

Infrared Touch Systems



Touch the Future

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MAC OS X Driver Installation

These notes should be followed to install the UPDD pointer device driver on Mac OS X platforms utilising 10.2 and above. Drivers for 10.0 and 10.1 are available on request.

System Requirements

C++ run-time library shipped as standard with Mac OS X 10.4 (Mac Intel support started at OS X 10.4). Please contact Touch-Base for a separate 10.1, 10.2 or 10.3 (Power PC) driver if required. A user has installed with 10.3.9 so it is possible that the C++ libraries shipped with later versions of 10.3. When the libraries are missing the set up program bounces in the dock. Running setup from a terminal command line shows the actual system error which is not seen when running it from the desktop.

Stuffit is required to decompress the .sit file. This utility does not ship with latest Mac OS and can be downloaded from www.apple.com/downloads/macosx/system_disk_utilities/stuffitexpander.html. **If using Mac Intel we highly recommend you use Stuffit 10.0.x (at the time of writing the link above is pointing to 10.0.2) 10.1 beta or above as this is the Intel native version of Stuffit.** See <http://www.stuffit.com/mac/expander/universalbeta.html> for more details.

A few customers reported that a Stuffit error was reported (using Stuffit 10.x) when trying to unpack the UPDD.sit file. The problem was overcome when they unchecked the preference “Continue to expand if possible”.

We are not currently able to create a universal driver that supports both Power PC and Intel processors so we are shipping separate drivers. **Please make sure you have the appropriate driver for the processor.**

Classic Mode Issues

Early versions of our driver performed well on the dialogs of native OS X applications. However, it was discovered that using the driver with classic mode applications the click emulation was not as good as expected, especially with quick taps on the touch screen. We changed the way our driver was internally handling OS mouse interfacing when in classic mode but unfortunately we could not find a solution that worked well for both modes so we have introduced a new setting called ‘Support Classic Mode’. This setting should be enabled in the UPDD Console – Properties page if running classic mode applications with the touch screen and disabled if running native mode.

Installation Notes

Mac purist will note that the software does not follow some Mac development standards. The common issues raised are:

1. Using Stuffit to unpack as this is an old decompression method. Unfortunately the software is created in a Windows environment and creates a compressed file that only Stuffit can handle. We hope to address this in a future release.
2. Placing 'aliases' on the desktop. These are placed on the desktop for convenience to allow instant access to calibration and the driver's settings. Can easily be dragged to trash.
3. Creating a directory (/tbupddmx) off the root folder. This is a temporary requirement in that this version of the driver needs access to a known location. In version 4.1.x this will be addressed.
4. Documenting that the root account is used to perform a manual uninstall. Root is required to uninstall kernel extensions used by the driver for HID devices. The proposed 4.1.x uninstaller will avoid this requirement.

We have noted that a common difference between releases is the permissions set on critical directories. If the permissions are incorrect the driver will not run, therefore we need to change the install to cater for the changed permissions. Should you try the driver on a new release of Mac OS X and it fails to run, there is a 'Fix permissions' utility that runs as part of the disk utility program which checks the permissions on all critical directories. It can verify and repair any that might be incorrectly set. Some customers have reported that running this utility has addressed many strange problems and also allowed the driver to load in cases where it previously failed to work. It's worth a try should the driver fail to work after installation. The disk utility program is located in the utilities folder, which is within applications. There is a tab called "First Aid". There are a couple of permissions choices; Verify and Repair permissions. Select a disk and run one of them. Verify just tells you what is not set correctly and repair fixes it.

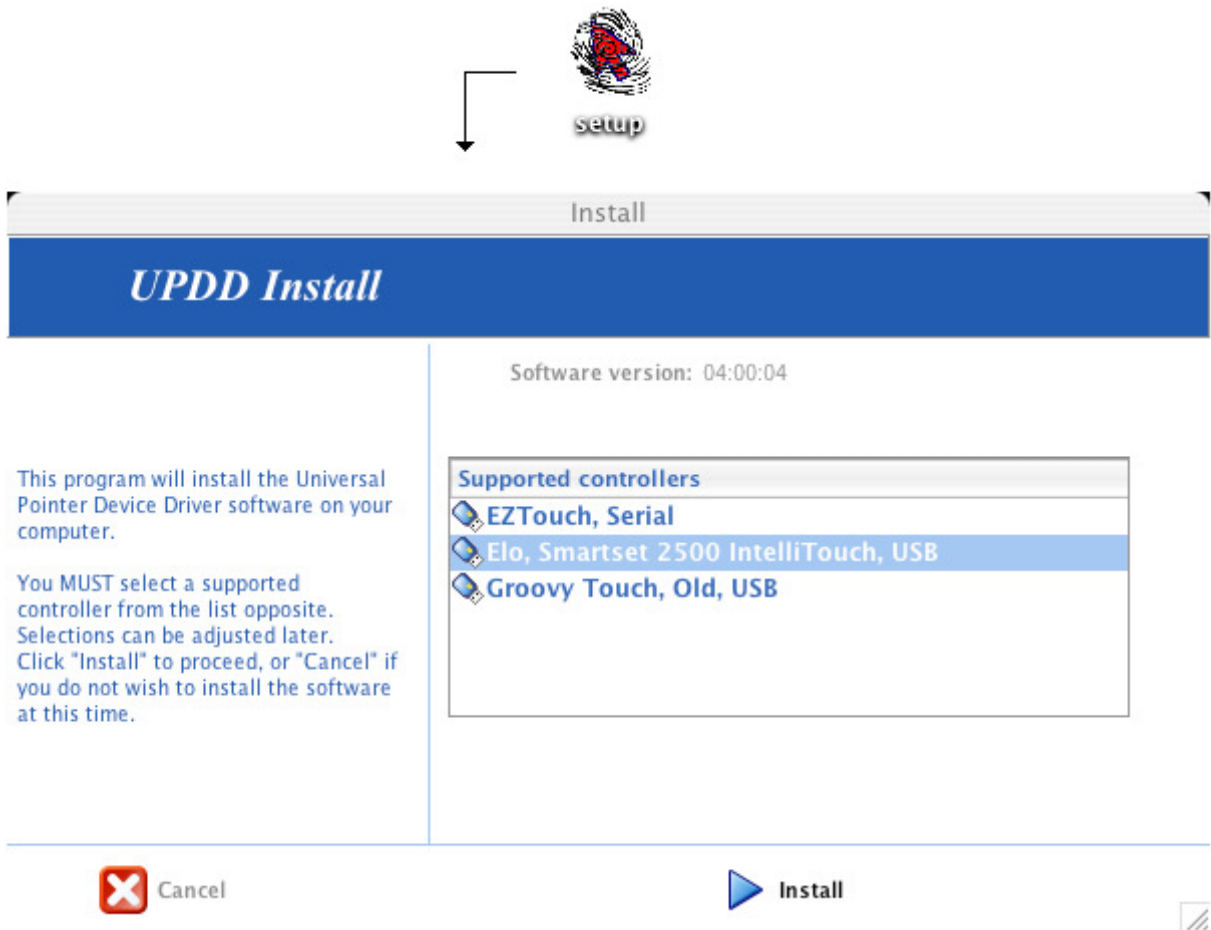
At the time of writing (OS release 10.3.5), MAC OS X has a bug and will not recognise more than one USB controller of the same type unless they are plugged into separate USB hubs.

A customer reported that an HID compatible touch USB controller was still controlled by the HID driver after installing the UPDD driver when using Tiger version 10.4.0. Upgrading to 10.4.2 overcame this issue so we have not investigated further as we believe most users will be on 10.4.1 or above or be able to upgrade.

Installation Procedures

Copy the .sit file to your desktop. Double click the desktop icon - Stuffit will run and create the setup program on the desktop.

Double click the setup program icon, enter your Mac users password and the controller selection dialog will be shown (with version 4.1.x it can take up to 20 seconds before the install dialog appears due to the large size of some of the libraries embedded in the setup that need to be extracted):



Select the controller from the list of controllers shown in your version and wait for installation to complete.

Following installation the software will be placed in /TBUPDDMX folder, with UPDD Console and calibration utilities aliases placed in the Utilities folder and, for convenience, also on the desktop. With 4.1.x and above the UPDD Console will automatically list all USB touch devices supported by the driver and plugged into the system.

Calibration

After installation, the Calibrate icon appears on the desktop and in the Utilities folder.



Calibration is a procedure used to align the pointer device with the graphical display area or desktop segment. When using the pointer device the mouse cursor should normally position itself under the stylus when it is in contact with the pointer device. If this is not the case then calibration will be required and this is described in full in the Calibration document.

Driver Settings – The UPDD Console

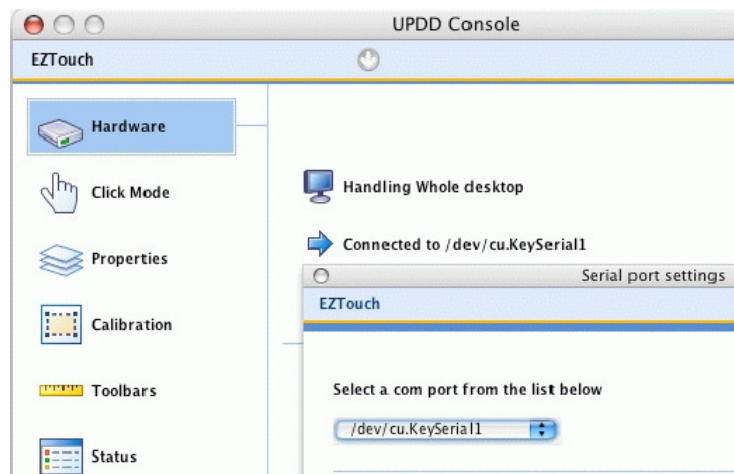
After installation, the UPDD settings icon appears on the desktop, in the Utilities folder and in the System Preferences, Other section.



The driver and device settings can be adjusted with the UPDD Console program and is described in full in the UPDD Console documentation.

Serial Port Issues

The UPDD Console, Hardware tab allows the serial port name to be changed after installation, if required.



Use the dropdown to select the name of the serial port. If your serial port is not listed, read on.

Serial Port Identification and Testing

We use a file called serial.dat to define the structure of valid native and virtual com ports available on a Mac. If your serial port is not listed then the file structure is not defined in the serial.dat file. Please let us know what serial port structure you have and we will update the serial.dat file and send you a new build.

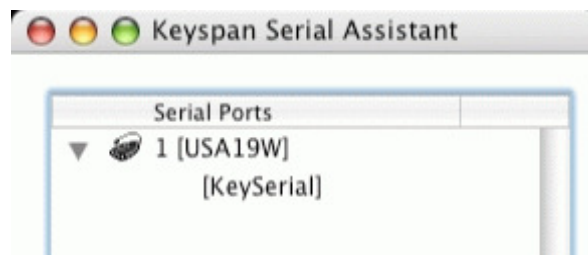
Serial port names can be found in the /dev folder (as seen from a Terminal window's LS command).



```
Terminal — bash — 80x24
Last login: Mon May  1 14:01:10 on ttys1
Welcome to Darwin!
dave-bhattacharjees-computer:~ daveb$ cd /dev
dave-bhattacharjees-computer:/dev daveb$ ls
ath          ptyu8       ttyr6
bpf0         ptyu1       ttyr7
bpf1         ptyu2       ttyr8
bpf2         ptyu3       ttyr9
bpf3         ptyu4       ttyra
console      ptyu5       ttyrb
cu.Bluetooth-Modem  ptyu6       ttyrc
cu.Bluetooth-PDA-Sync  ptyu7       ttyrd
cu.KeySerial1 ptyu8       ttyre
```

In the above example a virtual serial port is listed as cu.KeySerial1. This is a Keyspan serial to usb adaptor.

A Universal Binary (a driver that runs on both Intel and Power PC Macs) Keyspan USB serial adaptor Mac OS X driver is available on the Keyspan web site, downloads page. Keyspan drivers also install a utility program which will list the name of the com port. In the following example the utility Keyspan Serial Assistant is invoked to list the port name:



The OS adds a number to this name to give each adaptor a unique identifier, 1 for the first port, 2 for the second, etc.

If you need to use a Serial to USB adaptor, only those supplied with a Mac OS X driver will work. Keyspan and adaptors using the Prolific chipset (branded by IOGear and Dynex amongst others) do have such drivers. The com port name given to many of these adaptors in the Mac OS X system is /dev/cu.usbserial.

Uninstall

Currently you can only manually uninstall. An automatic uninstall will be available with UPDD 4.1.x. Sorry for any inconvenience this may cause.

To uninstall the driver requires the Root User account to be activated as it is necessary to login to this account to uninstall the driver automatically or login as a Super User (with root privileges) in a Terminal session to manually uninstall the driver.

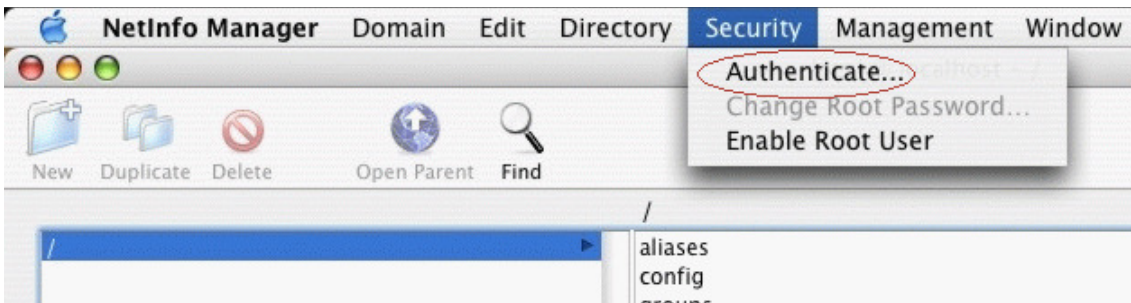
If the root user account is not active on your system it can be activated as shown below. If it is active you will need to know the password to allow you to log in as the root user/super user.

Activating Root User

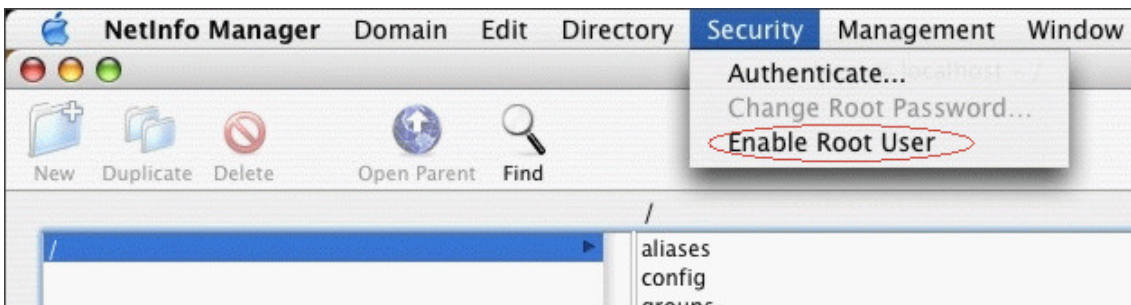
These instructions apply to Mac OS X 10.2.8 and above – for earlier versions replace the NetInfo Manager navigation path ‘Security >’ with ‘Domain > Security >’

Start the NetInfo Manager application. From a Desktop Finder window, locate and launch the NetInfo Manager application, found at /Applications/Utilities/NetInfo Manager.

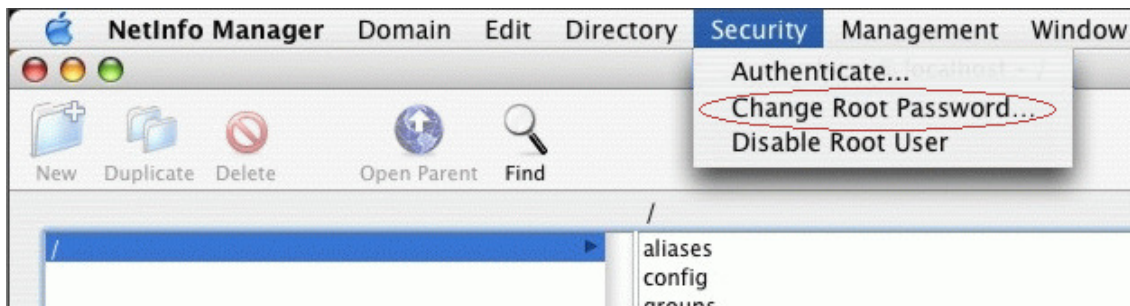
Choose Security > Authenticate and enter the password you use for your local account.



Choose Security > Enable Root User.



Now choose Security > Change Root Password to set a password for root.

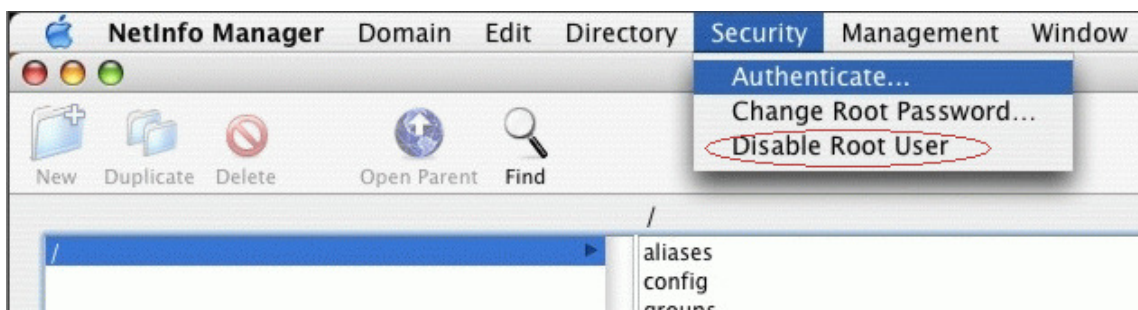


If the Root user has been previously activated you will need to enter the old password before you can select a new password. If it was not previously activated you will be asked to select a new password.

Now that you have activated the Root user you will either be able to login as the Root user at the login screen to perform Automatic uninstall or run as a Super user (typing 'su' in a Terminal window) with root privileges to perform a manual uninstall of the driver.

Note: Running as a Super User in a terminal window is not the same as logging in as a Root user. Logging in as a Root user gives system wide root privileges whereas logging in as a Super user in a terminal session only gives root privileges to the terminal session and the command typed within the terminal.

After you've completed all tasks requiring root access, you can relinquish root privileges by choosing Security > Disable Root User



Manually

To uninstall the application simple drag the UPDD icons (initially installed in the utilities sub-folder within the Applications folder) to the trash can and delete any related icons from the users desktop.

Uninstall the Driver

To uninstall the driver, the “root” account must be activated on the system, see activation section above.

Perform the following steps to uninstall the driver:-

Start a “Terminal” session and login as root:

- Open a “Finder” window
- Click “Applications” at the top (10.2.x) or at the side ($\geq 10.3.x$), or navigate to the “Applications” directory on the system disk
- Open the “Utilities” folder
- Double click “Terminal”
- Type “su”

Enter the root password that was selected when the Root user was activated.

Type “rm -r /tbupddmx”

Type “cd /System/Library/Extensions”

Type “rm -r tbupddmxhid.kext”

Type “cd /Library/StartupItems”

Type “rm -r TBUPDDMX (UPDD version 3 and 4.0.x)

Type “rm -r TBUPDDWU (UPDD version 4.1.x and above)


Type “rm /usr/local/lib/libhbutton.dylib”

Type “rm /usr/local/lib/libqt-mt.3.dylib”

Type “rm /usr/local/lib/libACE.dylib (UPDD version 4.1.x and above)

Type “exit”

Close the terminal

 It is very important that the commands are entered exactly as above (same capitalization, no spaces in the filenames) otherwise other data could be removed from the hard drive.