



Zytronic Touchscreen Driver Software  
(Linux 4.1.10R) Release Notes

Technical Report Number: TR0131

29<sup>th</sup> July 2011

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## 1.0 Touchscreen Software Driver Build ID

The build ID of the touchscreen driver software referenced in this report is:

UPDD version reference number: 4.1.10R  
Build Date: 19<sup>th</sup> May 2011  
Internal full Build ID: UPDD 04.01.10R / Linux / G13240

## 2.0 UPDD 4.1.10R Controller Support

The UPDD 4.1.10R build supports the following Zytronic X-Y off glass PCT™ touchscreen controller releases only:

- ZXY-U-OFF-32-B
- ZXY-U-OFF-64-A
- ZXY-S-OFF-32-B
- ZXY-S-OFF-64-A
  
- ZXY100-U-OFF-32-A
- ZXY100-S-OFF-32-A
- ZXY100-U-OFF-64-A
- ZXY100-S-OFF-64-A
- ZXY100-U-OFF-128-A
- ZXY100-S-OFF-128-A

## 3.0 Installation Notes

**IMPORATANT NOTE:** Before installing this new driver it is recommend that the touchscreen is disconnected, any older versions of the driver are uninstalled then the machine is then rebooted before installing the new UPDD v4.1.10R driver. The touchscreen should only be reconnected once the new driver has been installed.

#### **4.0 UPDD 4.1.10R Supported Linux Distributions**

The table below shows the Linux distributions that the UPDD 4.1.10R driver has been tested on and found to work.

<i>Distribution</i>	<i>Version</i>	<i>Status</i>
CentOS	4.6	Obsolete
Debian Etch	4.0	Obsolete
Debian Lenny	5.0	Tested
Debian Squeeze	6.0	Tested (Manual install only - see 'Known Issues' below)
Fedora Core Werewolf	8.0	Obsolete
Fedora Core Sulphur	9.0	Obsolete
Fedora Core Cambridge	10.0	Obsolete
Fedora Core Leonidas	11.0	Obsolete
Fedora Core Constantine	12.0	Tested
Fedora Core Goddard	13.0	Tested
Fedora Core Laughlin	14.0	Not tested
Guada Linux	7	Not tested
Lliurex	10.09	Not tested
Redhat Enterprise 64bit		Not tested
Slackware	12.1	Obsolete
Open SuSE	10.3	Obsolete
Open SuSE	11.1-64bit	Not tested
Open SuSE	11.1	Tested
Open SuSE	11.2	Tested
Open SuSE	11.3	Tested
Ubuntu Feisty-Fawn	7.04	Obsolete
Ubuntu Gutsy-Gibbon	7.10	Obsolete
Ubuntu Hardy-Heron	8.04 LTS	Obsolete
Ubuntu Intrepid-Ibex	8.10	Obsolete
Ubuntu Jaunty-Jackalope	9.04	Obsolete
Ubuntu Karmic-Koala	9.10	Obsolete
Ubuntu Lucid-Lynx	10.04 10.04.02	Tested
Ubuntu Maverick-Meerkat	10.10	Tested
Ubuntu Natty-Narwhal	11.04	Tested (Select Maverick Meerkat from install menu).
Kubuntu Lucid-Lynx	10.04 10.04.02	Tested
Kubuntu Maverick-Meerkat	10.10	Tested
Kubuntu Natty-Narwhal	11.04	Tested (Select Maverick Meerkat from install menu).

Please note that these systems were tested as they come '*out of the box*'; Zytronic makes no guarantees that the UPDD software will work on customised versions of these systems.

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In particular users should not change the default window managers, kernel, or X11 system if they are using one of the automatic install scripts. Installation on customised systems should be done manually according to the instructions found at:

<http://touch-base.com/documentation/LinuxPlatformNotes.htm>

## **5.0 UPDD 4.1.10R Release Disclaimers and Known Issues**

- **Ubuntu:** Desktop effects/Unity are known to cause an issue in all versions of Ubuntu; a title bar is erroneously shown at the top of the calibration screen causing the touch targets to be shown at non-standard positions. This ultimately results in the touch pointer being mis-calibrated and off target.
  - To address this problem go to “System Settings”->“Appearance”->“Desktop Effects” and disable all effects before calibrating; similarly Unity should also be disabled before calibration.
  - Please see: [http://touch-base.com/documentation/LinuxPlatformNotes.htm#\\_Linux\\_Notes](http://touch-base.com/documentation/LinuxPlatformNotes.htm#_Linux_Notes) for more detailed instructions. Desktop effects can be re-enabled once the screen is calibrated.
  
- **Debian 6:** Currently only a manual install is possible.
  - Please see: <http://touch-base.com/documentation/LinuxPlatformNotes.htm> for further details.
  
- **Upddcalib:** Advanced options such as setting the threshold / glass thickness etc. via the command line are currently not implemented. Currently upddcalib only supports invoking the basic calibration routine.

These known issues are being investigated further.

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## 6.0 Complete Change Log

### **Bug Fixes**

- FIX - linux / mac installs continued after bad location warning
- FIX - sync errors after OEM test page
- FIX - install location check should not be performed during 64 bit secondary phase
- FIX - a rare crash during api termination
- FIX - some localised files were not located correctly
- FIX - tbcilib did not init api correctly for some command line options
- FIX - problems with activation of raw data mode
- FIX - handle leak on client termination
- FIX - event synchronisation error
- FIX - corrected multi monitor PnP issues
- FIX - problems after suspend and hibernate for certain chipsets
- FIX - empty message blocks were causing random behaviour
- FIX - crash during install with no selected device if bundle has PS2 device
- FIX - japanese license text
- FIX - stop multiple dcu instances on non-english systems
- FIX - occasional tbupddwu crash due to pure virtual function call
- FIX - lockup in unload macro
- FIX - bogus mouse data in empty queue
- FIX - occasional crash due to pending IRP management
- FIX - crash if stall recovery attempted when not at power D0
- FIX - crash when controller reports incorrect serial number
- FIX - improvements to stall recovery
- FIX - usb buffer not cleared
- FIX - manage out of kernel memory conditions
- FIX - binding issue
- FIX - serial mode improvements
- FIX - calibration settings were not picked up immediately
- FIX - could not change com port
- FIX - better management of multi monitor with mixed resolutions

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FIX - mutex protection of restart process in tbupdds

FIX - DevicePath corruption on long entry

FIX - calibration in data driven monitor selection was not possible

FIX - correction to oem eeprom calibration function

FIX - automated PnP detection did not function in some scenarios

FIX - occasional errlog log message during shutdown (tbupddwu)

FIX - clone from read only media left tbupdd.ini read only

FIX - cloned install from read only media left tbupdd.ini read only

FIX - bsod in rare cases where ioctl timeout occurred

FIX - latched mode for interactive touch moved to 4.1.8

FIX - autodetect did not work when ACK specified timeout

FIX - install from CD left read only uninstaller

FIX - memory leak in API when no callbacks registered

FIX - wrapping at edge of screen when edge acceleration in use

FIX - UPDDDRAW - focus after screenshot

FIX - multi monitor co-ordinates were 1 unit out

FIX - raw data transfer, structure was misaligned

FIX - memory leak in tbdaemon

FIX - block reloads to prevent tbupddwu crash

FIX - crash on NULL USB response

FIX - out of memory condition detection for winqual

FIX - edge acceleration could move cursor out of range

FIX - non linear interpolation calibration algorithms could move cursor out of range

FIX - upddd draw gets focus after screen capture

FIX - 64bit uninstall did not clear all files

FIX - avoid BSOD during call to beep driver under heavy load

FIX - 64 bit calibration occasional error

FIX - tbcilib /assignall not working

FIX - long cal style names caused crash

FIX - problem with short customisation names

FIX - tbdaemon launch problem

FIX - tbcilib /assignall would not run

FIX - smartset eeprom corrections

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FIX - missing 'R' indicators on releases builds  
FIX - BSOD when working with USB serial numbers  
FIX - 64bit uninstall did not clear all files  
FIX - avoid BSOD during call to beep driver under heavy load  
FIX - 64 bit calibration occasional error  
FIX - tbcilib /assignall not working  
FIX - long cal style names caused crash  
FIX - problem with short customisation names  
FIX - tbdaemon launch problem  
FIX - tbcilib /assignall would not run  
FIX - smartset eeprom corrections  
FIX - missing 'R' indicators on releases builds  
FIX - BSOD when working with USB serial numbers  
FIX - usb check did not work correctly if no explicit selection during install  
FIX - syntax error with long (>64 byte) usb request length in macro  
FIX - serial 4800 baud support  
FIX - tbcilib now works with "calibration event"  
FIX - tbcilib diag now correctly ignores raw events  
FIX - mutex protection of restart process  
FIX - binding issue related to earlier iproduct changes  
FIX - tbrecrxdx in OEM build problem in 64bit asian systems  
FIX - various toolbar issues related to mixed size multiple monitors  
FIX - toolbar mouse drag bug related to multiple visible toolbars  
FIX - draggable toolbar option was ignored by mouse drag  
FIX - could not clear sound options on toolbar cell  
FIX - deletion of devices during -preinst on xp  
FIX - setup -ri left pnf file on xp  
FIX - setup -ri left pnf file on 64 bit  
FIX - "other" desktop segments not working  
FIX - close updddrow did not re-enable mouse port in all cases  
FIX - iproduct binding incorporated into latest bind model  
FIX - multiple toolbars caused unwanted entry in task bar  
FIX - remove crash when upgrading older 4.1.6 builds

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FIX - interlock lockup when interlocked device removed  
FIX - tbd daemon crash with new event selector and icon not shown  
FIX - fast switching caused toolbar images for disabled toolbars to be shown in some cases  
FIX - toolbar image placement on multi monitor  
FIX - corrections to eeprom calibration  
FIX - corrected minor toolbar issues  
FIX - eval mode bug  
FIX - occasional BSOD crash during sleep  
FIX - corrected lockup in api introduced in build 1733  
FIX - corrected some 64 bit installation issues  
FIX - extended touch options removed where inappropriate  
FIX - tlinuxmouse now removed by uninstaller  
FIX - /etc/rcn.d scripts now removed by uninstaller  
FIX - in use tbupddwu was not replaced  
FIX - usb check did not work correctly if no explicit selection during install  
FIX - serial 4800 baud support

### **API Changes**

API - TBApiGetDeviceFromSegment corrected  
API - tsharc eeprom write API made more general  
API - TBApiSetDrawState added to DLL

### **Technology Changes**

TEC - enable variable length interrupt blocks

### **OEM Changes**

OEM - splash screen  
OEM - corrected timing error in serial mode  
OEM - installer help files option  
OEM - OSD support  
OEM - localised company field  
OEM - defaults option  
OEM - exclude custom options

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OEM - hide custom desktop option based on customisation  
OEM - multi controller support in previous single config  
OEM - reintroduce extended monitor segments (left half etc)  
OEM - smartset eeprom, deal with controllers with no nvram  
OEM - serial eeprom fix  
OEM - usb eeprom fix  
OEM - new serial eeprom support  
OEM - new custom icons were not consistent  
OEM - no event selector  
OEM - 64 bit tbn macro support  
OEM - new firmware calibration  
OEM - final changes and fixes for customized functions  
OEM - fix customized functions  
OEM - corrected firmware help  
OEM - changes to customized functions  
OEM - customised layout  
OEM - new firmware page  
OEM - firmware page changes  
OEM - toolbar bitmaps  
OEM - serial eeprom support  
OEM- automatic segment selection  
OEM - customisation by prefix  
OEM - smartset eeprom, deal with controllers with no nvram  
OEM - serial eeprom fix  
OEM - usb eeprom fix  
OEM- automatic segment selection  
OEM - customisation by prefix

### **Enhancements**

ENH - test program shown on appropriate monitor  
ENH - smartset eeprom calibration support  
ENH - improvements to calibration mode selection with eeprom selection  
ENH - tbcilib Device=connected option to work with first connected device

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ENH - tbcilib /smtwrite option to write smartset serial numbers  
ENH - tbcilib /smtread option to read smartset serial numbers  
ENH - tbcilib /togglesound option added  
ENH - validation of eeprom calibration startup added  
ENH - improved binding to usb serial numbers  
ENH - usb recovery after "XACT" error  
ENH - fault tolerant settings writes  
ENH - ps/2 support in new pnp architecture  
ENH - improved replacement of older drivers in win xp  
ENH - digital signature capability  
ENH - ELO coach3/4 eeprom support switching  
ENH - DMC eeprom support  
ENH - various eeprom improvements  
ENH - prevent multiple tbcilib instances  
ENH - tbcilib /all support  
ENH - comprehensive rotate support  
ENH - calibration algorithm improvements  
ENH - interlock time based on customisation  
ENH - macro support for write to endpoint 2  
ENH - better throughput in high cpu load conditions  
ENH - tidy up of segment settings  
ENH - optional license in installer  
ENH - minor control enabling improvements  
ENH - dcu evaluation caption  
ENH - swkey is SCN in non-eval version  
ENH - picklists close if moue clicked outside control  
ENH - tbcilib /assignall  
ENH - larger calibration targets on high res monitors  
ENH - calibration uses packet averaging  
ENH - TouchdownTimeFilter  
ENH - improvements to installation of signed drivers  
ENH - improved automated recovery of tbupdd.ini after file system corruption  
ENH - data driven monitor selection, gui

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ENH - auto recovery of corrupted ini file  
ENH - allow continuation lines in bundled .reg files  
ENH - dynamic data based monitor selection  
ENH - increased robustness for settings manager when file system errors occur  
ENH - re-instated "custom" segment  
ENH - failed auto-detect shows in red  
ENH - msi installer  
ENH - latched more for interactive touch  
ENH - tbcilib /unload option  
ENH - PnP fixed binding retained when controllers are of different types  
ENH - some multi - monitor configurations were off by 1 pixel  
ENH - UPDDDRAW - multi monitor support  
ENH - UPDDDRAW - smooth drawing in "direct" mode  
ENH - autodetect for serial devices  
ENH - support up to COM50  
ENH - can now specify defaults for edge gain  
ENH - tbcilib /version option to dump version settings  
ENH - multi touch support  
ENH - improved binding for controllers without serial numbers  
ENH - net stop support for tbupddwu service  
ENH - updddraw captures current screen in multi monitor system  
ENH - line smoothing added for touch mode  
ENH - updddraw spin control for pen width  
ENH - Improved serial performance  
ENH - Usb Macro resilience, retry after incomplete bind  
ENH - reload driver if ioctl interface not available  
ENH - improved binding  
ENH - eeprom calibration timeout handling  
ENH - no progress bar option in setup  
ENH - tbcilib termination management improved  
ENH - improvements to smartset eeprom mode  
ENH - rotate support for nemo device  
ENH - stretched mode

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ENH - detect usb devices plugged in while computer is off  
ENH - autocal works with any monitor  
ENH - improved USB binding  
ENH - text wrapping on long menu items  
ENH - NVRAM operations for eeprom calibration (smartset)  
ENH - improved eeprom calibration scaling (smartset)  
ENH - cater for different controller models (smartset)  
ENH - improve responsiveness during startup  
ENH - Improved serial performance  
ENH - Usb Macro resilience, retry after incomplete bind  
ENH - reload driver if ioctl interface not available  
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ENH - improvements to smartset eeprom mode  
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ENH - improved USB binding  
ENH - text wrapping on long menu items  
ENH - NVRAM operations for eeprom calibration (smartset)  
ENH - improved eeprom calibration scaling (smartset)  
ENH - cater for different controller models (smartset)  
ENH - improve responsiveness during startup  
ENH - tbd daemon now has true 64 bit mode  
ENH - Touch mouse support  
ENH - 64 bit coin installer support  
ENH - eeprom write status in ini file  
ENH - no extended touch if pen services not running  
ENH - preinstall now supports "cold plug"  
ENH - calibration uses average of last 25% of touch points in non-delta mode

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ENH - larger calibration points at higher resolutions  
ENH - new option QMFolder, used to locate translation files for tbcilib  
ENH- improved speed of USB macros  
ENH - eeprom read status in ini file  
ENH - preinst removes all devices  
ENH- new configure all option in dcu  
ENH - new /configure all option in tbcilib  
ENH - tbcilib does assign all on multi monitor system when whole desktop selected  
ENH - tbcilib eeprom result (0/1) stored in device setting "eepromreadstatus"  
ENH - improved speed of USB macros  
ENH - new option ButtonDownTime  
ENH - new tbcilib options /toolbaron /toolbaroff  
ENH - tbupddwu -stopstart option and recovery from "device powered off"  
ENH - new setup option -ri remove installation folder  
ENH - setup -preinst sets -ri option  
ENH - TouchdownTimeFilterBoundary  
ENH - toolbar transparency improvements  
ENH - new toolbar based event selector  
ENH - toolbar transparency option based on fill colour  
ENH - systray event selector hidden in extended touch mode  
ENH - new option "setup -sn" silent install without installation of first serial device  
ENH - diagnostics in tbcilib  
ENH - new coinstaller based install strategy  
ENH - support for touch during sysprep  
ENH - Extended support for remote wake up  
ENH - Touch data logging facility added  
ENH - text change to correct layout error  
ENH - raw trace dialog for oem controller.  
ENH - auto eeprom read on Windows  
ENH - retry on eeprom read failure  
ENH - faster API for raw mode  
ENH - improve virtual HID interface  
ENH - improved multi touch interface

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ENH - improved PnP management for signed drivers  
ENH - Full screen option in updddrawing  
ENH - install now records selected distribution in dist.txt  
ENH - install now forces explicit selection of a distribution  
ENH - allow unusual characters in install script names  
ENH - stop driver process during, not before, install  
ENH - stop driver related processes during install  
ENH - record and playback options in tbutils  
ENH - serial pnp, driver installation (no auto resource allocation)

### **Localisation Changes**

LOC - localisation for pre gui installer  
LOC - added templates for Greek support  
LOC - Japanese company name  
LOC - Japanese localisation corrections  
LOC - German translations