

HTT Utility

For all variants of the HTT50A and HTT70A

HTT Utility Guide

Revision 1.0

Firmware Revision: 2.0.10589 or higher



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Revision History

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

Introduction

The HTT Utility application provides the ability to modify certain display characteristics that may not be configurable within the hosting operating system's settings. Characteristics such as touch panel orientation, sensitivity, and touch calibration can all be modified through the HTT Utility.

The HTT's current settings, such as touch orientation and sensitivity, can be scanned and modified through the HTT Utility. Resistive touch HTT variants can also be recalibrated through this utility. A 'help' option is available, listing all of the options available for the connected display(s).

Compatibility

The HTT Utility was developed to run in newer Windows environments, and has been tested on Windows 7 and Windows 10. Resistive (-TPR) and Capacitive (-TPC) HTT variants running firmware revision 2.0.10589 or higher will be compatible with the HTT Utility software.

HTT Utility Usage

Running the Utility

The following procedure describes all the steps that one will need to follow in order to run the HTT utility.

1. Connect your HTT's USB header to your host.
2. Open a terminal program

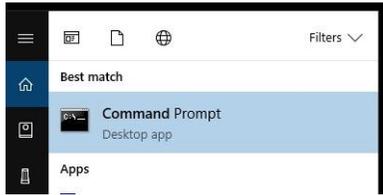


Figure 1: Windows Terminal Program

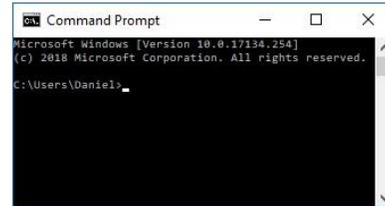


Figure 2: Command Prompt

3. Navigate to the directory where the htt_util.exe is located.

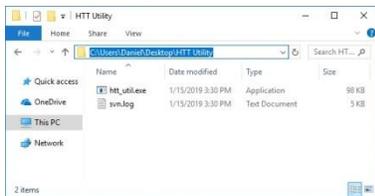


Figure 3: HTT Utility Directory

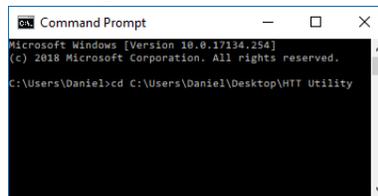


Figure 4: Changing directory

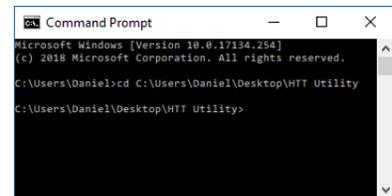


Figure 5: HTT Utility directory

4. Run htt_util.exe

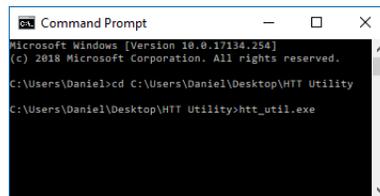


Figure 6: Run the HTT utility

5. A help menu will appear listing all of the configurable options and describing how to use the program

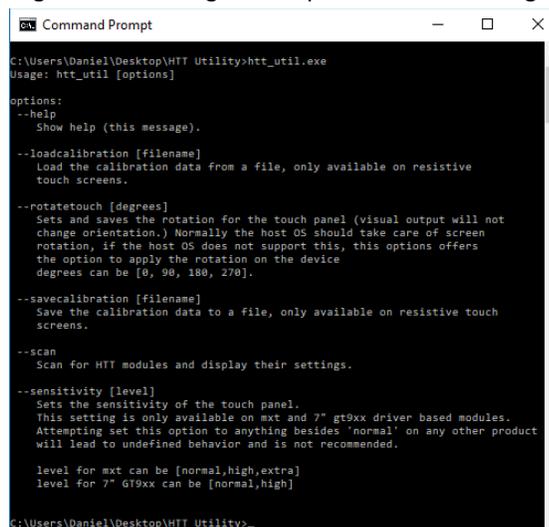
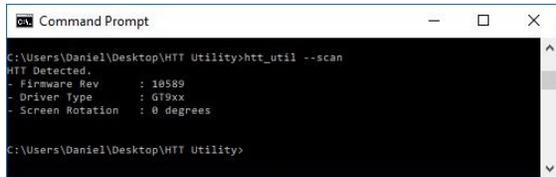


Figure 7: HTT Utility Help screen

Configuring the HTT

HTT options can be configured by specifying the characteristic that needs to be modified, followed by any associated parameters.

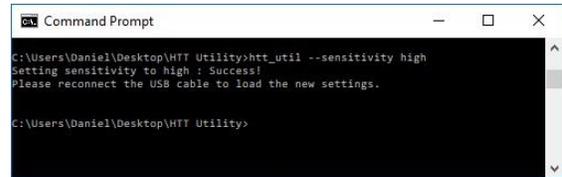
Usage: `htt_util [option] [parameters]`



```
C:\Users\Daniel\Desktop\HTT Utility>htt_util --scan
HTT Detected.
- Firmware Rev      : 10589
- Driver Type       : GT9xx
- Screen Rotation   : 0 degrees

C:\Users\Daniel\Desktop\HTT Utility>
```

Figure 8: Scanned HTT data



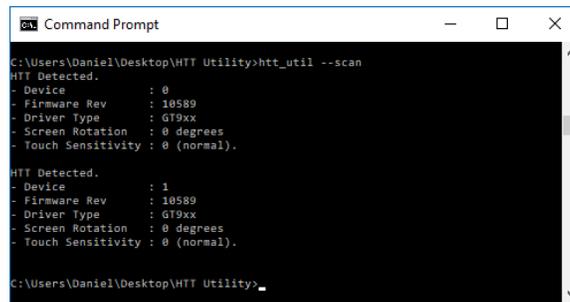
```
C:\Users\Daniel\Desktop\HTT Utility>htt_util --sensitivity high
Setting sensitivity to high : Success!
Please reconnect the USB cable to load the new settings.

C:\Users\Daniel\Desktop\HTT Utility>
```

Figure 9: Setting the HTT's sensitivity

When multiple HTTs are connected, the HTT Utility will assign each display with a device number. This allows each HTT to be configured individually by specifying the device number, the option, and the associated parameters.

Usage: `htt_util [device #] [option] [parameters]`

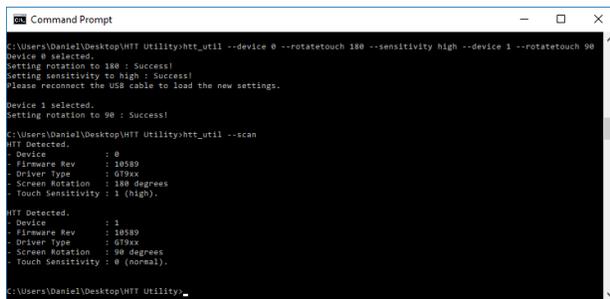


```
C:\Users\Daniel\Desktop\HTT Utility>htt_util --scan
HTT Detected.
- Device           : 0
- Firmware Rev     : 10589
- Driver Type      : GT9xx
- Screen Rotation  : 0 degrees
- Touch Sensitivity: 0 (normal).

HTT Detected.
- Device           : 1
- Firmware Rev     : 10589
- Driver Type      : GT9xx
- Screen Rotation  : 0 degrees
- Touch Sensitivity: 0 (normal).

C:\Users\Daniel\Desktop\HTT Utility>
```

Figure 10: Multiple HTTs Detected



```
C:\Users\Daniel\Desktop\HTT Utility>htt_util --device 0 --rotatetouch 180 --sensitivity high --device 1 --rotatetouch 90
Device 0 selected.
Setting rotation to 180 : Success!
Setting sensitivity to high : Success!
Please reconnect the USB cable to load the new settings.
Device 1 selected.
Setting rotation to 90 : Success!

C:\Users\Daniel\Desktop\HTT Utility>htt_util --scan
HTT Detected.
- Device           : 0
- Firmware Rev     : 10589
- Driver Type      : GT9xx
- Screen Rotation  : 180 degrees
- Touch Sensitivity: 1 (high).

HTT Detected.
- Device           : 1
- Firmware Rev     : 10589
- Driver Type      : GT9xx
- Screen Rotation  : 90 degrees
- Touch Sensitivity: 0 (normal).

C:\Users\Daniel\Desktop\HTT Utility>
```

Figure 11: Changing Multiple HTT settings



```
C:\Users\Daniel\Desktop\HTT Utility>htt_util --device 0 --rotatetouch 180 --sensitivity high
Device 0 selected.
Setting rotation to 180 : Success!
Setting sensitivity to high : Success!
Please reconnect the USB cable to load the new settings.

C:\Users\Daniel\Desktop\HTT Utility>
```

Figure 12: Changing an individual HTT's settings

HTT Utility Options

The HTT Utility program can configure an HTT using a list of options. Certain options are only applicable to specific HTT model variants and may result in an 'Invalid' error message if applied incorrectly.

```

C:\Users\Daniel\Desktop\HTT Utility>htt_util --device 0 --rotatetouch 100 --savecalibration touchdata --touchscreen high
Device 0 selected.
Invalid parameter for rotatetouch : 100
Saving calibration matrix is not supported on GT9xx driver
Unknown parameter --touchscreen
C:\Users\Daniel\Desktop\HTT Utility>
    
```

Figure 13: Invalid, Incorrect, and Unknown options errors

Some options can be stored in the HTTs non-volatile memory. Once configured, these options will be automatically applied whenever the HTT boots up. These settings can be overwritten through the HTT Utility, though it should be noted that the HTT's non-volatile memory has a minimum endurance of 100,000 write cycles. It is recommended that users limit how often they write to memory, as it may affect the HTT's operation in the long term.

Please refer to the HTT Utility Options table below to confirm option compatibility and save settings.

Table 1: HTT Utility Options

Option	Parameters	Description	Variant	Saved
--help	-	Demonstrates the utility's usage and lists all of the available options that can be set. The help message will appear when HTT Utility is executed.	All	Never
--scan	-	Looks for any HTT display modules that are connected to the host, then reads and displays the HTT's firmware revision, driver type, and screen rotation settings within the terminal window.	All	Never
--restorecalibration	[Filename]	Searches for the specified filename on the HTT and uses the values stored to calibrate the touch screen. This option is only available for resistive touch HTT variants.	Resistive touch only	Never
--savecalibration	[Filename]	Saves the current touch calibration settings to the filename specified. These calibration settings can then be called upon using the restorecalibration command. This option is only available for resistive touch HTT variants	Resistive touch only	Always
--rotatetouch	[degrees]	Set and saves the touch panels orientation. This is normally taken care of by the OS, but if the host OS does not support this functionality the touch panel's orientation can be set manually through this option. This option accepts the following orientations: [0, 90, 180, 270]	-All	Always
--sensitivity	[level]	Configures the sensitivity of the HTT's touch panel. It is recommended that the touch sensitivity level is increased if a cover lens is applied overtop the HTT's touch panel. The touch panel sensitivity level should be adjusted appropriately based on the material of the cover lens. Sensitivity settings are stored in the The following sensitivity levels are available:	Capacitive touch only	Always

Table 2: HTT Sensitivity and corresponding Lens Thickness

	mXT		GT9xx	
Material	Acrylic	Glass	Acrylic	Glass
Normal	0.2mm	0.55mm	0.5mm	0.55mm
High	0.7mm	1.5mm	1.2mm	2.0mm
Extra	1.2mm	2.5mm	-	-

*Note: The composition of the Cover Lens may affect the touch panel's operation. The values listed should be taken as reference only.

Downloads

Utility Program

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>

A step by step guide describing the firmware upgrade procedure is also available for download from https://www.matrixorbital.com/index.php?route=download/download_category&dpath=274_178_246

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 Utility and using it with 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