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Support Procedures

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This document describes the procedures to follow if you are experiencing a problem with our pointer device driver UPDD.

Please note that in most cases the advice in this document applies to our version 4.x.x drivers but specific references relate to UPDD 4.1.1 and above. Please contact Touch-Base if you need specific support assistance with 4.0.x version of the driver.

As the developers of UPDD we want to ensure as best as possible that UPDD will cause as few problems as possible. Unfortunately, given all the environments in which drivers need to operate, UPDD will occasionally fail to function as expected. It is at this point we are contacted to help and you will appreciate that we need as much information as possible to help identify the problem so we can best advise or try and reproduce the problem to allow us to investigate further. Reporting that a problem occurs on a particular operating system doesn't really help, we will need specific details!

Please read carefully and supply as much of the information requested. On receipt of this information we will endeavor to investigate your problem and report back ASAP. Thank you in advance for your co-operation.

Obvious checks

Prior to supplying this information, check the obvious such as cabling and power issues. Try and prove the hardware is working without our driver.

Serial

If the driver is installed set it to access a different serial port so that the touch screen port can be used by another application. You can employ the following methods to see if there is data being received from the serial port

- Windows Use HyperTerminal or the free Touch-Base software data scope at http://scope:scope@ftp2.touch-base.com (Windows 2000/XP/ Vista users only) or a commercial data scope program such as Docklight (http://www.docklight.de)
- Linux Open a terminal window and type cat < /dev/ttySN and use the serial device.
- Mac Open a terminal window and type cat < /dev/[port] and use the serial device.

Serial port testing is further described in the knowledge base article here.

Once data is seen you need to ensure UPDD is configured for the correct serial port. UPDD will then see the data. If it sees the data expected, the mouse should move when touching the screen. If it moves, but incorrectly, try calibrating the screen.

If the data is incorrect, or the wrong UPDD driver is installed (for a different touchscreen), there will be no mouse movement but there will be sync errors in the UPDD Console Status dialog.

USB

With USB devices ensure the driver is loaded and the USB is recognized by the operation system.

Windows Device Manager

Check that UPDD is loaded in the Device manager along with the supported controller. Any icon with an indicator, such as a red X, exclamation mark, down arrow etc will indicate an issue. Mice and other pointing devices



Universal Pointer Device Driver

E.g. Under Vista this is shown with a small down arrow on the icon

-- 👸 PS/2 Compatible Mouse -- 🖧 Universal Pointer Device Drivi

The driver will take control of devices configured in the package. However, if another driver is installed to control the device the UPDD entry will show an error in the device manager as UPDD will not automatically try and remove an existing driver. This is normally shown in the Device Manager with a yellow exclamation mark, as shown:

Building Mice and other pointing devices

- 🖑 HID-compliant mouse
- ITL, TP001, USB (UPDD)

To rectify this problem remove the device created in the device manager by the other driver and reinstall UPDD.

A yellow exclamation will also be shown if there is an error on the system preventing access to the device. **Graphical viewer**

Use a graphical USB Viewer available on the web (Google 'usb view download'), such as the one at http://www.microsoft.com/whdc/device/stream/vidcap/UVCView.mspx (this is the same as USB viewer)

File Options Help				
My Computer Intel(f) 8280TDB/DBM USB Universal Host Controller - 24C2 RootHub [Port1] DeviceConnected : USB Printing Support [Port2] NoDeviceConnected Intel(f) 8280TDB/DBM USB Universal Host Controller - 24C4 RootHub [Port1] NoDeviceConnected [Port1] NoDeviceConnected [Port2] DeviceConnected [Control to Control to Co	Device Descriptor: bdUSE: bDeviceClass: bDeviceSubClass: bDeviceProtocol: bMaxPacketSize0: idVendor: idVendor: bcdDevice: iManufactures: iProduct:	0x0110 0x00 0x00 0x00 0x08 0x04E7 0x0007 0x0105 0x0105 0x01	(8) (ELO	TouchSystems)

MacOSX

System Profiler

Use the system profiler to check the pointer device is recognised

		000	System Profile						
		Touch-Base's Computer							
		Contents	USB Device Tree						
		▼Hardware	▼USB Bus						
		Memory	Bluetooth HCI						
		PCI/AGP Cards	USB Bus						
		ATA	VSB Bus						
		SCSI	Elo TouchSystems IntelliTouch 2500U						
		USB	USB High-Speed Bus						
		FireWire							
		AirPort Card							
		Modems							
		▼ Software							
		Applications							
		Extensions	Elo TouchSystems IntelliTouch 2500U:						
		Network							
		Logs	Vendor Name: Elo TouchSystems, Inc. Product ID: 7 (57)						
			Speed: Up to 12 Mb/sec						
			Serial Number: 07D22494						
			Bus Power (mA): 500						
inux	Cat Command		00.00						
	Open a terminal window and type								
	cat /proc/bus/usb/devices. This is	T: Bus=01 Lev=01 Prn	t=01 Port=00 Cnt=01 Dev#= 3 Spd=1.5 MxCh= 0						
	best performed with all other USB	D: Ver= 1.00 Cls=ff(ve	nd.) Sub=00 Prot=ff MxPS= 8 $\#$ Cfgs= 1						
	devices unplugged as sometimes it	P: Venuor=0ara Prouid	=0566 Rev= 1.10						
	is unclear which device is which	$C^* #Ifs = 1 Cfa #= 1 A*$	$r = a0 M x P w r = 100 m \Delta$						
	especially if the description string	I: If $\#=0$ Alt = 0 $\#FPc=$	1 Cls=ff(vend.) Sub=ff Prot=ff Driver=(none)						
	has not been implemented in the	E: Ad=81(I) Atr=03(In	t.) MxPS= $5 \text{ Ivl} = 10 \text{ms}$						
		JI(I) /// -/J(II)	.,						
	Graphical viewer								
	Use a graphical USB Viewer available	on the web (Google '	usb view download'), such as the one at						
	Use a graphical USB Viewer available on the web (Google 'usb view download'), such as the one at http://www.kroah.com/linux/ush/When.run_this will show the USB devices:								
	nttp://www.kroah.com/linux/usb/ . When run, this will show the USB devices:								
	E USB THCL Root Hub	USB UHCI Boot Hub							
		Serial Number: dce0	H						
	Port Hub Sereal Number: acce USB KMp USB KMp Number of Ports: 2								
		Number of Ports: 2							
	Bandwidth allocated: 24 / 900 (3%)								
	Datalux Space Saver USB Keyboard	Total number of interr	upt requests: 2						
	keyboard	Total number of isoch	ironous requests: 0						
	API USB KB HUB	USB Version: 1.00							
	API USB KB HUB	Device Class: 09(huk							
	hid hid	Device Subclass: 00							
	L USB Zip 100	Device Protocol: 00	Incint Size, 9						
	Unknown Device	Number of Configurat	ippint 5/28: 0						
	USB Keyboard and Mouse	Number of Configurations: 1							
	🖨 hub	Config Number: 1							
	🖨 hub	Number of Inter	faces: 1						
	- N48	Attributes: 40							
	- Unknown Device	MaxPower Nee	ded: OmA						
	⊟ hub								
	- Camera	Interface Numb	er. O						
	Name huh								
	If the device is seen in Linux, and because we use the USB file system to access the port, it is possible to								
	see if USB data is being received from the USB device as follows:								
	The sequence of steps to determine whether we are controlling the touch device are:-								
	The sequence of steps to determine whether we are controlling the touch device are:-								
	-Onen a terminal								
	Type "cat /proc/buc/uch/dovices"								
	- i ype cat / pi oc/ bus/ usb/ uevices"								
	A list of the USP devices always dist	will be printed An arrest	mplo of a dovice would be						
	A list of the USB devices plugged in will be printed. An example of a device would be:								
	I: BUS=UI LEV=UI Prnt=UI Port=UU Chi	1 = 01 Dev = 2 Spd = 12							
	D: ver= 2.00 LIS=00(>IIC) SUD=00 Pro	L-UU MIXPS=04 #CIGS=	1						
	 S: Manufacturer=Zytronic Displays Limit 	io ted							
	S: Product=7vtronic v-v USR								
	S: SerialNumber= 000006561								
	C:* #Ifs= 1 Cfa#= 1 Atr=c0 MxPwr= 2r	mA							
	I: If $\#=0$ Alt = 0 $\#EPs=2$ Cls=00(>ifc)	Sub=00 Prot=00 Driver=	-(none)						
	E: Ad=81(I) Atr=03(Int.) MxPS= 64 Ivl	=1ms							
	E: Ad=01(O) Atr=02(Bulk) MxPS= 64 I	vl=0ms							
	The information we have highlighted	in red allows you to id	entify which device is the						
	touch controller vou are interested in	. The information we h	nave highlighted in blue will read "usbfs" if we have						
	control of it.		La companya da la blac vin read abbib in we have						
	16 Nuch6a// := :=t ! ! ! ! .		ata than planas da tha fallauinar						
	If "usbfs" is in control and the contro	ller is not outputting d	ata then please do the following:-						
	-Open a terminal								
	-Type "sudo init 3" and enter your pa	assword when prompte	d, to stop X Windows from running.						
	-You will be presented with a text mo	ode login screen. Loa i	n.						
	-Type "cat /opt/tbunddlx/comReadPir	pe"							
	-Touch the screen	r -							
	At this point you should see data bou	na printed on the scro	n						
	At this point you should see data bell	ing printed on the scien							
TBUPDDWU	is running:								

Services								🖳 Windows Task Manager			2
File Action Vie	w Help							File Options View Help			
← → 💽 🖆	7 B B 🕜 💷 🕨 💷 🗉							Applications Processes Perform	ance Netwo	rking	
Services (Local)	Services (Local)							Image Name	PID L	Jser Name	c۸
	tbupddwu		Name /	Des	cription	Status	Startup Type	hsdx.exe mspaint.exe	5976 d 5692 d	laveb laveb	
	Stop the service Restart the service	-	System Restor Task Scheduler tbupddwu	e Service Perfo r Enab Univi	orms system restore func les a user to configure a orsal Pointer Device Driver	Started Started	Automatic Automatic Automatic	chrome.exe mspaint.exe chrome.exe	5792 d 5784 d 5724 d 5720 d	laveb laveb laveb	
💣 Registry Edite	or							chrome.exe	5548 d	laveb	
File Edit View F	Favorites Help							TBUPDOWU.EXE	5504 S	YSTEM	
My Computer Min Computer Mi			Name (Default) (Default) (DisplayName ErrorControl FalureActions (Group) (Default	Type REG_SZ REG_SZ REG_SZ REG_DWORD REG_BINARY REG_SZ REG_SZ	Data Universal Pointer De tbupddwu 0x00000001 (1) 80 51 01 00 00 00 Pointer Class Cultorcass Election	vice Driver	00 00 03 00 08 00 14	Chrome.exe chrome.exe OUTLCOK.EXE EyesBoard.exe mdsc.exe AddoeARM.exe WINWORD.EXE	5432 d 5432 d 5164 d 4952 d 4824 S 4720 d 4700 d 4168 d	laveb laveb laveb YSTEM laveb laveb laveb	×
	thupddsu Thupddsu Enum Security	5	al ImagePath CobjectName	REG_EXPAND REG_SZ REG_DWORD	_SZ C:\Program Files\UF LocalSystem 0x0000102d (4141)	DD\tbupddv	wu.exe	Show processes from all users Processes: 78 CPU Usage: 8%	Comm	En	d Process
			Start Type	REG_DWORD	0x00000002 (2) 0x00000010 (16)						
2		3	0					1 (5)			

TBUPDDWU is the user mode portion of the driver and must be running in order for the touch device to work. It runs as a service and is set to run automatically (Registry key 'Start' = 2). Should, for any reason, the service fail or terminate it should 'in theory' restart automatically.

If it is believed that the hardware is functioning as expected re-enable the UPDD driver and run the test program from the UPDD Console, Status page and select the 'Direct' option. In this mode the test program uses the UPDD API to receive co-ordinate data rather than mouse emulation. If drawing is seen this implies the controller is functioning but for some reason the UPDD system mouse interface is not working.

If the device is correctly connected and functioning please answer the following questions as best you can (use N/A or Unknown where appropriate)

Support Information

Free Format

(Describe as best as you can what the problem is - list any error messages you see etc)

Operating System

- Detail the OS in use (Windows, Vista32, Vista64, CE4, 5 or 6, XPe, Linux, Mac OS X etc)
- For Linux indicate the distribution, kernel, Windows manager etc
- Indicate the patch status
- Indicate the locale (language)
- Any other features to be considered

Hardware related

- Is there anything unusual about the system in use?
- Is there any specialised hardware/configuration in use? E.g. Multiple monitors,
- Is the pointer device connected to unusual hardware? E.g. Serial to USB (to serial) converter.
- Are there other pointer devices installed and supported by other drivers?
- Is the any other driver that could be trying to claim the same hardware port/system resources in use by UPDD? (e.g. Serial printer/Modem driver connected to the same port)
- Do the ports in use by the UPDD driver show up in the system device manager or system profile?
- What pointer device controller and hardware port are you using?

Install problems

- Did the UPDD software install correctly?
- During install did you specifically select the hardware port to use or was the auto-detect check box available and enabled?
- Did you install as a result of a PnP message or did you run the setup program.

If the install appeared to be successful.....

Functionality

- In the UPDD Console, Hardware dialog is the correct port selected for the device?
- Can the device be calibrated? On the calibration screen do the points react to being touched (next point is displayed)?
- Does the cursor move when the device is in use?
- Does it work for a short while then fail? (e.g. after power management has hibernated the system or following a reboot?).
- Does it fail in some very specific situation?
- If there is no cursor movement does the device starts working after you the reinitialize or reload option in the UPDD Console, Status dialog?

Sequence of events leading to the problem

If the fault is obscure and is only seen after a sequence of events please describe the events that need to be performed in order to reproduce the fault.

Information request

Please supply the following information

- 1. In the UPDD Console, About dialog, please list company name and driver version number.
- 2. In the UPDD Console, About dialog, Support option, please list SCN (Software Support Number).
- 3. In the UPDD Console, Status please list the information shown.
- 4. In the UPDD Console, Status dialog, please select the 'Dump settings' option and attach it to this email.
- 5. In the UPDD Console, please list the name of the controller causing problems
- 6. If using USB, identify the vendor and product id of the device.
- If using a serial device and the serial port connection appears not be working there are a number of procedures to follow to help identify the problem as described in the knowledge base article <u>here</u>.
- 8. If using a
- 9. Please list the devices shown in UPDD Console device list, are they shown in red or black (red indicating unplugged/not available)?

UPDD Console	
Elo, Smartset 2500 IntelliTouch	C
Select device	×
星 Elo, Smartset 2500 IntelliTouch	
💂 Hampshire Touch, TSHARC-12	
星 Zytronic, x-y	

10. For Windows, send a screen print of the Device Manager 'Mouse/Mice and other pointing devices' branch. The easiest way to the Device Manager is to right click the My Computer icon or start menu entry, select Manage and select Device Manager:



- 11. Please indicate the OS in use and its locale (e.g. English, French, Japanese etc)
- 12. If requested, please supply a debug trace as described below in the debug section.
- 13. Under Windows, if the error is causing a Blue Screen Crash commonly known as a BSOD we will need a system memory dump at the time the crash occurs. The dump is requested as follows: in the control panel -> system -> advanced -> startup and recovery. Select small memory dump. After a BSOD the dump file will be located in SystemRoot%\Minidump (or whatever was set in the control panel). Send the file related to the crash using the timestamp of the file to determine the correct file.

		Settings	 Write an event to the system log Send an administrative alert 		
Startup an System sta	d Recovery rtup, system failure, and debugging informa	ation	Automatically restart Write debugging information		
		Settings	Small memory dump (64 KB)		
			Small dump directory:		
	Environment Variables	Error Reporting	%SystemRoot%\Minidump		
			☑ Overwrite any existing file		
			·		

14. UPDD program symbols:

These symbols are used in conjunction with identifying crashes within any UPDD modules and are mainly for internal use. However, occasionally technical users have asked for access to these symbols for their own debugging purposes. To this end we have made these symbols externally available on our symbol server at <u>http://symbols.touch-base.com/Symbols</u>.

The symbol server holds symbols for all version 4.1.x release / production builds since 6 Nov 2008.

- 15. Under Linux please supply the following information:
 - 1. The outcome of typing "ps ax | grep tb" into a terminal.

					andrew@ab12;~
<u>F</u> ile	<u>E</u> dit	View	<u>T</u> erminal	Ta <u>b</u> s	Help
[andr	ew@al	o12 ~]	\$ ps ax	grep	tb
2362	?	Sec. SN	S1 0	:00 /t	bupddlx/tbupddlx
3213	pts,	/0	R+ 0	:00 gr	ep tb
[andr	ew@al	o12 ~]	\$		

2. For USB controllers, the outcome of typing "cat /proc/bus/usb/devices".

$\mathbf{\nabla}$	andrew@ab12;~	
<u>F</u> ile	e <u>E</u> dit <u>V</u> iew <u>T</u> erminal Ta <u>b</u> s <u>H</u> elp	
S:	SerialNumber=0000:00:07.2	^
C:*	#Ifs= 1 Cfg#= 1 Atr=c0 MxPwr= OmA	
I:	If#= 0 Alt= 0 #EPs= 1 Cls=09(hub) Sub=00 Prot=00 Driver=hub	
E:	Ad=81(I) Atr=03(Int.) MxPS= 2 Iv1=255ms	
T:	Bus=01 Lev=01 Prnt=01 Port=00 Cnt=01 Dev#= 2 Spd=12 MxCh= 0	
D:	Ver= 1.10 Cls=00(>ifc) Sub=00 Prot=00 MxPS=64 #Cfgs= 1	
P:	Vendor=0596 ProdID=0001 Rev= 2.90	
S:	Manufacturer=MicroTouch Systems, Inc.	
S:	Product=MicroTouch USB Touchscreen - EX II	
C:*	#Ifs= 1 Cfg#= 1 Atr=e0 MxPwr=100mA	
I:	If#= 0 Alt= 0 #EPs= 1 Cls=ff(vend.) Sub=00 Prot=00 Driver=usbfs	
E:	Ad=81(I) Atr=03(Int.) MxPS= 32 Iv1=2ms	
T:	Bus=01 Lev=01 Prnt=01 Port=01 Cnt=02 Dev#= 3 Spd=1.5 MxCh= 0	
D:	Ver= 1.10 Cls=00(>ifc) Sub=00 Prot=00 MxPS= 8 #Cfgs= 1	
P:	Vendor=00c8 ProdID=0003 Rev= 0.40	
S:	Manufacturer=EELY Corporation	
S:	Product=EELY elTouch	
S:	SerialNumber=EWW-4WR-U	1
C:*	#Ifs= 1 Cfg#= 1 Atr=a0 MxPwr= 50mA	
I:	If#= 0 Alt= 0 #EPs= 1 Cls=03(HID) Sub=00 Prot=00 Driver=usbhid	
E :	Ad=81(I) Atr=03(Int.) MxPS= 5 Iv1=10ms	
[and	drew@ab12 ~]\$	*

Note: On SuSE 10.1 systems (and possibly others) the USB file system isn't enabled by default. This should be enabled by editing the file "/etc/fstab" and change the line that says:

usbfs /proc/bus/usbfs noauto 00 to usbfs /proc/bus/usbfs auto 00 and then reboot your system.

This is required to get the output of "cat /proc/bus/usb/devices"

Support Procedure

Based on the above information we will advise if we know of a fix or we will investigate further. We may require a debug log (see below) to be captured on the failing system. If we do not know what the problem is and cannot reproduce we may ask for the system to be sent to us if this is possible.

Debug Procedures

Difficult to reproduce or to identify UPDD problems sometimes require a debug trace to be captured. The debug trace is enabled within the UPDD driver and the debug output is sent to the 'standard out' port on the OS.

With UPDD versions up to 4.1.10, build 2113 debug messages were either On (DebugLevel setting = 5) or Off (DebugLevel setting = 0). However, starting with UPDD version 4.1.10, build 2114 the user mode component has 4 settings, 0,1,2 and 3 (and 5 to be backward compatible).

0 – no debug messags

1 – non-time critical messages

2 - non-time critical messages
 3/5 - all messages including debugging in the interrupt path

Non-time critical messages will be allocated to either level 1 or 2 such as often repeated message, e.g. in polling functions.

Critical messages that can affect performance and critical path functionality, such as hardware interface interrupt procedures.

Note: The Windows Kernel mode component is still either on (5) or off (0).

Debug preparation

Windows

Under Windows we use a kernel debugger (normally DebugView) to capture the debug messages - software that is freely available on the web. Last time we looked it was available <u>here</u>. If not, Google DebugView.

There are two parts to the Windows driver, a kernel mode element – TBUPDDSU and a user mode element – TBUPDDWU. Both elements will output debug information if the Debug Level is set to 5. The kernel mode driver references the registry for it's debug setting and the user mode references the UPDD settings file for its debug setting, as follows;

Kernel mode debug setting - TBUPDDSU

💣 Registry Editor				
File Edit View Favorites Help				
Computer	^	Name	Туре	Data
		(Default)	REG_SZ	(value not set)
		🔀 DebugLevel	REG_DWORD	0×00000005 (5)
Services		DisplayName	REG_SZ	Universal Pointer Device Driver
		- Control	REG_DWORD	0×00000001 (1)
		a) ImagePath	REG_EXPAND_SZ	system32\DRIVERS\tbupddsu.sys
		🔣 Start	REG_DWORD	0×00000003 (3)
E Dunddwu		👸 Туре	REG_DWORD	0×00000001 (1)
Enum				
Security				

If the DebugLevel entry is missing, Right Click in the window pane, select New, DWORD value and rename the new key to DebugLevel:



User mode debug setting – TBUPDDWU

📕 tbupdd.ini - Notepad
File Edit Format View Help
[updd] autoruntbalt=0x00000000 debuglevel=0x00000005 initialmouseportenabled=0x00000001 installing bundle={9569DECO-3355-11D5-92A7-004005684455} kickstartdelay=0x000003E8 kickstartdelta=0x000000A kickstartdwell=0x000000A kickstartdwell=0x0000001F4 mousespeed=0x00000002 pnp=0x00000001

To enable debugging:

If requested to capture kernel mode debug messages use Regedit to set HKLM/System/CurrentControlSet/Services/tbupddsu/debuglevel setting to 5 and reboot the system (as shown above).

If requested to capture user mode debug messages use the following procedure whilst logged on as a user with administrator rights

1) If using UPDD 5.1.0 it is only necessary to run the command "tbutils global setting dw debuglevel 5". The driver will be reloaded and in debug mode.

If not running 5.1.0 then

- 2) Stop the driver as follows:
- With UPDD 4.1.6, build 1200 and above (Start, Run) Net Stop TBUPDDWU or
- With earlier builds to **stop the user mode driver** you need to kill the TBUPDDWU process either via the Task Manager, end process:

3	Windows Task Man	ager	
File	Options View Help		
Ap	plications Processes	Performance Networkin	g
	Image Name	PID User Name	CPU Mem Usage
	TBUPDDWU.EXE	End Process	00 6,972 K
	sychost.exe	End Process Tree	00 4,464 K
	AIDAEMON.EXE	Debug	00 1954 K
	regedit eve		00 1,000 K
	TBDAEMON.EXE	Set Priority 🔹 🕨	00 10,812 K

or, if the above does not work, change directory to c:\program files\updd and "kill /f tbupddwu"



2) Use Notepad to set TBUPDD.INI file debuglevel setting to 1,2,3 or 5 as requested.

3) Reboot the system or start the user mode driver with the command "Net Start TBUPDDWU" as shown above.

Mac OS X

If requested to capture user mode debug messages use the following procedure:

For Mac OS X you can run the driver from a terminal (console) and view the debug log messages or redirect them to a file.

If using UPDD 5.1.0 it is only necessary to run the command "tbutils global setting dw debuglevel 5". The driver will be reloaded and in debug mode

If not running 5.1.0 then:

To stop the driver run up a terminal window (sometimes known as a Console) and type 'sudo killall tbupddwu'.

To enable debugging:

Open up a terminal window cd /tbupddmx cp tbupdd.ini ~/tbupdd.ini open -a textedit ~/tbupdd.ini Use the text editor to make the change, save and close sudo cp ~/tbupdd.ini tbupdd.ini

To **start the driver** change to the UPDD folder (type cd \tbupddmx in the terminal window) and type `sudo ./tbupddwu to see the debug log in the terminal window or `sudo ./tbupddwu >updddebuglog' to redirect the console output to a log file.

Linux

If requested to capture user mode debug messages use the following procedure:

For Linux you can run the driver from a terminal (console) and view the debug log messages or redirect them to a file.

If using UPDD 5.1.0 it is only necessary to run the command "tbutils global setting dw debuglevel 5". The driver will be reloaded and in debug mode

If not running 5.1.0 then:

To stop the driver run up a terminal window (sometimes known as a Console) and type

`sudo killall startupdd

'sudo killall tbupddwu'

To enable debugging:

Open up a terminal window cd /opt/tbupddlx cp tbupdd.ini ~/tbupdd.ini open -a textedit ~/tbupdd.ini or gedit ~/tbupdd.ini Use the text editor to make the change, save and close sudo cp ~/tbupdd.ini tbupdd.ini

To start the driver change to the UPDD folder (type cd /opt/tbupddlx in the terminal window) and type

export LD_LIBRARY_PATH=/opt/tbupddlx:\$LD_LIBRARY_PATH

sudo ./tbupddwu

to see the debug log in the terminal window or 'sudo ./tbupddwu >updddebuglog' to redirect the console output to a log file.

Debug message capture

Once debug is enabled, run up the kernel debugger under Windows or start the driver in a terminal Window under Linux/Mac OS X and recreate the problem and send the debug log to Touch-Base for analysis.

If capturing a kernel log and using DebugView please ensure the kernel capture setting is enabled:

😹 nenni	garew on	werenow (local)			
File Edit	Capture	Options Computer	Help		
F	🖌 Captur	re Win32	Ctrl+W	0	🤿 🖗
#	🖌 Captu	e Kernel	Ctrl+K		
	 Enable Verbose Kernel Output Pass-Through 				
	🗸 Captur	e Events	Ctrl+E		
	Log Bo				

If the driver is failing to load or the load sequence is required then run up the UPDD Console and select reload from the status screen. When the Reload option is selected in UPDD it effectively reinitialises the driver and hardware port, outputting debug messages at each stage. These messages are displayed in the debug dialog and should be saved and sent to Touch-Base for analysis.

Example:

Windows

User reports that touch screen is taking excessive time to become active after system has been sleeping:

- 1) Set both debug levels to 5 (kernel and user) and reboot system. Check touch is active.
- 2) Invoke the kernel debugger (e.g. locate and run DebugView application)
- 3) Place system in sleep (or standby / hibernate) and return from sleep

🔆 DebugView on \\DAVEDUAL (local)				
File	Edit Capture Options	Computer Help		
🖻	8 🖌 🖌 🖓	🛶 😹 🖾 🗃 😳 😓 🛱		
#	Time	Debug Print	^	
0 1 2 3 4 5	0.00000000 0.00000326 0.00000492 0.00030467 0.00030688 0.00030819	Tbupddwd: Power Enter. Tbupddwd: Power Enter.		
6 7 8 9	0.00031683 0.00031838 0.00031959 0.12324925	Tbupddwd: Power Enter. Tbupddwd:		
10 11 12 13 14 15 16	0.12325285 0.12325455 0.12325645 0.12325843 0.12325984 0.12326279 0.12326279 0.12326436	Power Enter. Tbupddwd: Powering down to PowerDeviceD3 Tbupddwd: Clearing RTS	*	
<				

4) Use DebugView, File, Save As to save debug log.

Capturing debug over a reboot (Windows)

In some circumstances we may need to see the debug log over a system boot rather than when the driver is reloaded. In this instance the kernel debugger may have an option to log kernel debug output over a reboot as shown below in the DebugView debugger:



Selecting this option in DebugView acknowledges that data will be captured at next reboot:

Debug¥iew 🔀		
٩	DebugView has been configured to buffer kernel debug output at the next boot.	
	ОК	

The debugger will capture all the debug messages produced by the driver during the reboot load.

Controller data capture

Occasionally we would like to view the raw data received from the controller. This can be achieved in one of two ways:

Tbcalib test mode

Tbcalib program has a <u>test mode</u> to log single point touch data to a file.

Tbcalib diag mode

Tbcalib program has a diagnostic mode to log trace data pattern to a file.

Remote Access

In some cases it is desirable to be able to remotely connect to a failing touch system to help identify the problem. We prefer to utilize a remote access product called Crossloop, available for free from http://www.crossloop.com/ipage.htm?id=predownload (the free, non professional version should be available). To make the system available for remote control, ensure it is physically connected to the internet, install and run the crossloop application (you do not need to register for an account) which will issue a unique session identifier which you need to pass on to the Touch-Base technician (phone or via on-line chat using Skype or Google Talk). Using this code the technician can connect to and take control of the system, as shown below:







Run crossloop and select the Share option. Pass on the Access Code to the technician via phone or chat session.

When instructed by the technician hit connect.

Using the supplied access code, the technician will try and connect which will need to be approved. You can now watch whilst the system is controlled remotely and to be at hand to help if required.

Uploads

Any files requested to be sent to Touch-Base can be sent as email attachments or placed directly on our upload server at http://upload.touch-base.com – useful for very large attachments. Click on the link or enter this URL in any browser and you will see a drop zone in the browser to which you can drag and drop the file(s).

Contact

For further information or technical assistance please email the technical support team at technical@touch-base.com