Diebold Nixdorf

User Manual

UTD

Universal Touch Driver
Windows

UTD

Universal Touch Driver

Windows

User Manual

Edition 2.2.14 Revision 1, January 2021

Diebold Nixdorf

Contents

Introduction

The UTD (Universal Touch Driver) for Windows supports the Diebold Nixdorf touch controllers BA8x /irTouch, BA8x /e /cTouch, BA80 /rTouch, BA9x /rTouch, BA9x /pcTouch, D1xxx /pcTouch and touch controllers of Diebold Nixdorf All-In-One systems BEETLE /iPOS plus (Advanced/XL/SL), BEETLE A1xxx, BEETLE /iScan, Diebold Nixdorf kiosk systems and others (see chapter “Identification of supported Touch Monitors” on page 37). All events from these displays are send as touch input to the operating system. Therefore a touch point is visible on the screen after tapping the display.

This manual applies to driver package version 2.2.14.

It supports the following operating systems:

- 32 bit version of Windows 7, POSReady 7
- 64 bit version of Windows 7, POSReady 7, Windows Server 2008 R2
- 32 bit and 64 bit version of Windows 8.1
- 32 bit and 64 bit version of Windows 10 (Build 1607 and 1809)

It includes the following key features (see also „
Key Features” on page 7):

- Different touch modes with Tap, Single- and Multi-touch as well as the Mouse mode
- Beep and sound on touch
- Multi monitor support (Mapping touch controller to a display)
- Calibration
- Edge acceleration
- Tap Adjustments (delay, min., max. duration)
- Hold/Right Click Adjustments
- Enable/Disable of Events

Used Symbols

Notes and important information in this manual are marked by this symbol.

Component Overview

The software consists not only of a kernel driver that will support several different touch controllers. It also contains some additional modules which aid the actual driver in its function.

The USB Filter Driver

The UTD USB filter driver is the actual kernel driver that is installed for each of the supported touch devices in the device manager (in “Human Interface Devices”). It receives the USB data from the corresponding controller, interpretes and manipulates them as required and passes them up the driver stack. In this way it is responsible for the core functions of UTD such as positioning, edge acceleration, beep, etc.

The Mouse Filter Driver

The UTD mouse filter driver is installed on the virtual mouse device.
It is responsible for the mouse mode interactions like simulating right click and the positioning of the cursor.

The Configuration Panel

The UTD configuration panel is the user interface where all the settings of the UTD can be viewed and modified. These settings will be saved within the respective registry key.
The configuration panel also provides several additional interfaces for special purposes:

- A draw test interface for testing the calibration.
- The monitor mapping interface for easy assignment of touch controllers to display monitors.
- A monitor identification as the counting order of the UTD and the Windows OS may differ.
- An interface to set the right click boundary with visual feedback.

The User Application

The UTD user application is a piece of software which runs in the background and is responsible for sound output as well as reacting to registry or USB changes. It communicates with the driver directly. It will be started for each user logged in. The name is “wnutd_user_app.exe”.

If the user application is started with the parameter “help” further parameters are shown:

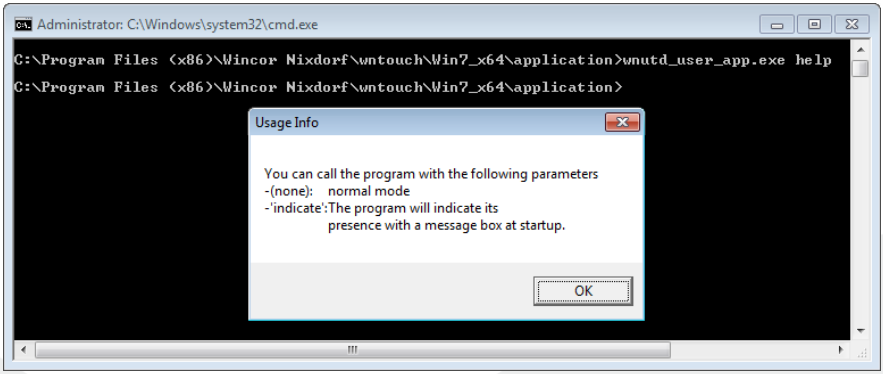


Figure 1: User Application Help

The Installer

The UTD installer installs the software suite with all its components and prerequisites.
See „Installation” on page 11 for details on the installation procedure.

The Windows Registry

All the configuration data and settings relevant for the UTD are stored in the Windows Registry and can be found in the Registry key and its sub keys

32 Bit:

HKEY_LOCAL_MACHINE\SOFTWARE\Wincor Nixdorf\WNUTD

64 Bit:

HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Wincor Nixdorf\WNUTD

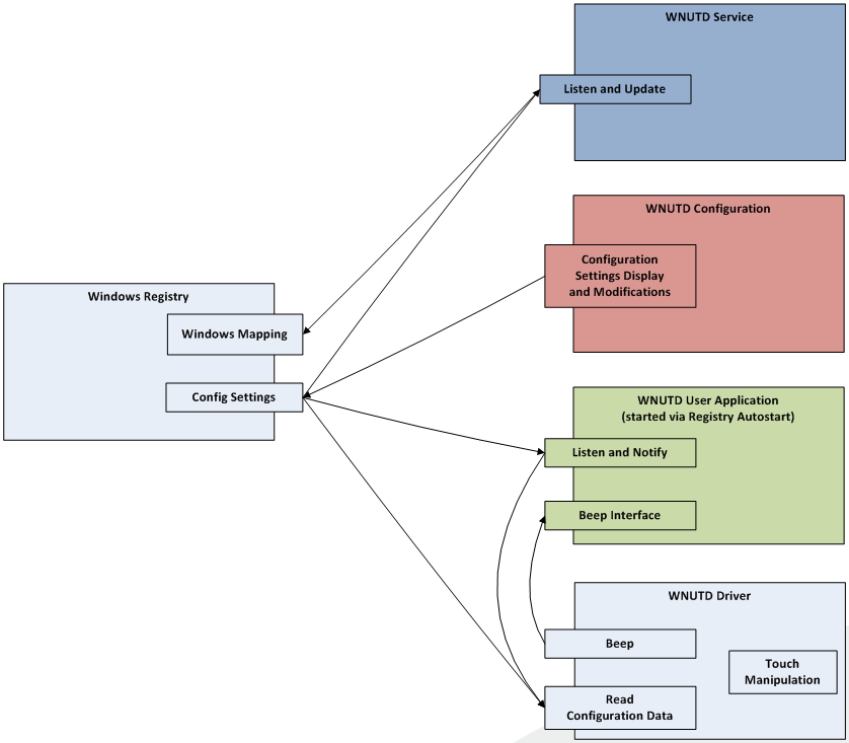


Figure 2: System Overview

Key Features

Touch Modes

In order to support various touchscreen applications and their different requirements, it is possible to configure UTD to manipulate the touch tap as follows:

Multi-Touch Mode

Touch input is possible with up to ten fingers simultaneously, based on the touch digitizer. This behaves like a normal windows touchscreen, therefore allows the use of Windows gestures, but adds UTD features like edge acceleration to the touchscreen. Multi-Touch mode is the default.

Single-Touch Mode

On touch input only one finger is allowed, all other fingers will be filtered. Apart from that it behaves like the Multi-Touch mode but only with single-touch
Windows gestures.

Tap-On-Touch

When the finger touches the screen, a finger down event is issued, followed immediately by a finger up event (i.e. a tap is issued). This results in a tap being executed where the screen is touched. Moving the finger on the screen does not affect the system.

Tap-On-Release

When the finger touches the screen nothing happens. Moving the finger on the screen does not affect the system. When the finger leaves the screen, a finger down event followed immediately by a finger up event is send (i.e. a tap is issued).

Mouse Mode

The touch input is transformed to mouse events. A mouse cursor is placed instead of the touch symbol. This mode might be needed for applications that do not handle touch input properly.
The Mouse mode supports most functions of the UTD but has some limitation as Calibration and screen panning is not possible. The Tap settings are obviously also only available for touch modes.

Beep and Sound On Touch

For many applications an audio feedback of the touching of the screen is required. UTD supports generic beeping as well as the playback of a configured PCM coded WAV file on touch.
Note that the touch mode has some influence on the exact behavior. In Tap-On-Touch the sound is issued as soon as a valid touch is registered. In Tap-On-Release the sound is issued in the moment that the end of a valid touch is registered.

Multi Monitor Support

UTD supports the listed touch controllers pointing to different monitors on one system. An mapping between the touch controllers and monitors can be done easily with a wizard.

Calibration

Some touchscreen technologies require a touchscreen calibration in order to get reliable touch information. The calibration process corrects the positioning of the cursor using user input.
For infrared and projected capacitive touch controllers it is usually not necessary to calibrate. There is usually only very little – if any – production variance and almost no deterioration of positioning over time that requires compensation by calibration.

Edge Acceleration

In some cases it might be hard to place a tap within the edge area of the screen (e.g. because of the way the touchscreen is set within its casing). The edge acceleration tries to alleviate this problem by placing the tap between the place where the touch actually happens and the very edge of the screen. The width of the area where the acceleration should be applied can be configured as well as the factor how much further to the edge the tap should be set.

Tap Adjustments

The behavior of the Tap event (previously Left Click event) can be configured to fulfill individual needs.

The **Global Touch Release Delay** determines the time in milliseconds after which a touch or release event gets valid. Touches that last shorter than the time specified will be ignored.

Minimum Duration determines the minimum delay in milliseconds from a valid touch to its corresponding release event passed to the OS. This setting can be used to define a minimum press time for tap events.

Maximum Duration determines the maximum delay in milliseconds from a valid touch to its corresponding release event passed to the OS. This setting can be used to define a maximum press time for tap events.

The last two settings are for Tap-On-Touch and Tap-On-Release only.

Hold

A Right Click event can be emulated after touching the screen for certain time.
The time until a Hold is executed and the duration of the event can be configured.
The feature Hold can be enabled or disabled and is only usable in Multi- and Single-Touch mode.

Enable/Disable of Events

Each configured touch controller can be set to a disabled state where no event are sent.

Mouse to touch

Pointer touchscreens like the BA83, which normally only support mouse input, can be modified to act as a touch device.

Installation

This chapter describes the installation of the Universal Touch Driver.

Prerequisites

In order to run correctly, the UTD software (or, more specifically: the configuration panel) depends on MSVC 2015 redistributable to be installed on the system. Therefore the MSVC 2015 redistributable is included in the installer and will be installed if necessary.

It is recommended to do the following before installing the UTD:
Plug the touch devices and arrange the desktop (multi-monitor-configuration) like in the final configuration and reboot the system.
In this case the system is in the same configuration like it will be every time after startup.
Install the driver and reboot again (installation procedure requests for a reboot).
After system is started, configure the UTD (registry keys or configuration wizard). It is recommended to reboot the system again to check afterwards, if all configuration parameters are like defined to exclude that there was an enumeration change. If all is fine, the configuration process is finished – otherwise the configuration must be corrected.
This method is most important for mass roll out scenarios via system image distribution (“Golden Build”) and scripted remote installation (with registry key adjustment).

Software Installation

Run the Installer „UTD_Setup.exe” and follow the Setup Wizard. The installer requires administrative rights. That means if the Windows UAC asks for permission to run the Installer with administrative rights, allow it to do so.

The Setup Wizard will guide through the installation process.

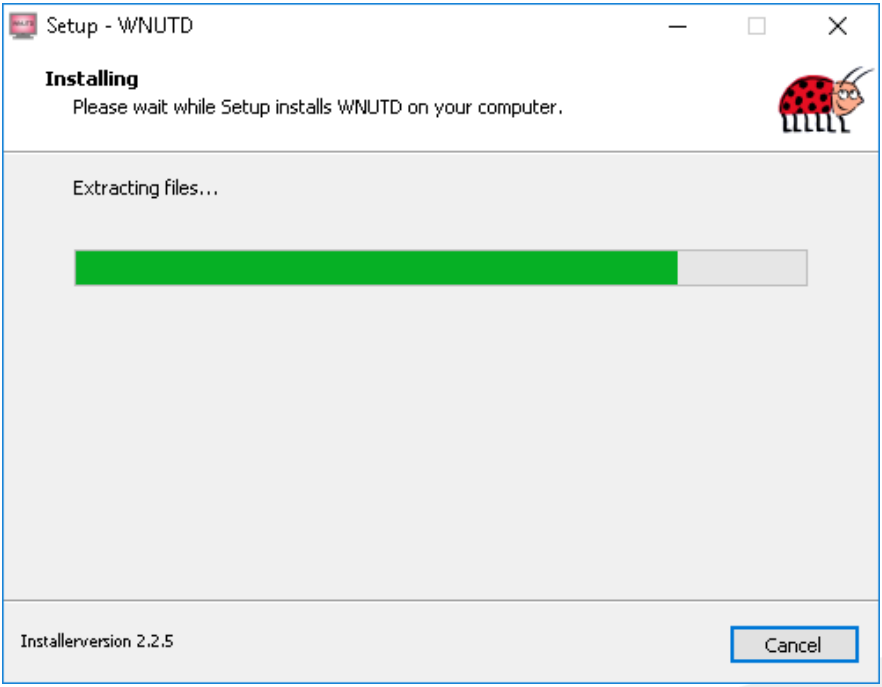


Figure 3: Setup Wizard

Installation Options

The Setup Wizard can be started like any other program with a double click without any parameters or from the command line with one or several of the following options:

/?

Lists the “Inno Setup” standard parameter. Additional installation parameters are described below.

/LOG

Specifying the parameter /LOG will cause the Setup Wizard to write a log file named „Debug Log *.txt” with detailed information about the installation process into the installation directory.
If the installation is not successful, the installation directory is not created and therefore the log file will be placed on the desktop of the current user.

/SILENT

If the Setup Wizard is started with the /SILENT parameter most of the installation will be run in the background using default settings.
As the user will not be presented the UTD EULA for acceptance, the EULA has to be accepted by specifying the parameter /ACCEPT_EULA.

/VERYSILENT

The complete installation will be run in background without any GUI if /VERYSILENT is specified as a command line parameter. This might be necessary for scripted or remote installations.
As the user will not be presented the UTD EULA for acceptance, the EULA has to be accepted by specifying the parameter /ACCEPT_EULA.
The installation started with /VERYSILENT will auto-restart the system on completion if not prevented by the parameter /NORESTART

/REGKEYFILE

With /REGKEYFILE <filename.reg> the content of the registry file ‘filename.reg’ will be imported to the registry. This can be used for installation of pre-configured settings during the installation.

/ACCEPT_EULA

/ACCEPT_EULA is a command line parameter to accept the end user license agreement (see „Appendix C – UTD End User License Agreement", page 44) when installing with the /SILENT or /VERYSILENT option. If used without those, the parameter has no effect.

/NORESTART

The command line parameter /NORESTART prevents the automatic system
restart after the installation. Note that if the system restarts after installation is suppressed, a manual system restart will be necessary for the UTD to be fully functional.

/NOWUSA

Specifying the parameter /NOWUSA will cause the Setup Wizard to skip the Windows 10 Universal C Runtime Update (KB2999226). This update is a requirement for Microsoft Visual Studio 2015 (MSVC 2015).
When the Windows Update Service is busy or blocked, the Windows Universal C Runtime Update will stuck in an infinite loop.
To fix this situation you got the following approaches:

1. Deactivate automatic Windows Updates and restart the computer
2. Install update manually and start Setup Wizard with /NOWUSA

The update can be found under "InstallPath\Windows6.1-KB2999226.msu" or downloaded from "https://support.microsoft.com/en-us/help/2999226/update-for-universal-c-runtime-in-windows"

Software Uninstallation

In order to uninstall the software select the item „UTD Uninstall” from the start menu group „ Diebold Nixdorf Universal Touch Driver” and complete the wizard. Alternatively start the uninstaller from a command prompt where also the optional parameters described below can be specified.

Uninstallation Options

/LOG

Specifying the parameter /LOG for the uninstallation will cause the uninstaller to write a log file named „Uninstall Log *.txt” with detailed information on the uninstallation process to the desktop of the current user.

/SILENT

The uninstallation will run without user interaction. A GUI is shown to display the progress.

/VERYSILENT

The uninstallation will run completely in the background without any GUI.

i When the uninstallation routine is completed, the UTD software is almost completely uninstalled and removed. It is however possible that the driver binary (.SYS file) remains in the drivers folder of Windows OS (usually %Systemroot%\system32\drivers).
So, to uninstall UTD completely from the system the file WNUniTouch.sys in the drivers folder has to be removed. This however is not recommended and should only be done if advised to do so.

Driver Selection

The kernel driver in the package is signed by Microsoft. The controllers listed in section “Identification of supported Touch ” are automatically bound to the driver “Diebold Nixdorf Touch Controller”.
The device manager shows the following (View is set to “Devices by connection”).

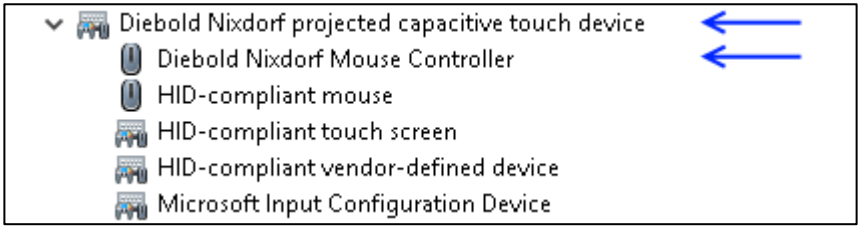


Figure 4: Device manager after UTD installation on touch device (e.g. BA9x)

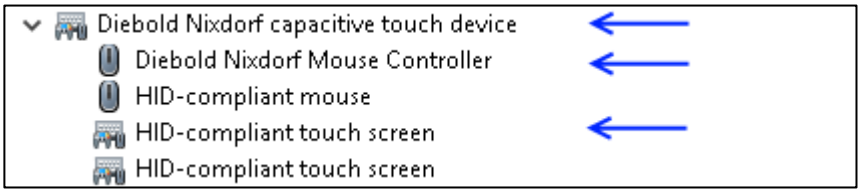


Figure 5: Device manager after UTD installation on pointer device (e.g. BA8x)

To change back to the “build-in” Windows touch driver, bind “USB Input Device” to the device instead of “Diebold Nixdorf Touch Controller” (Using the “Update Driver” button in the Device Properties window).

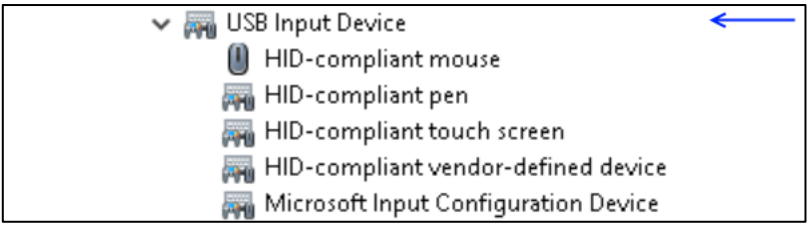


Figure 6: Device manager when changed back to Windows driver on touch device

Figure 7: Device manager when changed back to Windows driver on pointer device

A reboot is needed if the controller is switched to UTD again.

System Configuration

All configuration settings of UTD can be adjusted using the Configuration Tool. In order to start the configuration tool start „UTD Configuration” from the Start Menu’s „ Diebold Nixdorf Universal Touch Driver” group. Depending on the access rights for the UTD registry key, the configuration may only be allowed for Administrators. If that is the case the configuration tool will tell at startup that it was not started with sufficient rights. Then start „UTD Configuration” from the start menu by right clicking the entry and select „Run as administrator”.

If a software configuration is exported (Registry settings) and imported onto another system, it will only work if the new system uses the identical hardware configuration and the same previous interface setup.

Configuration Scenarios

The following recommendations guarantee the most flexible configuration and reduce the risk of wrong configuration. They are mentioned for experienced users, script based installations and rollout scenarios were different hardware setups are most likely. Other users should use the control panel with the Mapping Wizard.

One touch monitor only: It is recommended to leave the touch controller “not configured” and only change global settings if needed.

One touch monitor with additional non-touch monitors: The touch will be mapped to the primary display default. For other installations it is recommended
to use the Mapping Wizard or the command line to setup the mapping.

More than one touch monitor: It is needed to set all touch controllers to “configured”. Use the Mapping Wizard or the command line to setup the mapping.

Device Tab

In the device tab the touch controllers are listed and their mapping to a monitor can be configured. The list includes touch controllers that have been configured previously (connected and unconnected) and those that are connected regardless to their configuration state.

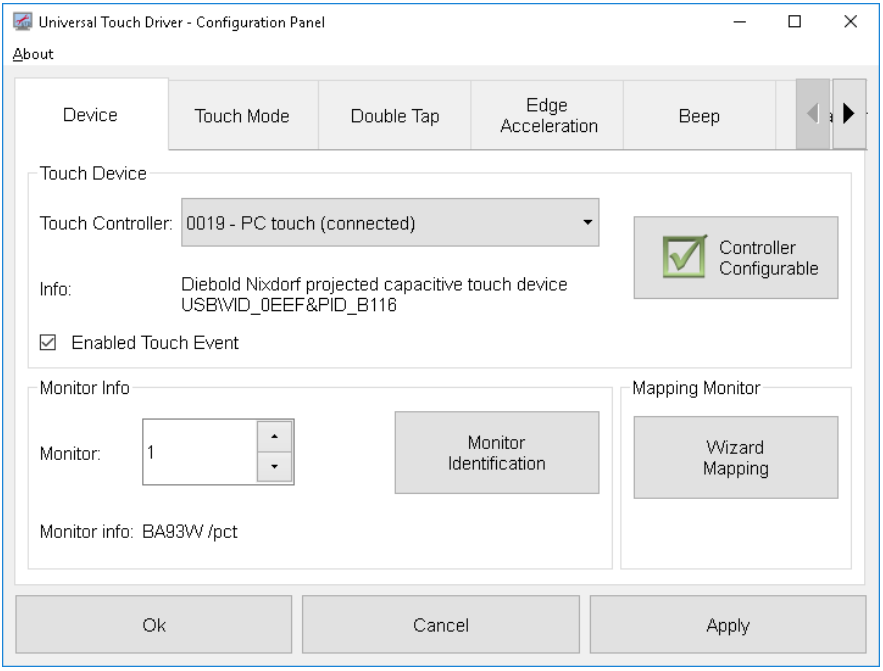


Figure 8: Device and Mapping configuration tab

Select a touch controller (numbered by their respective driver ID) from the dropdown box to display the dedicated information about the touch controller. The unique identifier for a touch controller is the driver ID which is set by Windows. Furthermore the monitor number and the monitor name, to which the device is mapped to, are shown. The checkbox below displays, if the device is enabled or disabled.

Pressing the button „**Controller not configured**" will change the status to „Controller configurable". This makes

it possible to set controller-specific settings e.g. mapping, beep and edge acceleration. Leaving a touch controller unconfigured, all touch events are mapped to the first monitor.

Pressing the button „**Controller configurable**" will change the status to "Controller not configured" and set all values for this device back to default. Even if a device was disabled ("Enabled Touch Event" unchecked) the device will now be enabled again. In this state it will not be possible to set controller specific settings and remove the touch controller from the configuration.

The **Mapping Wizard** can be used to select the touch controllers that are to be configured and the display monitors they are mapped to. Using the Mapping Wizard will automatically set the controllers to "configured" state. Touch only UTD supported device where the text is shown. Pressing "ESC" or "s" keys aborts the mapping of the current monitor.

The **Monitor Identification** button shows the monitor IDs which UTD uses and the devices which are mapped to it. The monitor IDs may differ from the order that the Windows OS uses.

Note that only the touch controllers set to "configured" within this Device tab can be individually configured in the other touch controller specific tabs. The maximum number of configurable devices is eight. If eight devices are already configured it is not possible to set another controller to configurable without 'un-configuring' some other controller first.

Touch Mode Tab

In the Touch Mode Tab the global touch mode can be selected (see „Touch Modes” on page 7 for details).

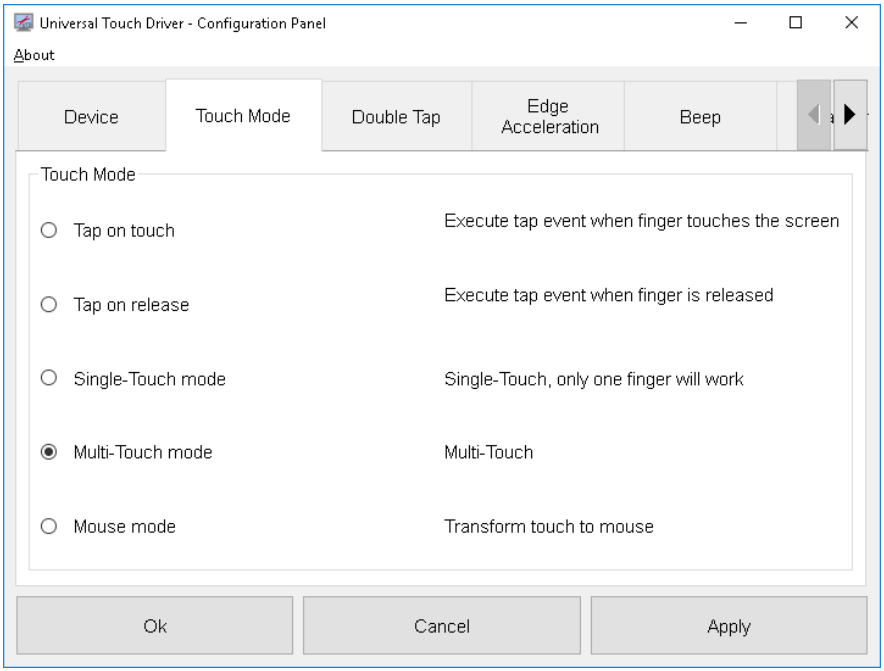


Figure 9: Touch mode configuration tab

Double Tap/Click Tab

Windows allows to define how quickly you have to tap the screen and the distance the pointer can move between taping when you want to double tap. With contemporary screen resolutions it is quite hard to be within the distance boundaries when double tapping a touchscreen.

To address this, it is possible to set the double tap configuration parameters from the Double Tap tab of the configuration tool. Note, that these settings are not specific to UTD but effect the Windows OS settings for the current user.

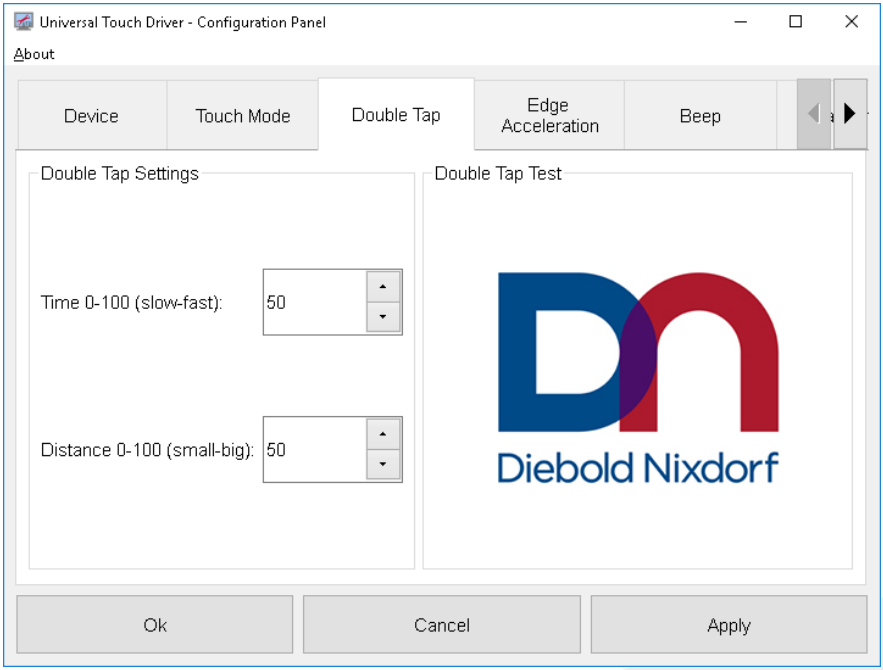


Figure 10: Double Tap tab

In the Touch Mode “Mouse”, Windows provides three settings for the double click behavior. They can be configured in the Double Click tab.

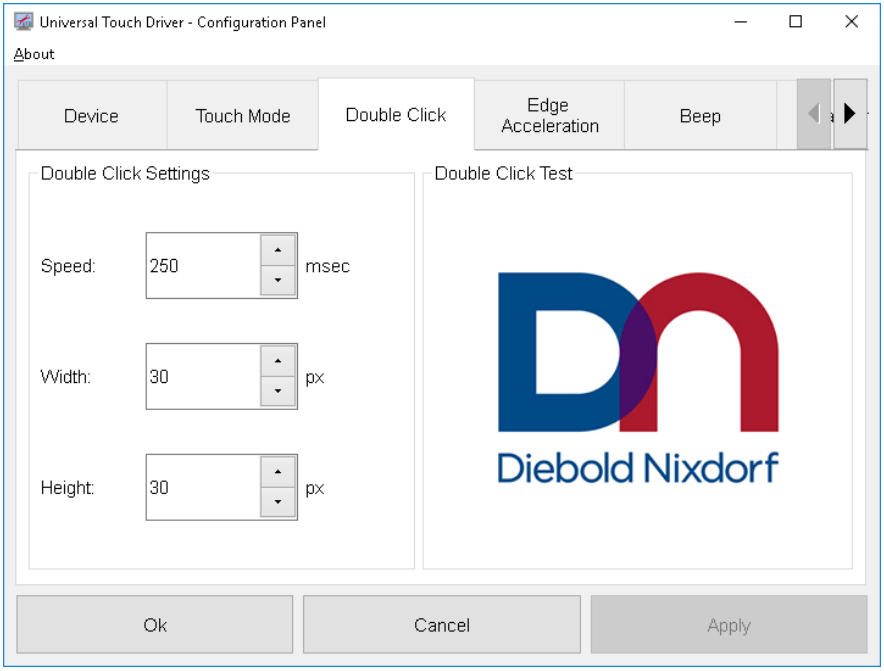


Figure 11: Double Click tab

Edge Acceleration Tab

Set horizontal and vertical edge acceleration border widths (distance from the edge of the screen) and acceleration multiplier (how fast the pointer will run to the edge of the screen) (see also „Edge Acceleration” on page 9). Check „global” for a global setting and uncheck the item for setting parameters for up to eight configured devices individually. Note, that the settings are per device and not per monitor/screen.

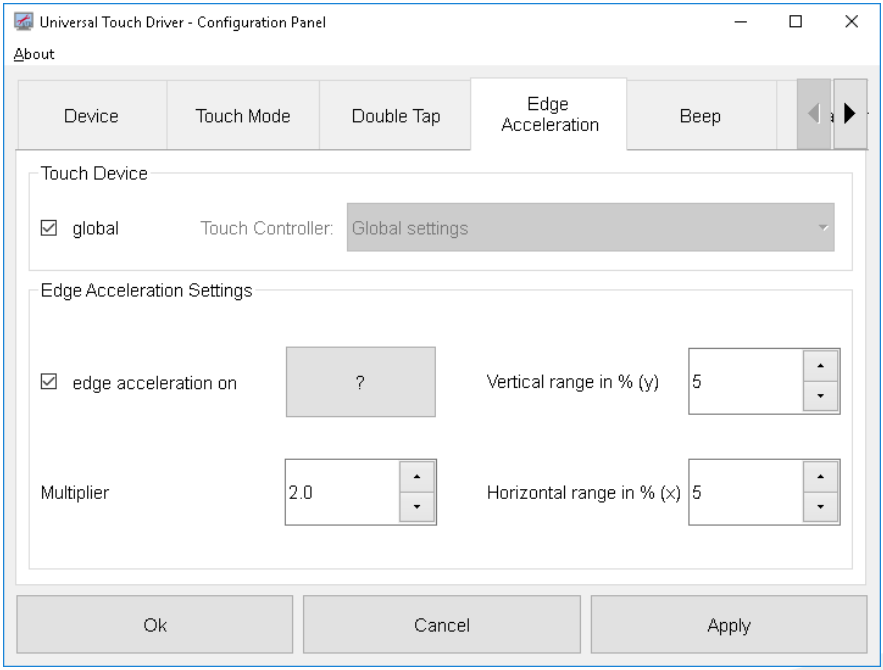


Figure 12: Edge Acceleration configuration tab

Clicking the <?> button will show a short explanation on the settings for edge acceleration.

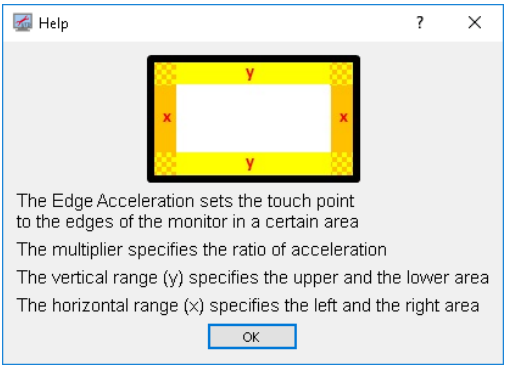


Figure 13: Edge acceleration help window

Beep Tab

In the Beep tab the settings for beeping or other sound output on click can be configured. Select a touch controller from the drop down box for device specific settings or check ‘global’ for global settings that will be applied to all (configured) touch controllers.

Note that only PCM coded wav files are supported for sound output. There are some generic beep sounds supplied within the „Sounds” subdirectory of the installation directory.

Note: Sound setting "System" has poor performance. This could lead to beeps lagging behind if touchscreen is touched faster than approx. 10 touches per second. The use of sound output on a soundcard is therefore recommended.

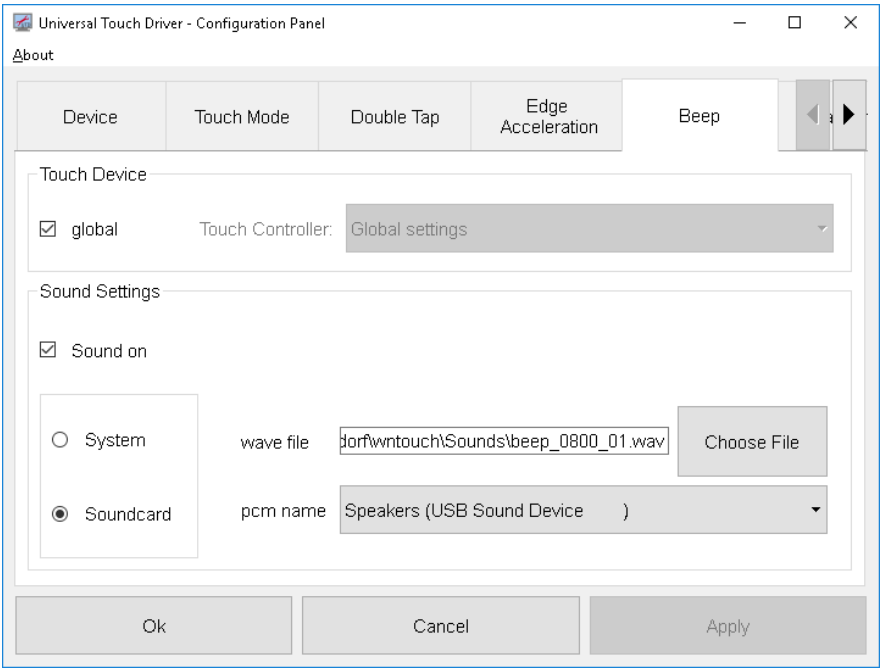


Figure 14: Beep and Sound configuration tab

Calibration Tab

In the calibration tab the calibration for all or a single selected monitor can be started by selecting the „Calibration wizard” button. Follow the wizard for the calibration process.

If a calibration is not satisfactory, it can be reset to null-calibration using the button „Calibration reset”.

Note that infrared and projected capacitive touch controllers usually do not need to be calibrated (see „Calibration” on page 8).

To see if the calibration was successful the “Draw Test” Button offers an interface on which the user can free draw on the screen.

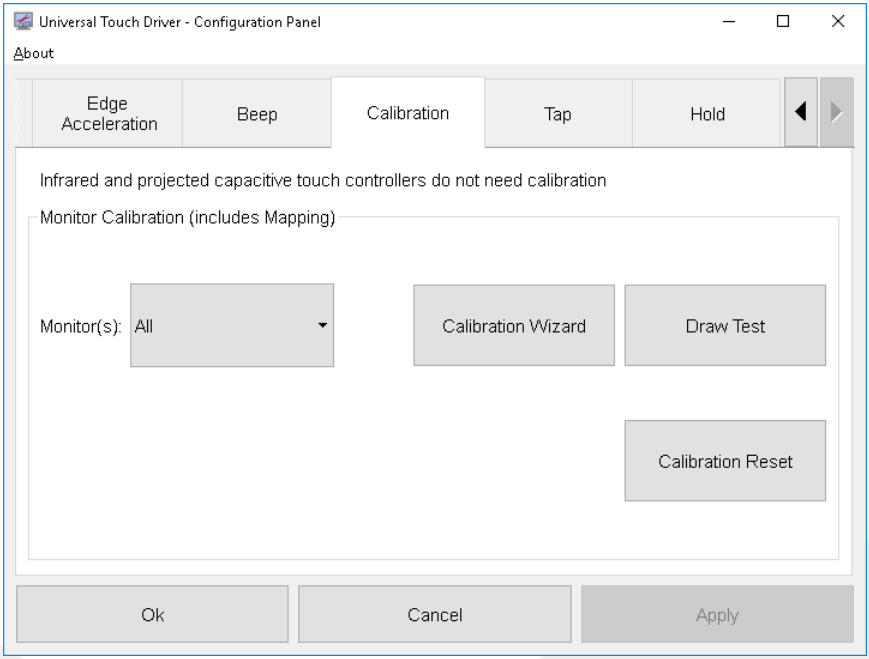


Figure 15: Calibration tab

Tap Tab

In this tab the tap settings (previously left click) for a configurable selected device and the global touch release delay can be adjusted.

The **Global Touch Release Delay** determines the time in milliseconds after which a touch or release event gets valid.

Minimum Duration determines the minimum delay in milliseconds from a valid touch to its corresponding release event passed to the OS.

Maximum Duration determines the maximum delay in milliseconds from a valid touch to its corresponding release event passed to the OS.

This tab is shown in touch modes only.

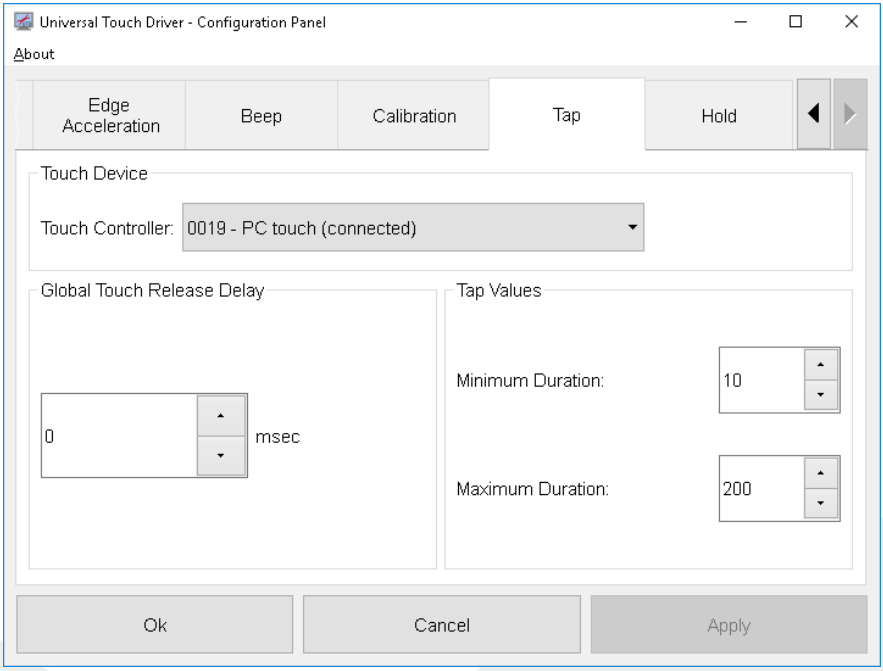


Figure 16: Tap tab

Hold Tab

In the hold tab, right click equivalent settings for a configurable selected device can be adjusted.

The **Enable Hold** checkbox enables/disables the right click emulation globally.

Speed determines the amount of time you must touch and hold before you can perform a right click equivalent.

Duration determines the amount of time during touch and hold to perform a right click equivalent.

Note, that these settings are not specific to UTD but effect the Windows OS settings for the current user.

This tab is shown in touch modes only.

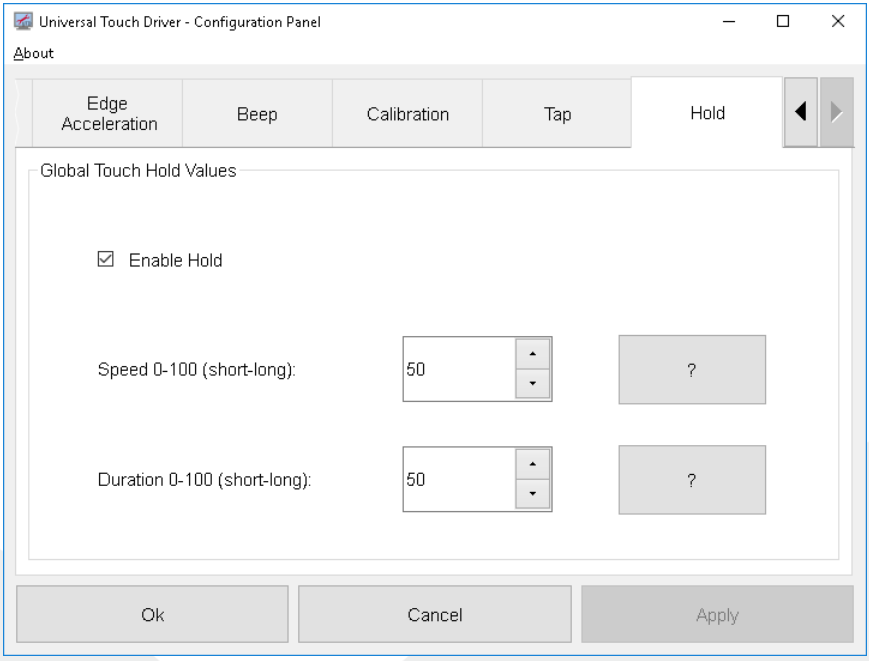


Figure 17: Hold tab

Right Click Tab

In this tab the settings for a right click on long presses can be adjusted.

By default, the right click settings can be configured globally for all (configured and un-configued) touch controller.

If the global settings is disabled, a touch controller device needs be selected first. Then the device needs to be set in the “configurable” state before it can be configured here.

The right click can be enabled/disabled, the speed (press duration) and boundary can be set.

This tab is shown in Mouse Mode only.

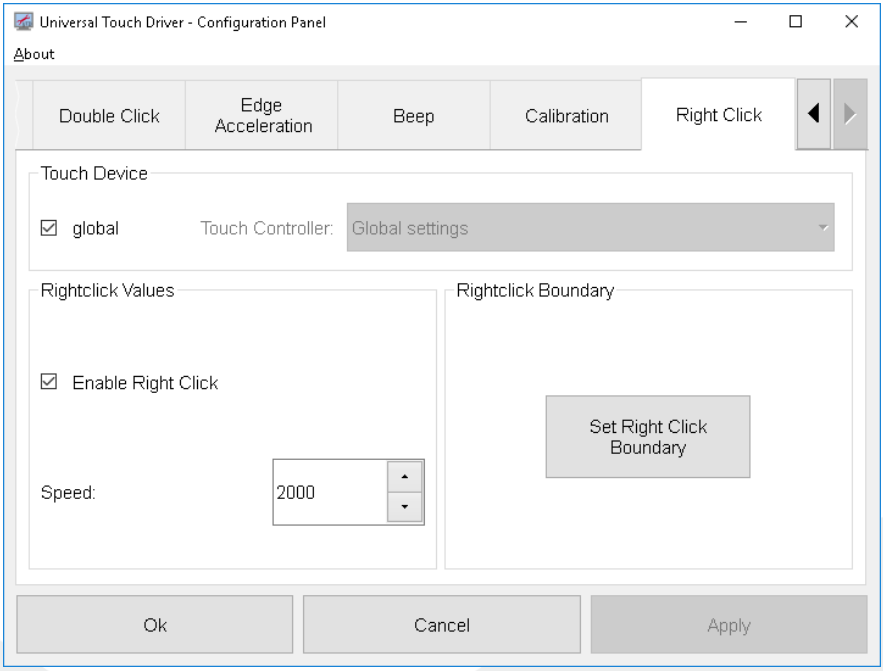


Figure 18: Right Click tab

Command Line

The Configuration Tool wnconfig.exe also offers a command line.

CALIBRATION

The option -CALIBRATION starts the calibration wizard.

DRAWTEST

The option -DRAWTEST shows the draw test screen.

WIZARD

The option -WIZARD starts the mapping wizard.

MAPPING

The option -MAPPING <Monitor> <Touch> has two optional parameter <Monitor> and <Touch>.
Without additional argument, the list of connected touch controller is printed.
<Monitor> is the ID of the monitor where the touch controller will be mapped.
<Touch> is a (partial) string of the list of connected touch controller.
The following are some examples:

- `wnconfig.exe -MAPPING > out.txt`
  - prints all connected devices to the file in the form: “0007 - PC touch USB\VID_0EEF&PID_72D0“
  - The output needs to be redirected. There is no output to stdout!
- `wnconfig.exe -MAPPING 2`
  - maps all connected devices to monitor 2.
- `wnconfig.exe -MAPPING 2 "0007 -"`
  - maps devices containing “0007 -” in the list to monitor 2
  - “” are used because of the containing space
- `wnconfig.exe -MAPPING 2 PID_72D0`
  - maps devices containing “PID_72D0” in the list to monitor 2.
- `wnconfig.exe -MAPPING 2 "PC touch"`
  - maps devices containing “PC touch” in the list to monitor 2.
  - “” are used because of the containing space

General

Whenever any of the settings have been changed, it is possible to press „**Apply**” to activate the settings immediately and save them persistently within the registry. When „**OK**” is pressed it has the same effect but also exits the configuration tool.

Restrictions

- Changes to the screen setup may only be applied after some seconds.
- A touch controller/touch monitor is identified by VID, PID and USB-Port. If the same touch controller is moved to another USB port it has to be reconfigured. If a touch controller with the same PID/VID is connected to the same port where another one was disconnected it uses the same settings as the previous controller.
- Default double tap and hold settings during installation and from the configuration tool only affect the current user.
- It is not recommended to manually change the UTD registry key unless it is done with access rights in mind. The key always has to be readable by a normal, non-privileged user.
- The Mapping Wizard does not support cloned monitors. Use the command line option to configure the cloning scenario.
- The configuration tool may display that it is running with an older version than it was built for. This is OK if a released version of UTD is used.
- Do not downgrade to an older version. Uninstall the current version first.
- In mouse mode the following functions can not be used: (Touch) Calibration, (Touch) Tap settings. The mouse mode is not working if the screen is panning which means that the screen resolution leads to a non-full screen mode.

Identifying the Software Versions

There are different software modules combined within the UTD package. Therefore there is one software version for the package itself (“driver version”) and several software versions for the software modules.

The Installer Version

The installer version can be seen in the bottom left corner of the installer wizard during the installation. The Fileversion can be seen in the Details tab od the file properties dialog.

The Configuration Tool Version

The configuration tool version can be found in the about box of the configuration tool GUI. Select „About” from the menu bar for displaying it.

The Kernel Driver Version

The currently active driver version is also shown in the about box of the configuration tool GUI.

The User Application Version

The user application version is also shown in the about box of the configuration tool GUI and can furthermore be retrieved by calling the user application with the command line parameter „version”.

Version Information

The driver package 2.2.9 contains the following component versions

Component	Version
Installer Fileversion	2.2.14 2.2.14
Kernel driver	2.2.10.0
Configuration tool	2.2.13
Service	2.2.3
User application	2.2.4

Version History

Version 1.0.19
- Support for BA8x series

Version 1.1.17
- Support for BA9x series (as pointer devices)

Version 1.1.23
- Support for iPOS+ Advance 10-point touch (0xB10E)

Version 2.1.21
- Support of Windows 8.1 and Windows 10
- Support of multi-touch input instead of pointer input

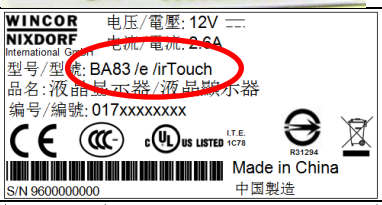
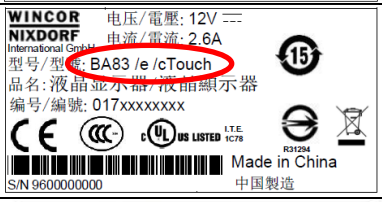
Version 2.1.24
- Monitor Mapping is working without Adminstrator rights

Version 2.2.9
- Mouse Mode added
- Support for iPOS+ SL and XL added

Version 2.2.14
- Support for updated BA9x
- Support for displays D1xxx and BETTLE A1xxx
- Support for Kiosk displays
- Right-click can be configured also globally (not only per configured device)

Identification of supported Touch Monitors

This driver supports the following Diebold Nixdorf touch screens. They can be identified by the name, the type label or by its USB IDs. The USB ID can be read in the operating system.

Touch screen name	Type label	USB IDs
- BA80 /rTouch		Vendor=1BFD Product=1688
- BA82 /irTouch - BA82 /e /irTouch - BA83 /irTouch - BA83 /e /irTouch		Vendor=6615 Product=0012
- BA82 /cTouch - BA82 /e /cTouch - BA83 /e /cTouch		Vendor=0596 Product=0003
- BA90 /pcTouch - BA92 /pcTouch - BA93 /pcTouch - BA93w /pcTouch - iPOS+ /pcTouch		Vendor=0EEF Product=7200 or Product=B10D or Product=B114 or Product=B115 or Product=B116 or Product=C116 or Product=C113 or Product=C114

- BA92 /rTouch - BA93 /rTouch		Vendor=0EEF Product=0001
- BA91w /pcTouch		Vendor=0EEF Product=B10C or Product=B110
- BEETLE iPOS+ Advanced /rTouch - BEETLE iPOS+ Advanced /pcTouch - BEETLE iPOS+ Advanced /pcTouch 10pt		Vendor=0EEF Product=0001 or Product=7201 or Product=B100 or Product=B10E or Product=B10F
- BEETLE iPOS+ SL - BEETLE iPOS+ XL		Vendor=0EEF Product=B113 or Product=C111
- Kiosk Displays	15" Display 19" PCAP Display 22" PCAP Display 27” PCAP Display 32” PCAP Display	Vendor=0EEF Product= 72C4 or Product= 7904 or Product= A100 or Product= C000
- D1101 - D1150, A10xx - D1156, A11xx		Vendor=0EEF Product= C11C or Product= C11E or Product= C11D

The Touch Monitors of the BA7x family and the BA83 /cTouch (Vendor=0596 Product=0001) are not supported by this version of UTD.

Appendix A – Default Settings

These are default settings of the current version of the package when no registry file was added to the installer.

Parameter	Value
Touch Mode	Multi-Touch Mode
Edge Acceleration	Disabled
Beep	Disabled
Right Click	Enabled
Mouse To Touch	Enabled

Appendix B – Registry Keys

All examples are listed for Windows 7 64 bit.

Example for Sound-on-Touch

```
Windows Registry Editor Version 5.00

[HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Wincor Nixdorf\WNUTD]
"GlobalSoundFile"="C:\\Program Files (x86)\\Diebold
                   Nixdorf\\wntouch\\Sounds\\beep_0800_01.wav"
"GlobalSoundType"=dword:00000002
"GlobalSoundActivated"=dword:00000001
"GlobalSoundCard"="default"
"GlobalBeepDevice"="/dev/console"
```

Global settings

[HKEY_LOCAL_MACHINE\SOFTWARE*Wow6432Node*\Wincor Nixdorf\WNUTD]

- DPINST_AVAILABLE (default = TRUE)
  TRUE if the installer tool “dpinst.exe” is available on the system.
- GlobalBeepDevice (default = /dev/console)
  Path to the beep sound output device.
  Only valid if GlobalSoundActivated == TRUE.
- GlobalEdgeActivated (default = FALSE)
  TRUE enables edge acceleration.
  Only valid if GlobalEdgePerDevice == FALSE.
- GlobalEdgeMultiplier (default = 2000)
  Acceleration multiplier * 1000.
  Only valid if GlobalEdgePerDevice == FALSE.
- GlobalEdgePerDevice (default = FALSE)
  TRUE selects edge acceleration per device.
- GlobalEdgeRangeH (default = 5)
  Left and right frame width where edge acceleration is applied (in percent).
  Only valid if GlobalEdgePerDevice == FALSE
- GlobalEdgeRangeV (default = 5)
  Top and bottom frame width where edge acceleration is applied (in percent).
  Only valid if GlobalEdgePerDevice == FALSE
- GlobalSoundActivated (default = TRUE)
  TRUE activates beep sound.
  Only valid if GlobalSoundPerDevice == FALSE.
- GlobalSoundCard (default = default)
  Sound device to play beep sounds.
  Only valid if GlobalSoundPerDevice == FALSE.

- GlobalSoundFile (default = C:\Program Files\Diebold Nixdorf\wntouch\Sounds\beep_0800_01.wav)
  Path to a .wav file played as beep sound.
  Only valid if GlobalSoundPerDevice == FALSE.
- GlobalSoundPerDevice (default = FALSE)
  TRUE selects sound per device.
- GlobalSoundType (default = 1)
  0 = Off, 1 = System, 2 = Soundcard.
  Only valid if GlobalSoundPerDevice == FALSE.
- GlobalTouchMode (default = 3)
  0 = Tap-On-Release, 1 = Tap-On-Touch, 2 = Single-Touch mode, 3 = Multi-Touch mode, 4 = Mouse mode.
  Only valid if GlobalTouchModePerDevice == FALSE.
- GlobalTouchModePerDevice (default = FALSE)
  TRUE selects touch mode per device.
- GlobalTouchReleaseDelay (default = 0)
  Time in milliseconds, after which a touch or release event gets valid.
- GlobalRightclickPerDevice (default = FALSE)
  TRUE selects right click per device.
- GlobalRightclickDelay (default = 2000)
  Time in milliseconds of the pressed event after which the right click event is executed.
- GlobalRightclickDuration (default = 50)
  Time in milliseconds of the duration of the right click event.
- GlobalRightclickEnabled (default = TRUE)
  TRUE enables right click.
  Only valid if GlobalRightclickPerDevice == FALSE.
- GlobalRightclickBoundary (default = 64)
  Sets the size of the area in with pressed events are detected as one event.

Device settings

[HKEY_LOCAL_MACHINE\SOFTWARE*Wow6432Node*\Wincor Nixdorf\WNUTD\device{1,8}]

- BeepDevice
  Path to the beep sound output device.
  Only valid if GlobalSoundActivated == FALSE.
- HardwareID
  Device hardware id (vendor and product ids), e.g. “USB\VID_0EEF&PID_B10D”
- InstanceID
  Device Instance id, e.g. “USB\VID_0EEF&PID_B10D\5&35F564D4&0&2”.
- DeviceKey
  Device key, e.g. “{4d36e96f-e325-11ce-bfc1-08002be10318}\0012”
- DeviceName
  Diebold Nixdorf projected capacitive touch device
- EdgeActivated (default = FALSE)
  TRUE enables edge acceleration.
  Only valid if GlobalEdgePerDevice == TRUE.
- EdgeMultiplier (default = 2000)
  Acceleration multiplier * 1000.
  Only valid if GlobalEdgePerDevice == TRUE.
- EdgeRangeH (default = 5)
  Left and right frame width where edge acceleration is applied (in percent).
  Only valid if GlobalEdgePerDevice == TRUE.

- EdgeRangeV (default = 5)
  Top and bottom frame width where edge acceleration is applied (in percent).
  Only valid if GlobalEdgePerDevice == TRUE.
- MappedMonitor (default = 1)
  Index of mapped monitor.
- MaxLeftclickDuration (default = 200)
  Maximum tap duration (touch/release distance) in milliseconds.
- MinLeftclickDuration (default = 10)
  Minimum tap duration (touch/release distance) in milliseconds.
- SoundActivated (default = FALSE)
  TRUE activates beep sound.
  Only valid if GlobalSoundPerDevice == TRUE.
- SoundCard (default = default)
  Sound device to play beep sounds.
  Only valid if GlobalSoundPerDevice == TRUE.
- SoundFile (default = C:\Program Files\Diebold Nixdorf\wntouch\Sounds\beep_0800_01.wav)
  Path to a .wav file played as beep sound.
  Only valid if GlobalSoundPerDevice == TRUE.
- SoundType (default = 1)
  0 = Off, 1 = System, 2 = Soundcard.
  Only valid if GlobalSoundPerDevice == TRUE.
- TouchEventsToOSEnabled (default = TRUE)
  TRUE enables passing of touch events from the device to the operating system.
- TouchMode (default = 3)
  0 = Tap-On-Release, 1 = Tap-On-Touch, 2 = Single-Touch mode, 3 = Multi-Touch mode, 4 = Mouse mode.
  Only valid if GlobalTouchModePerDevice == TRUE.
- Rotation (default = 0)
  Rotates the display clockwise by 90°, 180° or 270°, e.g. 90.

Appendix C –
UTD End User License Agreement

Diebold Nixdorf Systems GmbH

Universal Touch Driver for Diebold Nixdorf Touch Displays

DISCLAIMER

This software and its documentation consists of copyright protected materials. All copyrights and other intellectual property rights are exclusively under the owner-ship of Diebold Nixdorf. Any use or copy of the content outside the normal use or any transfer or deployment to any third party are subject to the respective writ-ten approval of Diebold Nixdorf.

DECLARATION OF CONSENT for the

Universal Touch Driver (UTD)

by Diebold Nixdorf Systems GmbH (Diebold Nixdorf)

Before continuing the installation please read the following Declaration of Consent. If you agree to all the conditions of use, select „I accept...“. If you do not agree with some or any of the conditions of use, select „I do not accept...“.

This product is only allowed to be installed if

- You use Diebold Nixdorf hardware with embedded touch components,
- You have read and accepted this Declaration of Consent.

Important: Please read this Declaration of Consent very carefully before installing the product. By using this product you declare that you have read the Declaration of Consent and that you consent to all the items listed therein.

A) Diebold Nixdorf delivers a data media containing a computer program (this Program), a User Manual and the relevant documents (together referred to as „Product“), and grants the right to use the Product on the terms stated in this Declaration of Consent.

B) You have the non-exclusive right to use the Product unchanged on Diebold Nixdorf hardware with embedded touch components. You will ensure that the software products, copies thereof and the documentation are not made available to third parties without the prior consent of Diebold Nixdorf in writing.

C) The product may not be used or copied in ways other than those described in this Declaration of Consent. You will not redevelop, disassemble or recompile the software product or separate or exchange any part of the program from the complete package. You will not work around any technical limitations of the software. You also may not lease or lend the software.

D) Any person that has valid access to your computer or internal network may copy and use the documentation for internal reference purposes.

E) We also provide other vendors’ products on this installation media. These products are provided exclusively under the conditions stipulated by the holder of the rights to the products concerned. Use these products is at your own risk. Diebold Nixdorf did not examine the products for mistakes or viruses and excludes every liability and warranty for these products.

F) The software is provided „as is”. You bear all risks of using it. Diebold Nixdorf gives no warranties, guarantees or conditions. When allowed by local laws Diebold Nixdorf excludes implied warranties of merchantability, fitness for a particular purpose and non-infringement agreements.

UTD End User License Agreement <V2.0>

Diebold Nixdorf Systems GmbH
Heinz-Nixdorf-Ring 1
D-33106 Paderborn