

HID-Multitouch Set-up Instructions for Android OS

Thank you for using IDS Pulse Touch Screen products. The following are essential tips on setting up the HID-Multitouch Kernel Driver for Android OS with M-Series PulseIR Touchscreens.

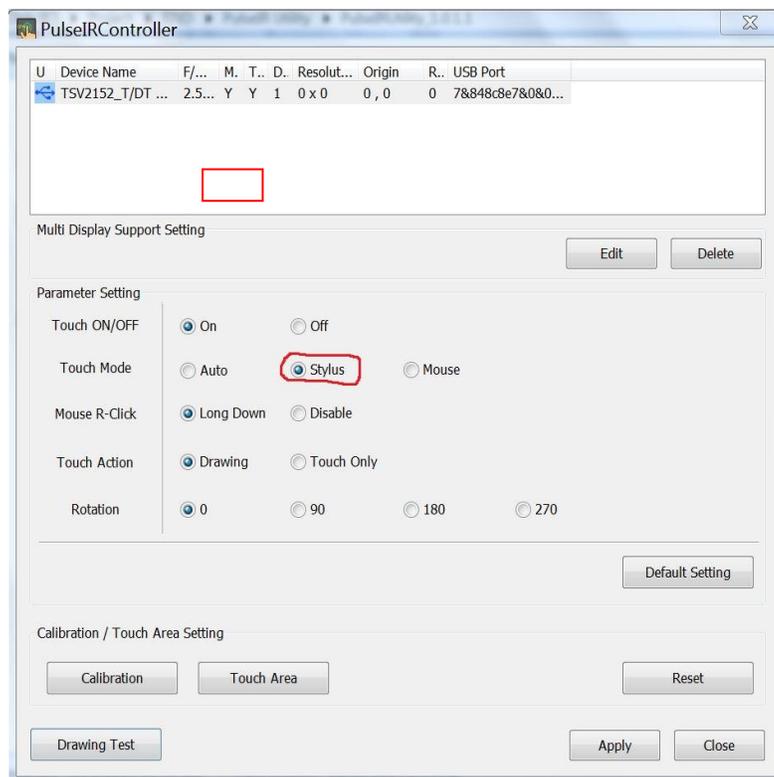
Plug and Go

They are configured to work immediately in multi-touch mode when plugged to a Windows 7/8 system with a standard USB port.

- When first plugged to a USB port, a “Installing device driver” message will appear and wait until you see the “device is ready” message before touching the screen:



- Run “PulseIRController.exe” to open the PulseIR utility UI program and set the touch mode to “Stylus” before switching the touchscreen to the computer running in Android OS





Instructions on Installation and Configuration of HID-Multitouch Kernel Diver

The touch screens are custom fit for the display that you specified. This means that there is no need to calibrate the unit, and the touch points will never go out of alignment as long as the touch screen is attached properly to the monitor.

- ☞ When attaching the touch screen to the display, insure that the internal edges of the touch screen align properly with the active display area of the monitor.

Step 1. Download Kernel Driver Source Code

- download the latest tar.xz archive for your kernel version from <https://www.kernel.org/> (Full Source code link)
- Uncompress the latest tar.xz

Step 2. Patch HID source codes(hid-multitouch.c , hid-ids.h , hid-core.c) from the latest kernel source codes

- Open ../drivers/hid/hid-ids.h and add the following vendor ID and device ID information

```
#define USB_VENDOR_ID_RNDPLUS          0x2512
#define USB_DEVICE_ID_RNDPLUS_PULSEIR1 0x5003
#define USB_DEVICE_ID_RNDPLUS_PULSEIR2 0x5004
#define USB_DEVICE_ID_RNDPLUS_PULSEIR3 0x5005
```

- Open ../drivers/hid/hid-core.c and add USB device ID information in the following clause

```
static const struct hid_device_id hid_have_special_driver[] = {
.....
{HID_USB_DEVICE(USB_VENDOR_ID_RNDPLUS,  USB_DEVICE_ID_RNDPLUS_PULSEIR1)},
{HID_USB_DEVICE(USB_VENDOR_ID_RNDPLUS,  USB_DEVICE_ID_RNDPLUS_PULSEIR2)},
{HID_USB_DEVICE(USB_VENDOR_ID_RNDPLUS,  USB_DEVICE_ID_RNDPLUS_PULSEIR3)},
....
}
```

- Open ../drivers/hid/hid-multitouch.c and add the following information :

```
static const struct hid_device_id mt_devices[] = {
...
/* RNDPLUS */
{.driver_data = MT_CLS_DEFAULT,
  HID_USB_DEVICE(USB_VENDOR_ID_RNDPLUS,
    USB_DEVICE_ID_RNDPLUS_PULSEIR1) },
{.driver_data = MT_CLS_DEFAULT,
  HID_USB_DEVICE(USB_VENDOR_ID_RNDPLUS,
    USB_DEVICE_ID_RNDPLUS_PULSEIR2) },
{.driver_data = MT_CLS_DEFAULT,
  HID_USB_DEVICE(USB_VENDOR_ID_RNDPLUS,
    USB_DEVICE_ID_RNDPLUS_PULSEIR3) },
}
```

```
....  
}
```

Step 3. Configure Kernel

- make menuconfig
- configure HID as a module
- go to Device Drivers ---> [*]HID Devices ---> Special HID Drivers ---> <*>HID Multitouch panels
- mark 'HID Multitouch panels' as module (hit space or m)
- Quit menuconfig (don't forget to save your changes)

Step 4. Compile and Install Kernel driver

Please compile and install Kernel by the instructions given the below link.

<http://lii-enac.fr/en/architecture/linux-input/multitouch-howto.html#compile>

If there are the difference between the actual touch point and the finger touch position on Android, please adjust Android display setting as follows :

- Change the display resolution from 720p to 1080p or choose “rotate” option in the display setting
- Download the vendor IDC file from <https://www.yousendit.com/download/UVJpWUhnNDRENIFQWWNUQw> and the idc file, “Vendor_2512_Product_5003.idc” in the folder ../system/usr/idc of Android rootfs(File System on Root directory of Android OS) to relieve the calibration problem Android OS has in itself.

Step 5. Test

Put Developer options to “Pointer location” to test the HID-Multitouch capability.

Supporting Information Links for the HID-Multitouch on Android OS

Please refer to the below links for more detailed information of how to compile and install HID-Multitouch Kernel Driver.

Multitouch on Android :

<http://lii-enac.fr/en/architecture/linux-input/multitouch-android-howto.html>

How to get the Kernel Driver and Prepare for Compilation

<http://lii-enac.fr/en/architecture/linux-input/multitouch-howto.html#get>

How to Compile and Install Kernel Driver

<http://lii-enac.fr/en/architecture/linux-input/multitouch-howto.html#compile>

Thank you for choosing IDS Pulse!