WINCOR NIXDORF

Retail Division - Technical Information

BEETLE Systems

Touch Driver MT7.13.4

for

Wincor Nixdorf displays

BA72/BA73

BA82/BA83

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Contents

1.0 Summery / Overview

Device Family	BEETLE / System Components; Peripherals / Displays; Mainboards
Category	Software; Hardware Driver
Software Designator	Wincor Nixdorf
Software Revision	MT7.13 Build4
Type of Software	Hardware Driver
Supported Hardware	Wincor Nixdorf displays: BA72 / BA73 and BA82 / BA83 Wincor Nixdorf mainboards: F2std, G1imp, H1std, G41std
Operating Systems	Windows 7 (32bit); Windows XP (SP3); POSready 2009; WEPOS; Windows 2003 Server R2 (with restrictions)
Scope of Application	Service and Customer IT

2.0 Introduction

The information given in this document is based on hardware, BIOS and software used during WN internal test and may change with new releases of BIOS and drivers.

This description is intended only for skilled personnel. Accordingly, pre-requisite to using this description is the adequate technical expertise in software and hardware configuration in the POS field.

3.0 Contents of DOWNLOAD.ZIP

Win7.WinXP.Driver.MT7.13.4*.*	Windows driver package release
MicroTouch Software User Guide 2011*.*	Driver manual, imported from Micro Touch
Windows.TwFactory.Samples*.*	TwFactory.Cfg (see according chaptrer here)
README.PDF	This information

4.0 General Remarks

These drivers and tools are already provided with actual pre installed BEETLE systems. If you do your own installation, please have a frequent look to the Wincor-Nixdorf web site and download actual driver and tool releases.

This document describes the driver which is valid for WN touch solutions based on 3M / Micro Touch panels with touch over COM included as 2-wire RS232 connection of WN panel link interface (BA7x) or touch over USB (BA82/BA83). The WN piggy back configuration (PCI SM712 based display controller + WN PCI COM board) inclu-des an internal flex cable that provides the needed RS232 signals.

The Micro Touch panels are implemented in displays with the following labels:
BA72A-2, BA73A-2, etc… BA82 c-touch, BA83 c-touch

➔   **All information given in this document is related to HARDWARE, BIOS and SOFTWARE used while WN internal qualification and may change with newer releases of BIOS / FIRMWARE or drivers!**

For further details not provided here see WN manual of touch display (BAxy) and Micro Touch User Guide (PDF) included in this archive…

4.1   Features / improvements / highlights

- First WN qualified 3M / MicroTouch driver for Windows 7.

- Solves sporadic Windows blue screen (BSOD) problems with previously mentioned piggy back solution.
  Which is WN PCI COM card and WN SM712 based graphics card (VGA/4, PLINK)

4.2   Common problems or restrictions

- A **mix up of different touch technologies** in a multi screen configuration is not supported,
  because the drivers from different OEM do not cooperate with MT7.

- During installation of the driver, you will be asked for type of controller.
  Select the legacy one and **do not select "HID traditional mouse driver"!**

- **Windows shutdown blocked?** We could see such a behaviour during our lab tests sporadically and always only once after installation procedure was done! If the Windows shutdown screen remains too long, then press ALT+TAB keys and change to **"GINA UI"**. Next press ALT+F4 (terminate Gina UI) and wait a few seconds…

- Accesing **MicroTouch help pages** by a click on HELP button, requires a web browser, to be installed before.

- If **driver is un-installed** it leaves registry entries and files on disk. Such files are all those the user changed or added to MicroTouch folders (e.g. TwFactory.Cfg). This feature does not influence the function of other touch drivers installed afterwards.

- **Screen rotation** and **screen panning** – as offered in sys tray tools for Intel onboard graphics - is not supported by touch driver 7.13 all builds.

- The **calibration tool is not automatically shown** in case of resolution change,
  like it was with legacy driver 5.xx.

- The **calibration tool** does not give any success indicator (beep or colour change) like we know from 5.xx release! Only the last / 3rd touch will be acknowledged by a beep.

- **Change relative position of Windows screens**

  If you exchange (virtual) position of screens by Windows display properties - by mouse click (right button) on desktop - and older WN hardware and according older Intel Graphics Driver is used, then the touch on second screen may not work anymore. With newer hardware and drivers we could not see such a bahaviour!
  How to solve?

  First open Windows properties and shift screens. This action needs to be done to inform the touch driver about new screen assignment. The side effect may be a dark secondary screen (no contents) - a "feature" of older Intel chipset graphics driver.

  Next start Intel sys tray tool and perform same action here again! This needs to be done to inform the Intel driver about new assignment. Now, primary screen is changed and touch is related to correct screen!

- If more than one screen attached, the **multi monitor manager** needs to be used to assign screens. It is <u>not</u> automatically started, like it was seen with traditional release 5.xx.

- There is <u>no way</u> to make a certain BA82/BA83 touch of **multiple touches beep** if touched !!! Since the BA82/BA83 internal device is a standard Windows USB sound / audio "card", it can not be selected dynamically. Windows supportes only one sound device at the time.
  You can beep either on … system speaker … OR … on system sound device … OR … on first BA8x USB sound … OR … on second BA8x USB sound …, but you may select different sound files to be played if touch down or up is detected

- The driver can not be installed unattied, if **Windows 2003 server** is used. You have to click (and close) Windows warning dialogs.

4.3   Additional tools and information on 3M / MicroTouch web site

Start your favorite web search site, type "3M Microtouch Touchscreen Drivers" and find newest "MT7 software diagnostics utility", "MT7 gesture API", etc…

We tested the MT7 driver release of download.zip archive on our hardware and operating system platforms. The additional 3M / MicroTouch tools are not included in our tests.

5.0 Installation

For all operating systems, you need to **prepare the BEETLE touch usage <u>before</u> touch installation.** Otherwise Touch Ware will <u>not</u> find related COM port automatically.

> If not done before, restart BEETLE and run **BIOS setup**: Set touch rerouting to COM1:, COM2:or COM5: ("basic" motherboards); for the new G41 motherboard it is COM4:.

> If once a BEETLE RS232 port is rerouted onboard for touch purpose, it is not available for external usage anymore. Do not connect any device to the related DSUB9 connector!

> If BA82/BA83 (USB) is used, then you do not need to reroute COM ports!

> WN delivers mainboards with touch ready configuration (re-routed touch ports as mentioend here).

The Windows touch driver will search & find controller at all COM port (COM1: ... COMx:) and USB ports of course at each system start up! → *No manual setup needed, if preparations done before!*

Exception: If you already forbit to search touch controller at these COM ports in "TwFactory.Cfg" before installation, then it will not be found automatically. See according "TwFactory" chapter

5.1   First touch calibration

After software installation, you may need to calibrate the touch. The calibration is valid for actual screen resolution only. The touch calibration needs to be (re)done for each screen resolution!

5.2   More install info

Please read the MicroTouch PDF in download archive…

6.0 Setup and unattended configuration by TwFactory.Cfg file

To adapt touch behaviour to special requirements 3M / MicroTouch provides the `TwFactory.Cfg` file.

- Its good practise to change the file, located in Micro Touch installation folder **before start of installation**.

- You also may change the file and (re)load the configuration contents after driver installation
  by a click on the **Software Reset button of MT control panel** → Tools

  Since you usually are not an administrator on a Windows 7 systems, it is good practice to copy "TwFactory.Cfg" file from program files sub folder "MT 7" to "MyDocuments" folder, open & change it there and finally copy it back to MT7 program folder.

- The commandline "**`TwCfgUtil.Exe /u <cfg file name>`**" (re)loads the contents of a Cfg file, too.

6.1   Trouble shooting

Entries in TwFactory.Cfg are case sensitive!

If your setup does not work as expected, check the spelling first. Never leave empty line between entries!

6.2   Samples

Some examples of TwFactory.Cfg, based on our customer support experience:

- The **COM port plug and play feature at Windows boot up**.
  The driver searches touch controllers on all COM ports at each Windows start up. Changed BIOS touch routing or new touch devices are found automatically! The search procedure tests each COM ports with all known interface parameters for a connected touch controller.

  If the COM port plug and play feature causes misbehaviour of any RS232 peripheral (fiscal printers may be quiet sensitive), disable search on certain COM port by the "**SerialPortNoSearch**" entry in "**TwFactory.Cfg**" file.

  This example excludes all other ports, except the COM2: touch port…

```
<touch>
 SerialPortNoSearch=1-1,3-8
</touch>
```
You may disable all COM ports, if USB based touch of BA82/BA83 is used.
This increases the touch ready time during Windows (re)boot.

- You may speed up touch driver loading a little more, if you inform the setup procedure about (fixed) touch parameters. Additional to port search exclusion, it is possible to pass the WN traditional, fixed baud rate.

```
<touch>
 SerialBaud=2400
</touch>
```
All BA7x with 3M touch technology are delivered with 2400 baud, therefore the touch ware installer does not need to try others. If you performed a controller reset by 3M control panel, then the baud rate is set to 9600. It is good strategy not to click this button – there is no way back to 2400 baud!!!

- If you want to disable the beep each time the driver finds a touch controller, add these lines to "TwFactory.Cfg".

```
<touch>
 ConnectionBeep=0
</touch>
```

- If beep on touch should be send to BA82/BA83 internal stereo speaker, follow these instructions:

```
<touch>
TouchDownSound=2
</touch>
```

You have to wait until Windows installed its generic driver for BA83 USB sound.
There is no beep available before!

Once changed by TouchWare dialog the touch beep will be redirected to system speaker until next reboot or click on "reset to factory" button!

If BA72/BA73 is used, system beep always is rerouted to display by hardware!

- Multiple USB touch configurations may also be handled in such "XML style" blocks. First readout the controller ID (USB / COM), next use it in cfg file. If touch screens are always connected to the same USB / COM ports of always the same WN mainboards, then the touch ID numbering does not change and you can use a unique cfg file for all systems installed in your stores.
This sample enables only one of both USB touch screens:

```
<Touch>
<Instance="Screen Left">
TouchRegionAction=4
TouchScreenIdentifier="USB00000000"
</Instance>
<Instance="Screen Right">
TouchRegionAction=0
TouchScreenIdentifier="USB00000001"
</Instance>
</Touch>
```
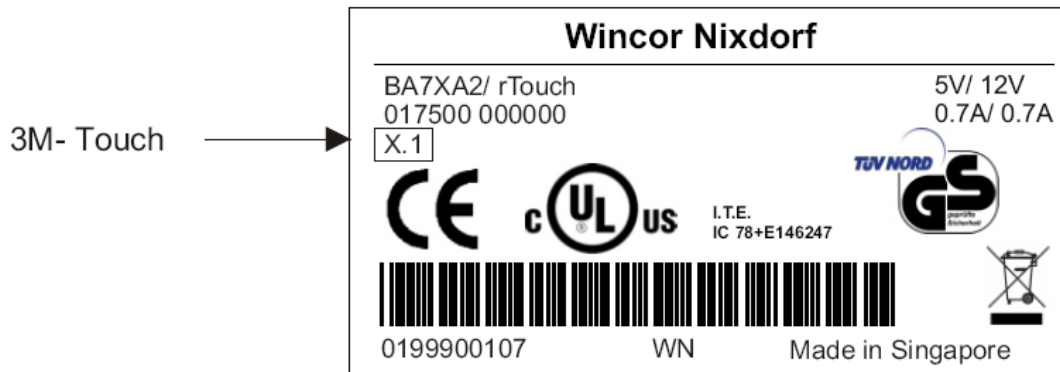
- This configuration causes a different sound for each RS232 based touch screen:

```
<Touch>
<Instance="Screen Left">
TouchScreenIdentifier="PORTCOM2"
TouchDownSound=3
TouchDownSoundFile=" C:\Windows\Media\Start.wav"
</Instance>
<Instance="Screen Right">
TouchScreenIdentifier="PORTCOM5"
TouchDownSound=3
TouchDownSoundFile="C:\Windows\Media\Tada.wav"
</Instance>
</Touch>
```

- If beep on touch settings is changed by TwFactory.Cfg, then the buttons in MicroTouch control panel are blank, until you click them. They loose all automatically set parameters until next setup.

- For more **"TwFactory.Cfg"** options see ParamDoc.HTML...
A click on button "restore factory settings" will cause the driver to be re-adapted to settings of "TwFactory.Cfg".

7.0 How to identify 3M technology / Micro Touch display?

The picture shows a sample of a BA7x type label. The last digit in the marked field indicates the technology. The "1" signifies a OEM product of 3M. When the digits "X.X" are missing on the type label and the display has a touch screen, it is a matter of 3M technology.

The type label may show "**BA82 /cTouch**" or "**BA83 /cTouch**" instead of "BA7XA2/ rTouch