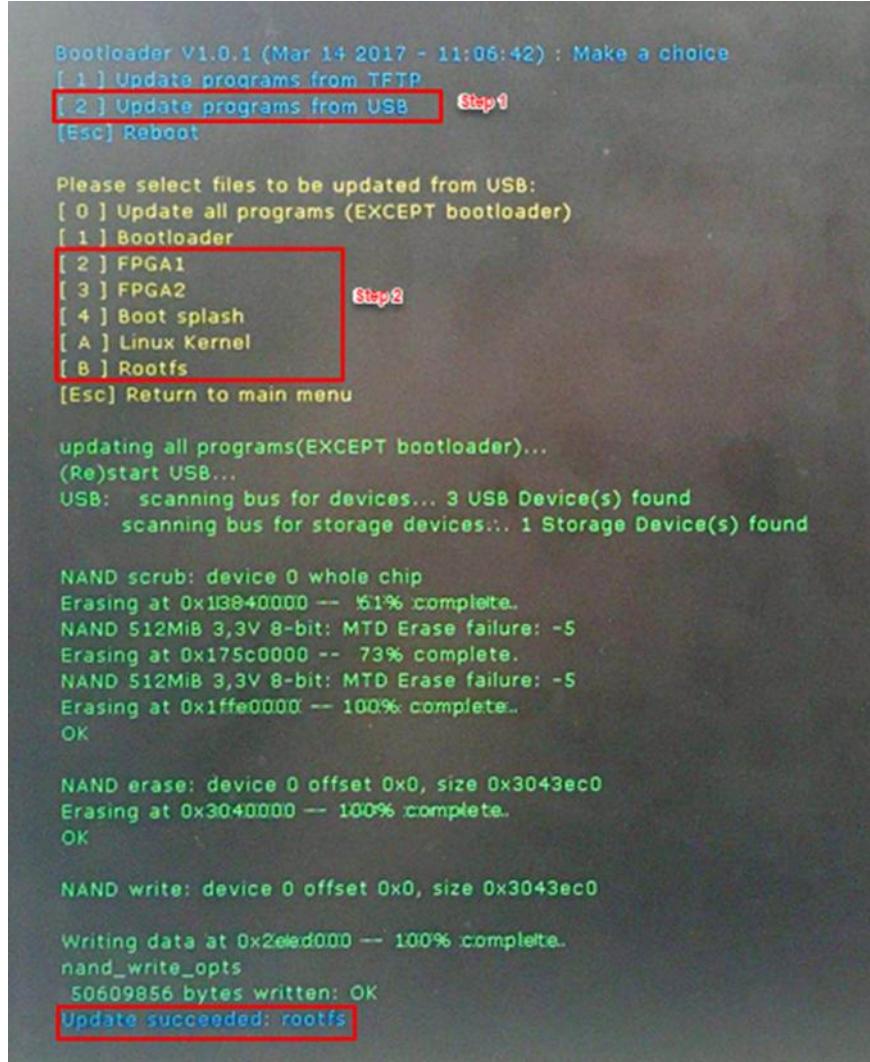
```
Bootloader V1.0 (Jan 4 2012 - 09:31:36) : Make a choice
[ 1 ] Update programs from TFTP
[ 2 ] Update programs from USB
[ 3 ] Erase internal NHND flash data
[Esc] Reboot
```

- d) Then press 1[Bootloader] to upgrade the Operating system from U-COS to Linux

```
Please select files to be updated from USB:
[ 0 ] Update all programs (EXCEPT bootloader)
[ 1 ] Bootloader
[ 2 ] FPGA1
[ 3 ] FPGA2
[ 4 ] Language package
[ 5 ] Application
[ 6 ] Probe data
[ 7 ] Boot splash
[ 8 ] Logo
[ 9 ] IME(Chinese Input Method) library
[Esc] Return to main menu
```

2.3 Update the Application software

- a) After rebooting and keep on tapping Shift+Enter, then you will see the below interface. Select the [2] Update programs from USB and then select the files from [2] FPGA 1 to [B] Rootfs step by step. There will show the information “Update succeeded: rootfs” on the last sentence when the upgrade succeeds.



Bootloader V1.0.1 (Mar 14 2017 - 11:06:42) : Make a choice
[1] Update programs from TFTP
[2] Update programs from USB Step 1
[Esc] Reboot

Please select files to be updated from USB:
[0] Update all programs (EXCEPT bootloader)
[1] Bootloader
[2] FPGA1 Step 2
[3] FPGA2
[4] Boot splash
[A] Linux Kernel
[B] Rootfs
[Esc] Return to main menu

updating all programs(EXCEPT bootloader)...
(Re)start USB...
USB: scanning bus for devices... 3 USB Device(s) found
scanning bus for storage devices... 1 Storage Device(s) found

NAND scrub: device 0 whole chip
Erasing at 0x13840000 -- 61% complete.
NAND 512MiB 3,3V 8-bit: MTD Erase failure: -5
Erasing at 0x175c0000 -- 73% complete.
NAND 512MiB 3,3V 8-bit: MTD Erase failure: -5
Erasing at 0x1ffe0000 -- 100% complete..
OK

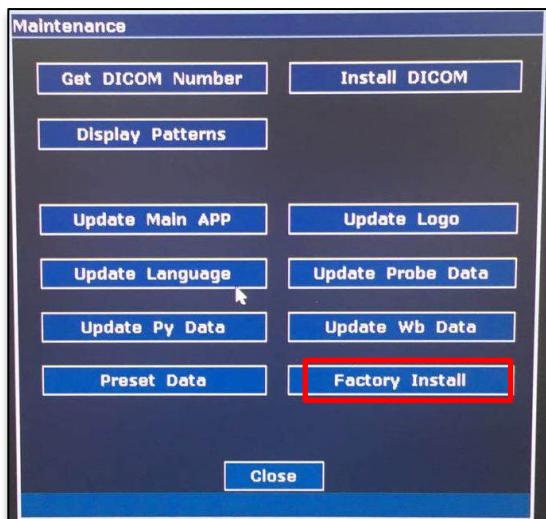
NAND erase: device 0 offset 0x0, size 0x3043ec0
Erasing at 0x30400000 -- 100% complete.
OK

NAND write: device 0 offset 0x0, size 0x3043ec0
Writing data at 0x2e0d000 -- 100% complete.
nand_write_opts
50609856 bytes written: OK
Update succeeded: rootfs

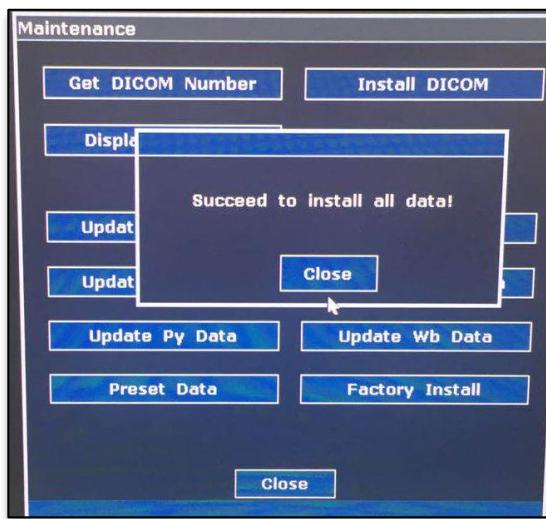
- b) Re-boot the system

2.4 Update the Factory Install

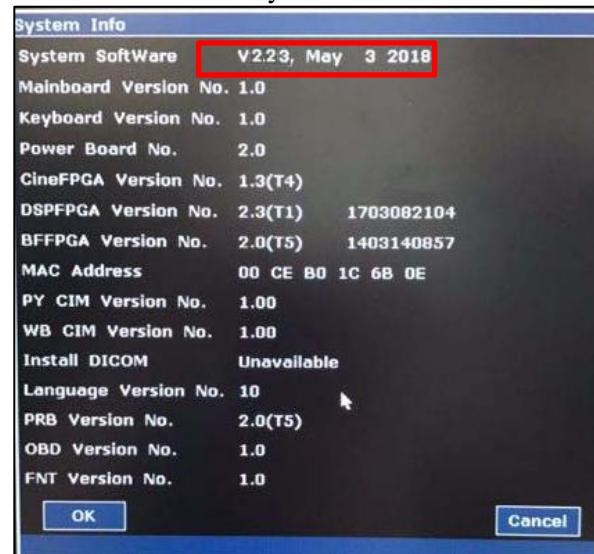
- a) Click **Maintian** and enter the Password '**U502905G**'.
- b) Choose **Factory Install** and wait for a seconds.



c) Choose **Factory Install** and wait for a seconds. A rpompt will pop up when the system succeeds to install all data



d) Reboot the system and enter to the System info to check the version



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