

Overview

The Ultritouch platform has migrated from Ubuntu v16.04 to Ubuntu v22.04 via the following releases:

- Ultritouch v1.0.5 enables saving configurations for upgrade to Ubuntu v22.04.
- Ultritouch v2.0.x to upgrade to Ubuntu v22.04.

This document outlines how to upgrade the Ultritouch to Ubuntu 22.04. This will require you to:

1. Upgrade the Ultritouch to v1.0.5.
2. Create a backup of the existing Ultritouch configuration.
3. Create a bootable USB device for the upgrade.
4. Install the Ubuntu v22.04 upgrade package on your Ultritouch.

Before You Begin

You will need the following equipment:

- Ultritouch panel with PSU
- Powered USB hub
- USB keyboard
- USB mouse
- USB Flash Drive (2GB or larger)
- HDMI Monitor
- ENET connection with DHCP server and Internet access
- Ultritouch OS installer image (e.g. ultritouch_v1_00-install.iso)
- Rufus Live USB creation tool (e.g. rufus-4.9p.exe for Microsoft Windows PCs)

Upgrade the Ultritouch to v1.0.5

If you are running Ultritouch software v1.04 or older, you will need to upgrade the Ultritouch to v1.0.5 before you can create a backup of your configuration.

To upgrade the Ultritouch

1. Download the Ultritouch v1.0.5 software to your DashBoard client computer.
2. Locate the Ultritouch node in the Tree View of your DashBoard client.
3. Expand the Ultritouch node to display the Ultritouch Device sub-node.
4. Double-click the Ultritouch sub-node to display the Ultritouch in the right-side of the DashBoard window.
5. Select the **General Info** tab.
6. Click **Upload**.
7. Follow the on-screen instructions.

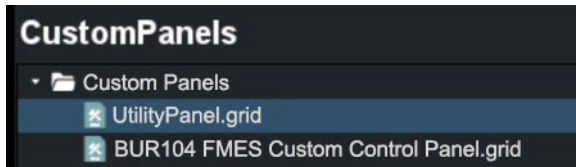
Create a Backup of the Existing Ultritouch Configuration

Next you will create a backup of the configuration of the Ultritouch. This backup captures:

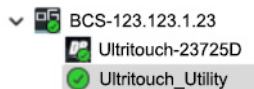
- Network IP address, netmask, gateway and DNS information
- Custom panels
- License files
- LCD brightness level
- Audio level and mute
- Screen-saver image
- Video files and settings

To create a backup of the existing configuration

1. In the Ultritouch interface, click **Manage Custom Panels**.
2. Expand the **Custom Panels** folder.
3. Select the **UtilityPanel.grid** file.



4. Click **Open File**.
5. On the left side of the DashBoard window, ensure that a new **Ultritouch_Utility** sub-node displays.



6. Double-click the **Ultritouch_Utility** node to open the **Ultritouch Backup Utility** interface.



7. From the bottom toolbar, click **Create Backup**.

A compressed backup file is generated that contains the relevant information about the Ultritouch.

8. From the bottom toolbar, click **Choose Location**.
The **File Save** dialog opens.
9. Select where on your PC the backup data file will be saved.
The default location is your Documents folder (e.g. C:\Users\UserName\Documents).
10. Click **Save**.
 - The backup data file is saved and the **File Save** dialog closes.
 - The backup file will have a name of "backup-Ultritouch-XXX.bin" where the XXX represents the Device ID (this ID is reported on the General Info interface).
- ★ Alternatively, if the destination folder is already correct, click **Save** at the bottom of the screen to transfer the backup data file to the PC.
11. If you have multiple Ultritouch units to be upgraded, you can perform the backup phase for each of them.
Each one will save the data to a file with filename uniquely linked to the unit ID.

Creating a Bootable USB Device for the Upgrade

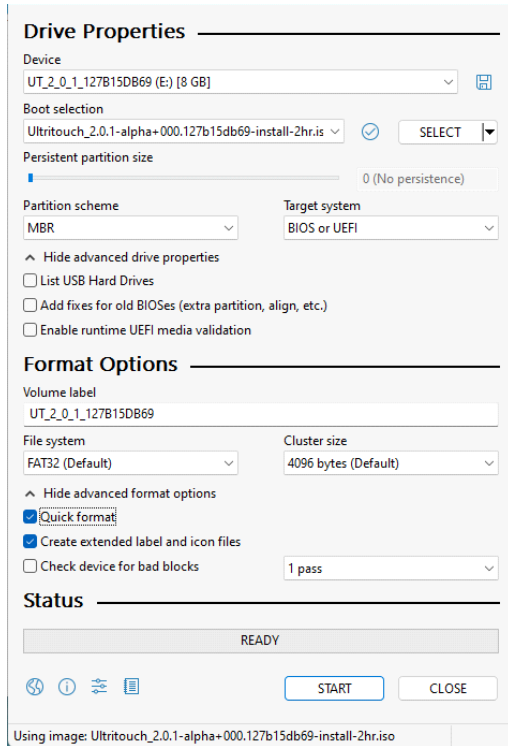
The OS upgrade release comes as a single large ISO file. To install this on an Ultritouch, it is necessary to transfer the file to a USB device. However, this cannot be done by simply copying the ISO file to the device. The USB must be formatted as a bootable device to allow the Ultritouch to boot from a temporary OS while the OS is being replaced. Creating a bootable USB can easily be performed using one of several freely available applications.

Before You Begin

- We recommend an application called Rufus to perform the operation on a Microsoft® Windows® PC (<https://rufus.ie/en/>). There are several versions available in the Latest releases area of the page. The easiest to use is the one marked as Portable (currently rufus-4.9p.exe), which can be run directly, without having to install it on the PC. Just save it to a folder on your PC and run it from there.
- You will need a USB device which is at least 4GB in size. A device with a fast write speed is useful, so USB-3 if possible, or at least USB-2.
- ★ The USB device will be completely reformatted by this operation, so any existing data on it will be lost. You will be warned about this several times while running the application.

To create a bootable USB device for the upgrade

1. Ensure the USB device is plugged into your PC.
2. Downloaded Rufus to your PC.
3. Run Rufus as administrator:
 - a. Right-click on the executable file.
 - b. Select Run as administrator.The Rufus (Portable) dialog opens.



4. Use the **Device** field (at the top) to select which USB device you would like to update.
 - ★ To avoid possible mistakes, it is a highly recommended to unplug all other removable USB devices from the PC for the duration of the operation. The list won't show you any fixed hard drives, so you don't have to worry about damaging your PC.
5. Use the **Boot selection** field to select the **ISO** file to be written to the USB device. The Select button (top right) allows you to select the location of the ISO file on your PC.
6. Ensure the **Partition Scheme** is set to **MBR**.
7. Ensure the **Target system** is set to **BIOS or UEFI**.
8. The rest of the parameters can probably be left at their default values (see example). The **File System** should be **FAT32** and **Cluster size** is **4096 bytes**.
9. Click **START**.
10. When the **IOHybrid image detected** dialog opens:
 - a. It is recommended that **Write in ISO Image mode** is selected.
 - b. Click **OK**.
11. If the **Download required** dialog opens, prompting to confirm which version of Grub will be installed on the device, select **Yes** to download the recommended version and continue.
12. When the final dialog box opens, it includes a warning that all the data on USB device is about to be destroyed.
13. Click **OK** to accept and to start the operation.
14. Wait 3-15 minutes, depending on the speed of your USB device.
15. When it completes, click **CLOSE** to exit the program.
16. Add one or more backup files to the USB device.
 - a. On the PC, open the USB device that you have just created.
You will see various files and folders including: *.disk, [boot], boot, casper etc.
 - b. Create a new folder at the top level of the device called **Backup** (with a capital 'B').
 - c. Copy the backup-XXX.bin file to this new Backup folder.
 - d. If you have backed up multiple Ultritouch units, copy the multiple backup-XXX.bin files in this folder together. The Ultritouch units will choose the correct one during the install.
17. Eject the USB device from your PC (right-click and click **Eject**).
18. Unplug the USB device from your PC.

Installing the Ubuntu v22.04 Upgrade Package

Once you have created the bootable USB device and added the backup files to it, you are ready to perform the Ubuntu upgrade on the Ultritouch.

- ★ While performing the upgrade, it is necessary to access the USB and HDMI ports on the back of the Ultritouch. If these ports cannot be accessed with the Ultritouch in its current installed location, move it to somewhere more convenient. A network connection is not required for the upgrade to succeed. A power supply connection will be needed.

To enable the Ultritouch to boot from the USB device, it is necessary to modify the boot parameters on the Ultritouch unit using the BIOS. **Figure 1** shows a simple configuration allowing the upgrade to be performed.

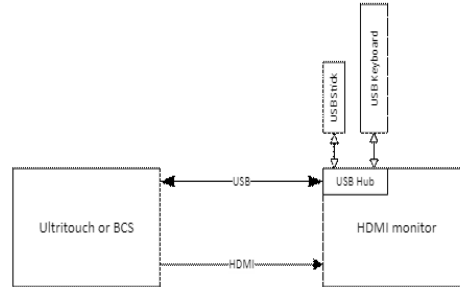
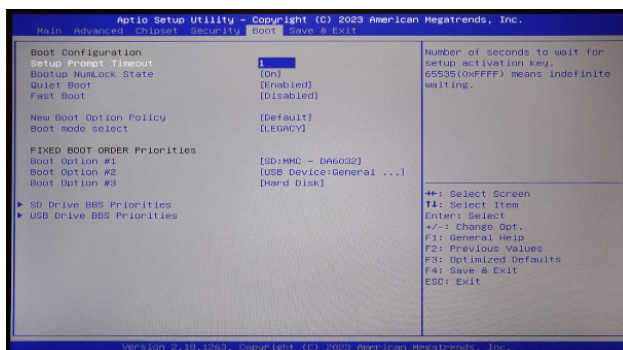


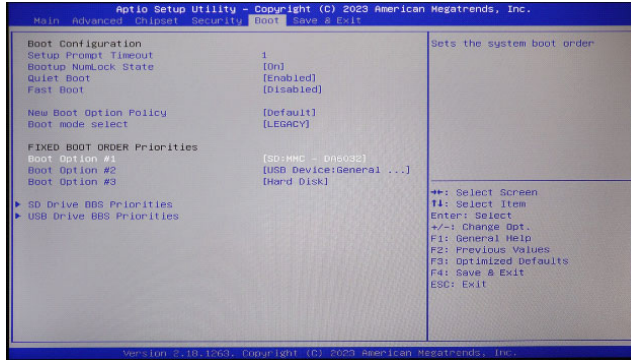
Figure 1 Example of a Simple Configuration for the Upgrade Workflow

To install the upgrade package

1. Connect a USB keyboard to the Ultritouch.
2. Connect an HDMI monitor to the Ultritouch.
3. Provide the ability to attach the USB to the Ultritouch via a powered USB hub.
- ★ HDMI monitors often include a powered two-port USB hub, which is ideal for this process.
4. Power up the Ultritouch.
5. Wait about one to two seconds, then press **ESC** on the USB keyboard.
6. Repeatedly press **ESC** about once per two seconds until the BIOS menu displays on the HDMI monitor (and the LCD display). It shouldn't take more than two or three repeats.
7. If a dialog prompts **Exit Without Saving?:**
 - a. Use the arrow keys to select **No**.
 - b. Press **Enter**.
8. If the grub monitor prompt opens (a black screen), return to the BIOS menu as follows:
 - a. At the grub prompt, type `fwsetup`.
 - b. Press **Enter**.
9. Use the right-arrow key to select the **Boot** menu. Refer to the following image.
The actual layout may be somewhat different depending on which version of the BIOS is installed.



10. Use the down arrow key to select the top entry in the **FIXED BOOT ORDER Priorities** list. On some versions of the BIOS, this list may be called **Hard Drive BBS Priorities**.
 - It will probably have an entry including “MMC”, but older units may have a different default boot device (e.g. PO: SQF-SLMM1-32G-S...).
 - Make a note of this name for later.



11. Press **Enter** to edit the top entry to be the connected USB device.
 - ★ The USB device must be connected before powering up the Ultritouch. Otherwise, it will not appear in this list of choices.

The name that appears for the USB device varies based on the manufacturer. This may include the word “USB” in it, or the name of the manufacturer (e.g. SanDisk), or similar to one of the following:

- Generic Flash Device
- USB Device: General UDisk 5.0
- UEFI: General UDisk 5.0

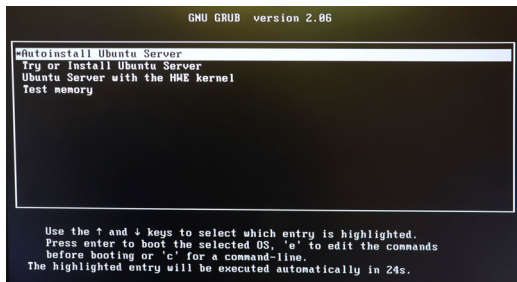
12. Use the up/down arrow keys to select the appropriate entry and press **Enter**.
 - ★ On legacy Ultritouch units, you may need to also press **ESC** to exit the popup and view the **Boot** menu.

The popup closes and the boot order devices are re-ordered, putting the USB device at the top and moving the previous entries down one row.

13. To save the changes and reboot:

- a. Press **F4**.
- b. Press **Enter**.

14. Monitor the Ultritouch as it reboots from the ISO image on the USB device. Refer to the following image.



15. It will start counting down from 2 seconds to AutoInstall Ubuntu Server.
16. Installation commences. It will take approximately 10 minutes to complete this first phase (patience is required).
17. At the end of the first phase, the Ultritouch will automatically power itself down.

18. Unplug the USB from the Ultritouch.
19. Power up the Ultritouch.
- ★ The Ultritouch units without the Ultritouch-HR logo on the front panel, can just be allowed to continue with the second phase of installation. The Ultritouch-HR units need to have the BIOS boot parameters restored manually.
20. If you are upgrading an Ultritouch-HR unit, you must press **ESC** immediately after re-powering the unit to get back into the BIOS and reverse the change that was previously done:
 - a. Select the Boot page.
 - b. Select the top row in the boot order list and press **Enter**.
 - c. Select the entry containing MMC (or whatever name you made a note in step 10) and press **Enter**.
 - d. Press **F4** to save the changes.
 - e. Press **Enter**.
21. Monitor the Ultritouch as it progresses with the second phase of the installation.
- ★ A number of worrying messages may display during this phase. This is normal and can be ignored.
22. At the end of the second phase, the Ultritouch will automatically power itself down.
23. Unplug the HDMI monitor and USB cabling.
24. If necessary, return the Ultritouch to its normal location and re-connect the network cable(s).
25. Power up the Ultritouch.

The unit now boots into the Ultritouch application, running under the Ubuntu 22.04 operating system.