

HTT Series

For all variants of the HTT50A, and HTT70A

Gesture Recognition Firmware Guide

Revision 1.0



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Revision History

Revision	Date	Description	Author
1.0	January 28, 2019	Initial Release	Divino

Introduction

The HTT Gesture Recognition firmware enables the use of common touch gestures such as swipes and pinches on compatible applications. Depending on the application, swipes can be used to scroll through pages or navigate through photos, and pinch gestures can be used to zoom in and out of the current screen. The firmware will also allow up to 5 touch points to be recognized simultaneously on capacitive touch HTT variants, allowing compatibility with applications that utilize more than 1 touch input.

Features

- Compatible with Windows and Linux hosts, including:
 - Raspberry Pi
 - BeagleBone
 - TinkerBoard
- Swipe and Pinch gestures are supported on compatible applications
- Multi-touch enabled on capacitive touch HTT variants
- Available for:
 - Resistive touch
 - Capacitive touch

Setting up the Firmware

Installing the firmware

The following procedure describes all the steps that need to be completed to install the gesture recognition firmware.

1. Power down the display and disconnect all connections from the unit. On the back of the HTT, you will find either a 3 pin bootloader header or a bootloader pushbutton.
 - If your HTT is populated with a 3 pin bootloader header, short the center pin and the pin designated with the white block with a wire or jumper.
 - If your display is populated with a pushbutton, hold the pushbutton down.
2. While your bootloader header is shorted/pushbutton is held down, connect your HTT to a PC through the USB header on the back of the display. A window should appear with a 'firmware.bin' file present.
3. Once this window appears, you can release the pushbutton or remove the bootloader jumper. Delete the firmware.bin file and copy over the HTT Multitouch firmware onto your display.
4. Once the firmware file has been copied over, you can boot up the display and find that the firmware has been installed.

Enabling Multi-Touch

Once the firmware has been installed on the HTT, you will have to enable multi-touch capabilities on your host platform. This process is only necessary for users with Capacitive touch HTT variants.

Windows

There are a few steps that will need to be followed in order for the multi-touch functionality to run properly on Windows:

1. Search for and open the 'Run' desktop application in the Windows Start Menu.

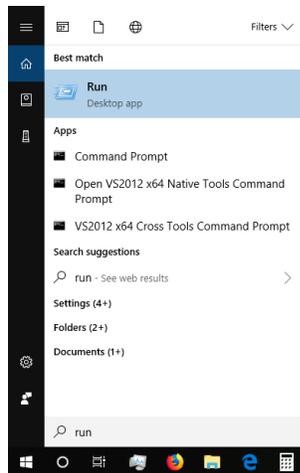


Figure 1: Opening the 'Run' application

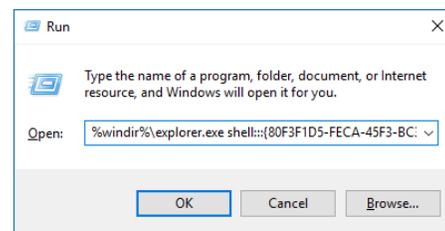


Figure 2: Running the windows multi touch command

2. Run the following command
`%windir%\explorer.exe shell:::{80F3F1D5-FECA-45F3-BC32-752C152E456E}`
3. Once the command runs, a new window should open. Press 'Setup' and follow the instructions on the screen

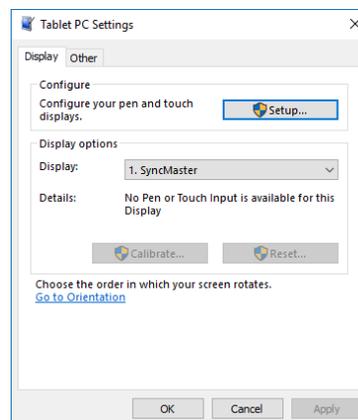


Figure 3: Tablet PC Settings

Once your display is setup, Windows will be able to recognize multi-touch inputs. You will be able to rotate your display's image as normal using Windows Display settings. The touch screen's orientation will follow the display's image orientation.

Ubuntu

There are a few steps that will need to be followed in order for the multi-touch functionality to run properly on Ubuntu:

1. Make sure that the HTT is setup as the primary display
2. If you are looking to use Mozilla Firefox, you may need to set the following environment variable
MOZ_USE_XINPUT2=1

Or start firefox as follows

```
MOZ_USE_XINPUT2=1/usr/bin/firefox
```

Once your display is setup, Linux will be able to recognize multi-touch inputs.

The touchscreen will not automatically rotate along with the display, so when you rotate the display, you will have to rotate the touchscreen as well.

This can be done by using both xrandr and xinput commands, or by using the rotate.sh script.

Testing New Features

Multi-touch capabilities and gesture recognition can be tested at the following links:

<http://photoswipe.com/> - a photo gallery that demonstrates swipe, pinch to zoom, and scrolling gestures.

<https://www.paulirish.com/demo/multi> - A painting demo that can make recognize of multiple inputs

<http://scripty2.com/demos/touch/touchspecter/> - a finger tracking demo that allows you to observe multiple inputs

Downloads

Utility Program

A terminal executable program called HTT Utility can be used to adjust characteristics such as touch orientation, calibration, and sensitivity. Updates, bug fixes, and new features are continuously being added to the HTT Utility program and released on a regular basis. The latest versions of the HTT Utility program can be downloaded for free from https://www.matrixorbital.com/index.php?route=download/download_category&dpath=12_333.

Firmware

After release, Matrix Orbital may publish updates to the HTT's firmware to improve functionality, add new features, or fix bugs. These firmware upgrades can be easily applied to the unit in the field. The latest firmware builds can be downloaded for free from <https://www.matrixorbital.com/firmware/htt-firmware>

HTT Resources

HTT drawings, models, and technical data can be found on our website and downloaded for free from https://www.matrixorbital.com/index.php?route=download/download_category&dpath=274_178_246

Troubleshooting

If you have any problems with setting up the HTT's multi-touch firmware on your display, please contact support@matrixorbital.ca and one of our friendly support representatives can help you out.

Support

Phone: 403.229.2737

Email: support@matrixorbital.ca

Manuals and Drivers: <http://www.matrixorbital.ca>

Forums: <http://www.lcdforums.com/forums>

Contact

Sales

Phone: 403.229.2737

Email: sales@matrixorbital.ca

Support

Phone: 403.229.2737

Email: support@matrixorbital.ca

Online

Purchasing: www.matrixorbital.com

Support: www.matrixorbital.ca