

TOSHIBA

TOSHIBA POS Terminal

ST-A20

Windows Setup Guide

Windows 2000 / XP / Vista / 7 /

WEPOS / POSReady 2009 / POSReady 7

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TOSHIBA TEC CORPORATION

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1. Overview

This document describes the procedures and notes for installing the ST-A20 drivers and building a RAID.

The outline of procedures to install Windows operating system on the ST-A20 is as follows:

Windows Setup Procedure

- 1) Installation for Operating System
- 2) Installation for Intel Chipset Software
- 3) Installation for Intel Graphic Accelerator Driver
- 4) Installation for Intel Network Driver
- 5) Installation for Realtek Audio Driver
- 6) Installation for EloTouch Panel Driver
- 7) Installation for i-Button Driver

2. Setup for Windows 2000

2.1. Installation for Operating System (Windows 2000)

Windows 2000 operating system must be installed with the Service Pack SP3 or later on the ST-A20.

To install the operating system using a bootable CD, use the one for Windows 2000 SP3 or later.

To install the operating system via network, Service Pack SP3 or later must be applied to Windows 2000 network image before installing.

Note: On basic information, ST-A20 applies an SATA technology for connection to a hard disk drive (HDD). Windows 2000 SP2 or earlier doesn't support SATA.

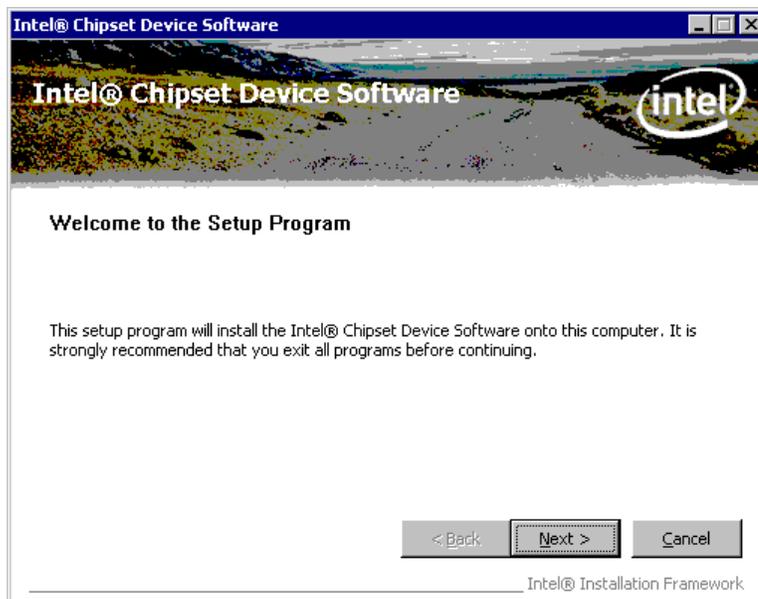
Notes: To use the RAID, the RAID must be built using the RAID BIOS Utility with reference to Section 6.1 Creation of RAID from RAID BIOS Menu.

To use the RAID, the operation system must be installed with reference to Section 6.2 Installation of Each Operating System in RAID Environment.

Notes: To use the two HDDs without using RAID, the operation system must be installed with reference to Section 6.2 Installation of Each Operating System in RAID Environment.

2.2. Installation for Intel Chipset Software

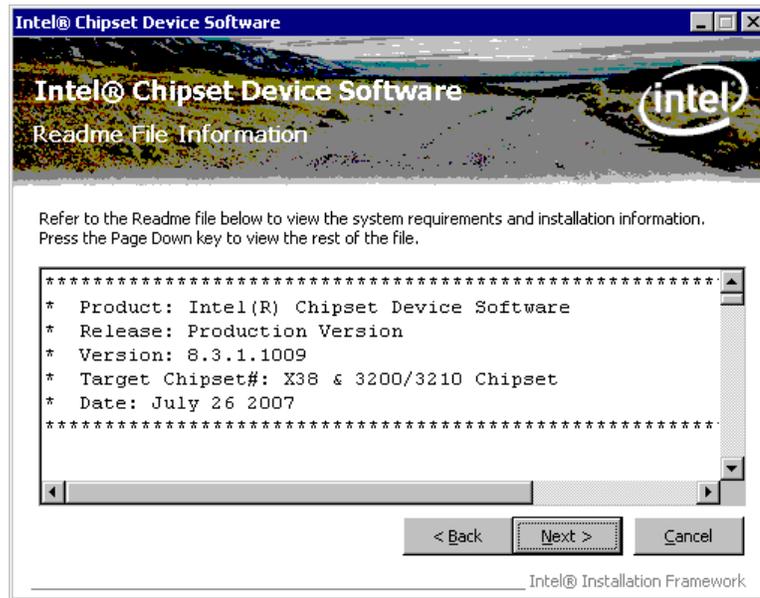
Run "Setup.exe" in the "ST-A20\Intel\Chipset\2000" folder in the Driver Kit CD-ROM. After a while, the following window appears. Click on the "Next" button.



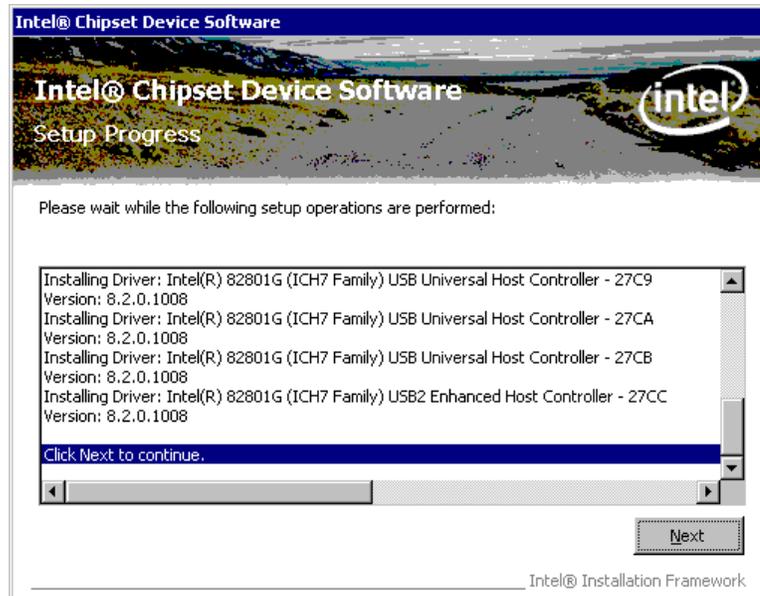
The "License Agreement" window appears. Confirm the contents. If you agree, click on the "Yes" button.



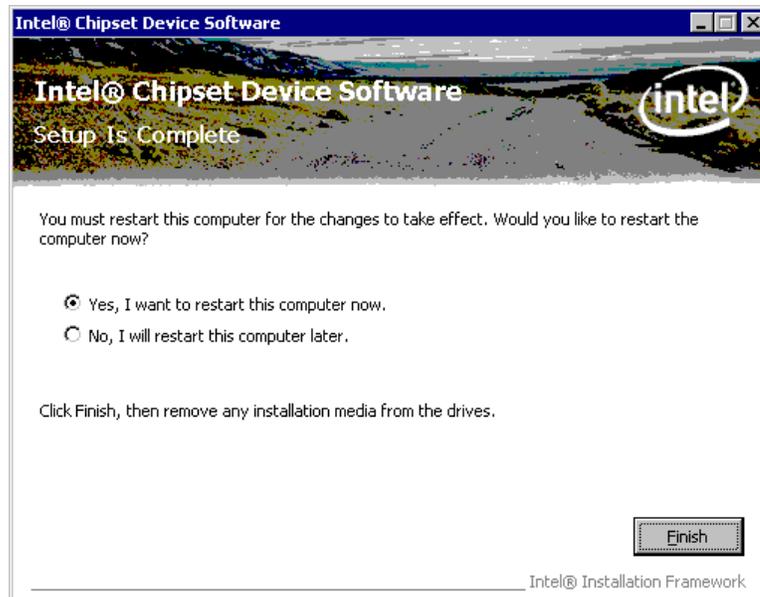
The "Readme File Information" window appears. Click on the "Next" button.



The "Setup Progress" window appears, and starts the installation. After the "Next" button changes to the status that you can click, click on the button.



When the installation is completed successfully, the following window appears. Check the “Yes, I want to restart this computer now” radio button, then click on the “Finish” button to reboot your computer.



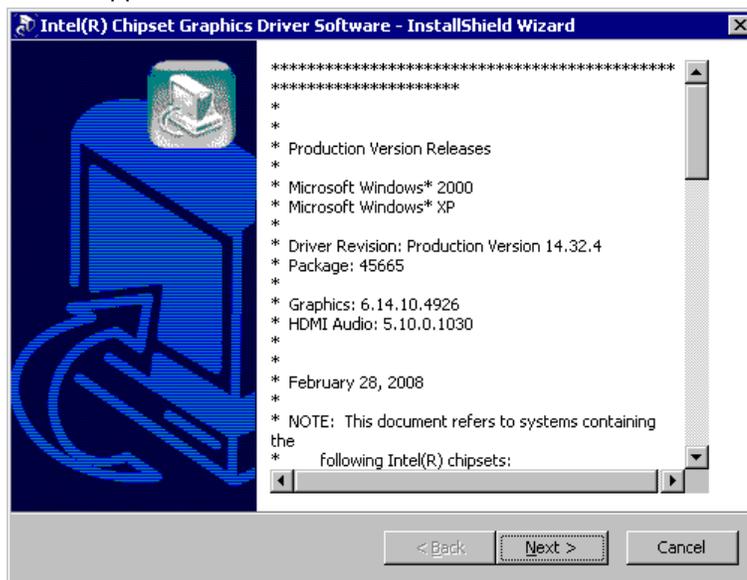
2.3. Installation for Intel Graphic Accelerator Driver

2.3.1. Installation

Run "win2k_xp14324.exe" in the

"ST-A20\Intel\Graphic_driver\2000_XP_WEPOS_POSReady" folder in the Driver Kit CD-ROM.

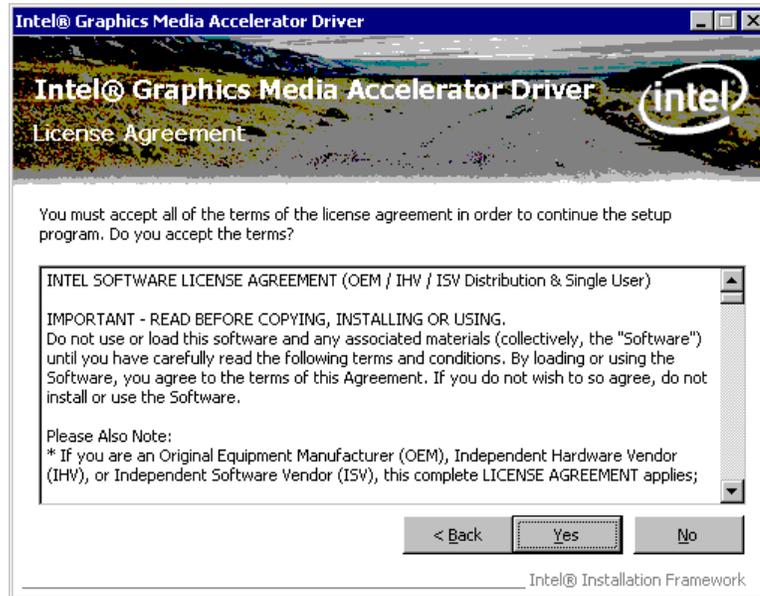
The following window appears. Click on the "Next" button.



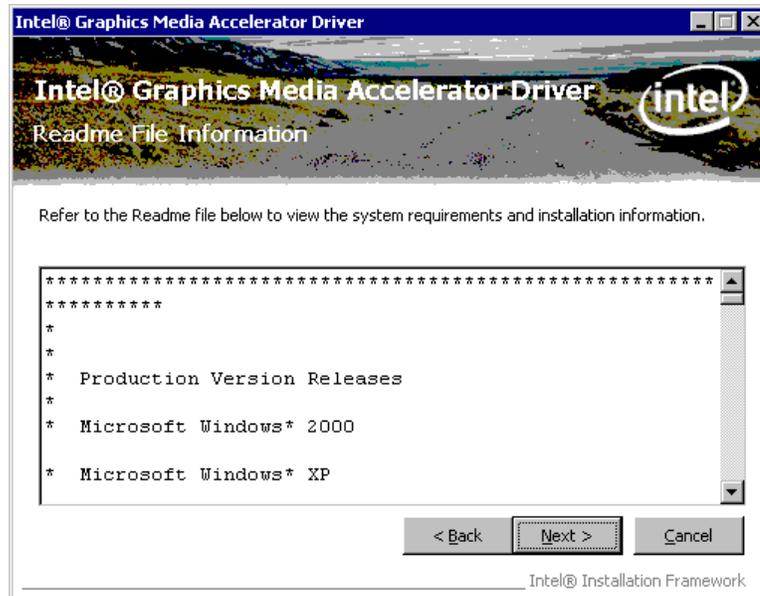
After a while, the following window appears. Click on the "Next" button.



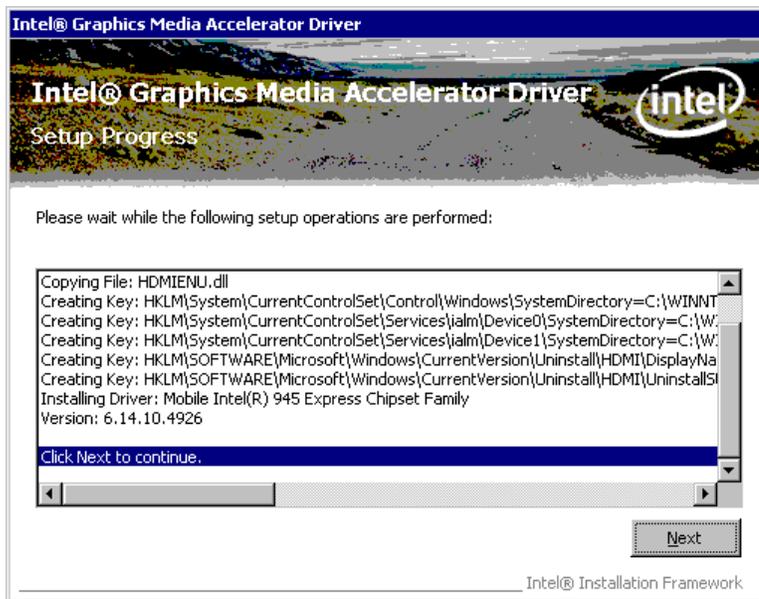
The “License Agreement” window appears. Confirm the contents. If you agree, click on the “Yes” button.



The “Readme File Information” window appears. Click on the “Next” button.



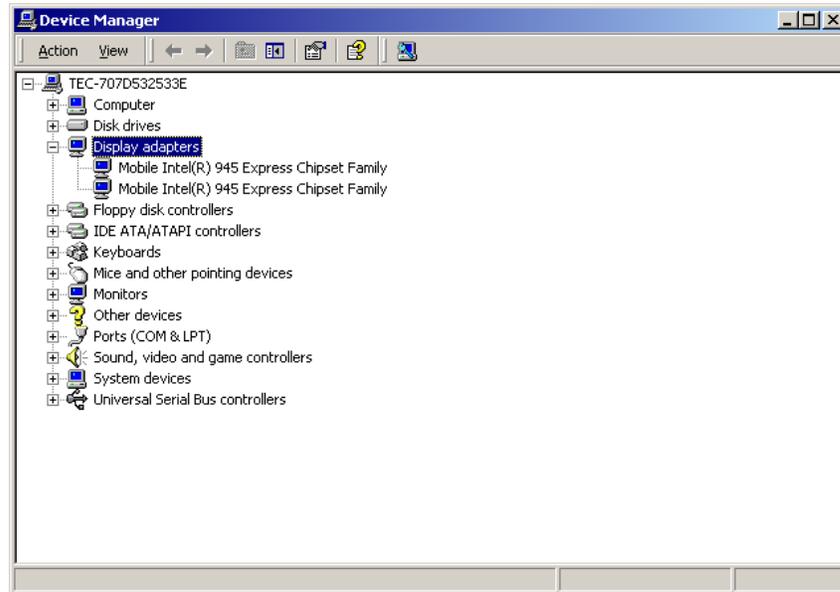
The " Setup Progress" window appears, and starts the installation.
After the "Next" button changes to the status that you can click, click on the button.



When the installation is completed successfully, the following window appears. Check the "Yes, I want to restart this computer now" radio button, then click on the "Finish" button to reboot your computer.



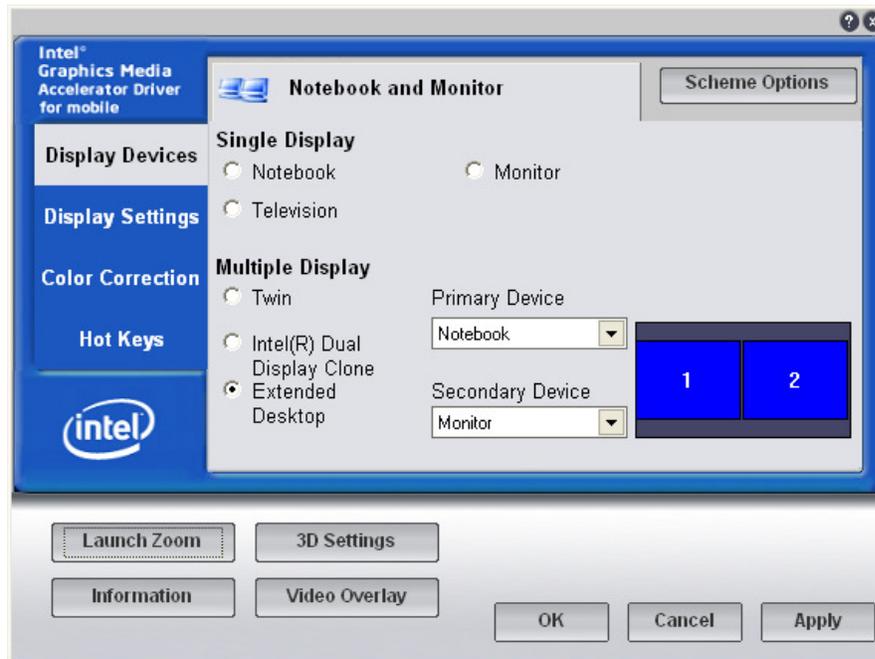
Open Device Manager to confirm the graphic driver has been installed. Make sure that “Mobile Intel(R)945 Express Chipset Family” is registered under the “Display adapters” icon..



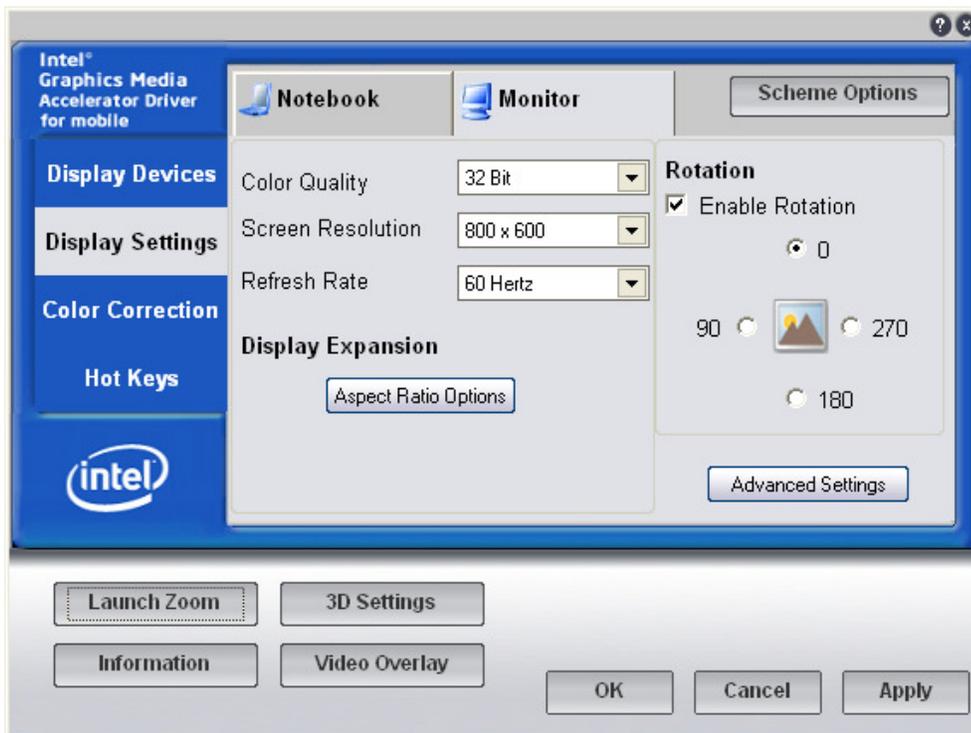
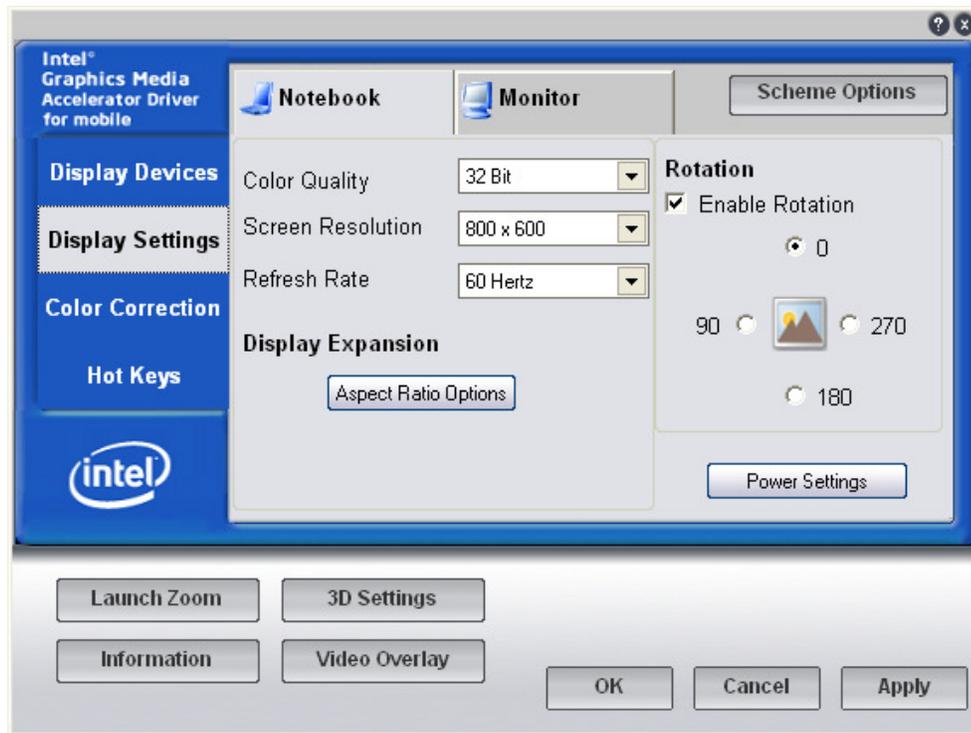
2.3.2. Additional Setting When Connecting TFTST-A20

When using TFTST-A20, it is necessary to change setting as follows by Intel Graphic control panel.

Below is Intel Graphic Control Panel (From Task tray or Control Panel)



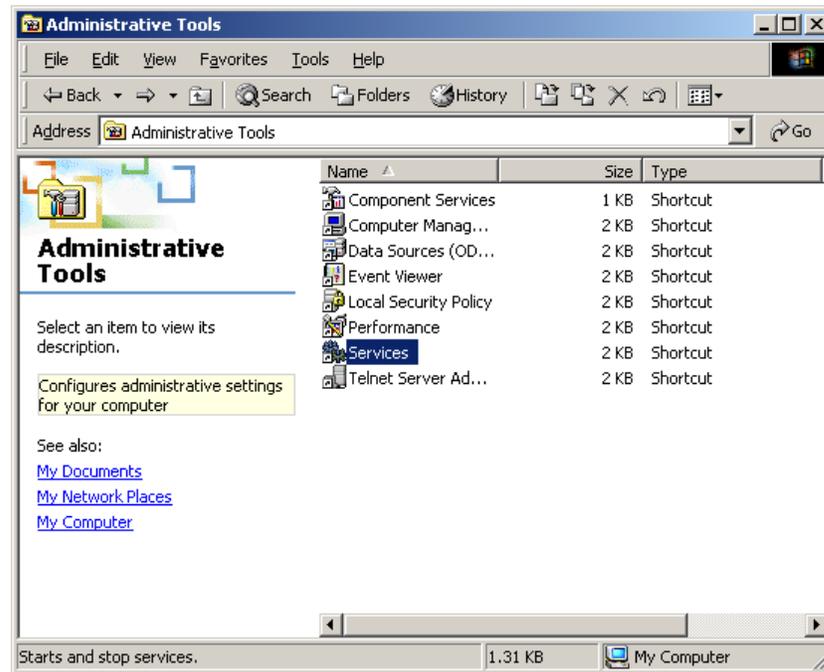
Select [Display Devices] Tab and check "Extended Desktop" radio button.
Click [Apply] button, then, TFTST-A20 available.



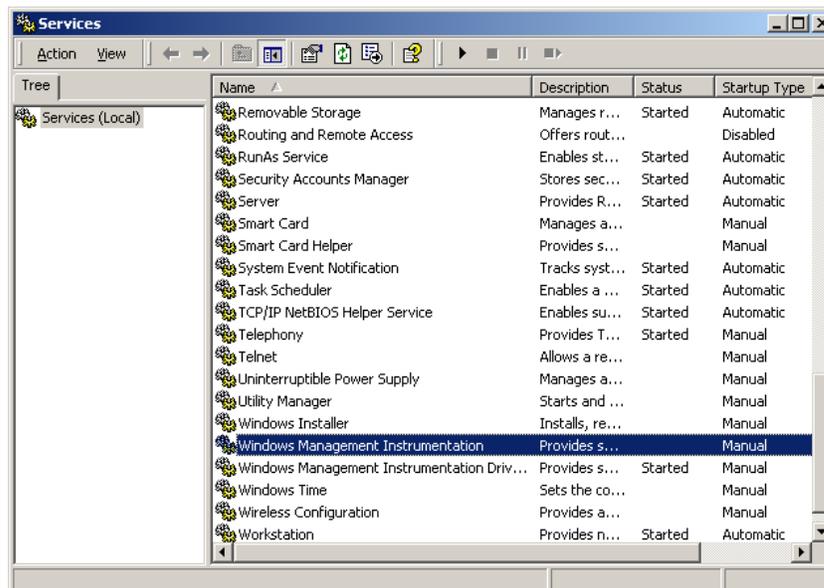
About the other performance (Screen resolution, Color Quality, etc):
 Please set TFTST-A20 for your environment by two Control Panel above at any time.

2.4. Installation for Intel Network Driver

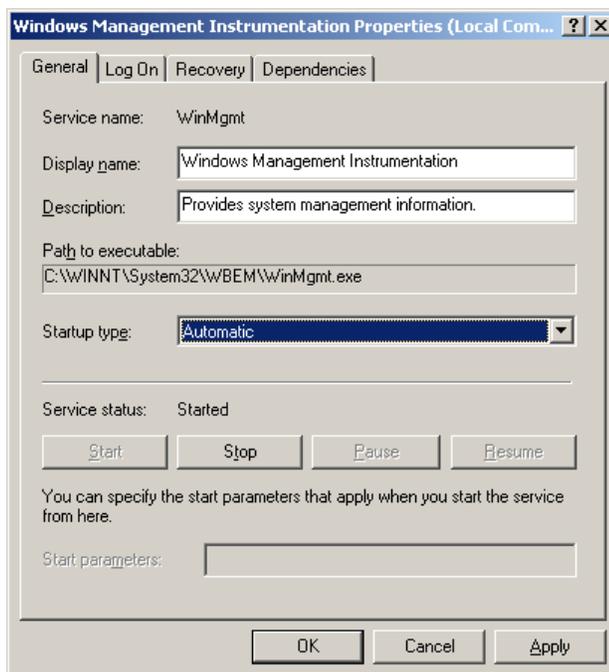
Open the “Administrative Tools” in Control Panels. And then, open the “Services”.



Next, open the “Windows Management Instrumentation” Service Properties menu.



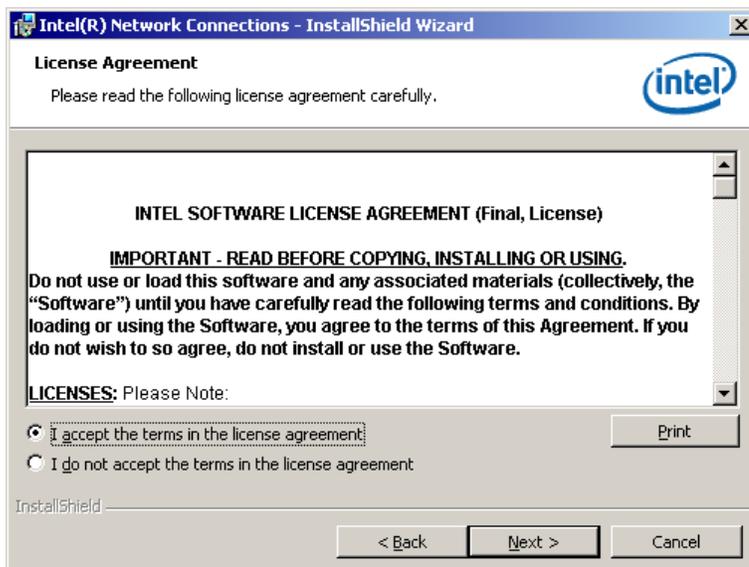
Change the “Startup types” to “Automatic”, and click on the “Start” button to start this service. And then, click on the “OK” button.



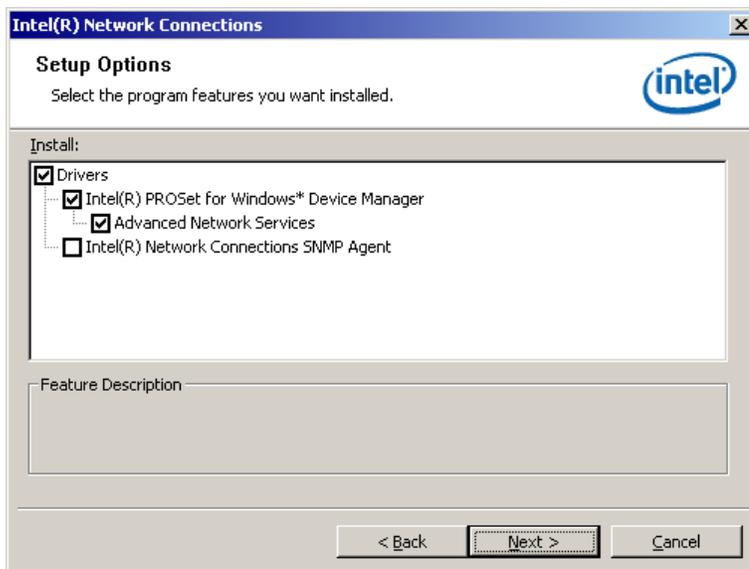
Run “PRO2KXP.exe” in the “ST-A20\Intel\Lan_driver\2000_XP_WEPOS_POSReady” folder in the Driver Kit CD-ROM. After a while, the following window appears. Click on the “Next” button.



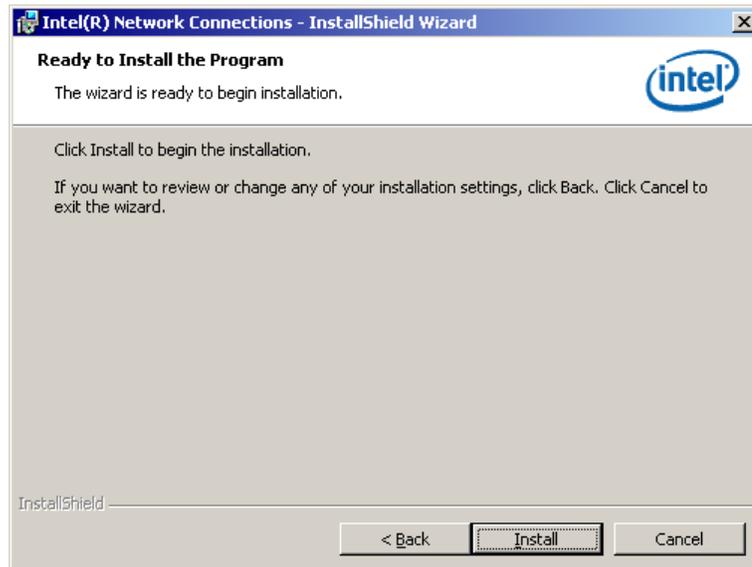
The “License Agreement” window appears. Confirm the contents. If you agree, check the “I accept the terms in the license agreement” radio button and click on the “Next” button.



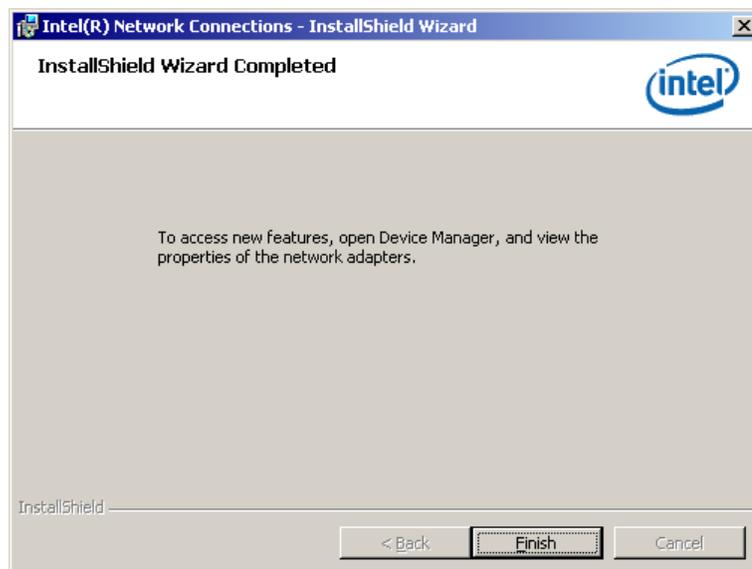
The “Setup Options” window appears. If nothing specially required, click on the “Next” button with default condition.



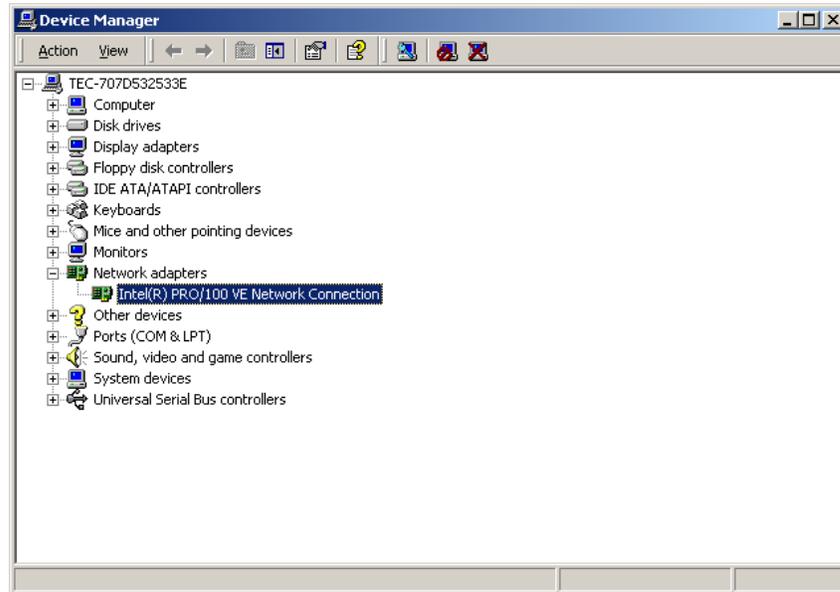
The following window appears. Click on the “Install” button to start the installation.



After completion of the installation, the following window appears. Click on the “Finish” button to complete the installation.

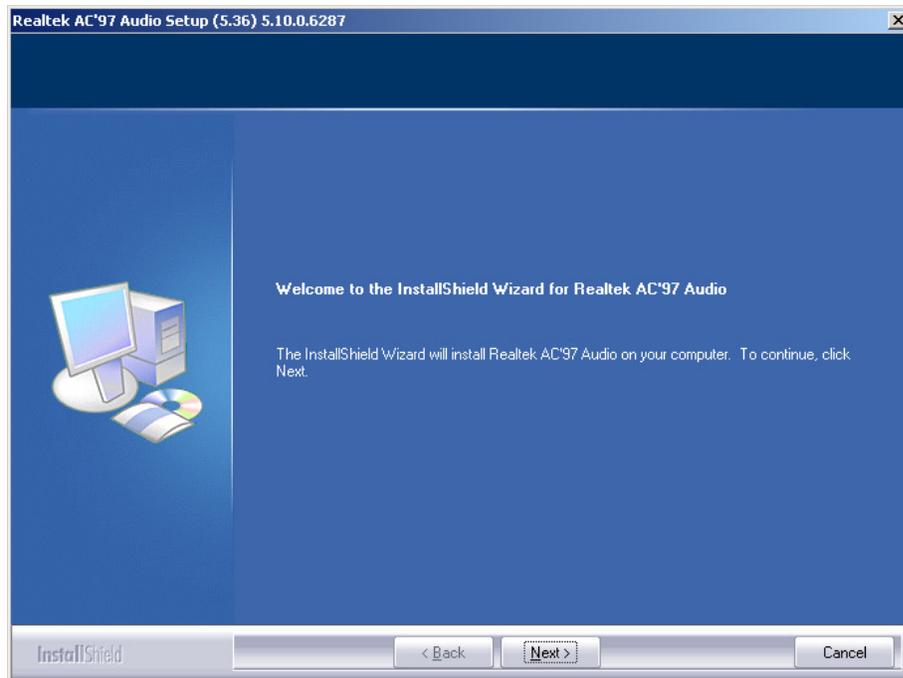


Open Device Manager to confirm the network driver has been installed. Make sure that “Intel (R) PRO/100 VE Network Connection” is registered under the “Network adapters” icon.



2.5. Installation for Realtek Audio Driver

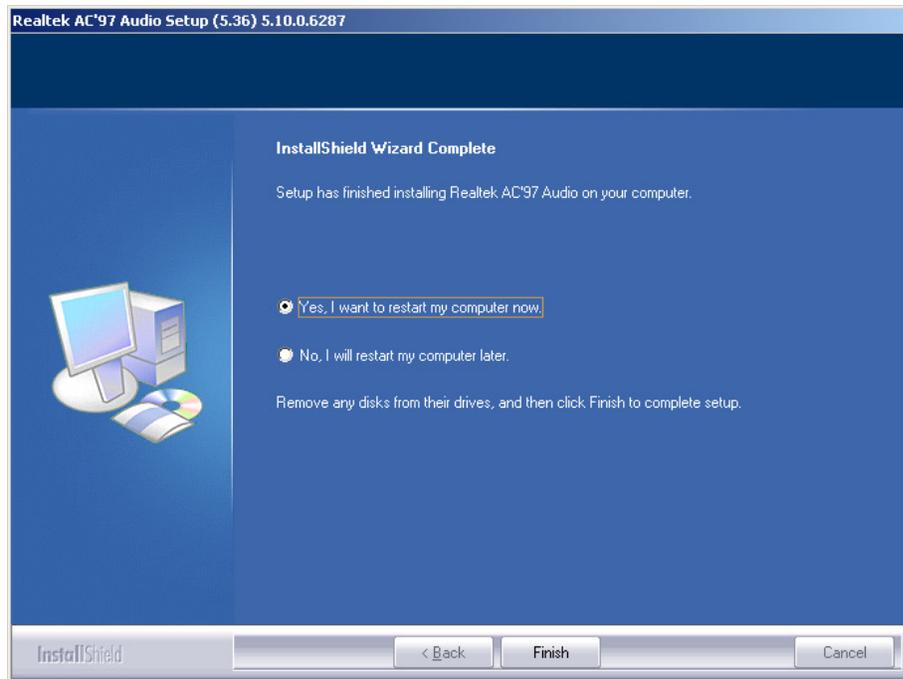
Run "setup.exe" in the "ST-A20\Intel\Audio\2000_XP_WEPOS_POSReady" folder in the Driver kit CD-ROM. After a while, the following window appears. Click on the "Next" button.



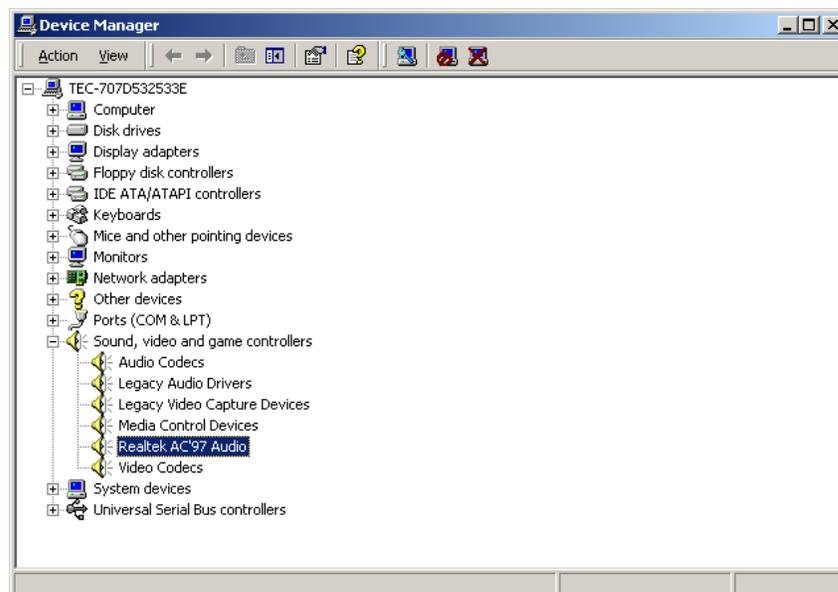
After a while, the following window appears. Click on the "Yes" button.



When the installation is completed successfully, the following window appears. Check the “Yes, I want to restart my computer now” radio button, then click on the “Finish” button to reboot your computer.



Open Device Manager to confirm the audio driver has been installed. Make sure that “Realtek AC'97 Audio” is registered under the “Sound, video and game controllers” icon.



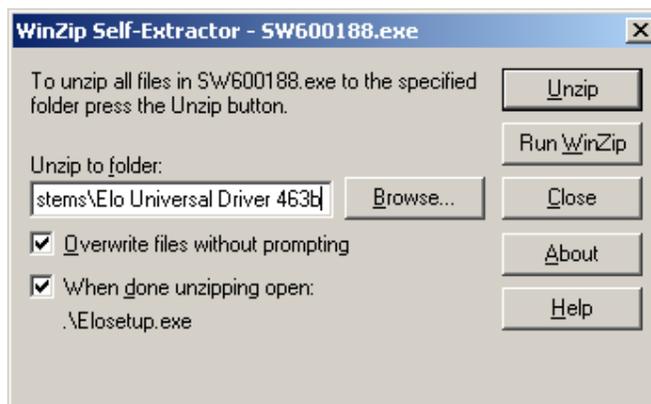
2.6. Installation for Elo Touch Panel Driver

2.6.1. Installation for Standard Model

Run "SW600188.exe" in the "ST-A20\Tablet\2000" folder in the Driver Kit CD-ROM, and the following window appears. Click on the "OK" button.



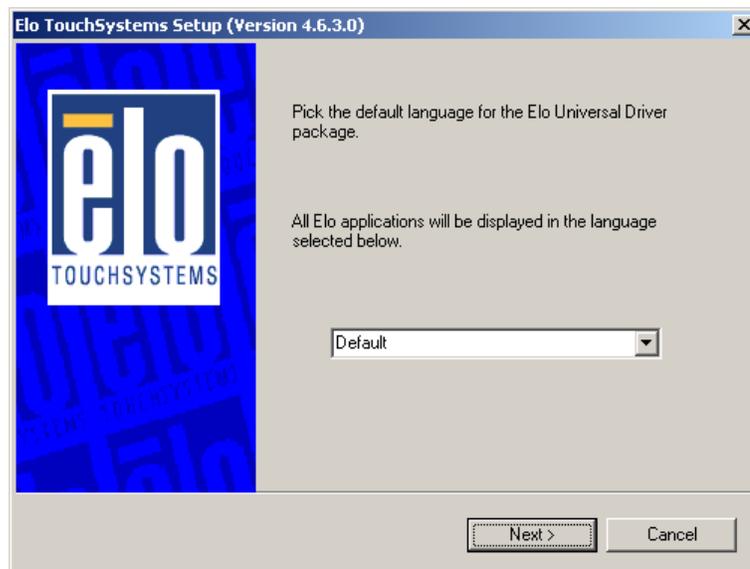
The following window appears. Click on the "Unzip" button, then the files are decompressed.



The following window appears. Click on the "OK" button.



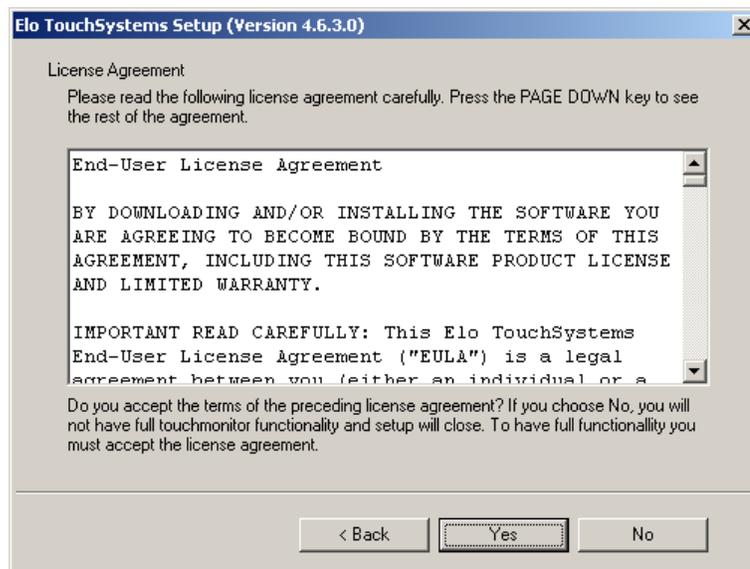
The following window appears. Choose a language, if necessary, and then click on the “Next” button.



The following window appears. Check the “Install Serial Touchscreen Drivers” check box, then click on the “Next” button.



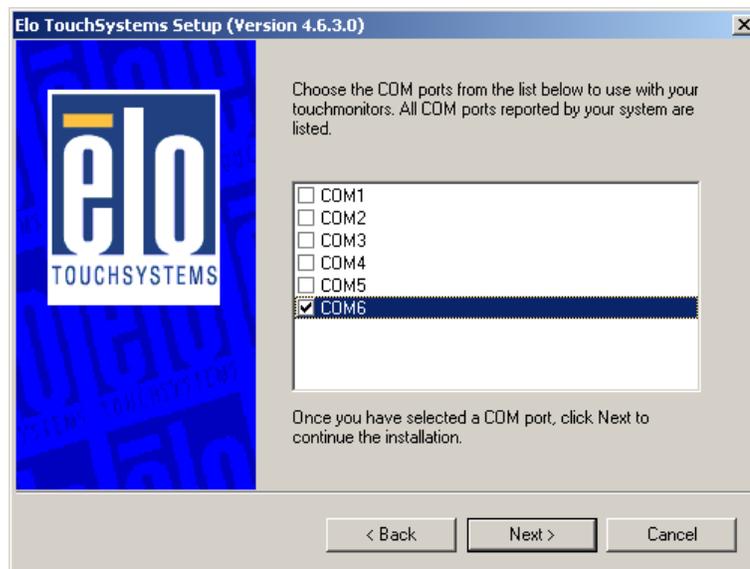
The “License Agreement” window appears. Confirm the contents. If you agree, click on the “Yes” button.



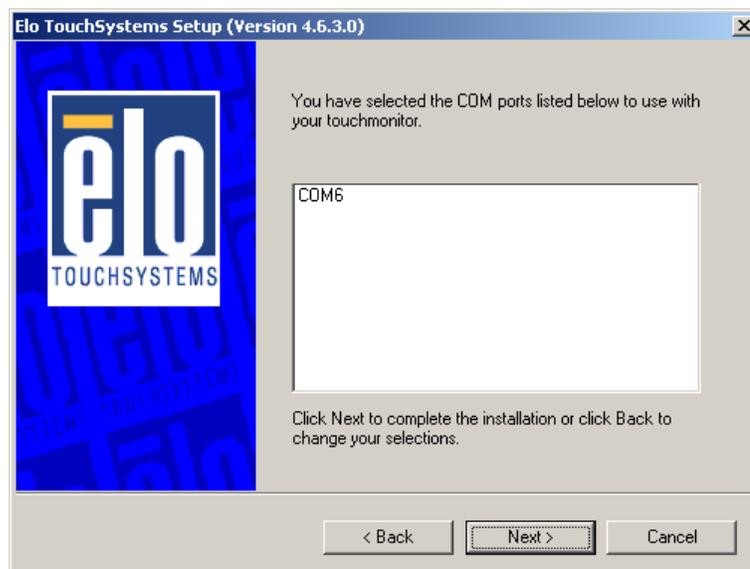
The following window appears. Check the “Auto-detect Elo devices” check box, then click on the “Next” button.



The following window appears. The touch panel connected to the ST-A20 is detected, and “COM6” is chosen. If “COM6” is not chosen, there may be a problem. Click on the “Next” button.



The following window appears. Confirm that “COM6” is chosen, then click on the “Next” button.



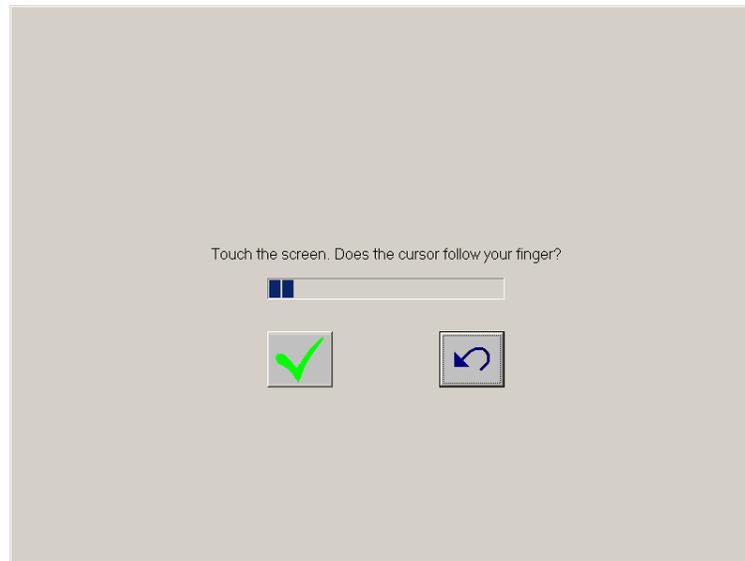
After completion of the installation, the following window appears. Check the “Calibrate Elo Touchscreen monitors” check box, and click on the “Finish” button.



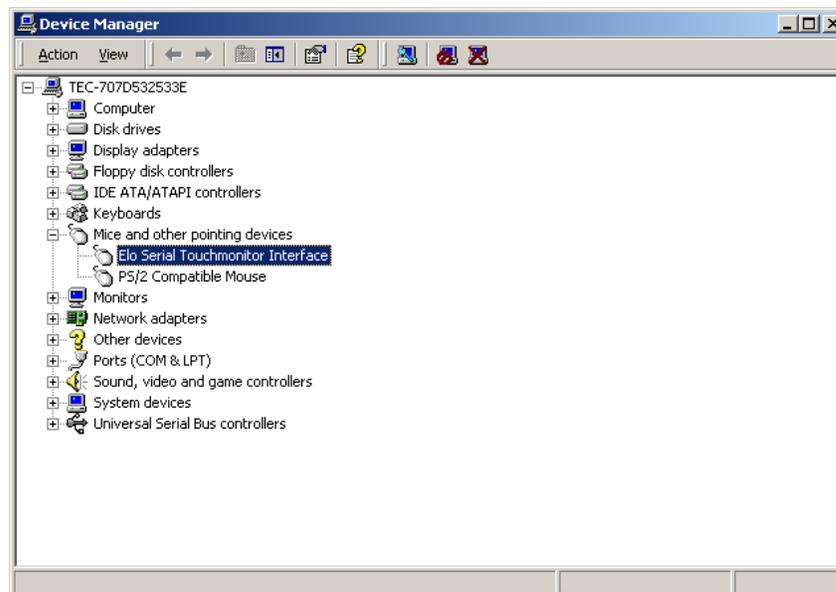
The following calibration screen appears. Perform a calibration by touching the mark whenever it appears. (The mark appears three times.) (Transparent background on v5.41 & above)



After the mark was touched three times, two buttons appear at the center of the screen. Click on the check mark button to complete the calibration



Open Device Manager to confirm the touch panel driver has been installed. Make sure that "Elo Serial Touchmonitor Interface" is registered under the "Mice and other pointing devices" icon.

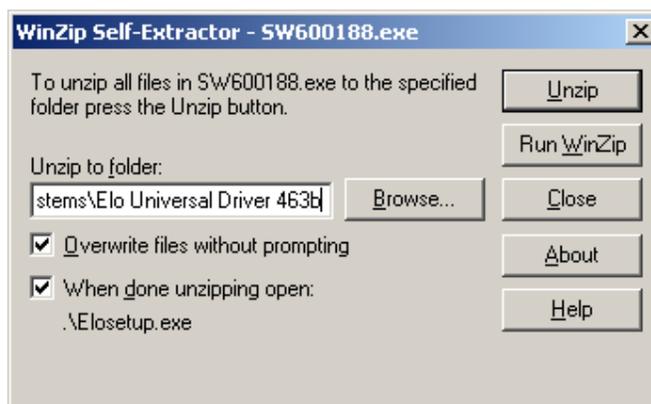


2.6.2. Installation When Connecting TFTST-A20

Run "SW600188.exe" in the "ST-A20\Tablet\2000" folder in the Driver Kit CD-ROM, and the following window appears. Click on the "OK" button.



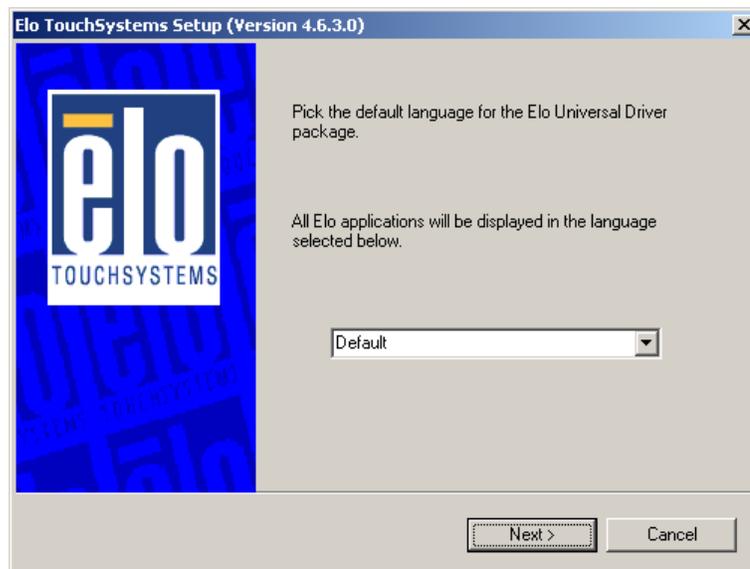
The following window appears. Click on the "Unzip" button, then the files are decompressed.



The following window appears. Click on the "OK" button.



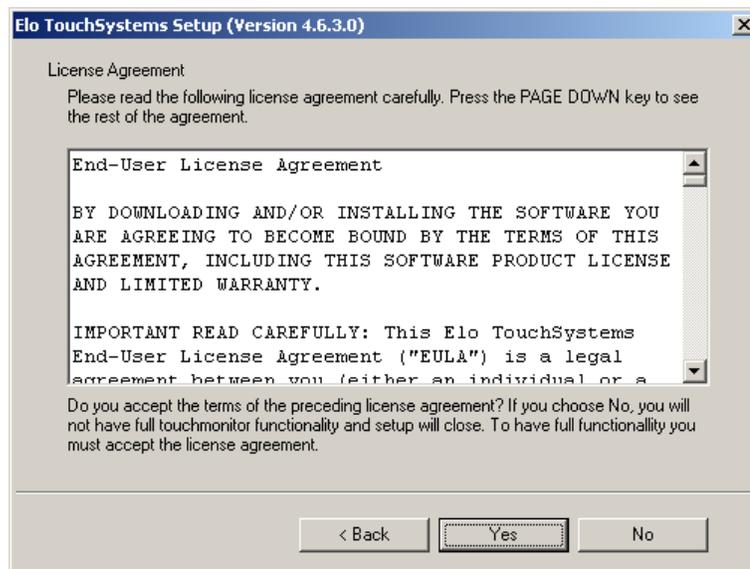
The following window appears. Choose a language, if necessary, and then click on the “Next” button.



The following window appears. Check the “Install Serial Touchscreen Drivers” check box, then click on the “Next” button.



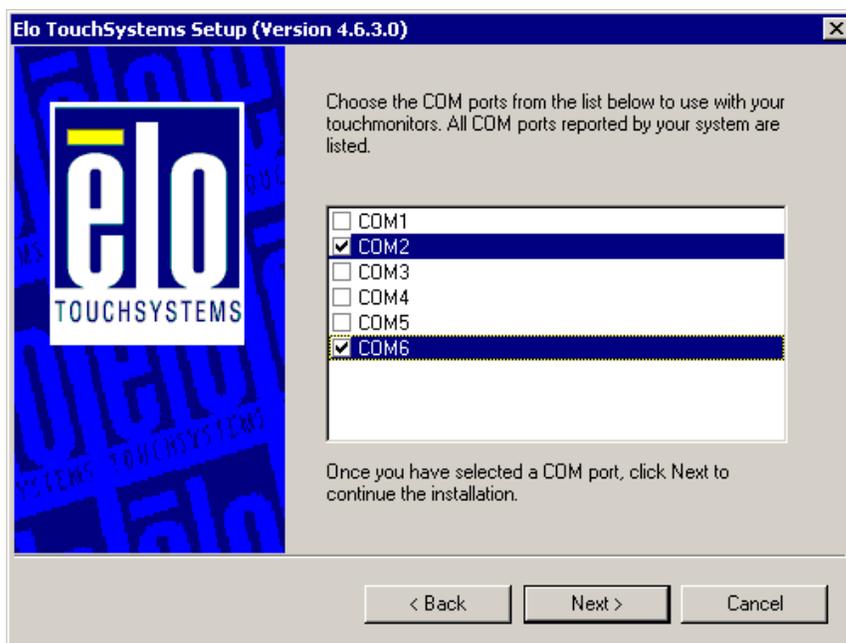
The “License Agreement” window appears. Confirm the contents. If you agree, click on the “Yes” button.



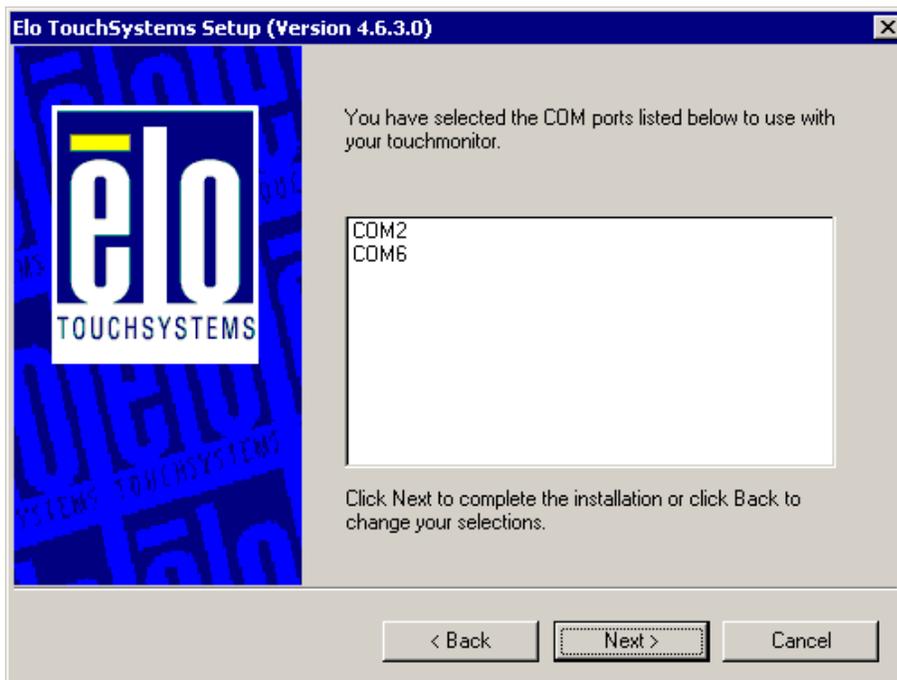
The following window appears. Check the “Auto-detect Elo devices” check box, then click on the “Next” button.



The following window appears. The touch panel connected to the ST-A20 and the TFTST-A20 are detected, and “COM6” and “COM1 or 2” are chosen. If “COM6” and “COM1 or 2” is not chosen, there may be a problem. Click on the “Next” button.



The following window appears. Confirm that “COM6” and “COM1 or 2” are chosen, then click on the “Next” button.



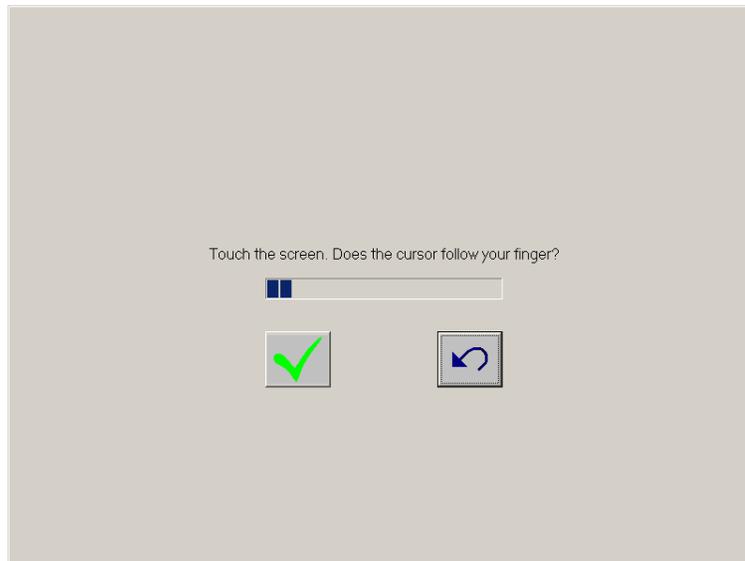
After completion of the installation, the following window appears. Check the “Calibrate Elo Touchscreen monitors” check box, and click on the “Finish” button.



The following calibration screen appears on ST-A20 main screen. Perform a calibration by touching the mark whenever it appears. (The mark appears three times.) **(Transparent background on version 5.41 & above).**



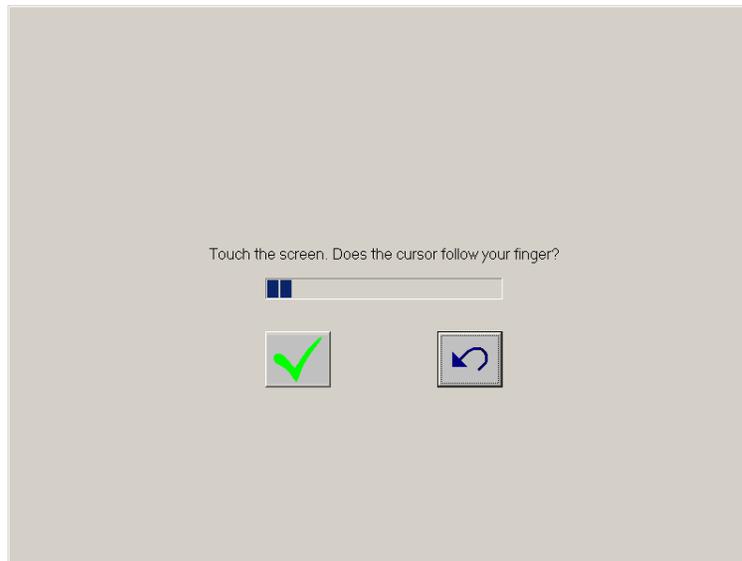
After the mark was touched three times, two buttons appear at the center of the screen. Click on the check mark button to complete the calibration



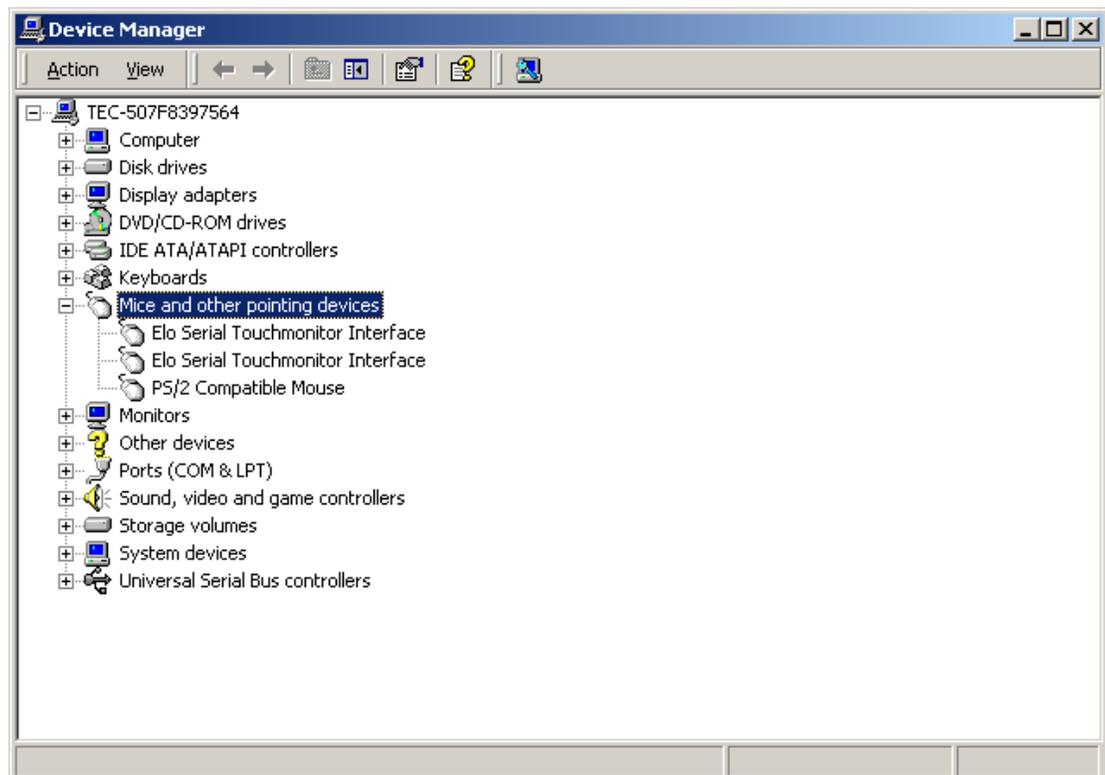
The following calibration screen appears on TFTST-A20 screen. Perform a calibration by touching the mark whenever it appears. (The mark appears three times.)



After the mark was touched three times, two buttons appear at the center of the screen. Click on the check mark button to complete the calibration

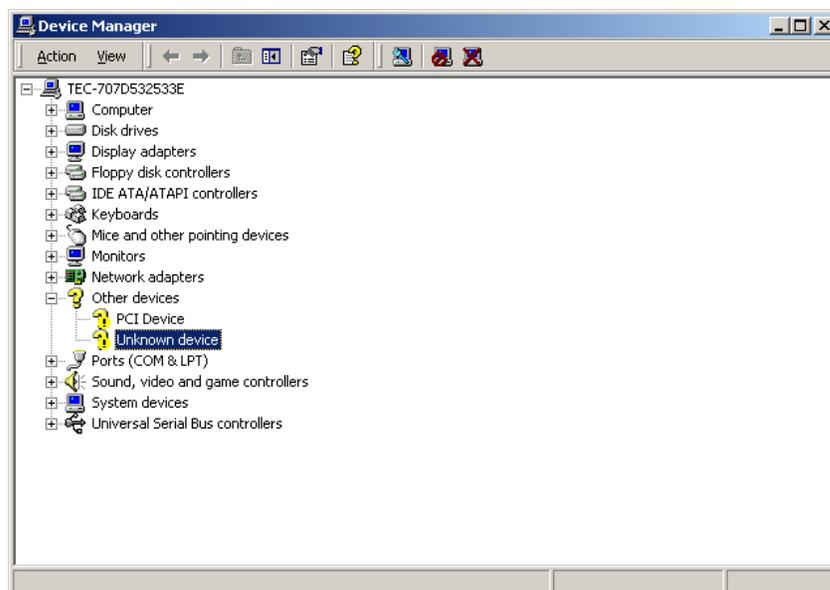


Open Device Manager to confirm the touch panel driver has been installed. Make sure that "Elo Serial Touchmonitor Interface" is registered under the "Mice and other pointing devices" icon.



2.7. Installation for i-Button Driver

When the iButton is connected to the ST-A20, “Unknown Device” is shown with an exclamationmark (!) under the “Other devices” icon in the Device Manager window.



We can not redistribute this installation driver.

Therefore, if you need the driver, you have to download the driver from following site.

<http://www.maxim-ic.com/products/ibutton/software/tmex/>

Note: This URL was written on 2008/7/30.

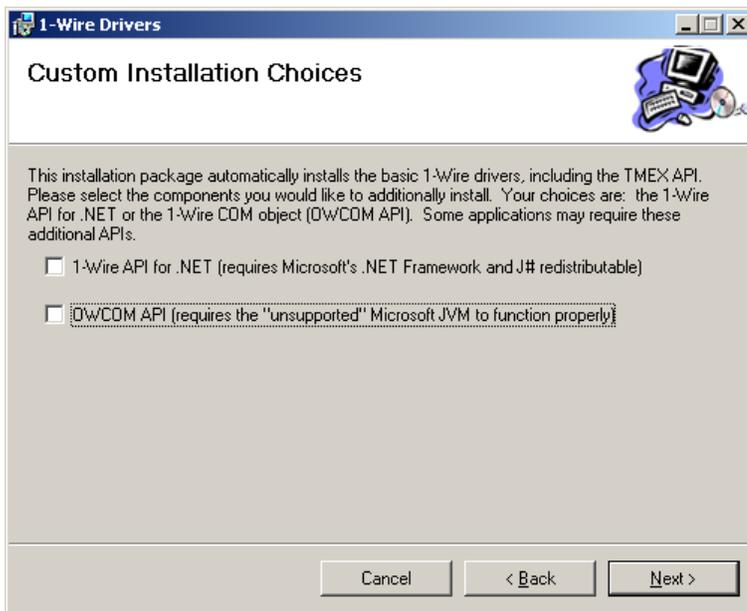
Run the “install_1_wire_drivers_v400.msi” which you downloaded. The following window appears. Click on the “Next” button.



After a while, the “License Agreement” window appears. Confirm the contents. If you agree, check the “I Agree” radio button and click on the “Next” button.



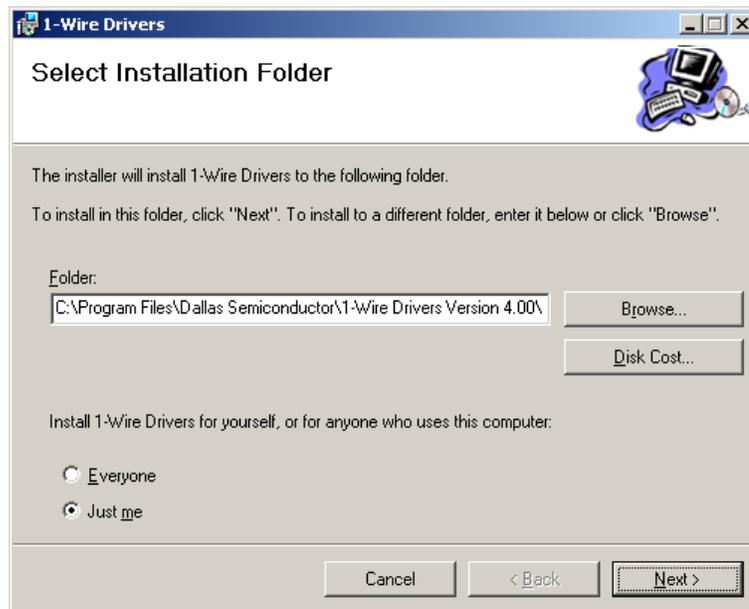
The following window appears. If you only use the Keylock OPOS Control, you don't need “1-Wire API for .NET” and “OWCOM API”. If you need these drivers, please check it. Then click on the “Next” button.



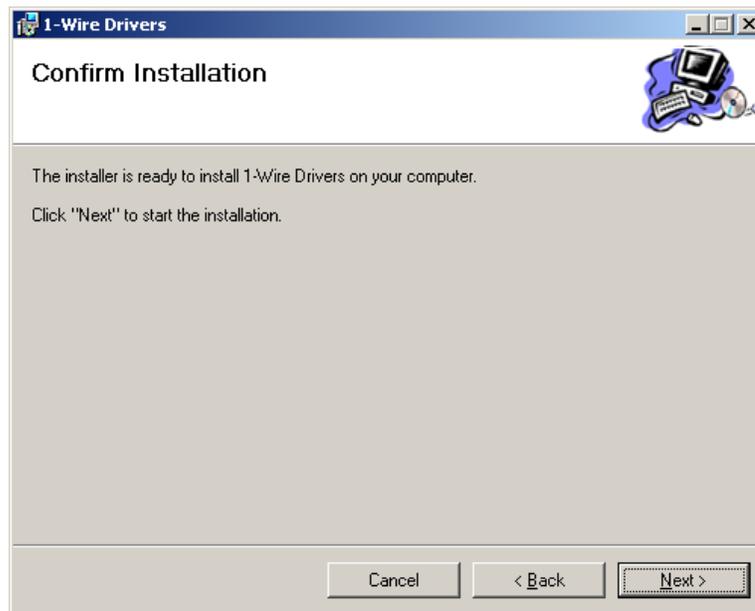
The following window appears. Click on the “Next” button.



Configure the necessary settings, then click on the “Next” button.



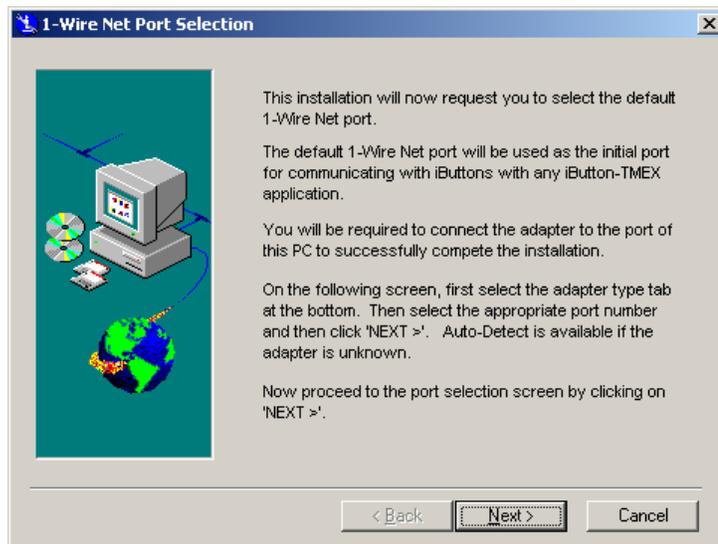
The following window appears. Click on the “Next” button.



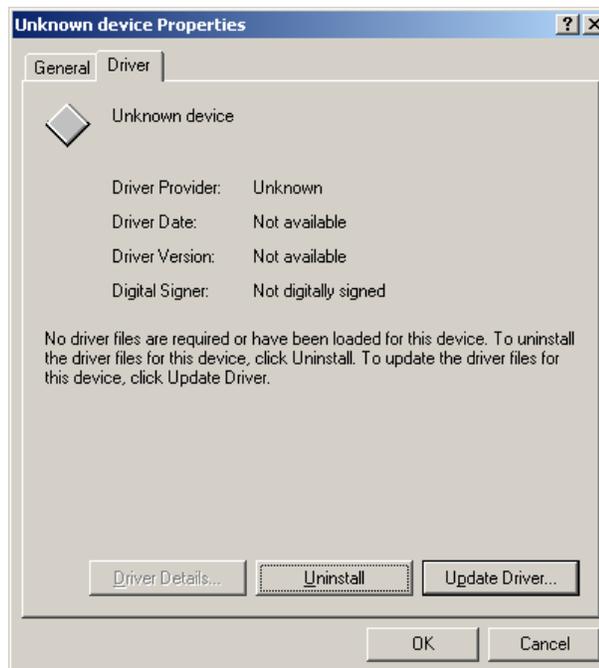
After a while, the following window appears. Click on the “OK” button.



After a while, the “1-Wire Net Port Selection” window appears. Keep this window without clicking on the “Next” button. (You will click on the “Next” button later.)



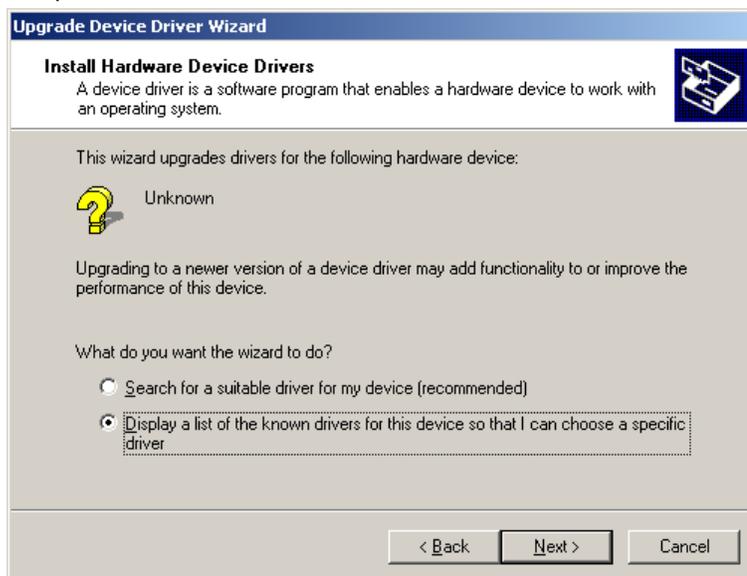
Open Device Manager, right-click on the “Unknown device” icon under the “Other devices”, then click on “Properties” to open the “Unknown device Properties” window. Click on the “Driver” tab and click on the “Update Driver...” button.



The following window appears. Click on the “Next” button.



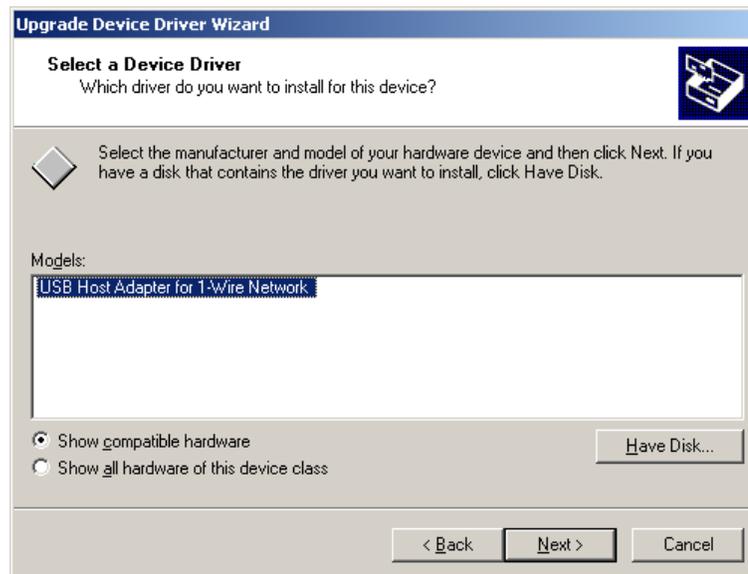
The following window appears. Check the “Display a list of the known drivers for this device so that I can choose a specific driver” radio button, then click on the “Next” button.



The following window appears. Click on “Other devices”, then click on the “Next” button.



The following window appears. Click on “USB Host Adapter for 1-Wire Network”, then click on the “Next” button



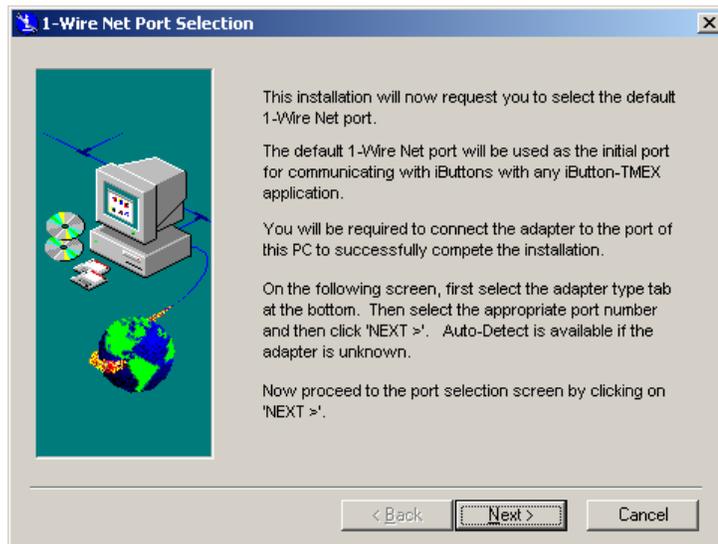
The following window appears. Click on the “Next” button.



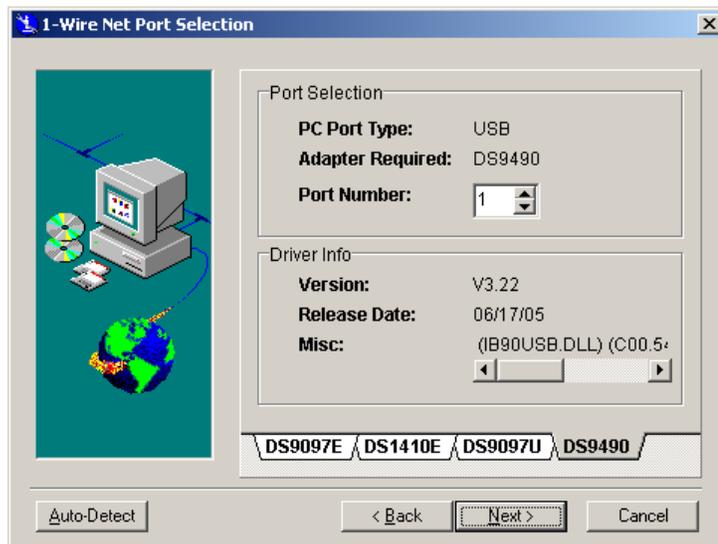
After completion of the upgrade, the following window appears. Click on the “Finish” button to complete the update process.



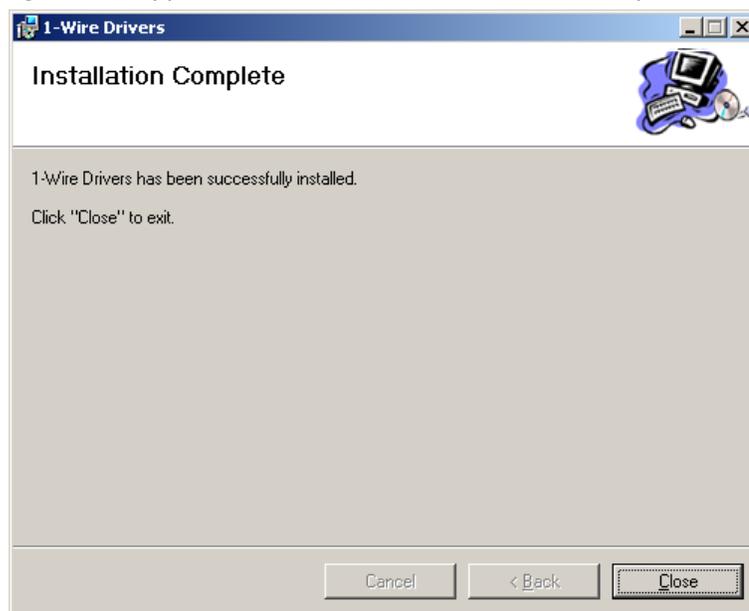
Back to the “1-Wire Net Port Selection” window, and click on the “Next” button.



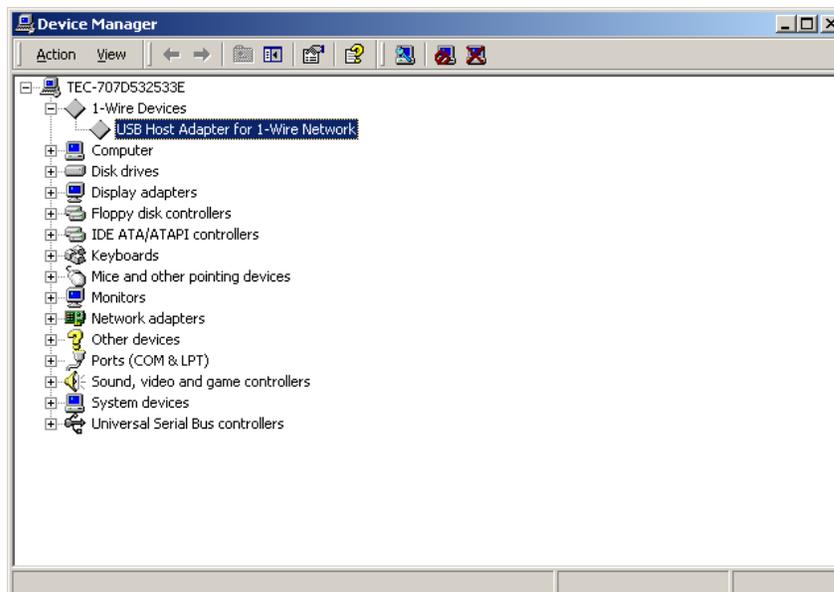
The following window appears. Click on the “Next” button.



When the following window appears, click on the “Close” button to complete the installation.



Open Device Manager to confirm the iButton has been installed. Make sure that “USB Host Adapter for 1-Wire Network” is registered under the “1-WireDevices” icon.



Note: To use the RAID, subsequently install the RAID Utility with reference to Section 6.3 Installation of RAID Utility JMB36X RAID CONFIGURER.

3. Setup for Windows XP(or WEPOS, POSReady 2009)

3.1. Installation for Operating System (Windows XP, WEPOS, POSReady 2009)

Install Windows XP(or WEPOS, POSReady 2009). And Install Windows XP service pack as needed.

Notes: To use the RAID, the RAID must be built using the RAID BIOS Utility with reference to Section 6.1 Creation of RAID from RAID BIOS Menu.

To use the RAID, the operation system must be installed with reference to Section 6.2 Installation of Each Operating System in RAID Environment.

Notes: To use the two HDDs without using RAID, the operation system must be installed with reference to Section 6.2 Installation of Each Operating System in RAID Environment.

3.2. Installation for Intel Chipset Software

Run “infinst_autol.exe” in the “ST-A20\Intel\Chipset\XP_WEPOS_POSReady_Vista” folder in the Driver Kit CD-ROM. After a while, the following window appears. Click on the “Next” button.



The “License Agreement” window appears. Confirm the contents. If you agree, click on the “Yes” button.



The "Readme File Information" window appears. Click on the "Next" button.



The "Setup Progress" window appears, and starts the installation. After the "Next" button changes to the status that you can click, click on the button.



When the installation is completed successfully, the following window appears. Check the “Yes, I want to restart this computer now” radio button, then click on the “Finish” button to reboot your computer.



Note: Installation of chipset driver for POSReady 2009

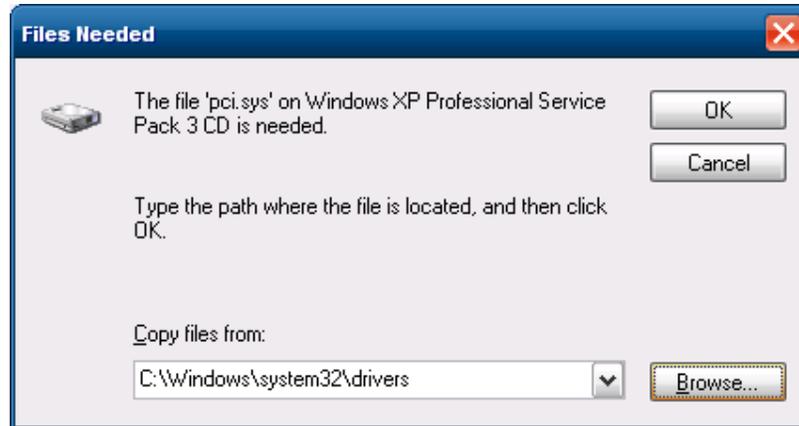
In the case of POSReady 2009, "*.sys" file or "*.dll" file is requested and the screen that request to insert "Windows XP Service Pack 3 CD" is displayed several times.

Please set the path for the location of "*.sys" file or "*.dll" file each time.

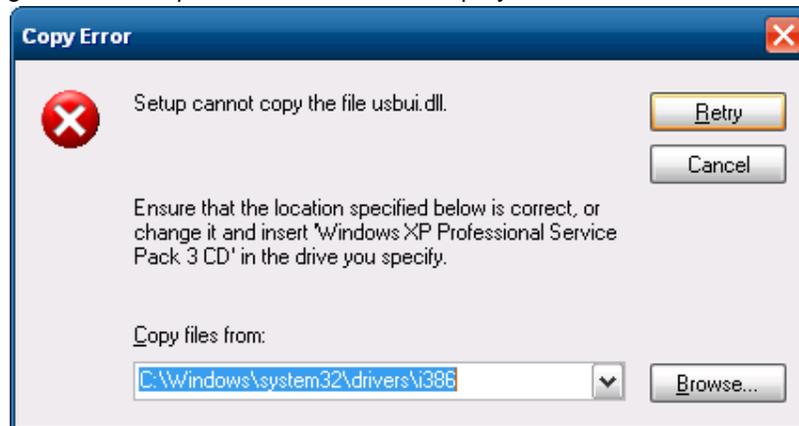
When "*.sys" file is requested -> Set the path to "c:\windows\system32\drivers"

When "*.dll" file is requested -> Set the path to "c:\windows\system32"

The following screen to request "*.sys" file will be displayed several times.

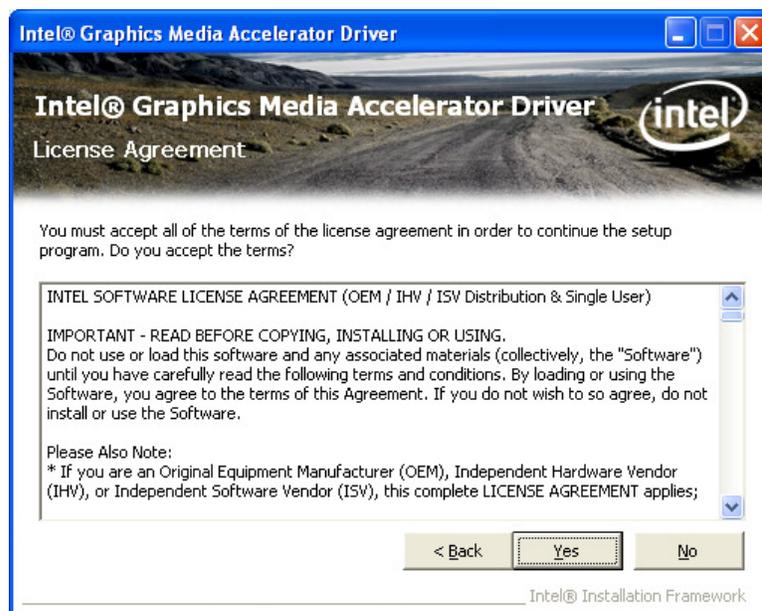


The following screen to request "*.dll" file will be displayed several times.

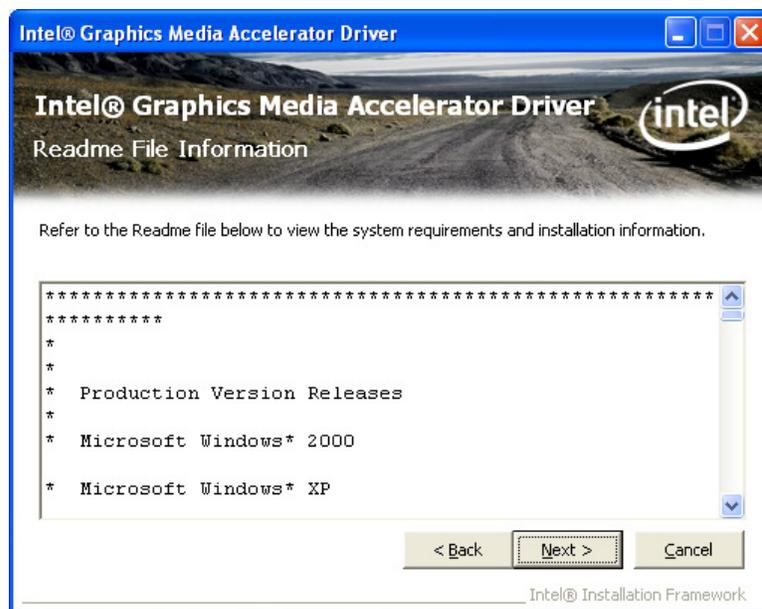


Note: If "Additional Drivers" or "Optional Components" is installed additionally in POSReady 2009 installation, these screen is not displayed. (Refer to Notice 6.1.3)

The “License Agreement” window appears. Confirm the contents. If you agree, click on the “Yes” button.

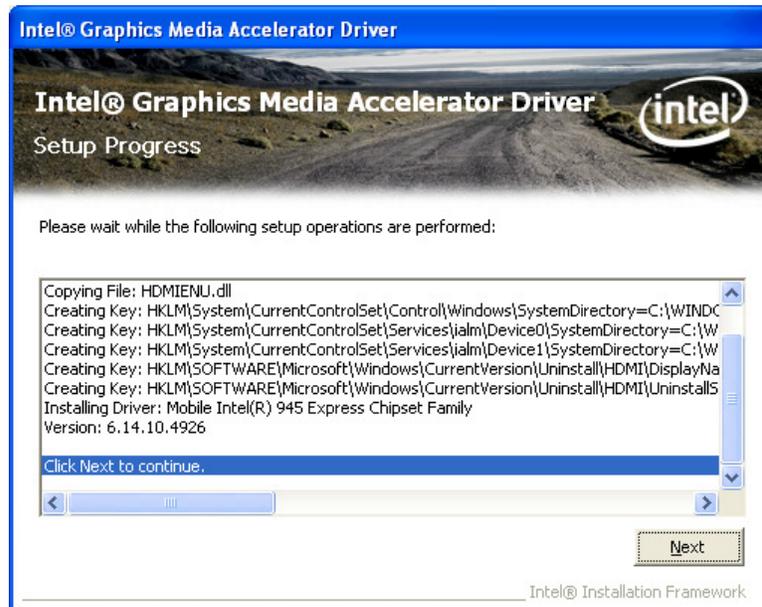


The “Readme File Information” window appears. Click on the “Next” button.



The " Setup Progress" window appears, and starts the installation.

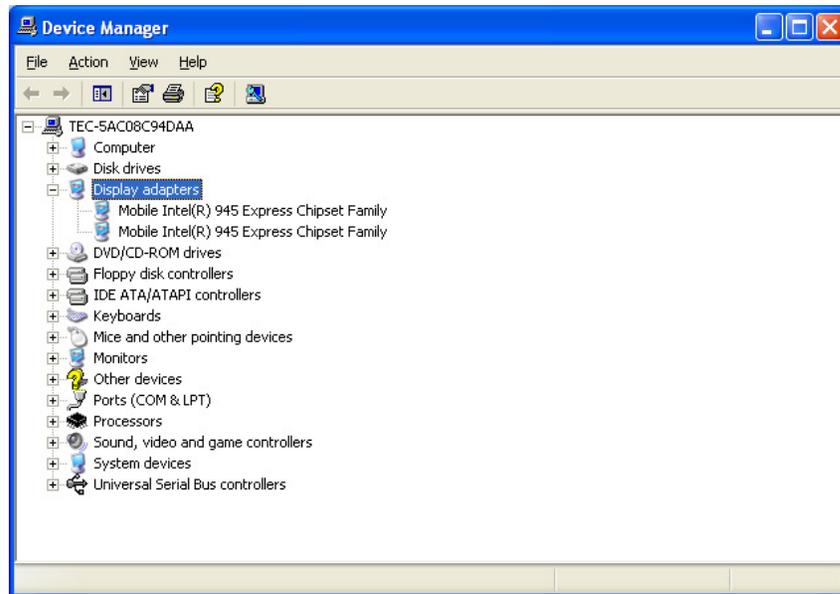
After the "Next" button changes to the status that you can click, click on the button.



When the installation is completed successfully, the following window appears. Check the "Yes, I want to restart this computer now" radio button, then click on the "Finish" button to reboot your computer.



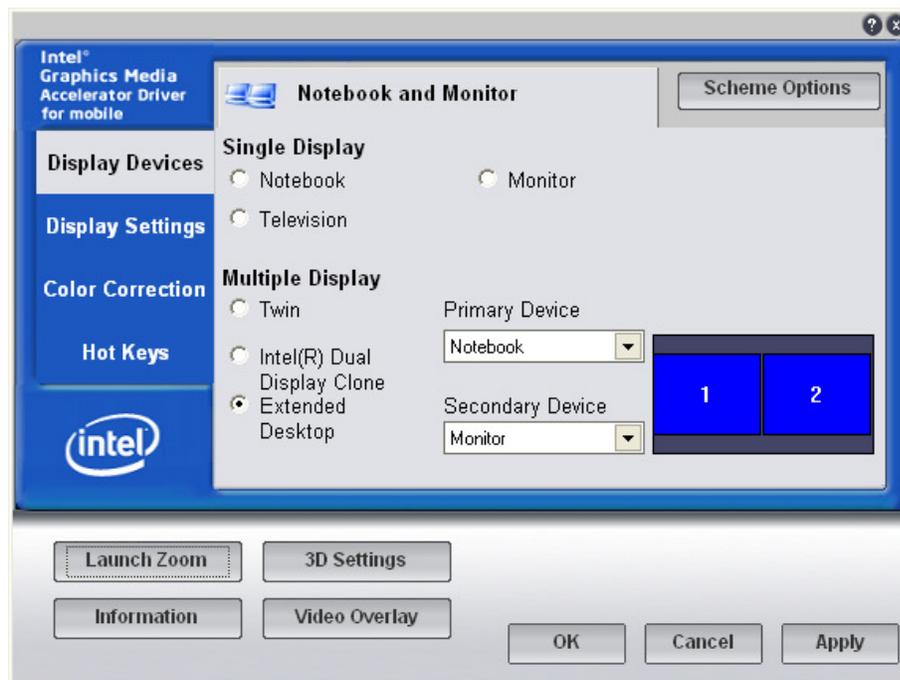
Open Device Manager to confirm the graphic driver has been installed. Make sure that “Mobile Intel(R)945 Express Chipset Family” is registered under the “Display adapters” icon.



3.3.2. Additional Setting When Connecting TFTST-A20

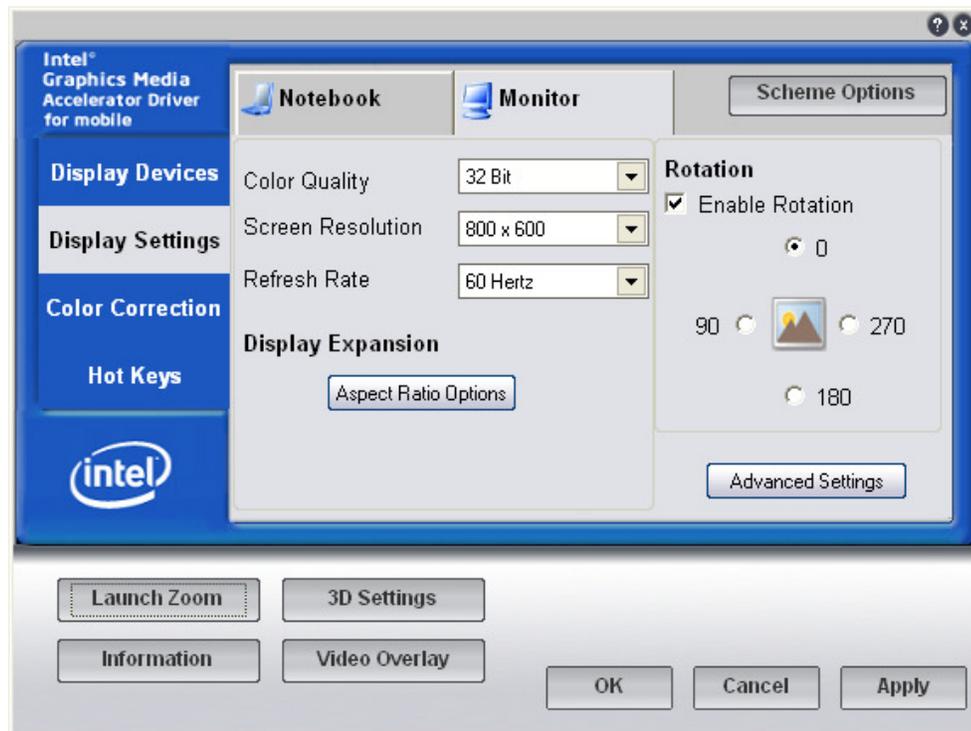
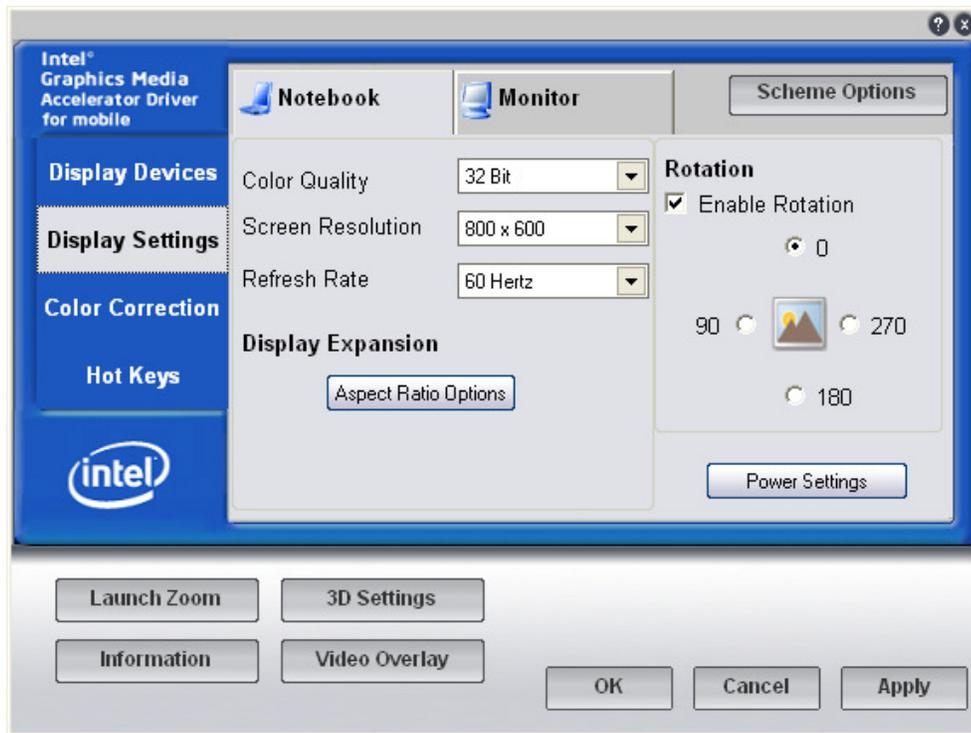
When using TFTST-A20, it is necessary to change setting as follows by Intel Graphic control panel.

Below is Intel Graphic Control Panel (From Task tray or Control Panel)



Select [Display Devices] Tab and check "Extended Desktop" radio button.

Click [Apply] button, then, TFTST-A20 available.



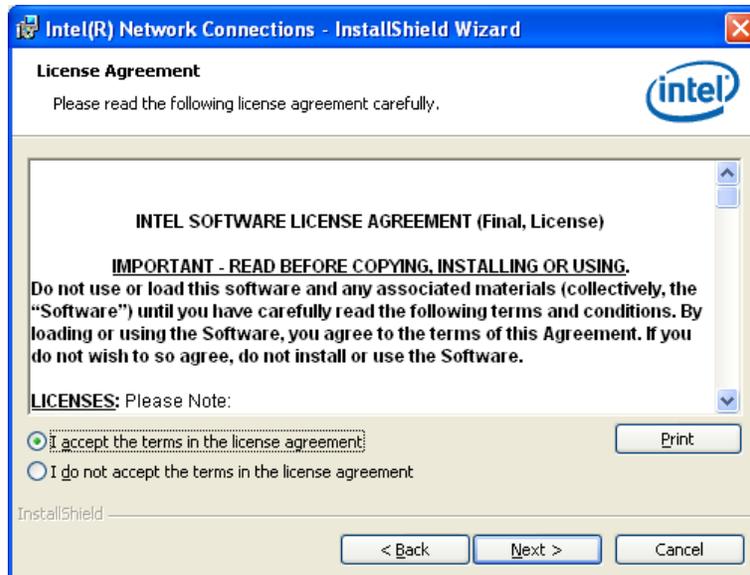
About the other performance (Screen resolution, Color Quality, etc):
 Please set TFTST-A20 for your environment by two Control Panel above at any time.

3.4. Installation for Intel Network Driver

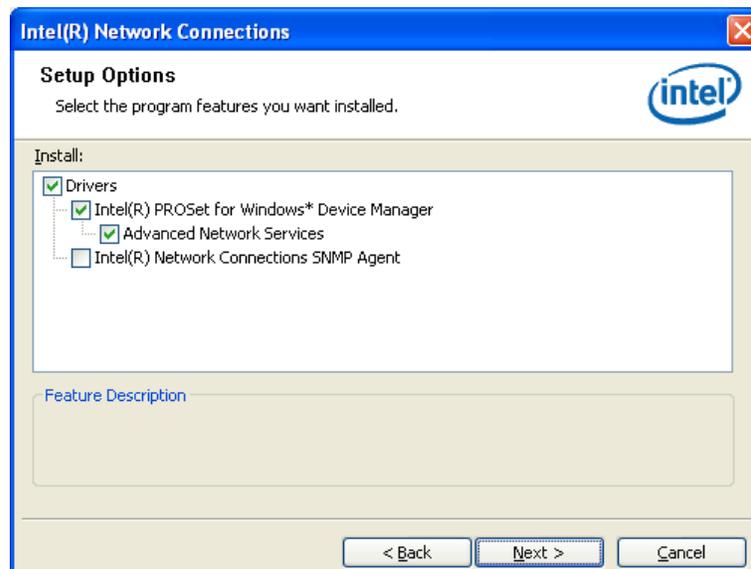
Run "PRO2KXP.exe" in the "ST-A20\Intel\Lan_driver\2000_XP_WEPOS_POSReady" folder in the Driver Kit CD-ROM. After a while, the following window appears. Click on the "Next" button.



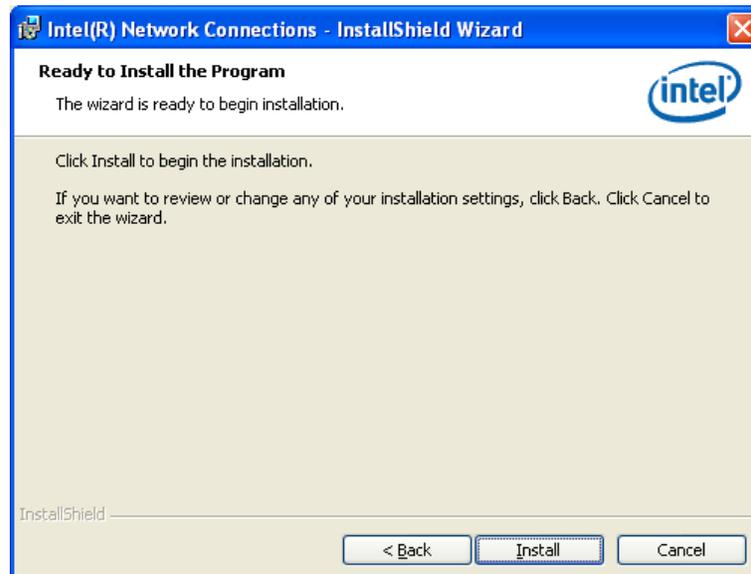
The "License Agreement" window appears. Confirm the contents. If you agree, check the "I accept the terms in the license agreement" radio button and click on the "Next" button.



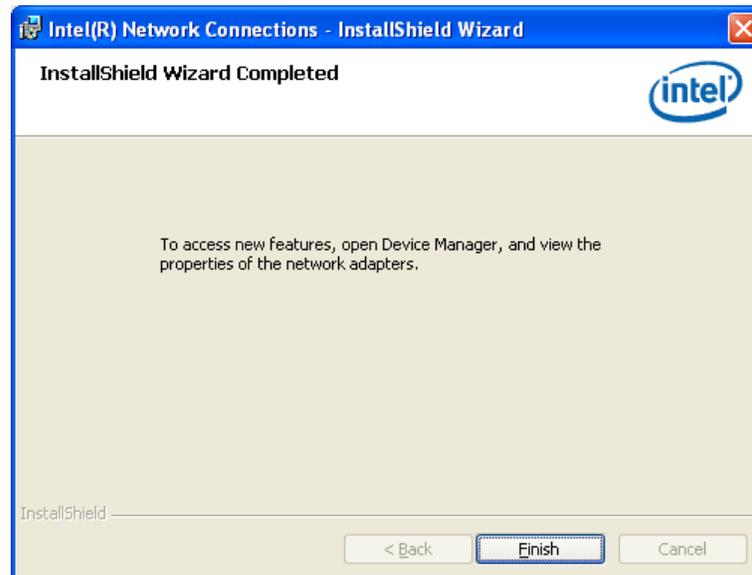
The “Setup Options” window appears. If nothing specially required, click on the “Next” button with default condition.



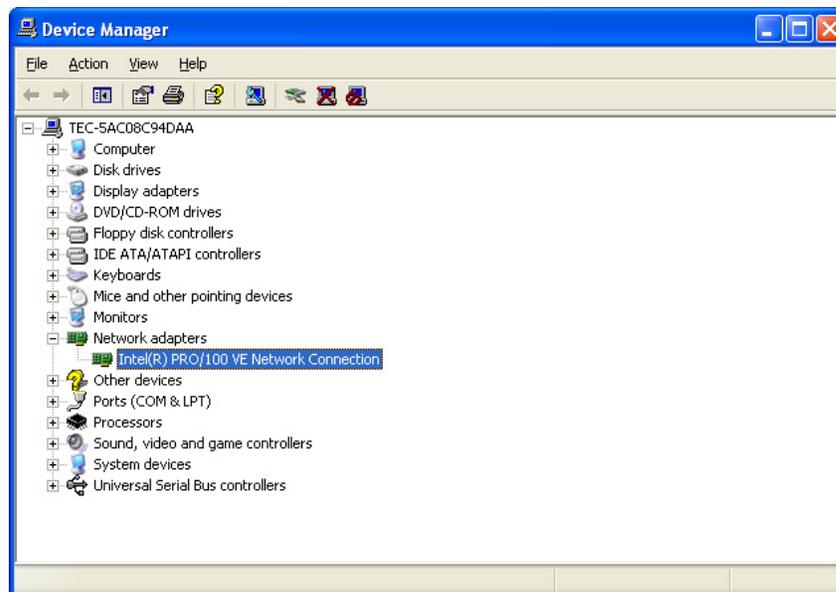
The following window appears. Click on the “Install” button to start the installation.



After completion of the installation, the following window appears.
Click on the “Finish” button to complete the installation.

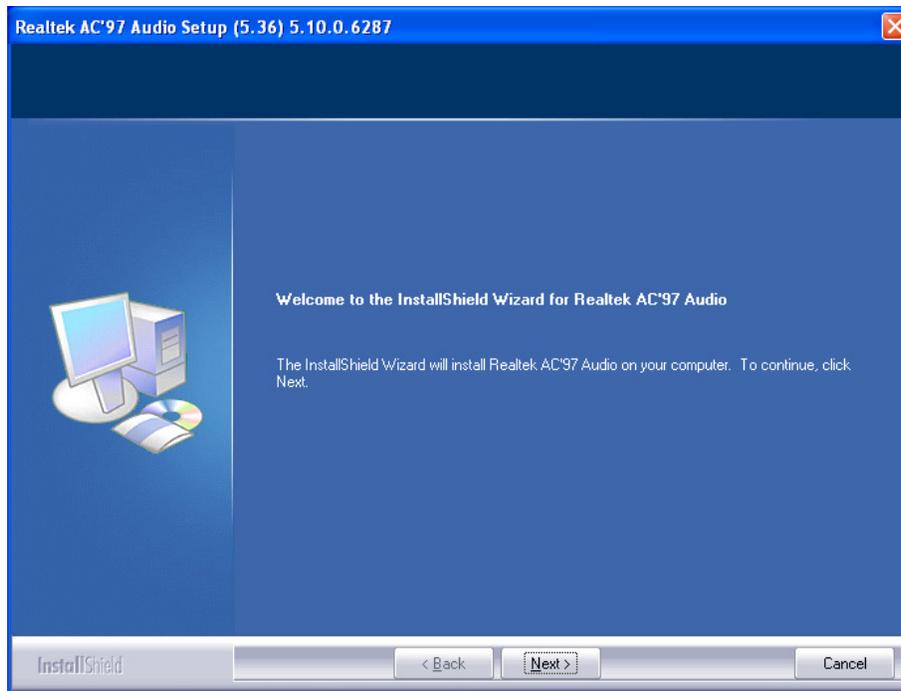


Open Device Manager to confirm the network driver has been installed. Make sure that “Intel (R)PRO/100 VE Network Connection” is registered under the “Network adapters” icon.



3.5. Installation for Realtek Audio Driver

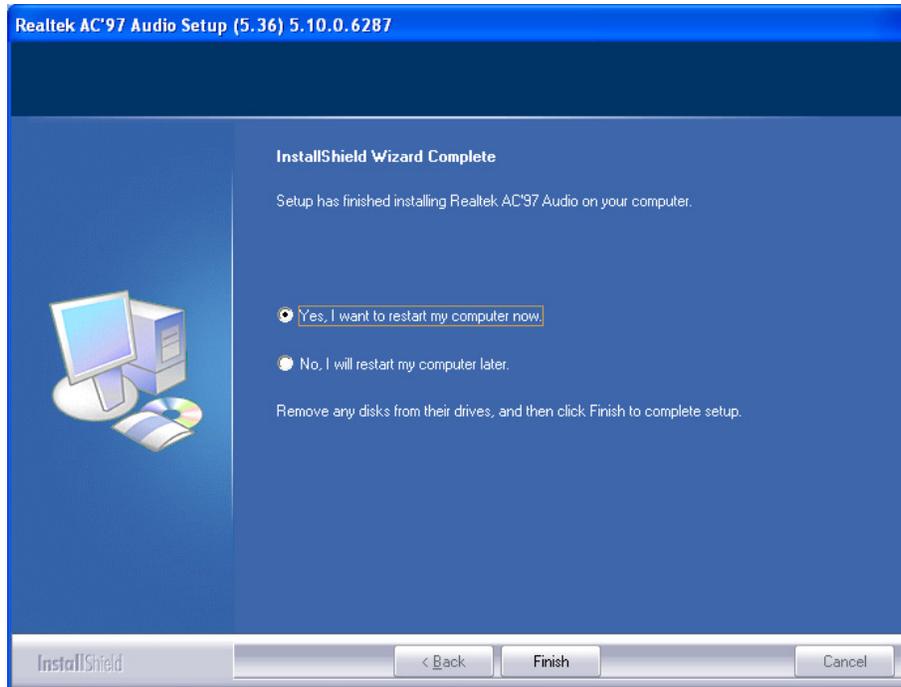
Run “setup.exe” in the “ST-A20\Intel\Audio\2000_XP_WEPOS_POSReady” folder in the Driver kit CD-ROM. After a while, the following window appears, click on the “Next” button.



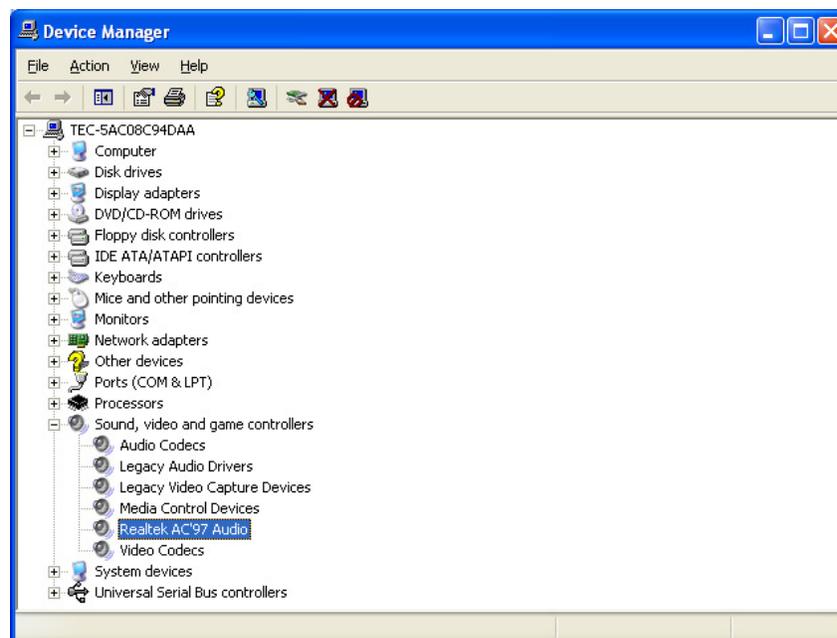
After a while, the following window appears. Click on the “Continue Anyway” button.



When the installation is completed successfully, the following window appears. Check the “Yes, I want to restart my computer now” radio button, then click on the “Finish” button to reboot your computer.



Open Device Manager to confirm the audio driver has been installed. Make sure that “Realtek AC'97 Audio” is registered under the “Sound, video and game controllers” icon.

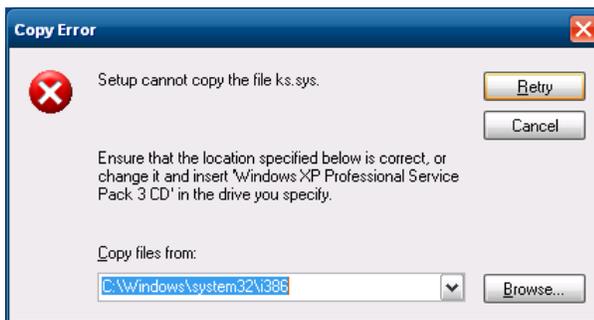


Note: Installation of audio driver for POSReady 2009

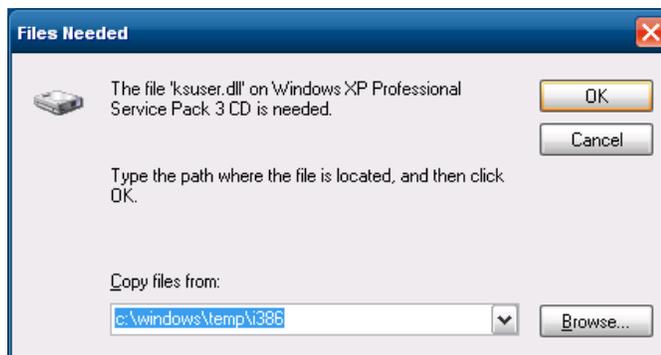
In the case of POSReady 2009, “.sys” file or “.dll” file is requested and the screen that request to insert “Windows XP Service Pack 3 CD” is displayed several times.
Please set the path for the location of “.sys” file or “.dll” file each time.

When “.sys” file is requested -> Set the path to “c:\windows\system32\drivers”
When “.dll” file is requested -> Set the path to “c:\windows\system32”

The following screen to request “.sys” file will be displayed several times.



The following screen to request “.dll” file will be displayed several times.



Note: If “Additional Drivers” of “Optional Components” is installed additionally in POSReady 2009 installation, these screen is not displayed. (Refer to Notice 6.1.3)

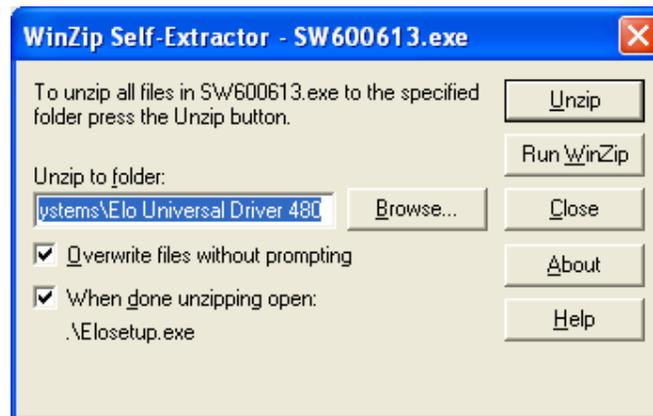
3.6. Installation for EloTouch Panel Driver

3.6.1. Installation for Standard Model

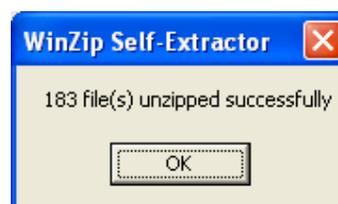
Run "SW600613.exe" in the "ST-A20\Tablet\XP_WEPOS_POSReady_Vista" folder in the Driver Kit CD-ROM. The following window appears. Click on the "OK" button.



The following window appears. Click on the "Unzip" button, then the files are decompressed.



The following window appears. Click on the "OK" button.



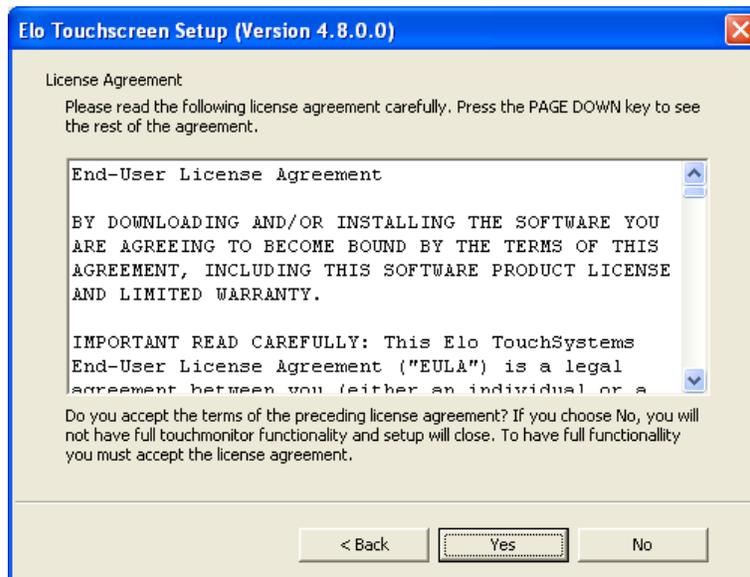
The following window appears. Choose a language, if necessary, and then click on the “Next” button.



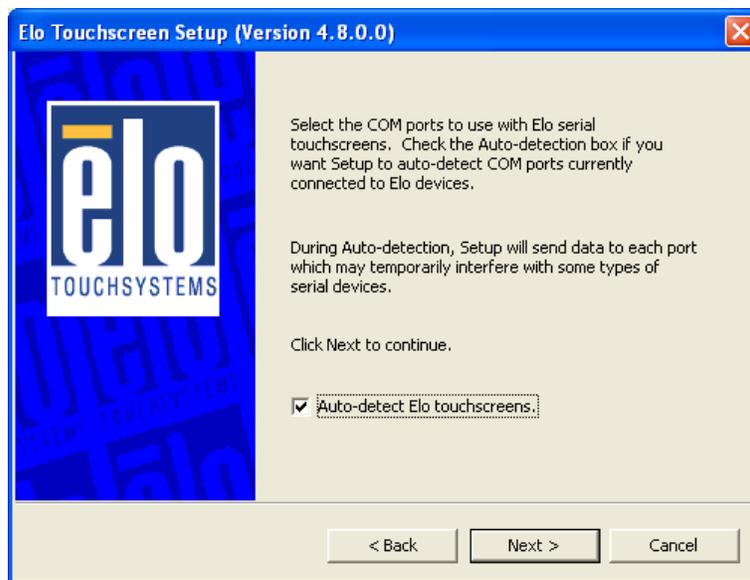
The following window appears. Check the “Install Serial Touchscreen Drivers” check box, and click on the “Next” button.



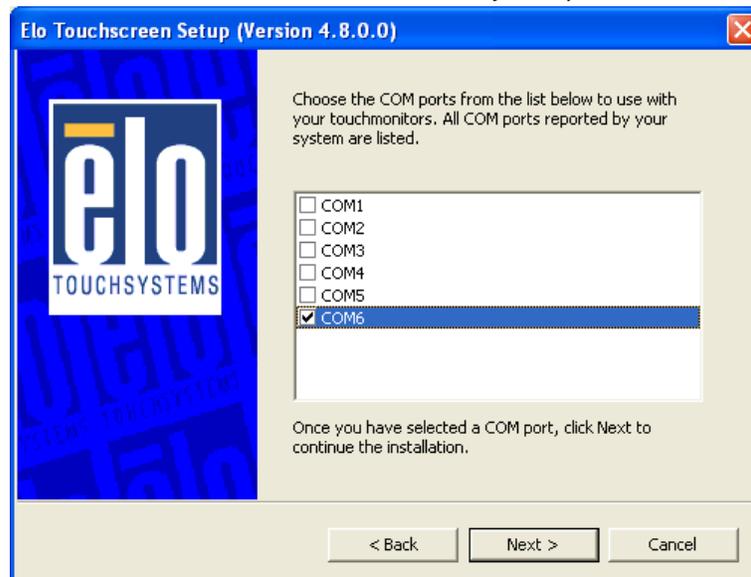
The “License Agreement” window appears. Confirm the contents. If you agree, click on the “Yes” button.



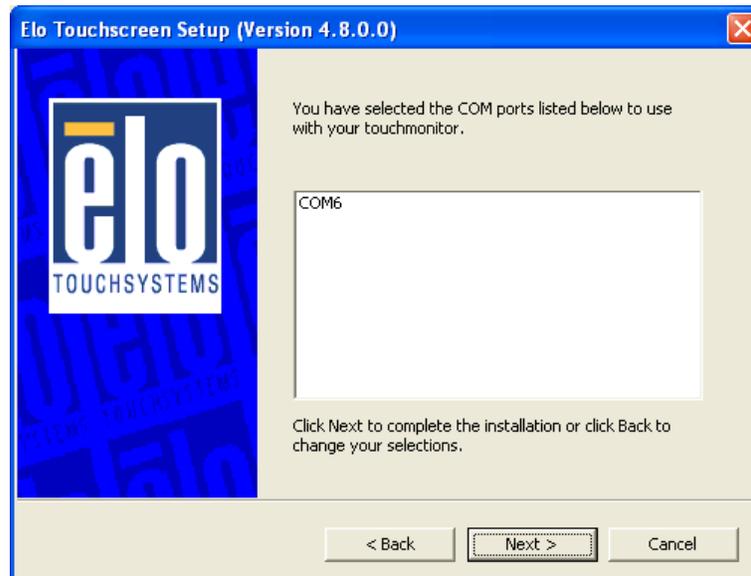
The following window appears. Check the “Auto-detect Elo devices” check box, then click on the “Next” button.



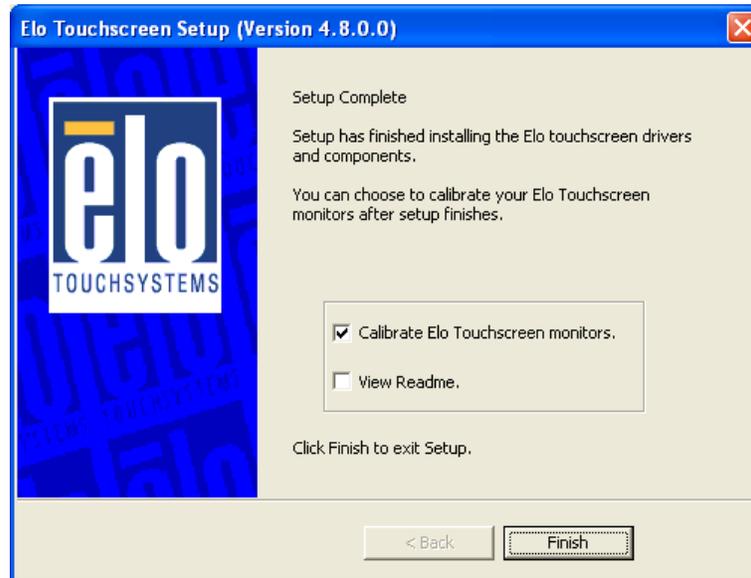
The following window appears. The touch panel connected to the ST-A20 is detected, and “COM6” is chosen. If “COM6” is not chosen, there may be a problem. Click on the “Next” button.



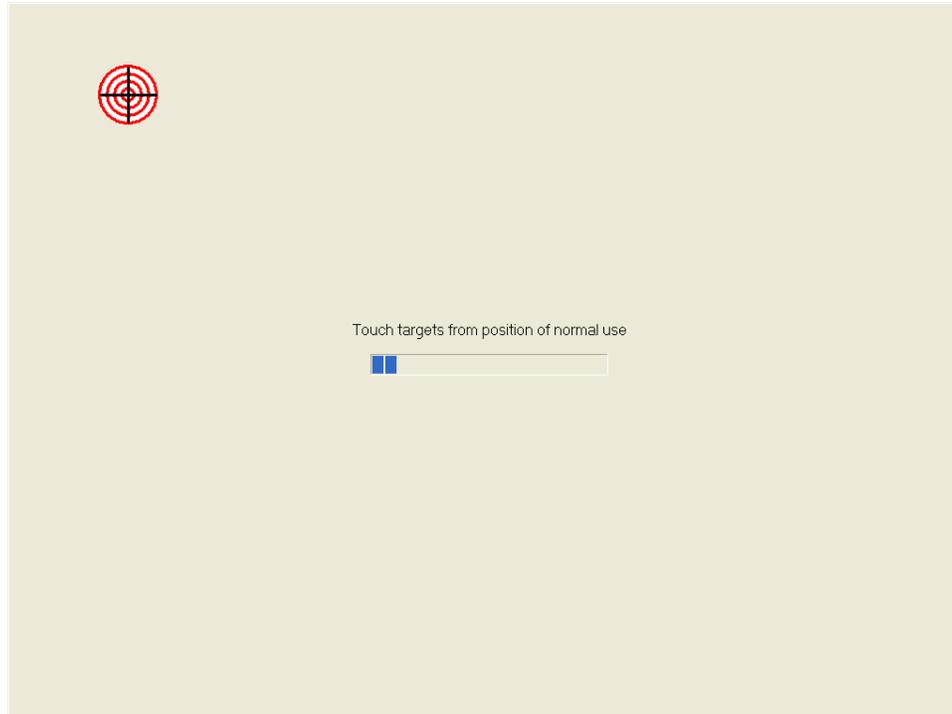
The following window appears. Confirm that “COM6” is chosen, then click on the “Next” button.



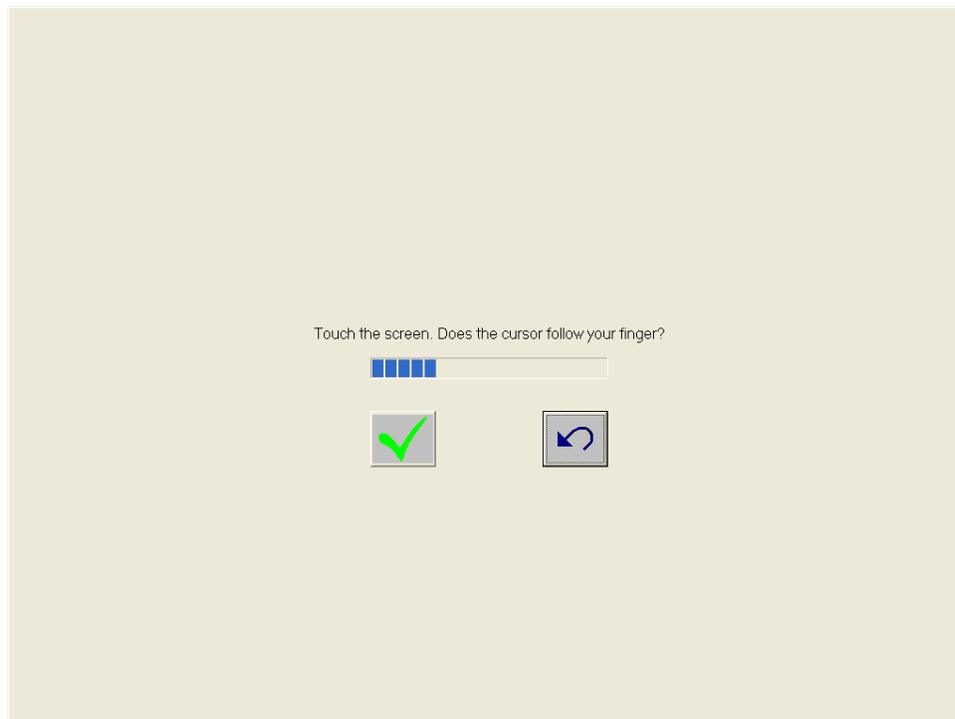
After completion of the installation, the following window appears. Check the “Calibrate Elo Touchscreen monitors” check box, and click on the “Finish” button.



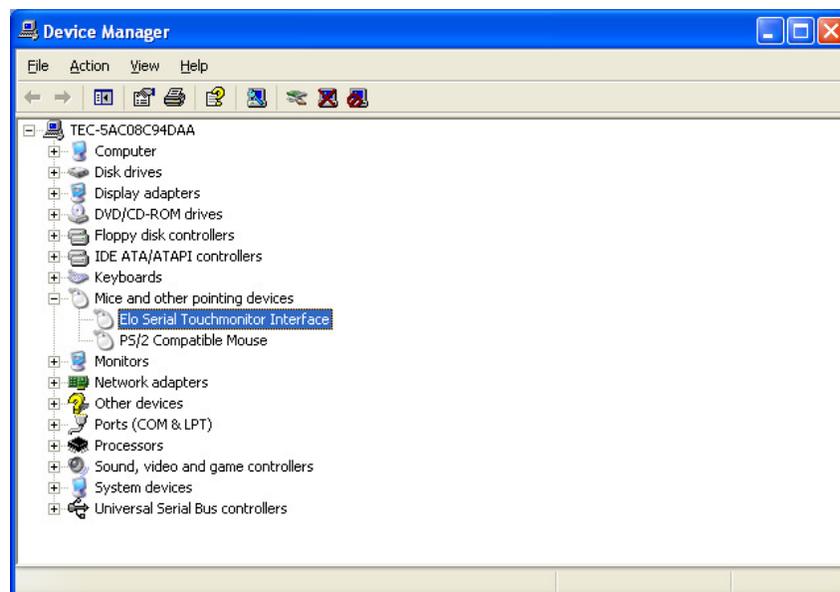
The following calibration screen appears. Perform a calibration by touching the mark whenever it appears. (The mark appears three times.) (Transparent background on V5.41 & above)



After the mark was touched three times, two buttons appear at the center of the screen. Click on the check mark button to complete the calibration



Open Device Manager to confirm the touch panel driver has been installed. Make sure that "Elo Serial Touchmonitor Interface" is registered under the "Mice and other pointing devices" icon.

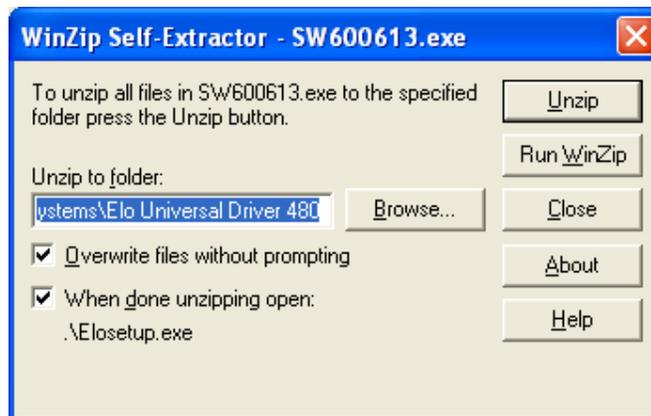


3.6.2. Installation When Connecting TFTST-A20

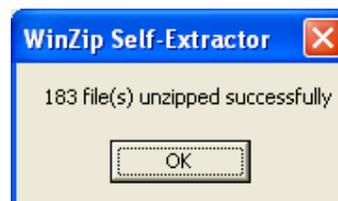
Run "SW600613.exe" in the "ST-A20\Tablet\XP_WEPOS_POSReady_Vista" folder in the Driver Kit CD-ROM. The following window appears. Click on the "OK" button.



The following window appears. Click on the "Unzip" button, then the files are decompressed.



The following window appears. Click on the "OK" button.



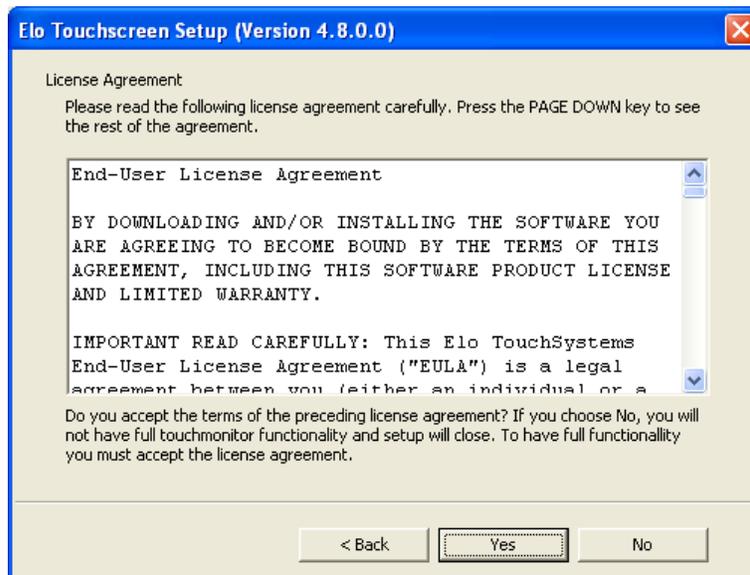
The following window appears. Choose a language, if necessary, and then click on the “Next” button.



The following window appears. Check the “Install Serial Touchscreen Drivers” check box, and click on the “Next” button.



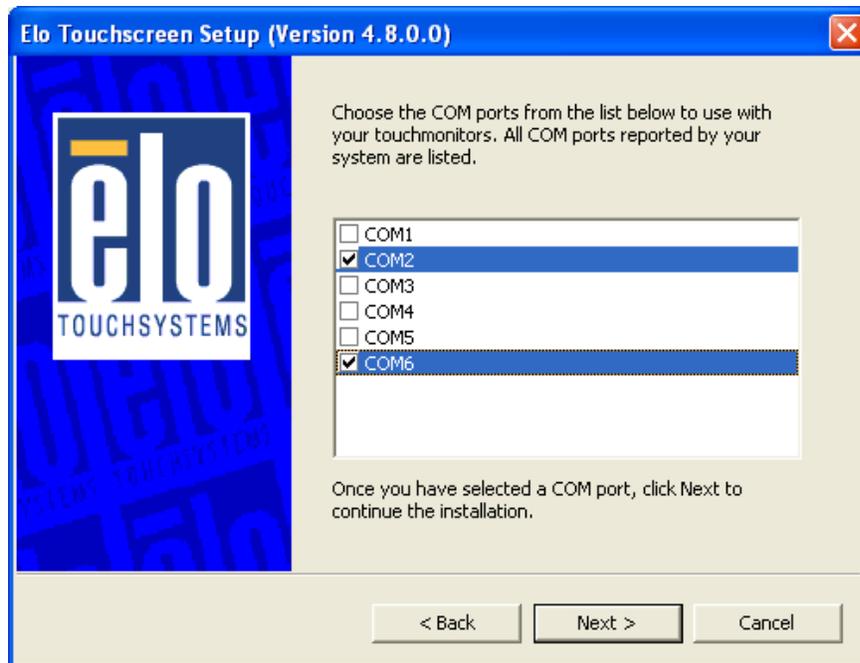
The “License Agreement” window appears. Confirm the contents. If you agree, click on the “Yes” button.



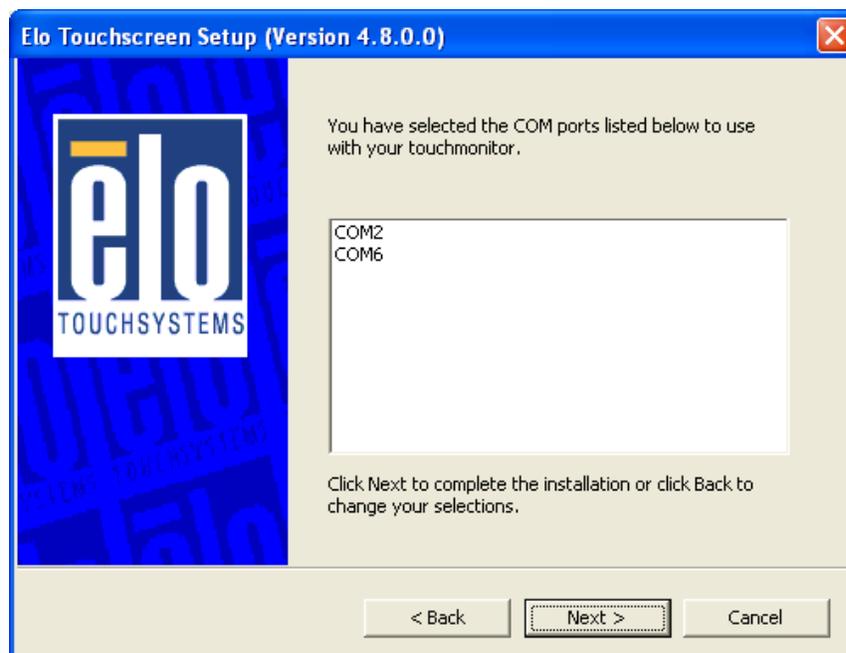
The following window appears. Check the “Auto-detect Elo devices” check box, then click on the “Next” button.



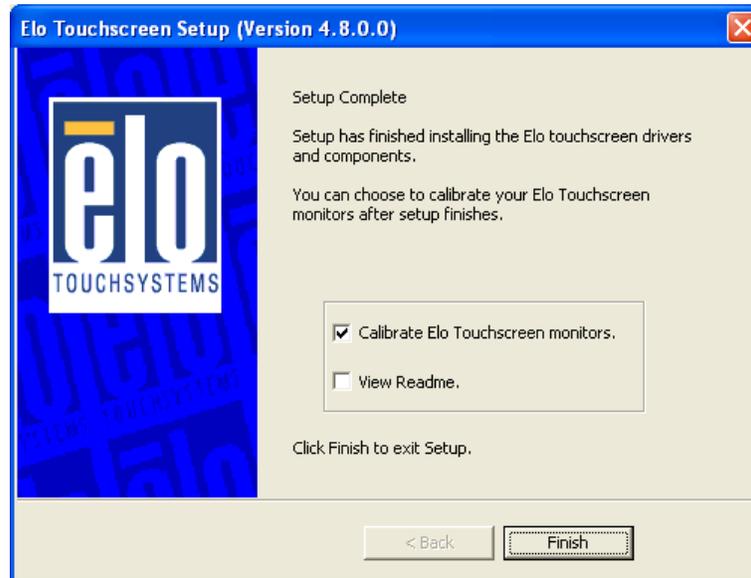
The following window appears. The touch panel connected to the ST-A20 and the touch panel connected to the TFTST-A20 are detected, and “COM6” and “COM1 or 2” are chosen. If “COM6” and “COM1 or 2” is not chosen, there may be a problem. Click on the “Next” button.



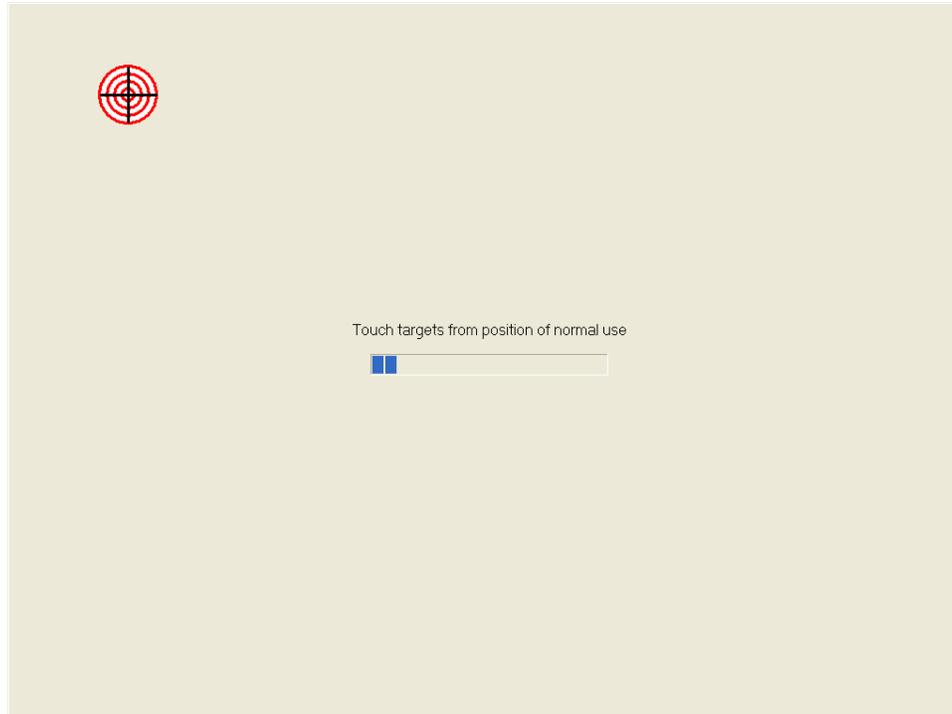
The following window appears. Confirm that “COM6” and “COM1 or 2” are chosen, then click on the “Next” button.



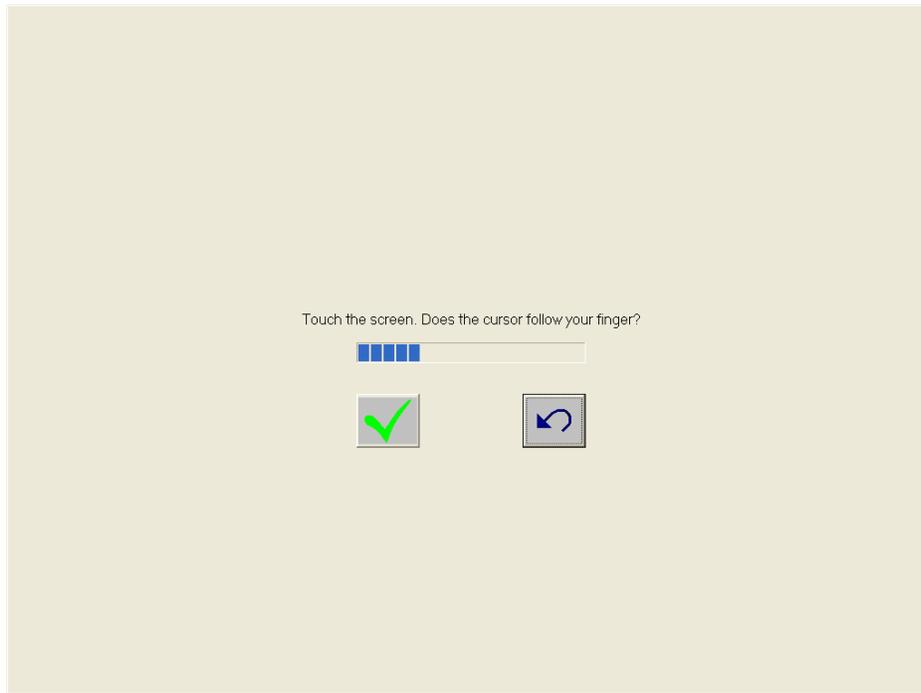
After completion of the installation, the following window appears. Check the “Calibrate Elo Touchscreen monitors” check box, and click on the “Finish” button.



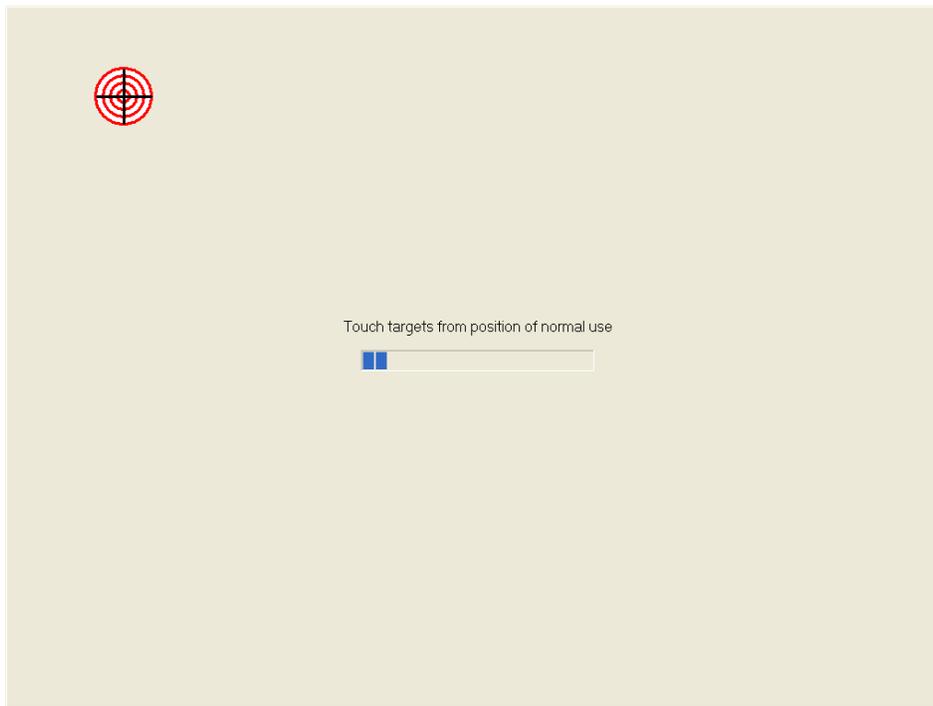
The following calibration screen appears on ST-A20 main screen. Perform a calibration by touching the mark whenever it appears. (The mark appears three times.)



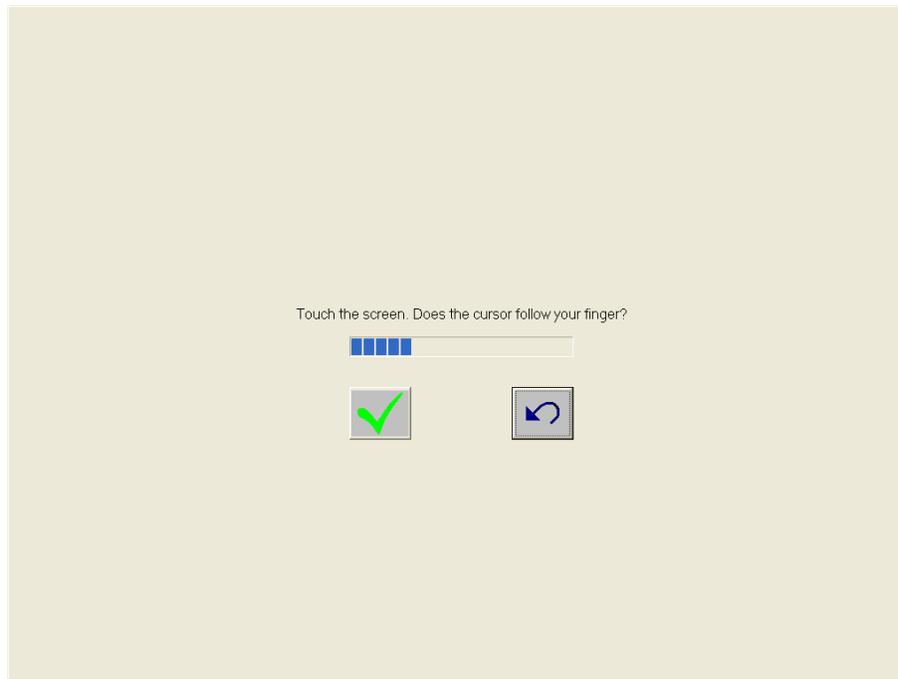
After the mark was touched three times, two buttons appear at the center of the screen. Click on the check mark button to complete the calibration



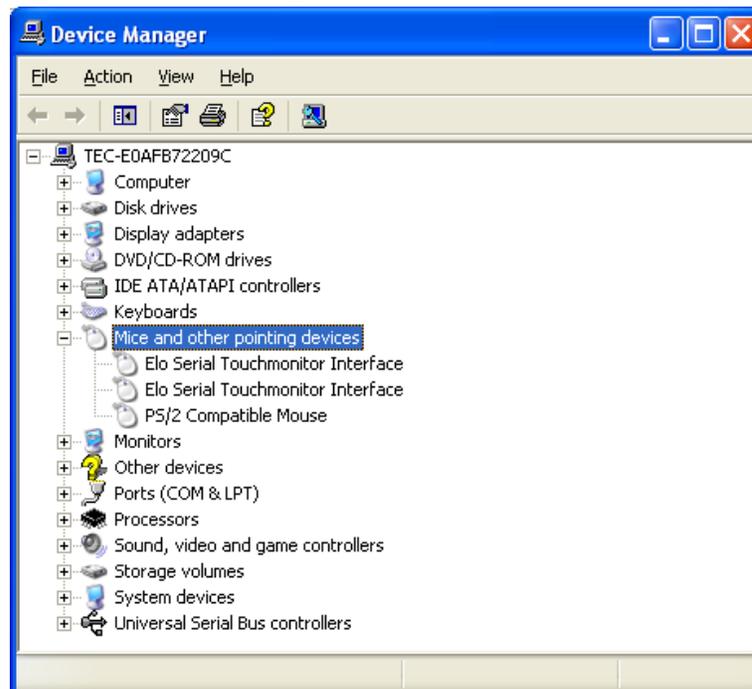
The following calibration screen appears on TFTST-A20 screen. Perform a calibration by touching the mark whenever it appears. (The mark appears three times.)



After the mark was touched three times, two buttons appear at the center of the screen. Click on the check mark button to complete the calibration

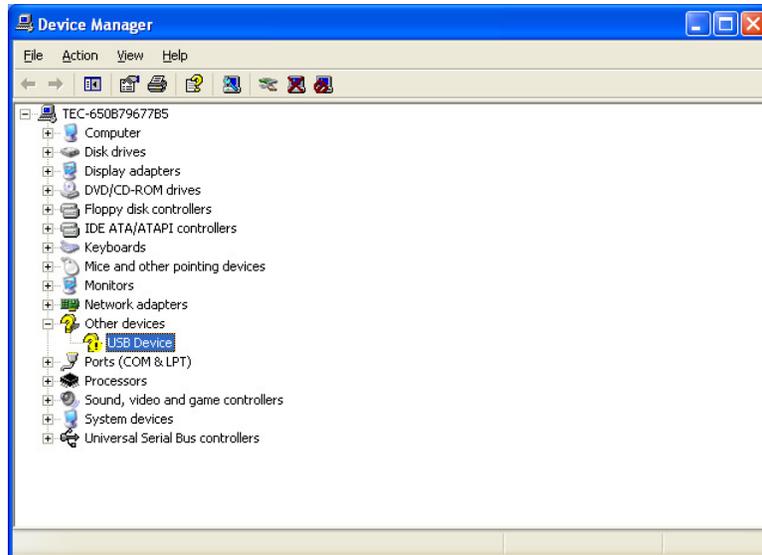


Open Device Manager to confirm the touch panel driver has been installed. Make sure that "Elo Serial Touchmonitor Interface" is registered under the "Mice and other pointing devices" icon.



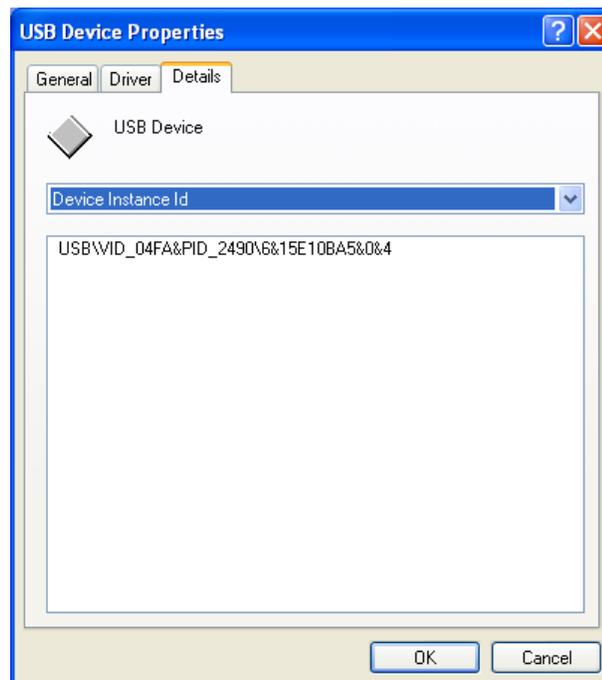
3.7. Installation for i-Button Driver

When the iButton is connected to the ST-A20, "USB Device" is shown with an exclamation mark (!) under the "Other devices" icon in the Device Manager window.



Note : A confirmation of iButton device

Open Device Manager, right-click on the "USB device" icon, then click on "Properties" to open the "USB Device Properties" window. Click on the "Details" tab, confirm that there is "USB\VID_04FA&xxxxxxx".



We can not redistribute this installation driver.

Therefore, if you need the driver, you have to download the driver from following site.

<http://www.maxim-ic.com/products/ibutton/software/tmex/>

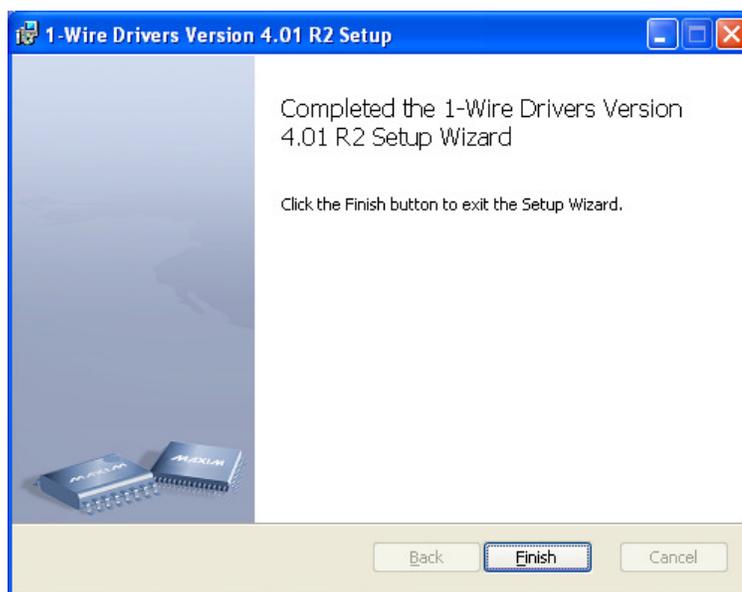
Note: This URL was written on 2008/7/30.

Run the “install_1_wire_drivers_x86_v401r2.msi” which you downloaded.

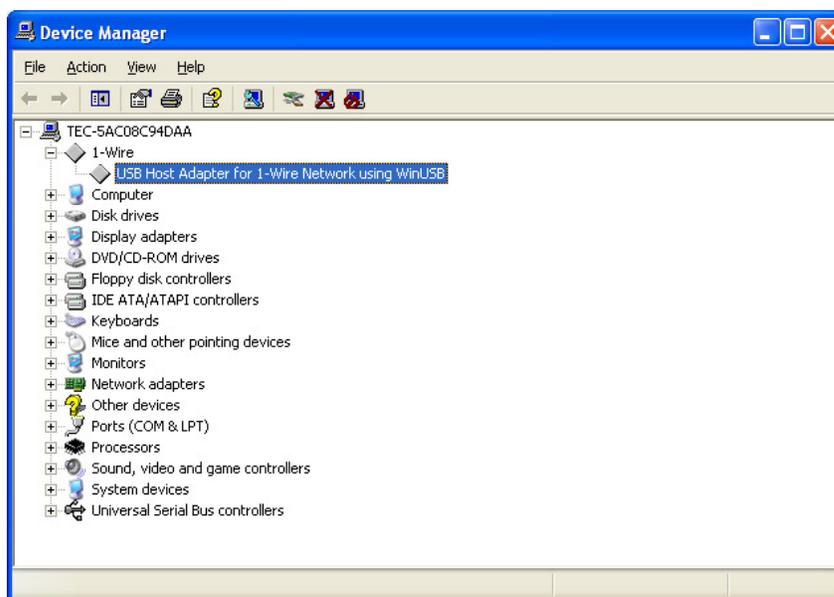
The “License Agreement” window appears. Confirm the contents. If you agree, check the “I accept the terms in the License Agreement” check box and click on the “Install” button.



After completion of the installation, the following window appears. Click on the “Finish” button.



Open Device Manager to confirm the iButton has been installed. Make sure that “USB Host Adapter for 1-Wire Network using WinUSB” is registered under the “1-Wire” icon.



Note: To use the RAID, subsequently install the RAID Utility with reference to Section 6.3 Installation of RAID Utility JMB36X RAID CONFIGURER.

4. Setup for Windows Vista Business

4.1. Installation for Operating System (Windows Vista Business)

Install Windows Vista. And install Windows Vista service pack as needed.

Notes: To use the RAID, the RAID must be built using the RAID BIOS Utility with reference to Section 6.1 Creation of RAID from RAID BIOS Menu.

To use the RAID, the operation system must be installed with reference to Section 6.2 Installation of Each Operating System in RAID Environment.

Notes: To use the two HDDs without using RAID, the operation system must be installed with reference to Section 6.2 Installation of Each Operating System in RAID Environment.

4.2. Installation for Intel Chipset Software

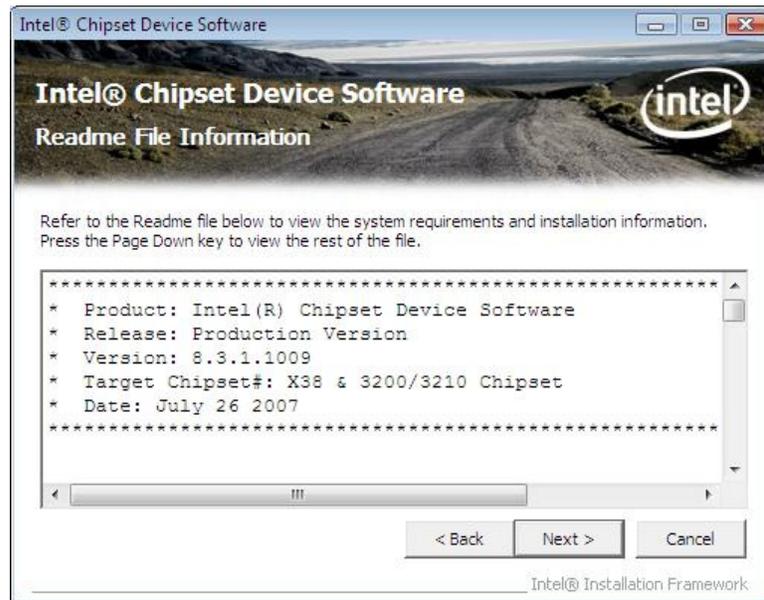
Run “infirst_autol.exe” in the “ST-A20\Intel\Chipset\XP_WEPOS_POSReady_Vista” folder in the Driver Kit CD-ROM. After a while, the following window appears. Click on the “Next” button.



The “License Agreement” window appears. Confirm the contents. If you agree, click on the “Yes” button.



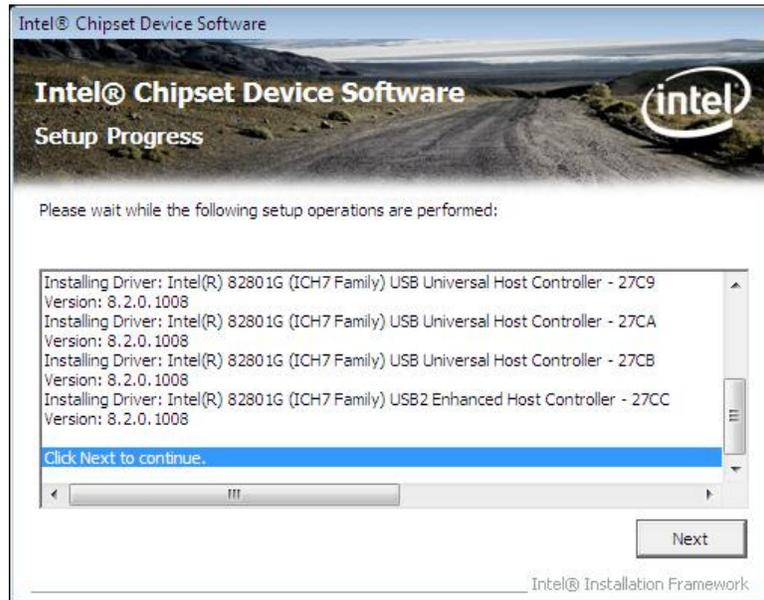
The "Readme File Information" window appears. Click on the "Next" button.



The "Setup Progress" window appears, and starts the installation.



After the “Next” button changes to the status that you can click, click on the button.



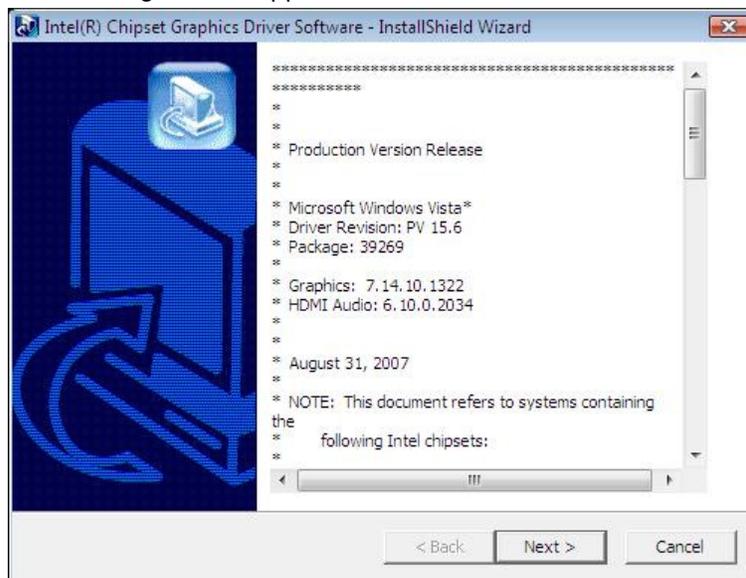
After completion of the installation, the following window appears. Click on the “Finish” button.



4.3. Installation for Intel Graphic Accelerator Driver

4.3.1. Installation

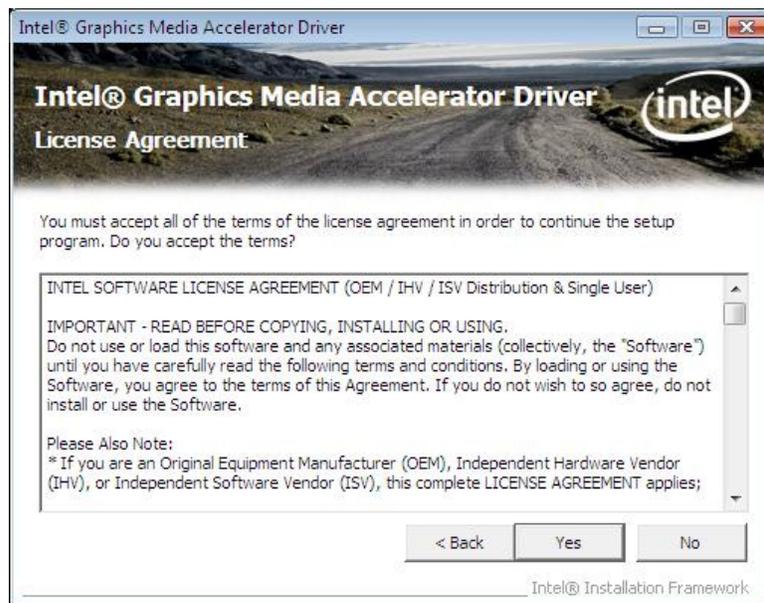
Run "winvista_1582.exe" in the "ST-A20\Intel\Graphic_driver\Vista" folder in the Driver Kit CD-ROM. The following window appears. Click on the "Next" button.



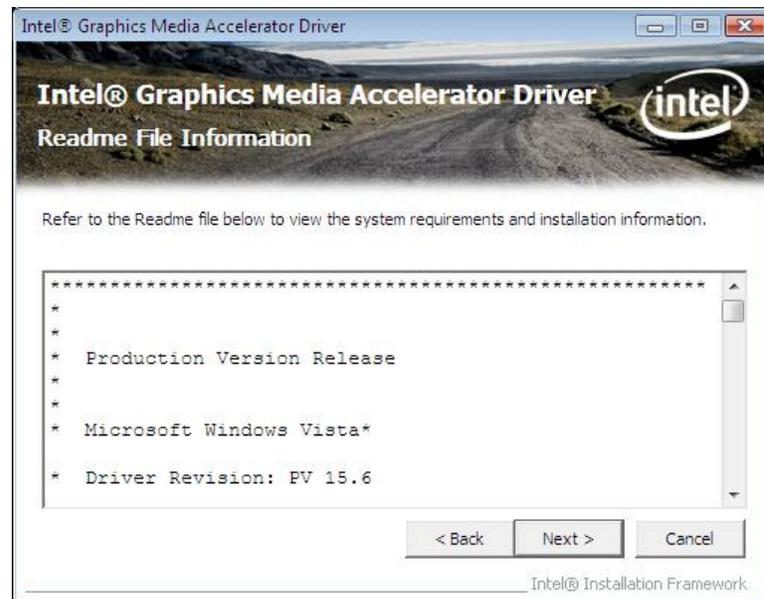
After a while, the following window appears. Click on the "Next" button.



The “License Agreement” window appears. Confirm the contents. If you agree, click on the “Yes” button.

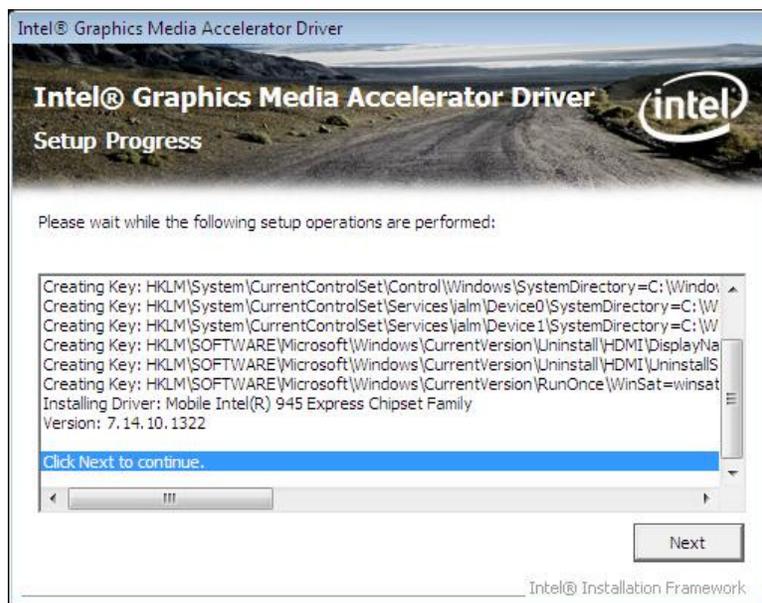


The “Readme File Information” window appears. Click on the “Next” button.



The “Setup Progress” window appears, and starts the installation.

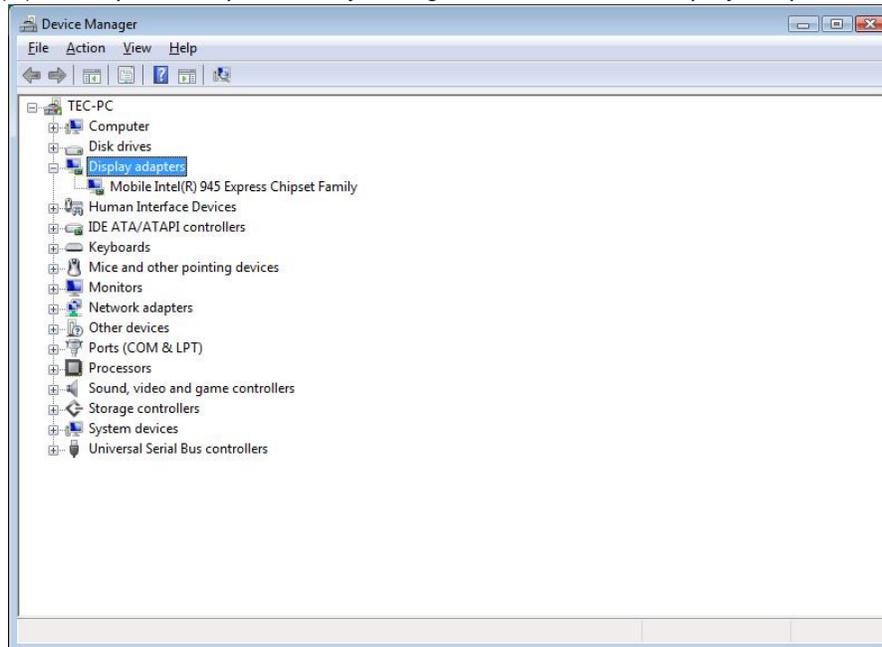
After the “Next” button changes to the status that you can click, click on the button.



When the installation is completed successfully, the following window appears. Check the “Yes, I want to restart this computer now” radio button, then click on the “Finish” button to reboot your computer.



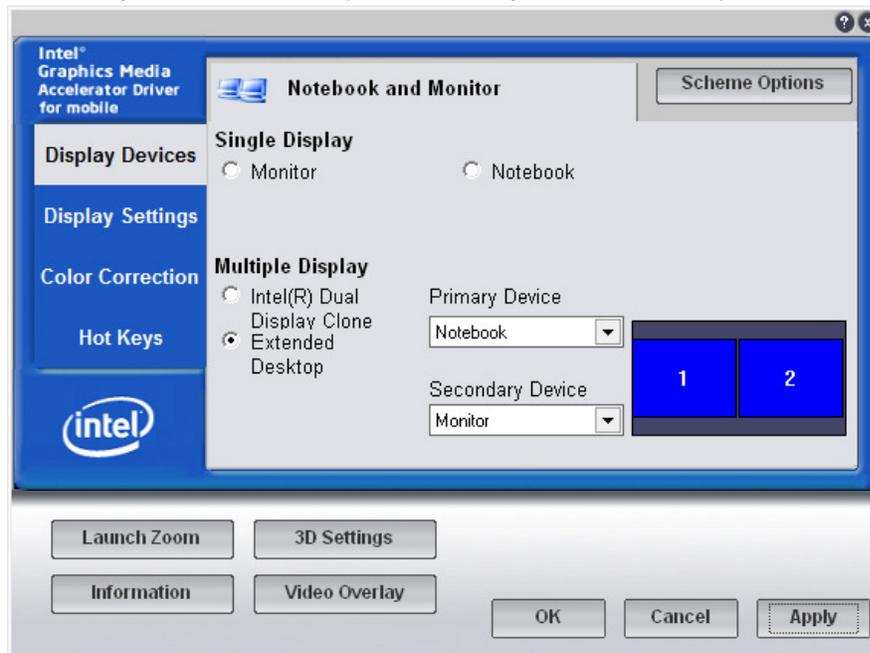
Open Device Manager to confirm the graphic driver has been installed. Make sure that “Mobile Intel(R)945 Express Chipset Family” is registered under the “Display adapters” icon.



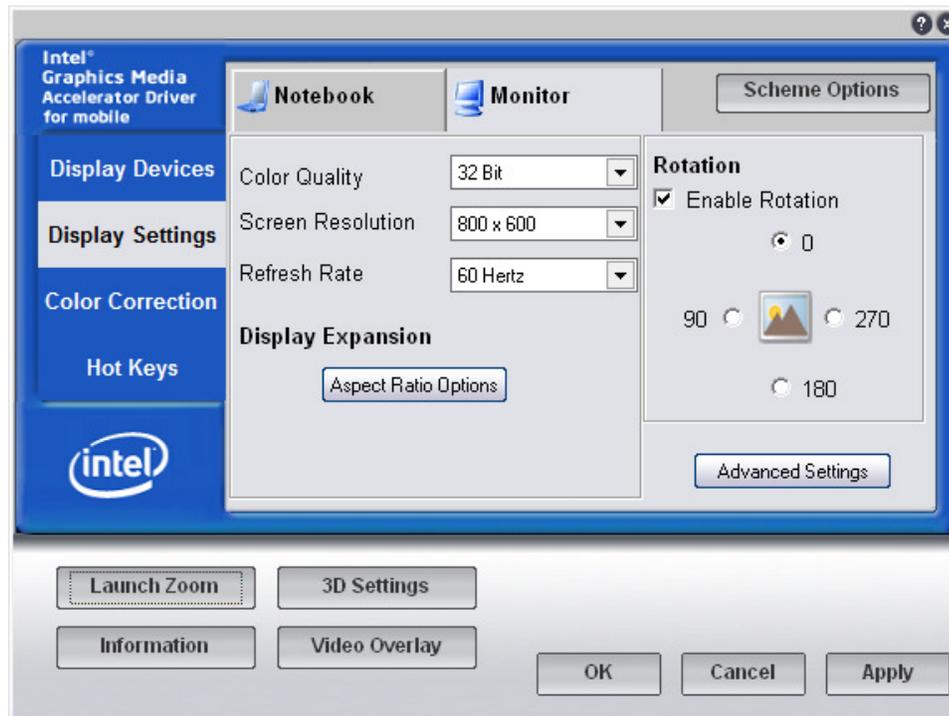
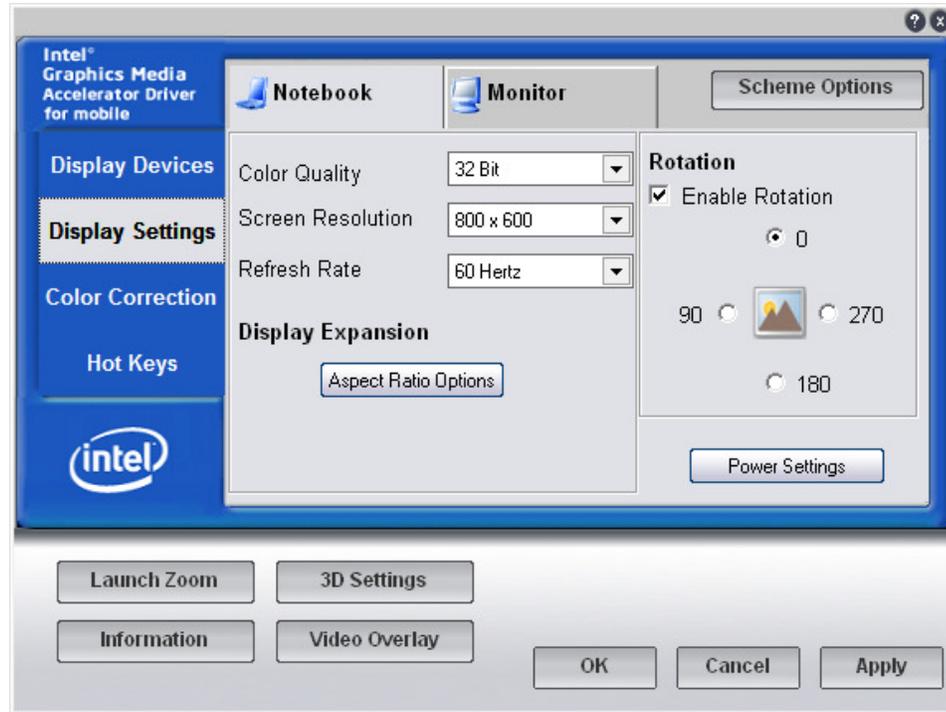
4.3.2. Additional Setting When Connecting TFTST-A20

When using TFTST-A20, it is necessary to change setting as follows by Intel Graphic control panel.

Below is Intel Graphic Control Panel (From Task tray or Control Panel)



Select [Display Devices] Tab and check "Extended Desktop" radio button.
Click [Apply] button, then, TFTST-A20 available.



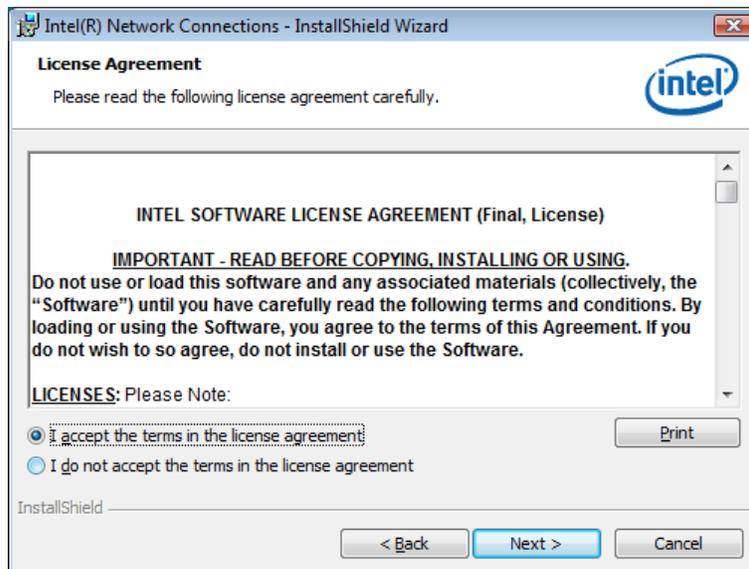
About the other performance (Screen resolution, Color Quality, etc):
 Please set TFTST-A20 for your environment by two Control Panel above at any time.

4.4. Installation for Intel Network Driver

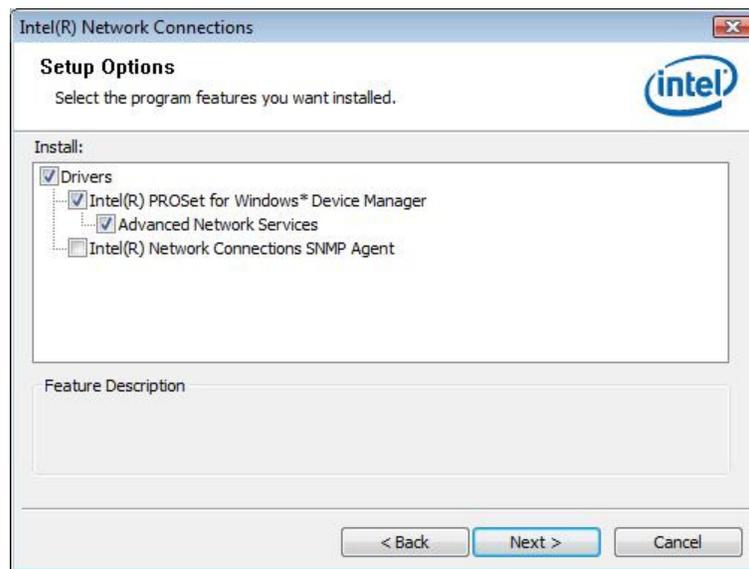
Run "PROVISTA32.exe" in the "ST-A20\Intel\Lan_driver\Vista" folder in the Driver Kit CD-ROM. After a while, the following window appears. Click on the "Next" button.



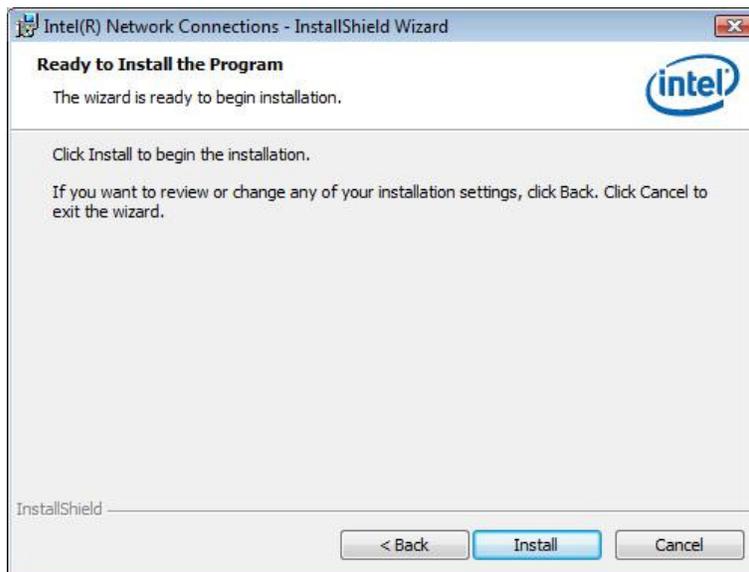
The "License Agreement" window appears. Confirm the contents. If you agree, check the "I accept the terms in the license agreement" radio button and click on the "Next" button.



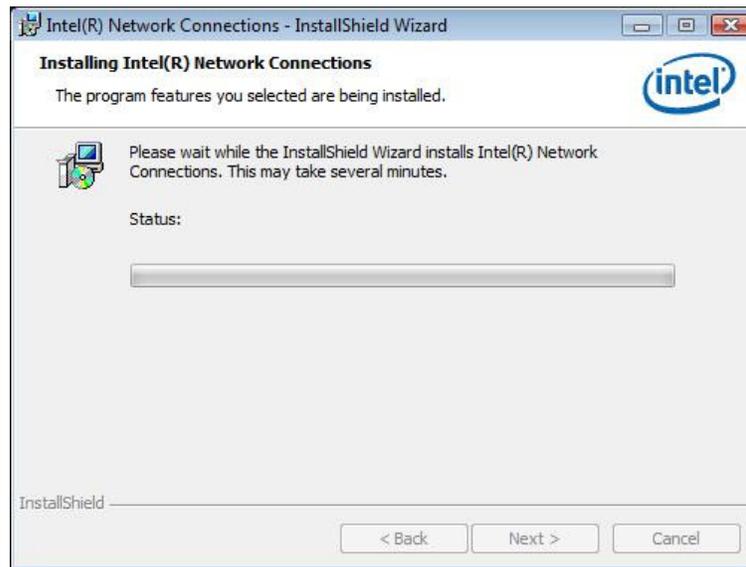
The “Setup Options” window appears. If nothing specially required, click on the “Next” button with default condition.



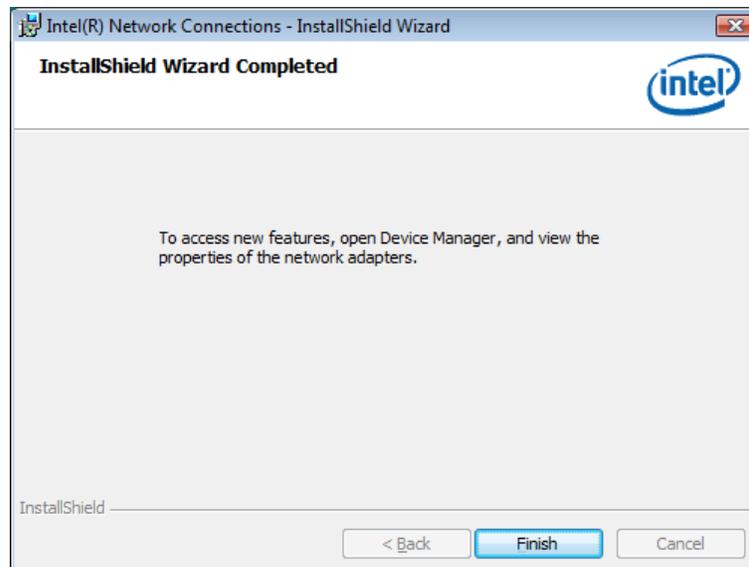
The following window appears. Click on the “Install” button to start the installation.



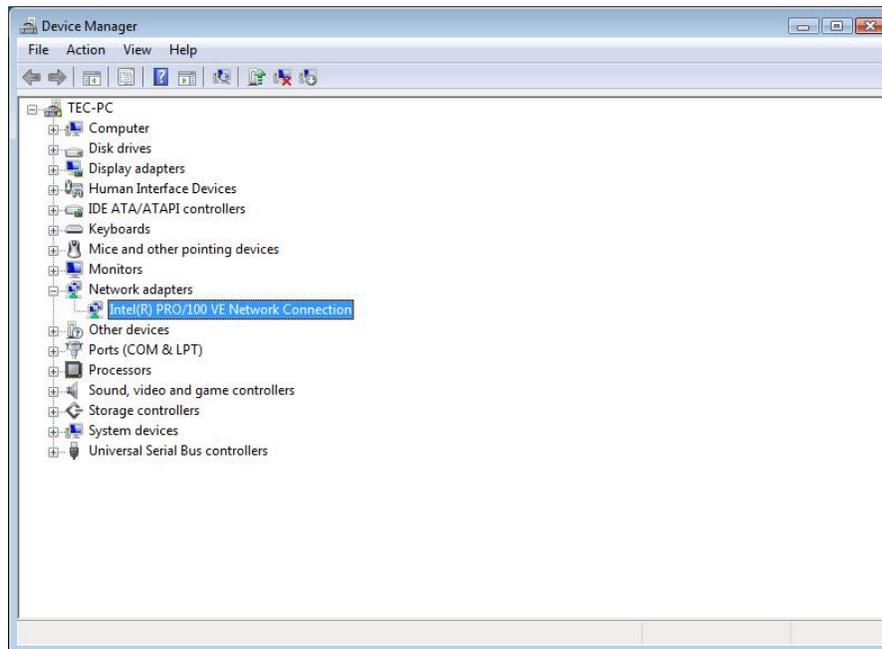
The following window appears asking you to wait until the installation completes.



After completion of the installation, the following window appears. Click on the "Finish" button.

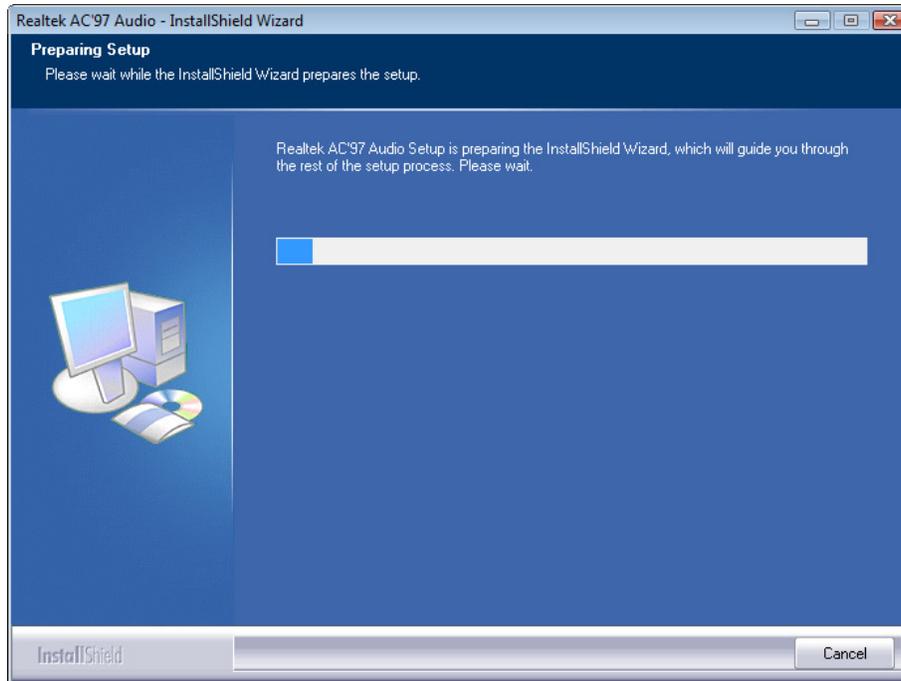


Open Device Manager to confirm the network driver has been installed. Make sure that “Intel (R) PRO/100 VE Network Connection” is registered under the “Network adapters” icon.

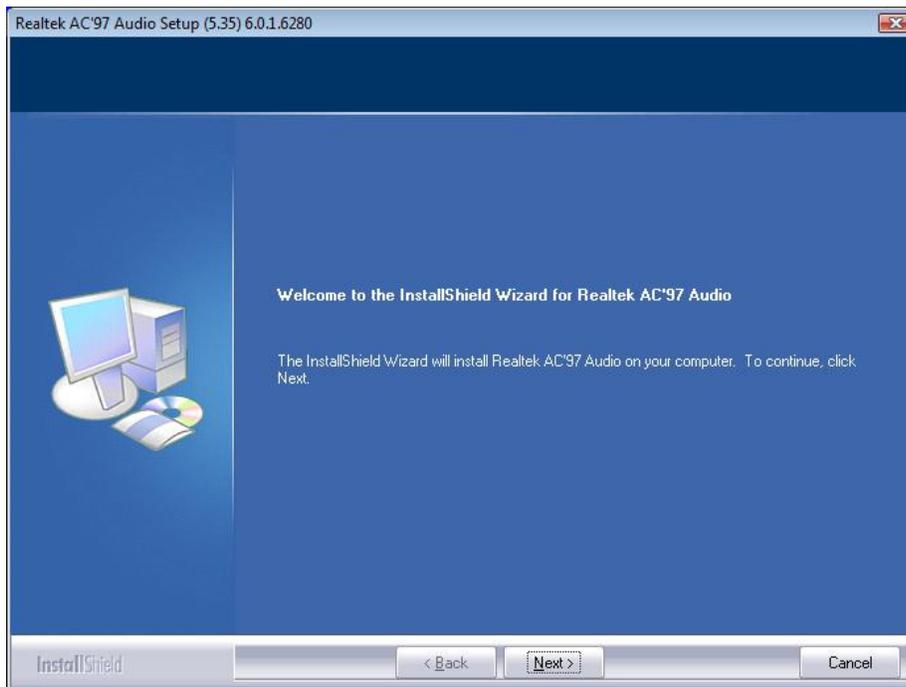


4.5. Installation for Realtek Audio Driver

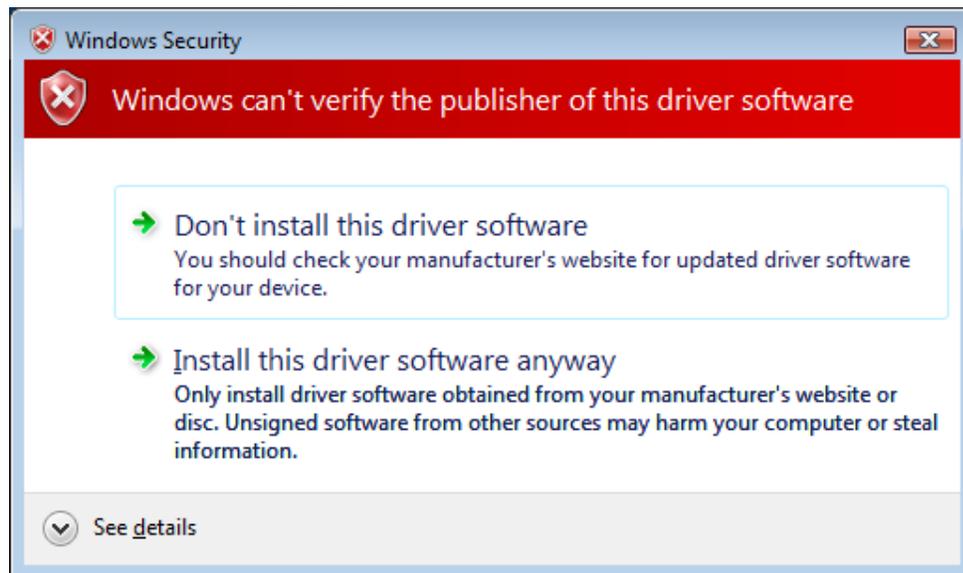
Run “setup.exe” in the “ST-A20\Intel\Audio\Vista” folder in the Driver kit CD-ROM, and the installer starts.



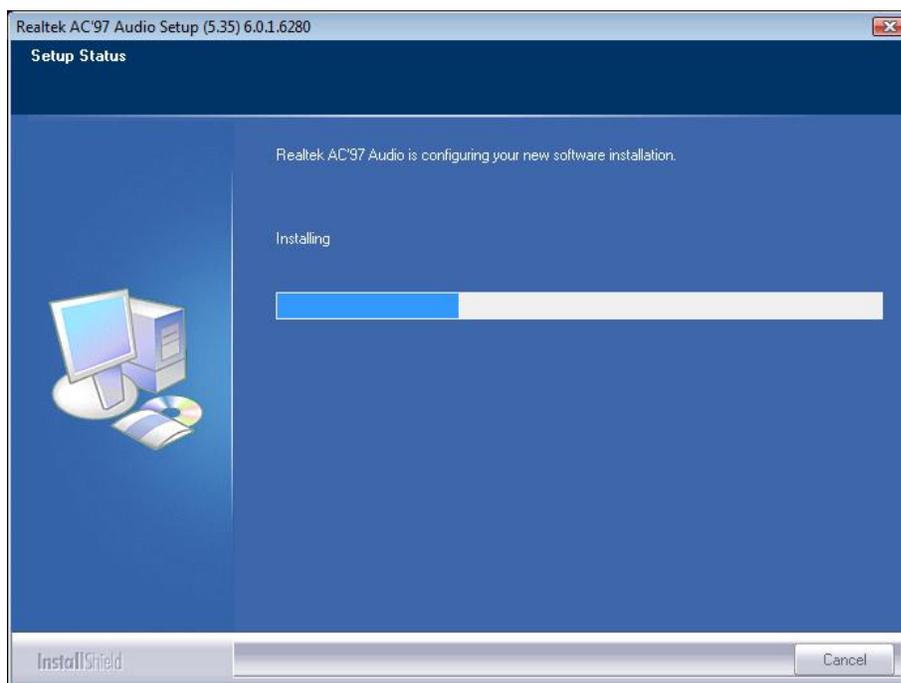
After a while, the following window appears. Click on the “Next” button.



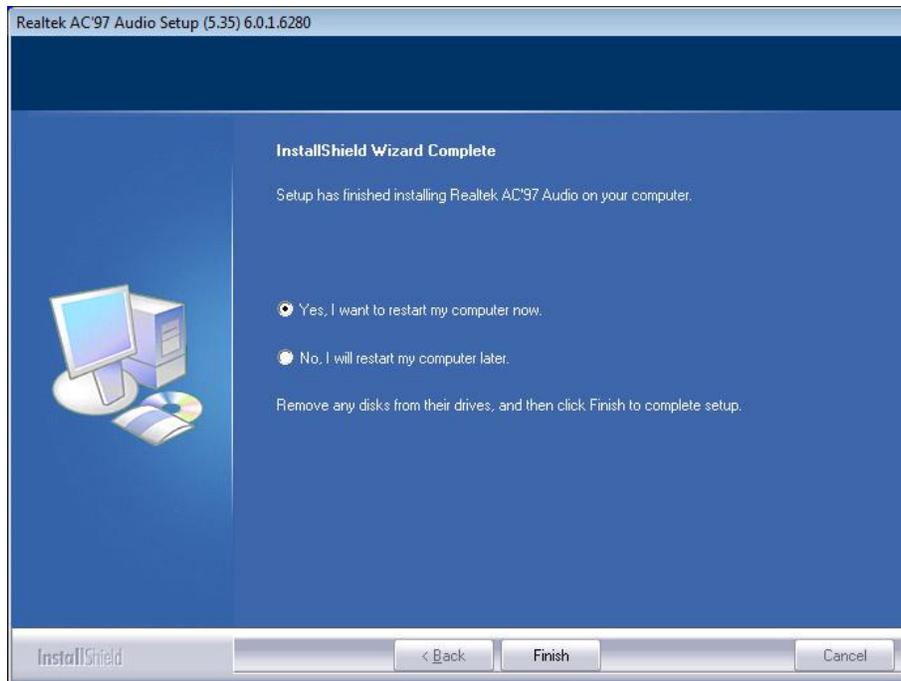
After a while, the following window appears. This is a security notice of Windows. Click on the “Install this driver software anyway” button.



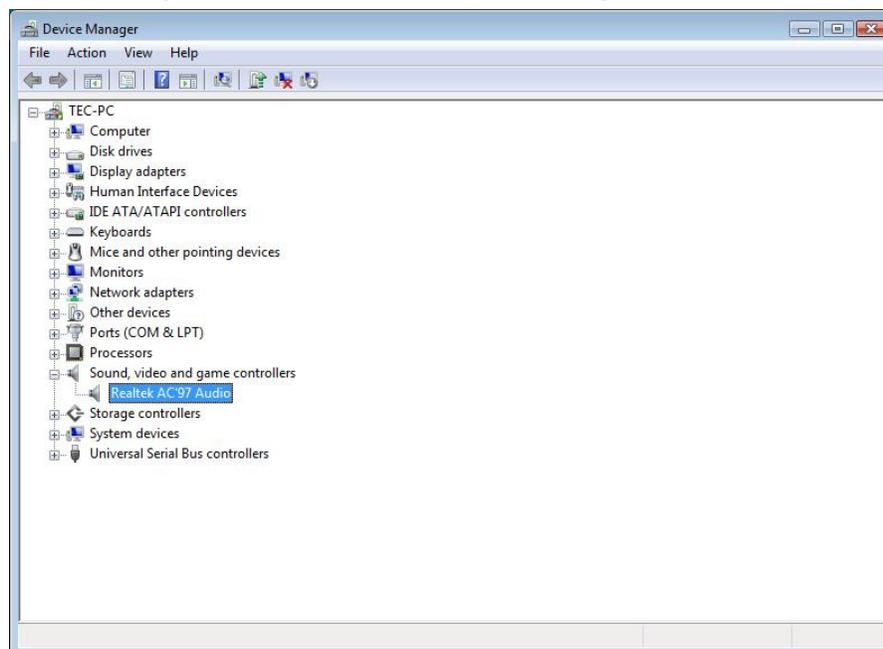
After a while, the installation starts.



When the installation is completed successfully, the following window appears. Check the “Yes, I want to restart my computer now” radio button, then click on the “Finish” button to reboot your computer.



Open Device Manager to confirm the audio driver has been installed. Make sure that “Realtek AC'97 Audio” is registered under the “Sound, video and game controllers” icon.

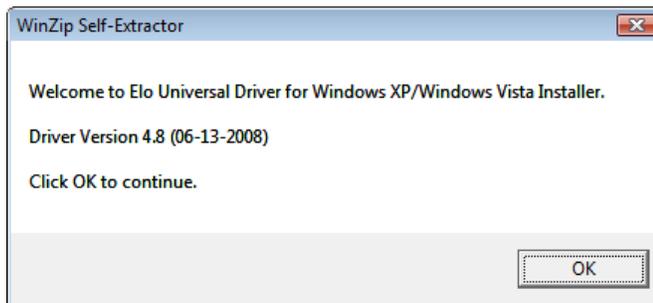


4.6. Installation for Elo Touch Panel Driver

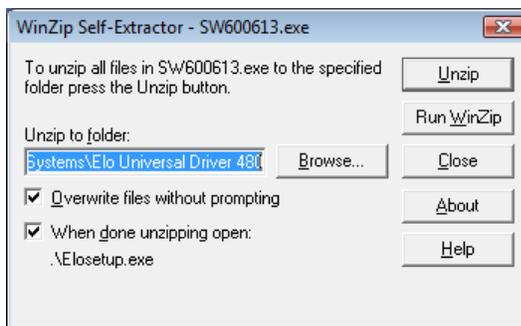
4.6.1. Installation for Standard Model

Open the “ST-A20\Tablet\XP_WEPOS_POSReady_Vista” folder in the Driver Kit CD-ROM. Right-click on the “SW600613.exe” icon, and select “Run as administrator” menu. The following window appears. Click on the “OK” button.

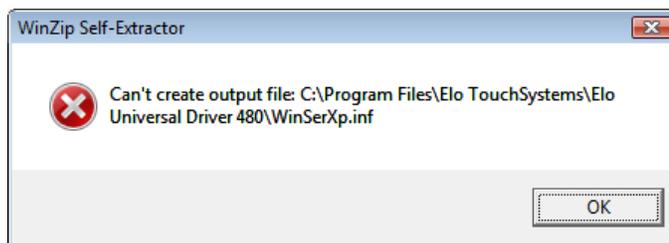
Note: If you forget it, the installation will not be completed.



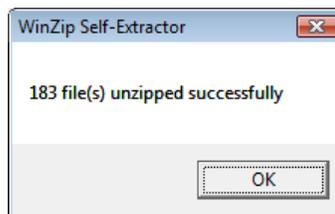
The following window appears. Click on the “Unzip” button, then the files are decompressed.



Note: If you forget to run the installer as an administrator, writing to the system area is limited and the installation fails. Then, the following window appears.



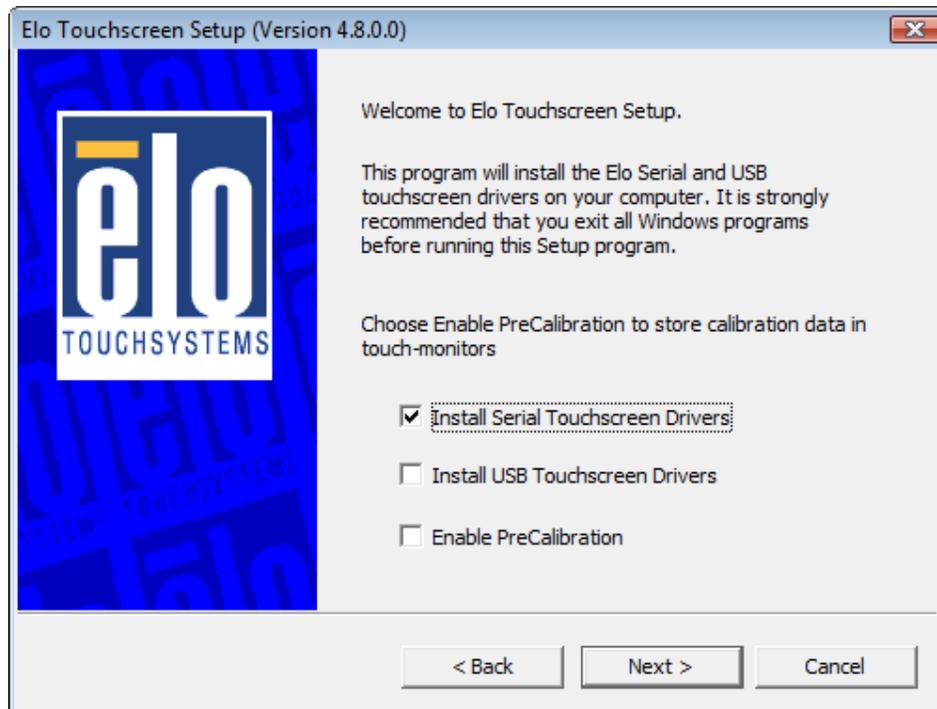
The following window appears. Click on the “OK” button.



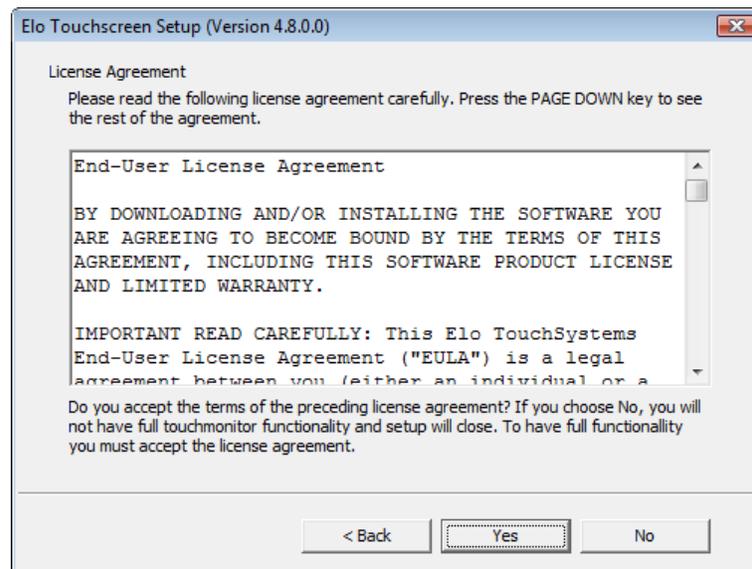
The following window appears. Choose a language, if necessary, and then click on the “Next” button.



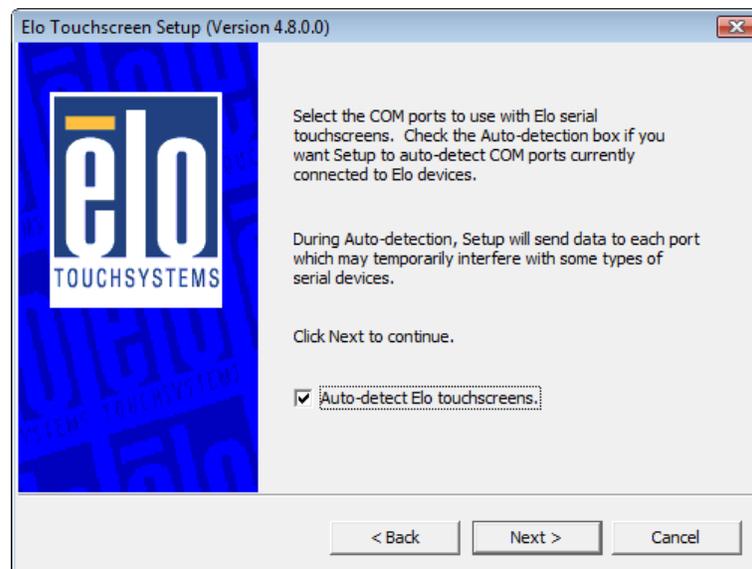
The following window appears. Check the “Install Serial Touchscreen Drivers” check box, and click on the “Next” button.



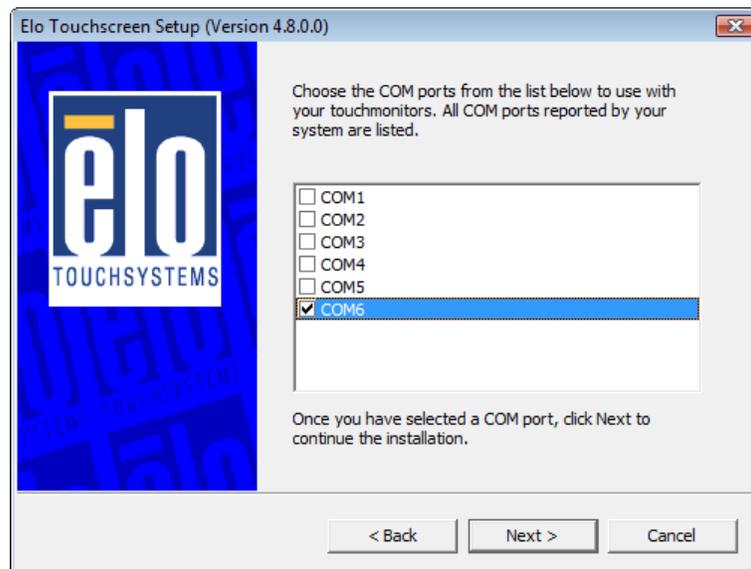
The “License Agreement” window appears. Confirm the contents. If you agree, click on the “Yes” button.



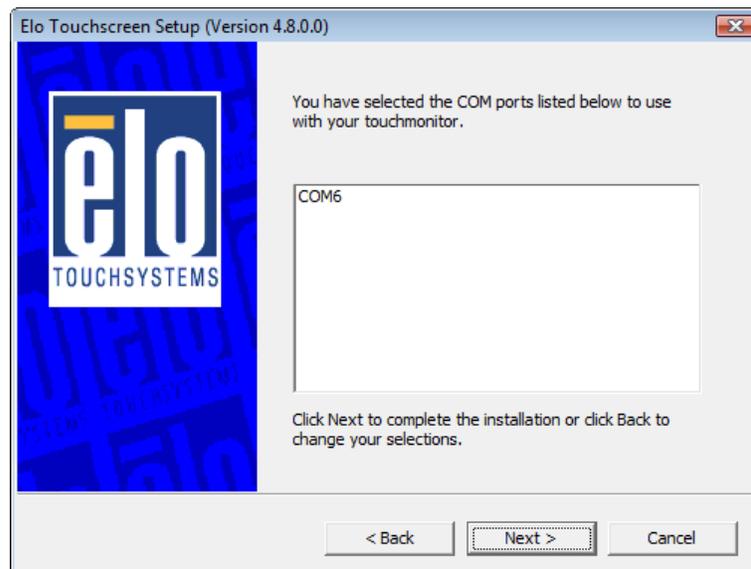
The following window appears. Check the “Auto-detect Elo devices” check box, and click on the “Next” button.



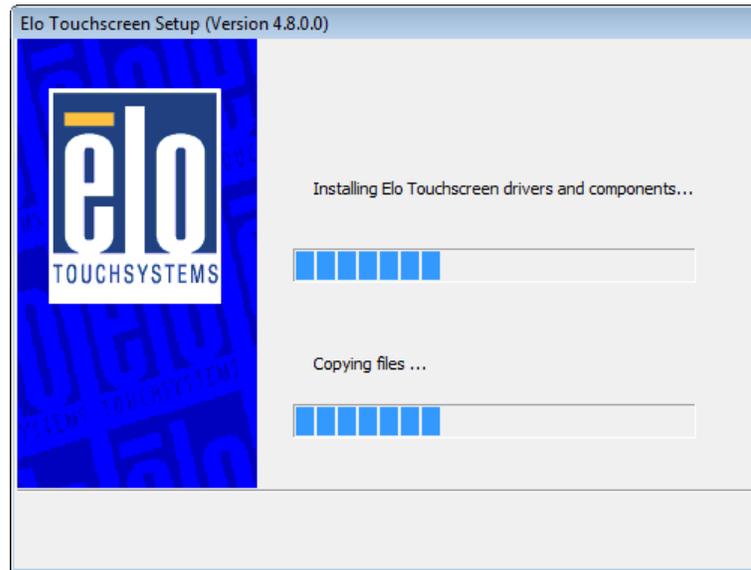
The following window appears. The touch panel connected to the ST-A20 is detected, and “COM6” is chosen. If “COM6” is not chosen, there may be a problem. Click on the “Next” button.



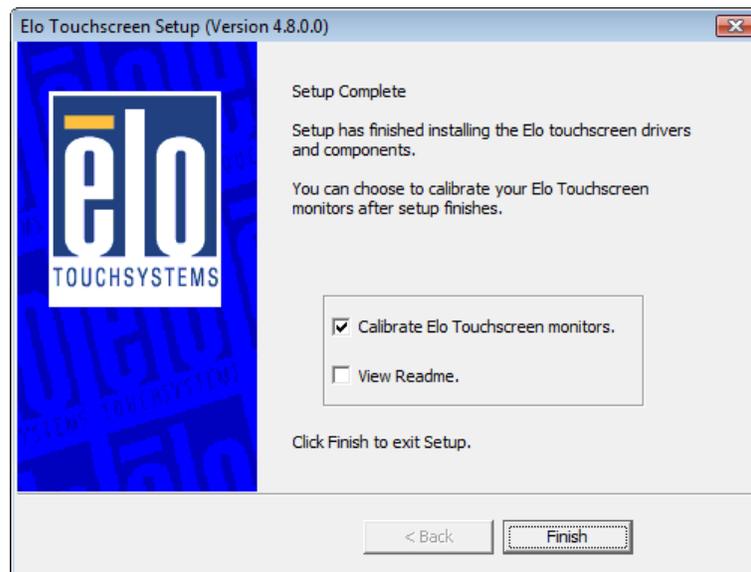
The following window appears. Confirm that “COM6” is chosen, then click on the “Next” button.



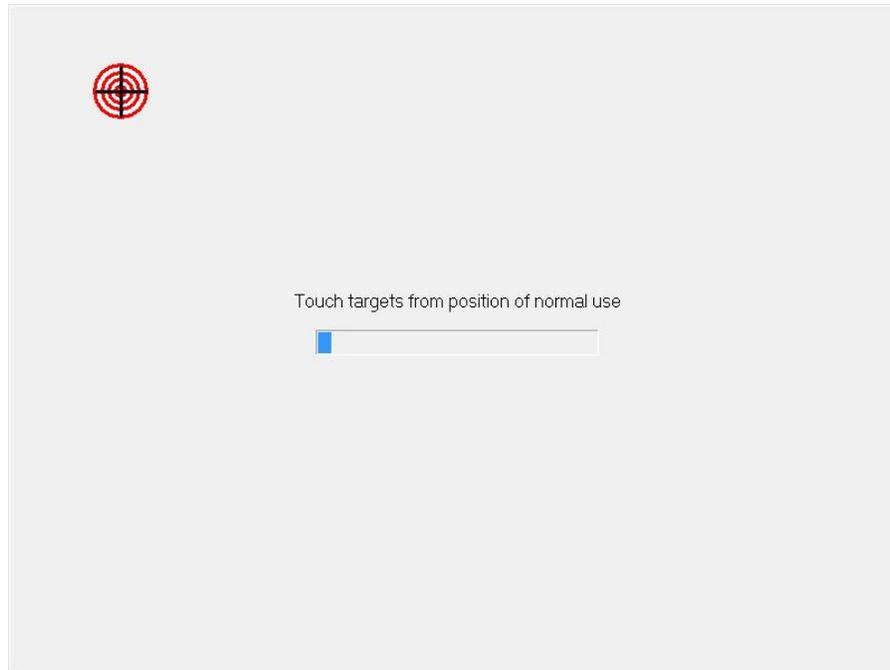
After a while, the installation starts.



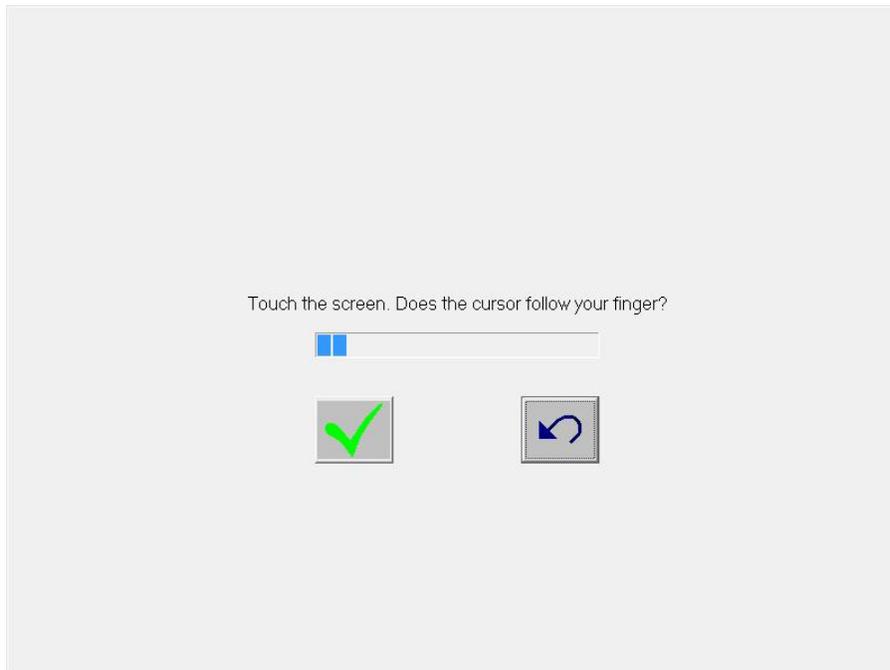
After completion of the installation, the following window appears. Check the “Calibrate Elo Touchscreen monitors” check box, and click on the “Finish” button.



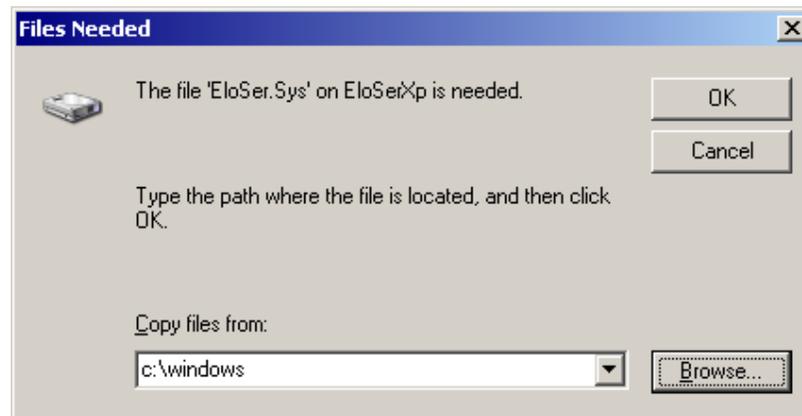
The following calibration screen appears. Perform a calibration by touching the mark whenever it appears. (The mark appears three times.) (Transparent background on v5.41 & above)



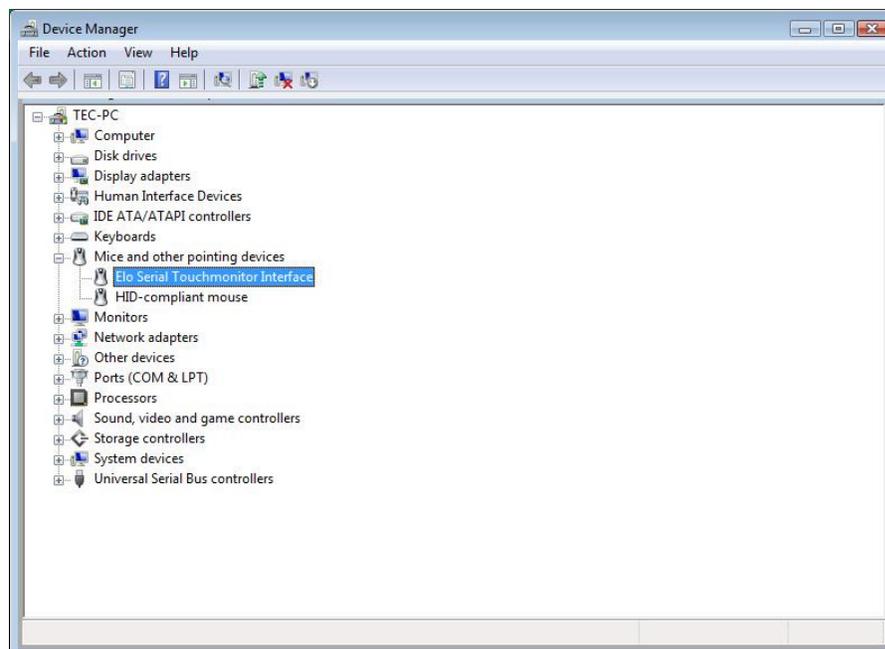
After the mark was touched three times, two buttons appear at the center of the screen. Click on the check mark button to complete the calibration



If the “Files Needed” window appears during installation, click “Browse” button and select “C:\Program Files\EloTouchSystems” folder. Then click on the “OK” button.



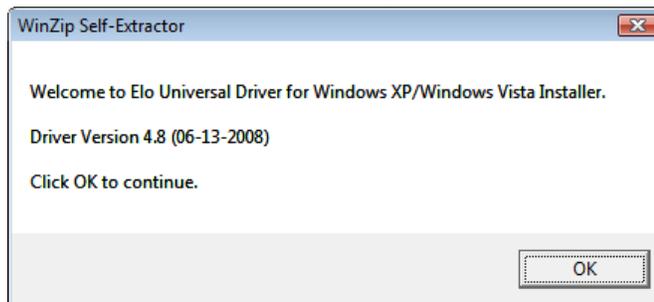
Open Device Manager to confirm the touch panel driver has been installed. Make sure that “Elo Serial Touchmonitor Interface” is registered under the “Mice and other pointing devices” icon.



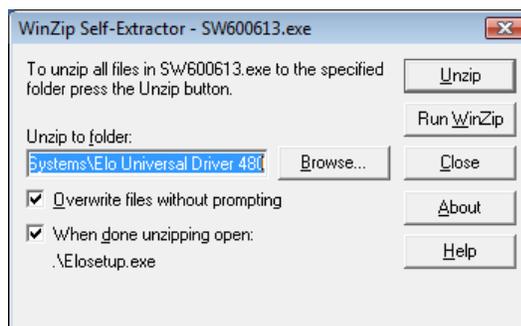
4.6.2. Installation When Connecting TFTST-A20

Open the “ST-A20\Tablet\XP_WEPOS_POSReady_Vista” folder in the Driver Kit CD-ROM. Right-click on the “SW600613.exe” icon, and select “Run as administrator” menu. The following window appears. Click on the “OK” button.

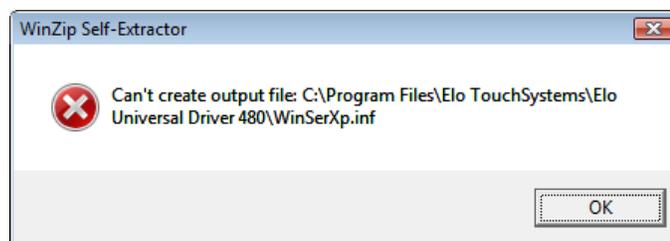
Note: If you forget it, the installation will not be completed.



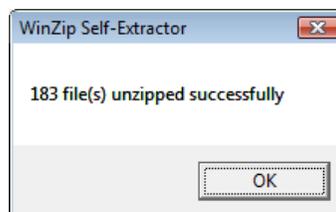
The following window appears. Click on the “Unzip” button, then the files are decompressed.



Note: If you forget to run the installer as an administrator, writing to the system area is limited and the installation fails. Then, the following window appears.



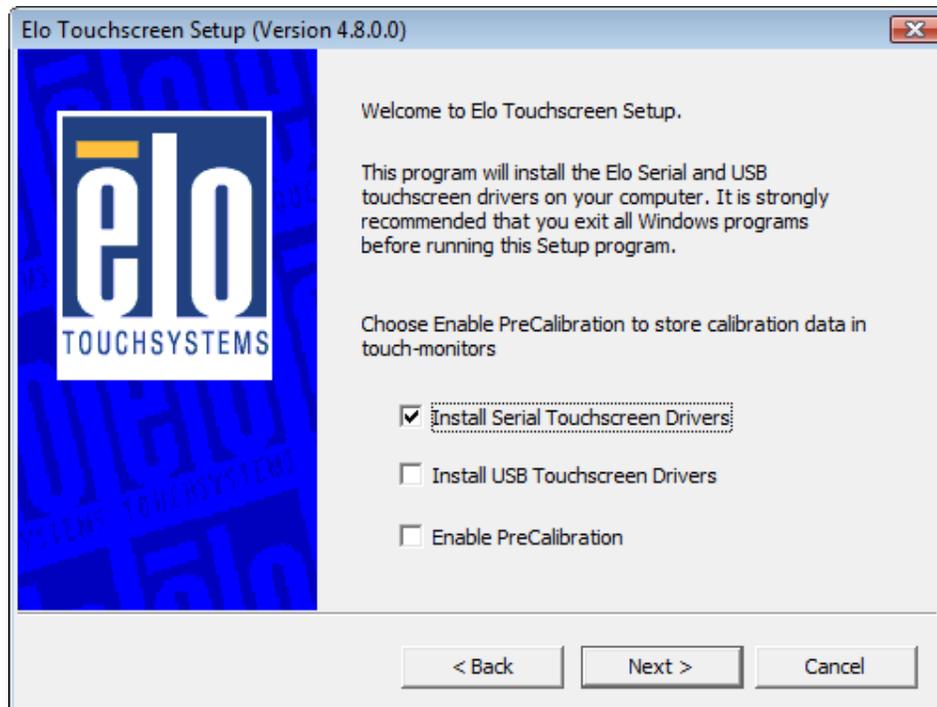
The following window appears. Click on the “OK” button.



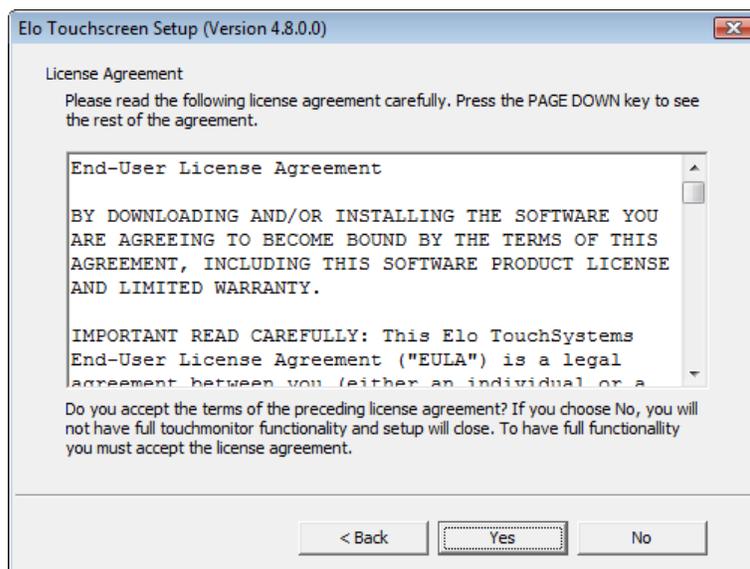
The following window appears. Choose a language, if necessary, and then click on the “Next” button.



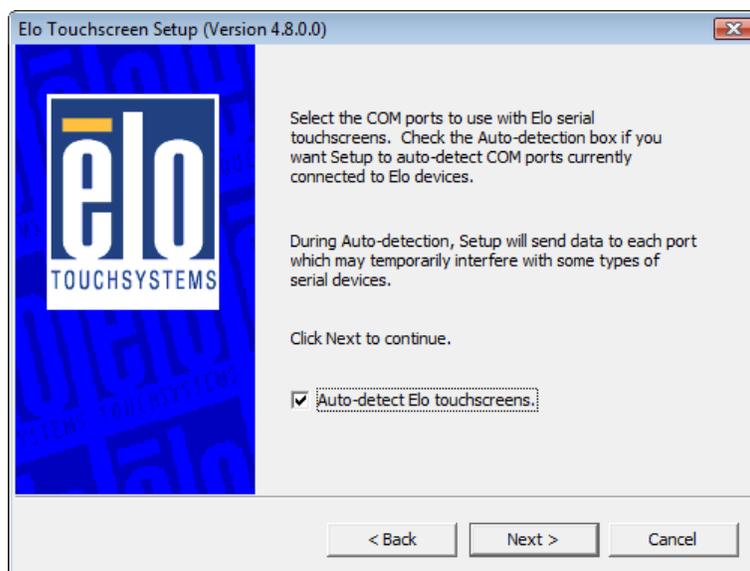
The following window appears. Check the “Install Serial Touchscreen Drivers” check box, and click on the “Next” button.



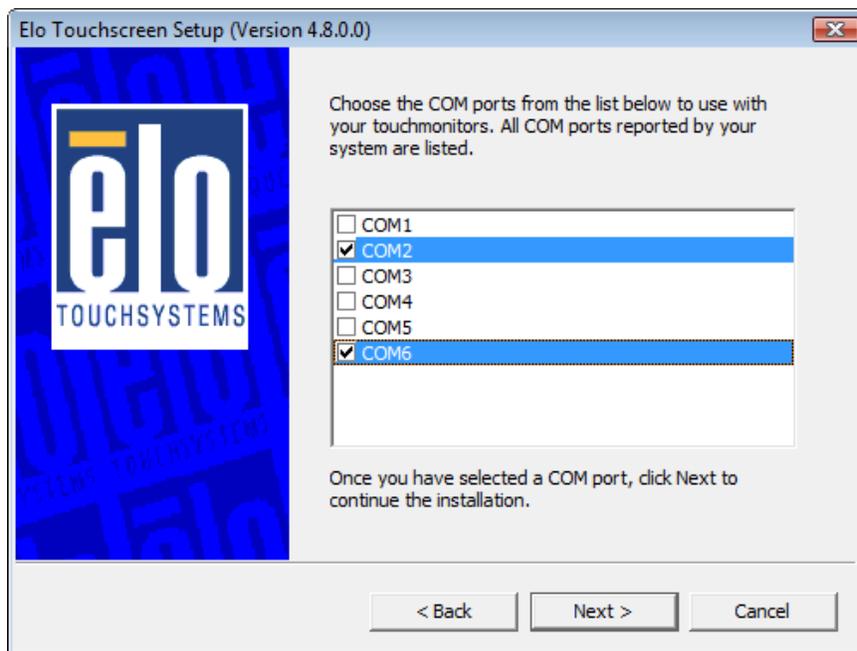
The “License Agreement” window appears. Confirm the contents. If you agree, click on the “Yes” button.



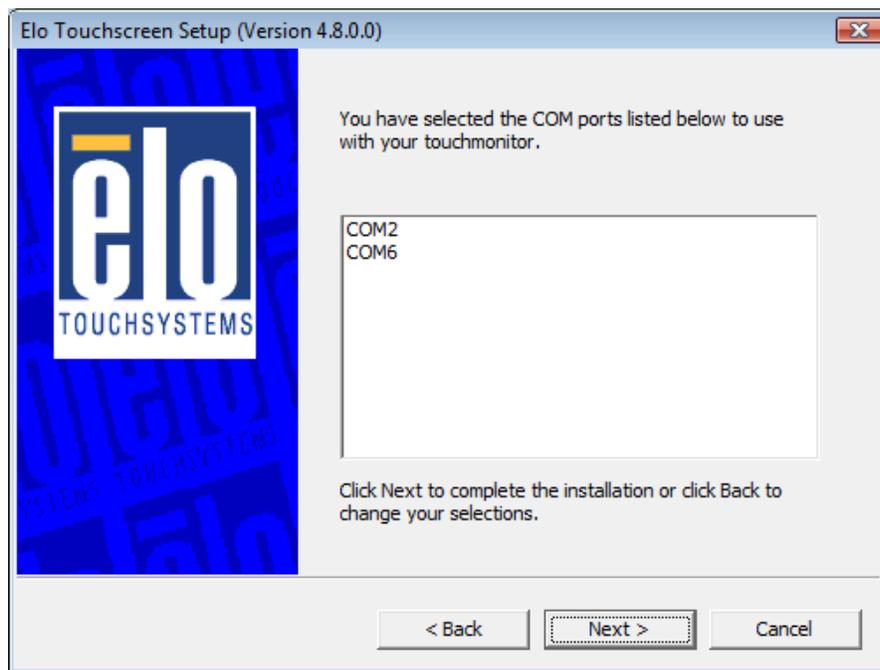
The following window appears. Check the “Auto-detect Elo devices” check box, and click on the “Next” button.



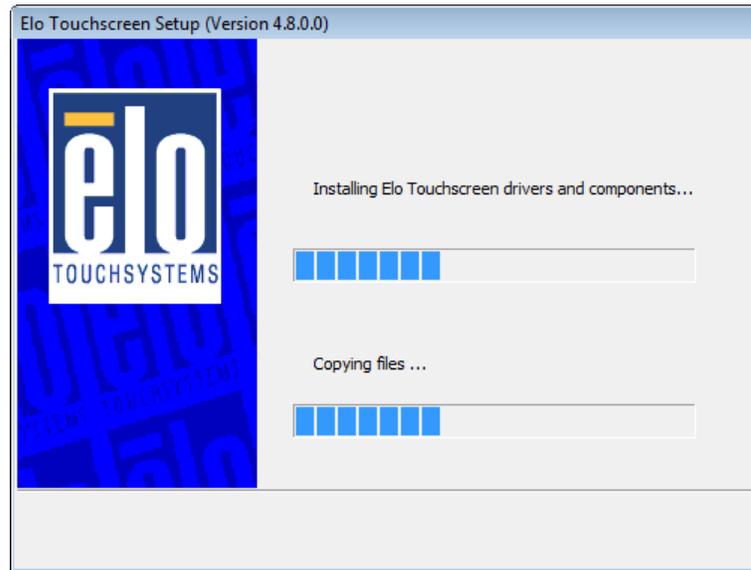
The following window appears. The touch panel connected to the ST-A20 and the TFTST-A20 are detected, and “COM6” and “COM1 or 2” are chosen. If “COM6” and “COM1 or 2” is not chosen, there may be a problem. Click on the “Next” button.



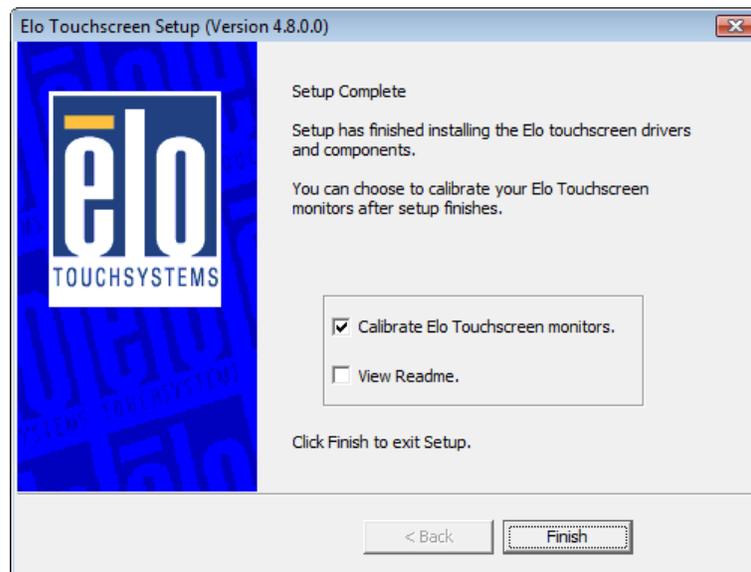
The following window appears. Confirm that “COM6” and “COM1 or 2” are chosen, then click on the “Next” button.



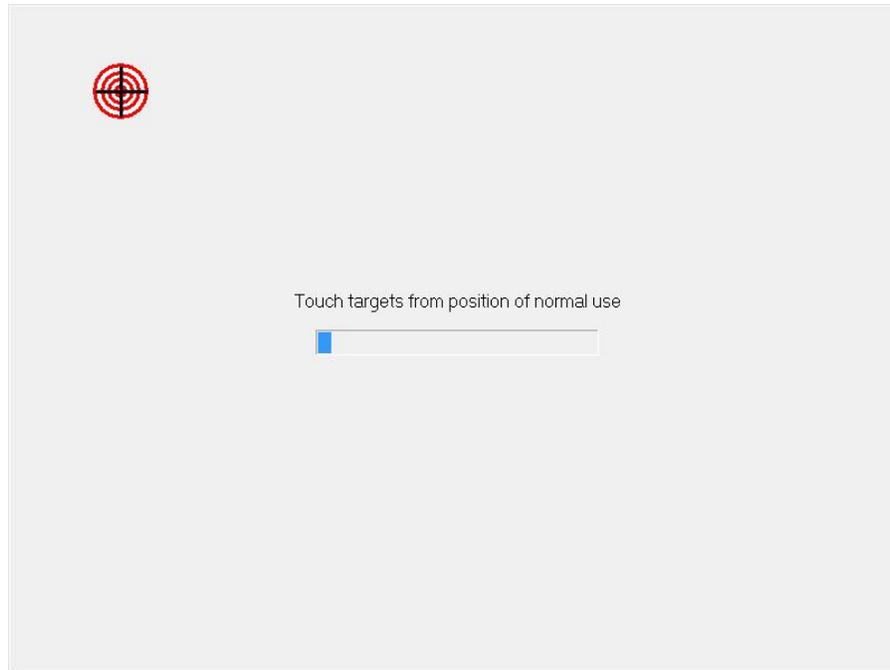
After a while, the installation starts.



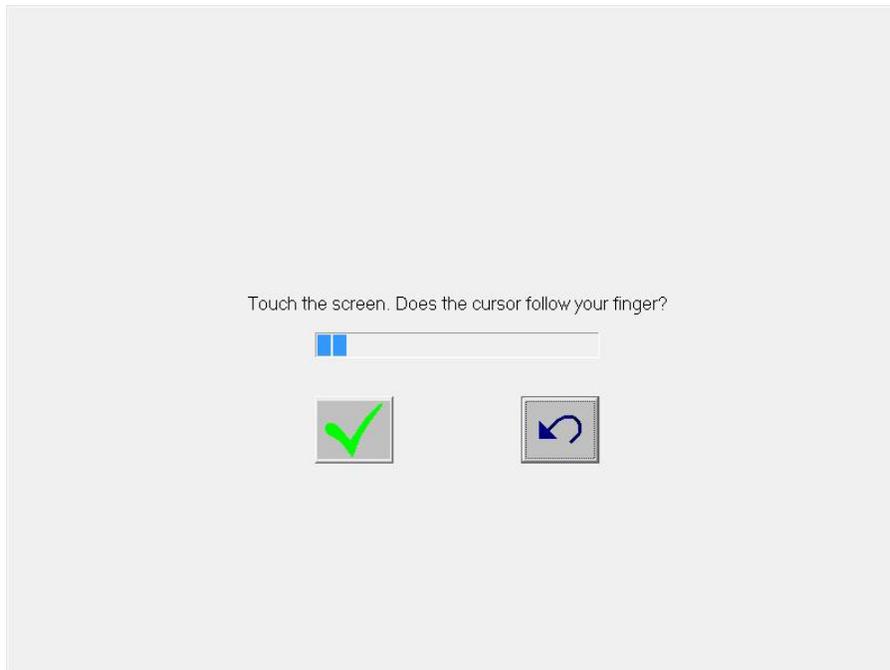
After completion of the installation, the following window appears. Check the “Calibrate Elo Touchscreen monitors” check box, and click on the “Finish” button.



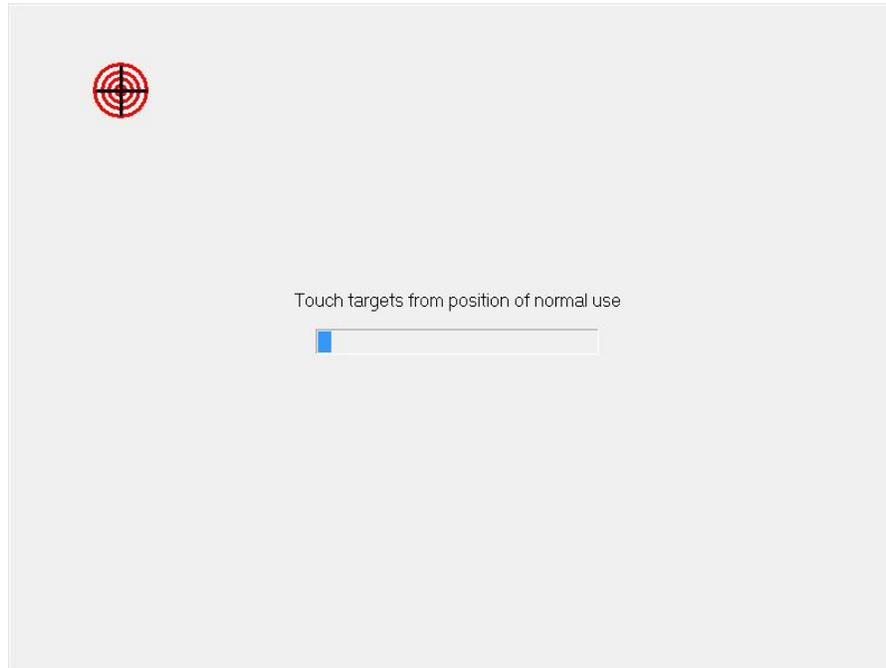
The following calibration screen appears on ST-A20 main screen. Perform a calibration by touching the mark whenever it appears. (The mark appears three times.)



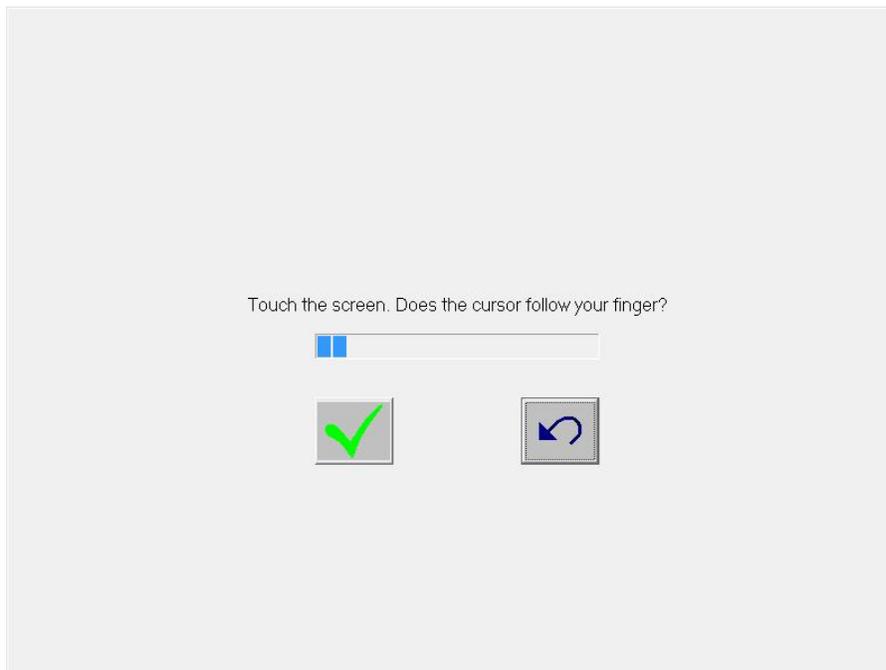
After the mark was touched three times, two buttons appear at the center of the screen. Click on the check mark button to complete the calibration



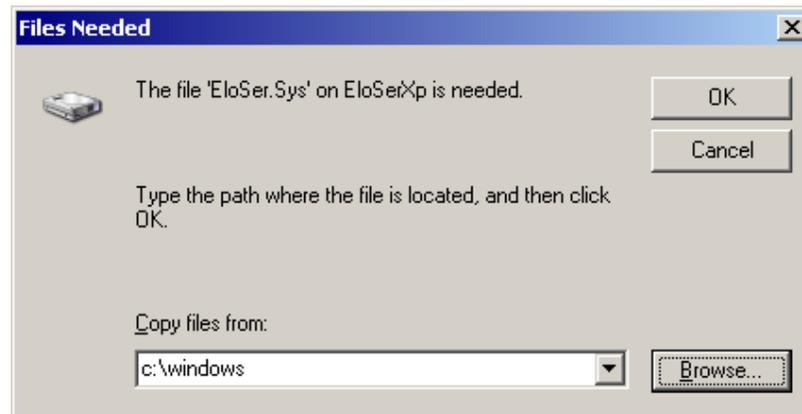
The following calibration screen appears on TFTST-A20 screen. Perform a calibration by touching the mark whenever it appears. (The mark appears three times.)



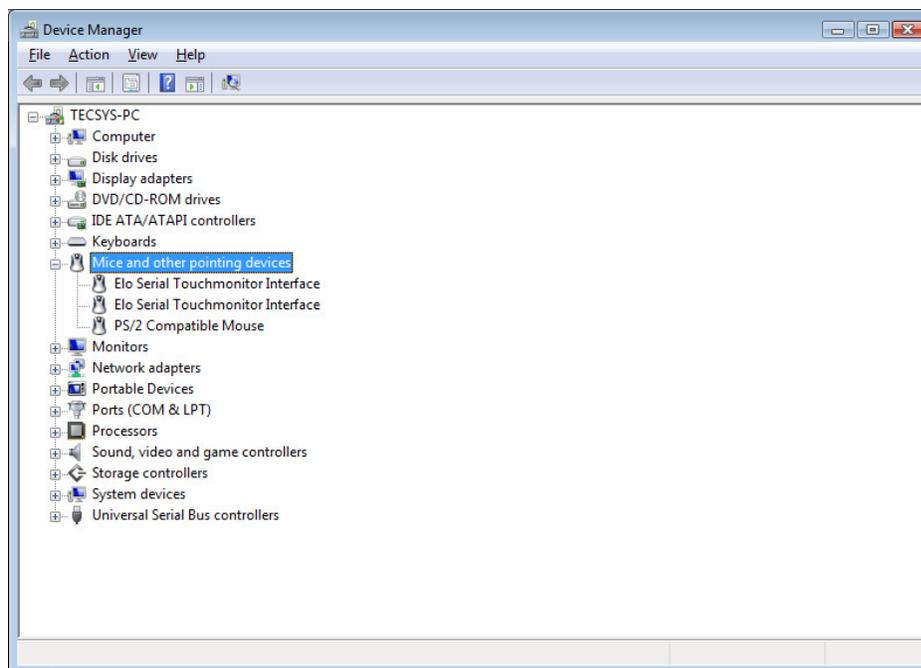
After the mark was touched three times, two buttons appear at the center of the screen. Click on the check mark button to complete the calibration



If the “Files Needed” window appears during installation, click “Browse” button and select “C:\Program Files\EloTouchSystems” folder. Then click on the “OK” button.

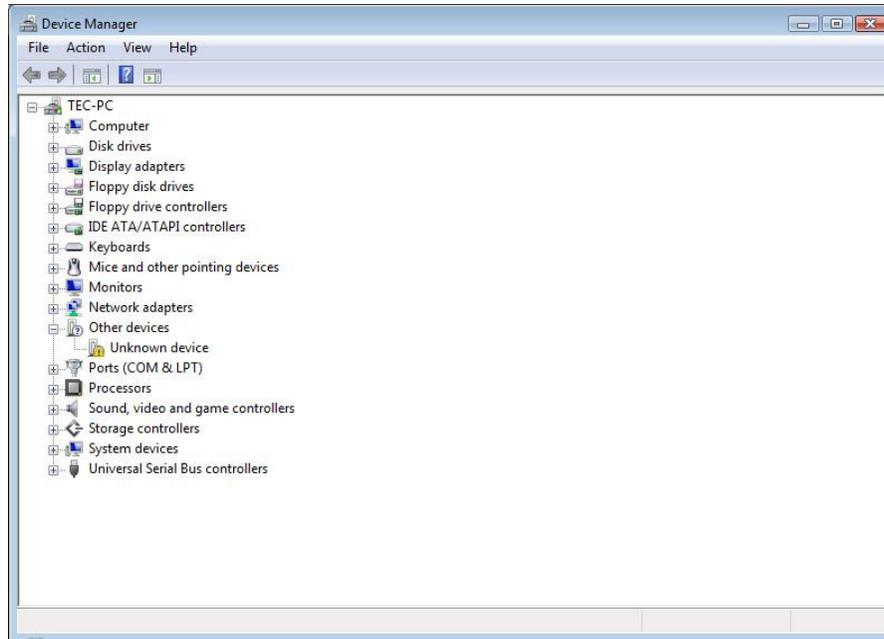


Open Device Manager to confirm the touch panel driver has been installed. Make sure that “Elo Serial Touchmonitor Interface” is registered under the “Mice and other pointing devices” icon.



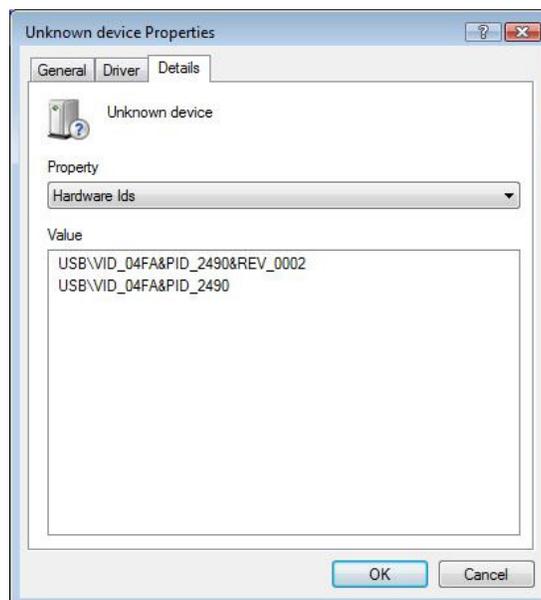
4.7. Installation for i-Button Driver

When the iButton is connected to the ST-A20, “Unknown Device” is shown with an exclamationmark (!) under the “Other devices” icon in the Device Manager window.



Note : A confirmation of iButton device

Open Device Manager, right-click on the “Unknown device” icon, then click on “Properties” to open the “Unknown device Properties” window. Click on the “Details” tab, confirm that there is “USB\VID_04FA&xxxxxx”.



We can not redistribute this installation driver.

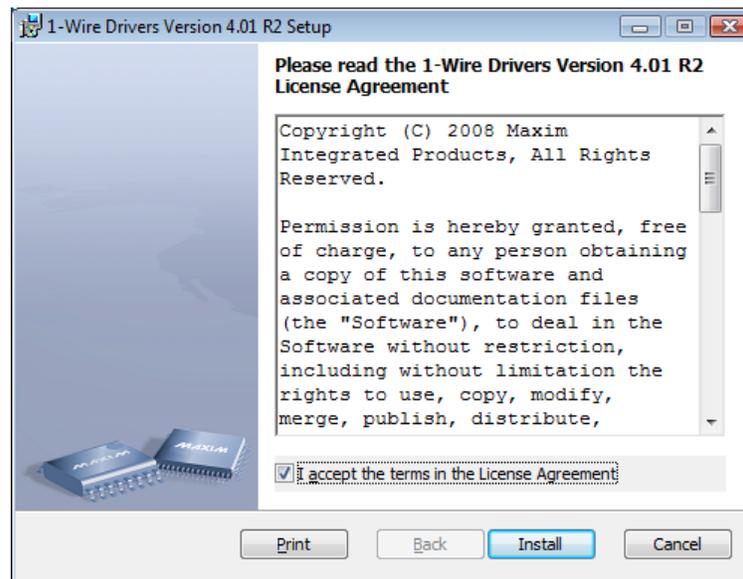
Therefore, if you need the driver, you have to download the driver from following site.

<http://www.maxim-ic.com/products/ibutton/software/tmex/>

Note: This URL was written on 2008/7/30.

Run the "install_1_wire_drivers_x86_v401r2.msi" which you downloaded.

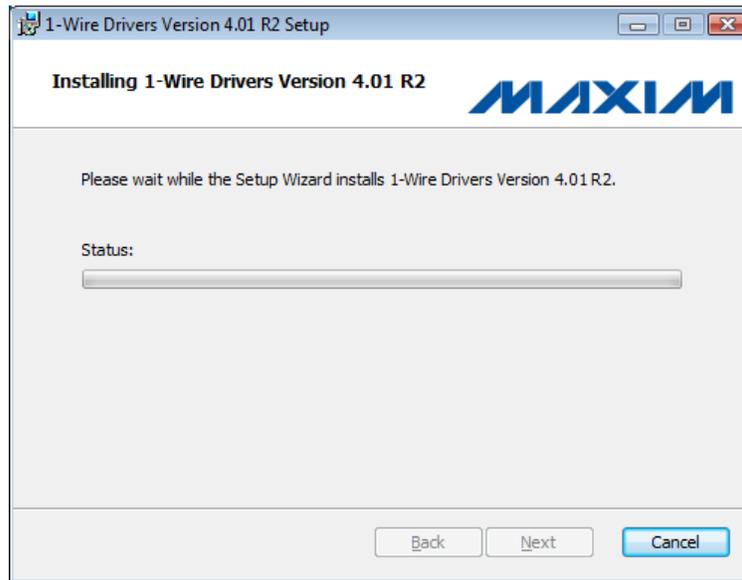
After a while, the "License Agreement" window appears. Confirm the contents. If you agree, check the "I accept the terms in the License Agreement" check box and click on the "Install" button.



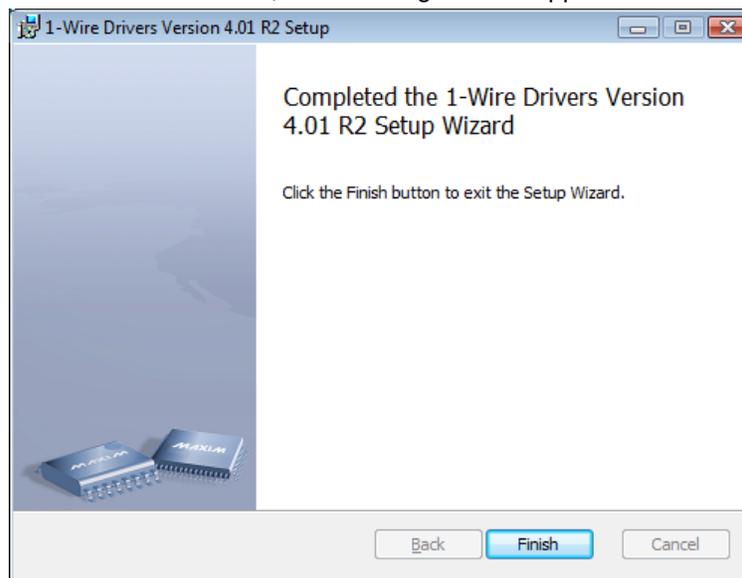
After a while, the following window appears. This is a security notice of Windows system. Click on the "Install" button.



After a while, the installation starts.

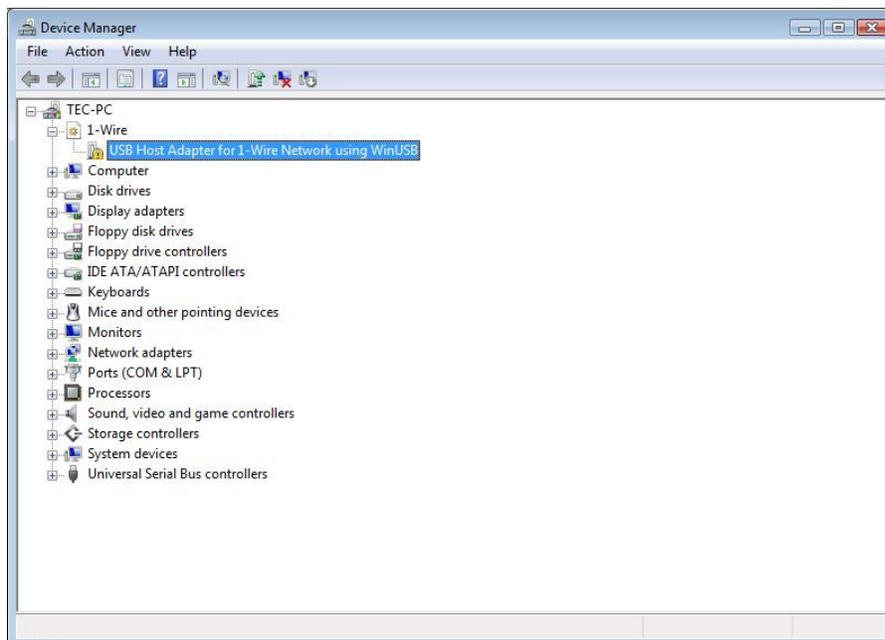


After completion of the installation, the following window appears. Click on the "Finish" button.

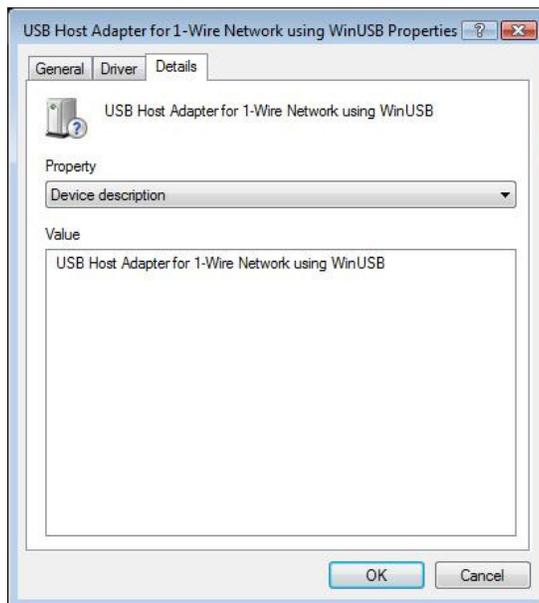


Next, we explain the method of updating driver from device manager.

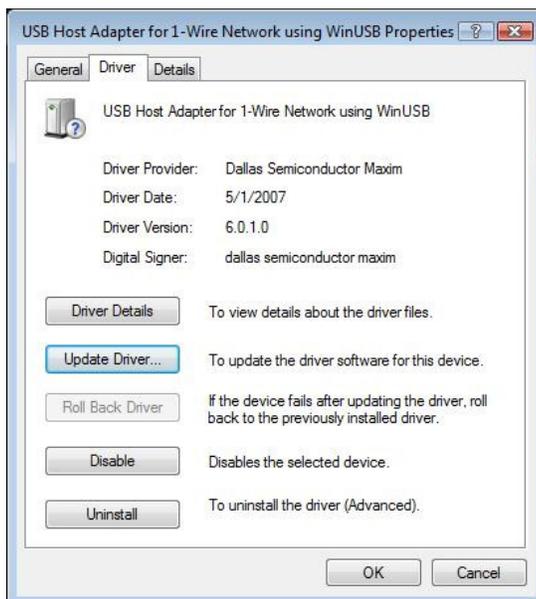
Open Device Manager, right-click on the “USB Host Adapter for 1-Wire Network using WinUSB” icon under the “1-Wire”, then click on “Properties” to open the “USB Host Adapter for 1-Wire Network using WinUSB Properties” window.



Click on the “Details” tab, and confirm that it is same as following window.

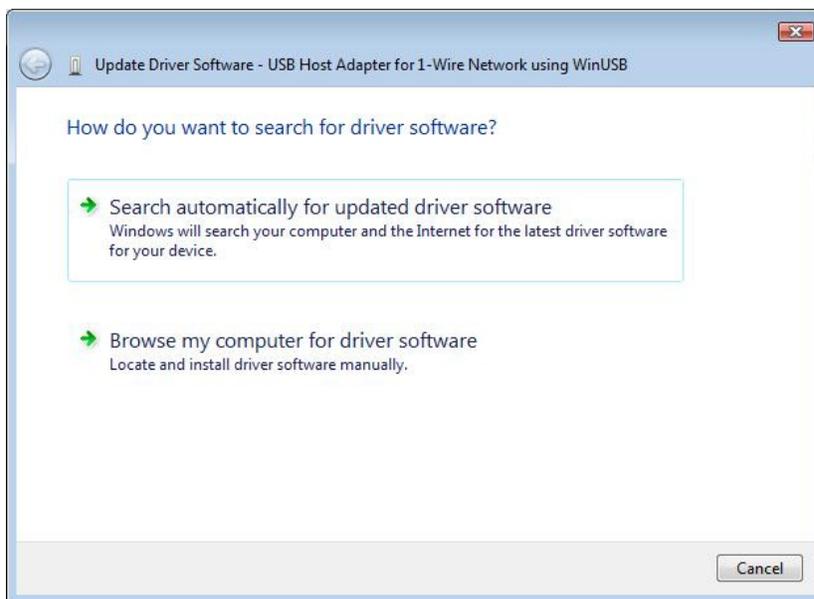


Click on the “Driver” tab, and click on the “Update Driver...” button.



After a while, the “How do you want to search for driver software” window appears. Click on the “Browse my computer for driver software” button.

Note : If you install it from the media(CD etc.), appoint a media drive path in the search range.



Note: To use the RAID, subsequently install the RAID Utility with reference to Section 6.3 Installation of RAID Utility JMB36X RAID CONFIGURER.

5. Setup for Windows 7 Professional (or POSReady 7)

5.1. Setup for Operating System (Windows 7 Professional)

5.1.1. Installation for Operating System (Windows 7 Professional)

Notes: To use the RAID, the RAID must be built using the RAID BIOS Utility with reference to Section 6.1 Creation of RAID from RAID BIOS Menu.

To use the RAID, the operation system must be installed with reference to Section 6.2 Installation of Each Operating System in RAID Environment.

Notes: To use the two HDDs without using RAID, the operation system must be installed with reference to Section 6.2 Installation of Each Operating System in RAID Environment.

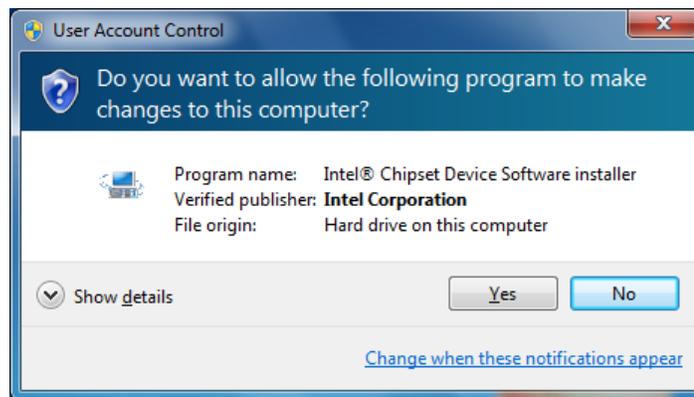
5.1.2. About User Account Control of Operating System (Windows 7 Professional)

Windows 7 is equipped with the security function called User Account Control. (UAC)

When installing any software to the POS, use administrator account for installation.

Note)

When the following UAC dialog appeared, push the “Yes” button and continue installation.



5.2. Installation for Intel Chipset Software

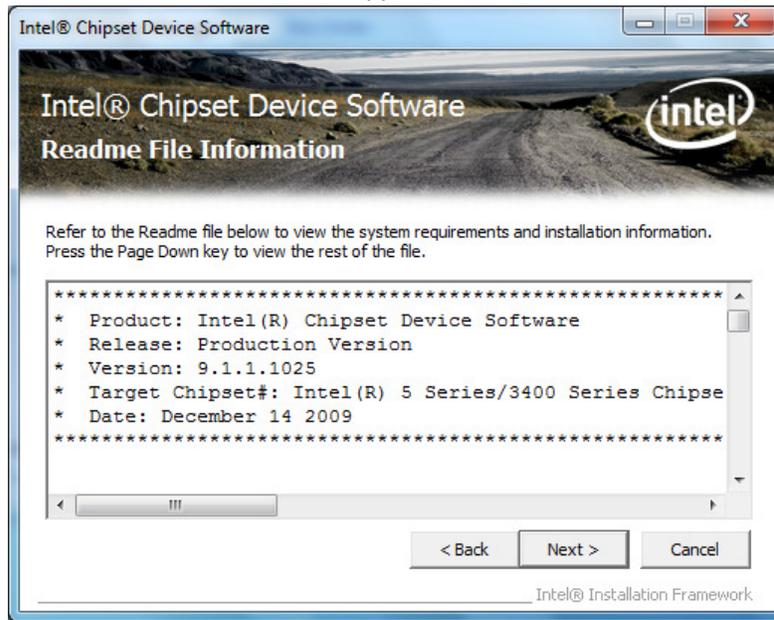
Run “infnst_autol.exe” in the “ST-A20\Intel\Chipset\7” folder in the Driver Kit CD-ROM. After a while, the following window appears. Click on the “Next” button.



The “License Agreement” window appears. Confirm the contents. If you agree, click on the “Yes” button.



The "Readme File Information" window appears. Click on the "Next" button.



The " Setup Progress" window appears, and starts the installation.
Please wait.

After the “Next” button changes to the status that you can click, click on the button.



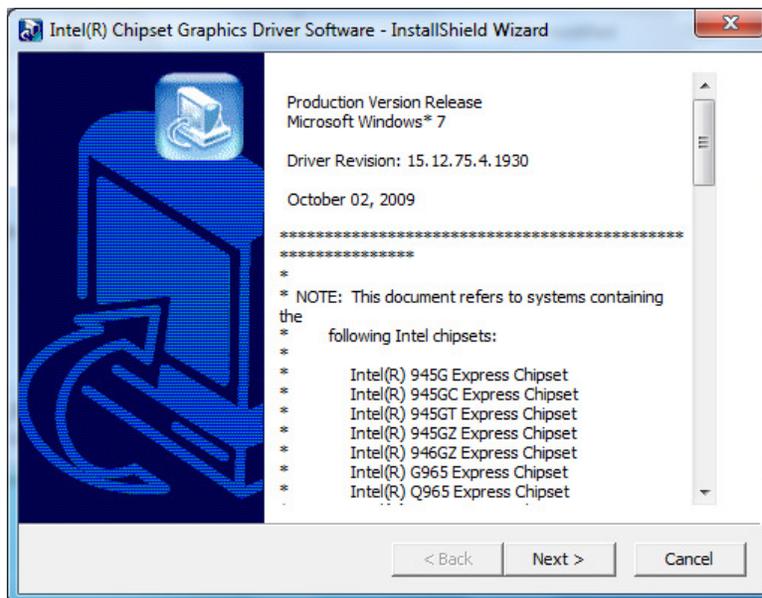
When the installation is completed successfully, the following window appears. Check the “Yes, I want to restart this computer now” radio button, then click on the “Finish” button to reboot your computer.



5.3. Installation for Intel Graphic Accelerator Driver

5.3.1. Installation

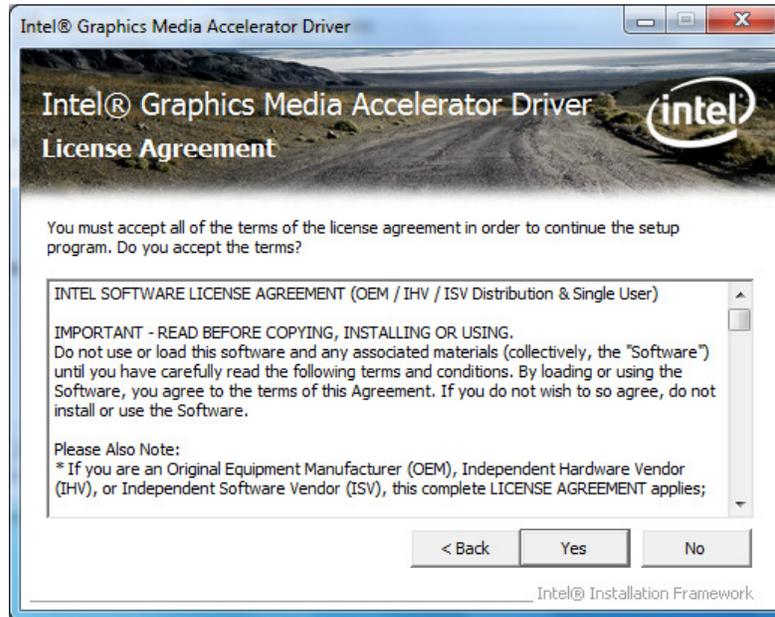
Run "win7_1512754.exe" in the "ST-A20\Intel\Graphic_driver\7" folder in the Driver Kit CD-ROM. The following window appears. Click on the "Next" button.



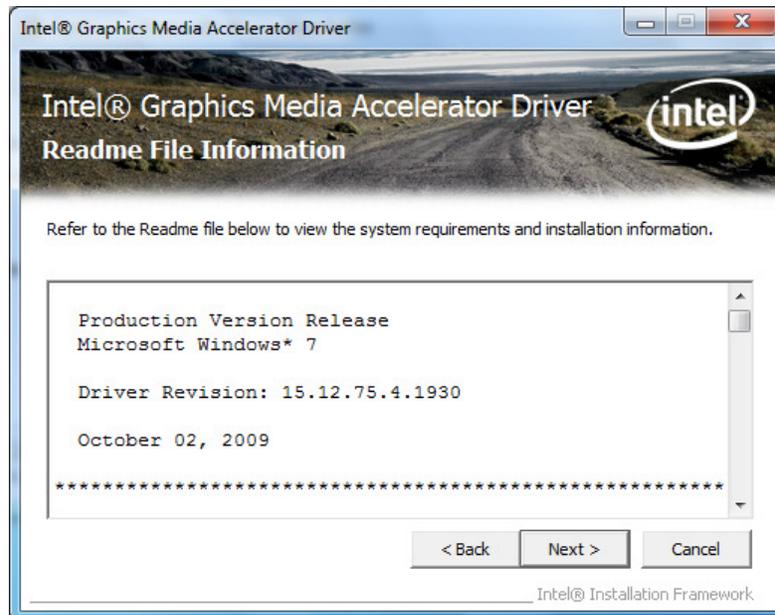
After a while, the following window appears. Click on the "Next" button.



The “License Agreement” window appears. Confirm the contents. If you agree, click on the “Yes” button.

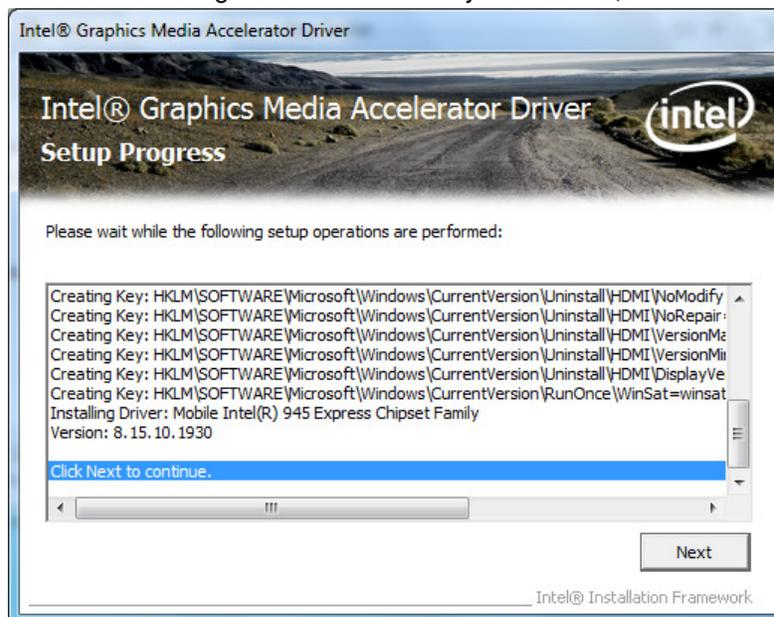


The “Readme File Information” window appears. Click on the “Next” button.



The “Setup Progress” window appears, and starts the installation.

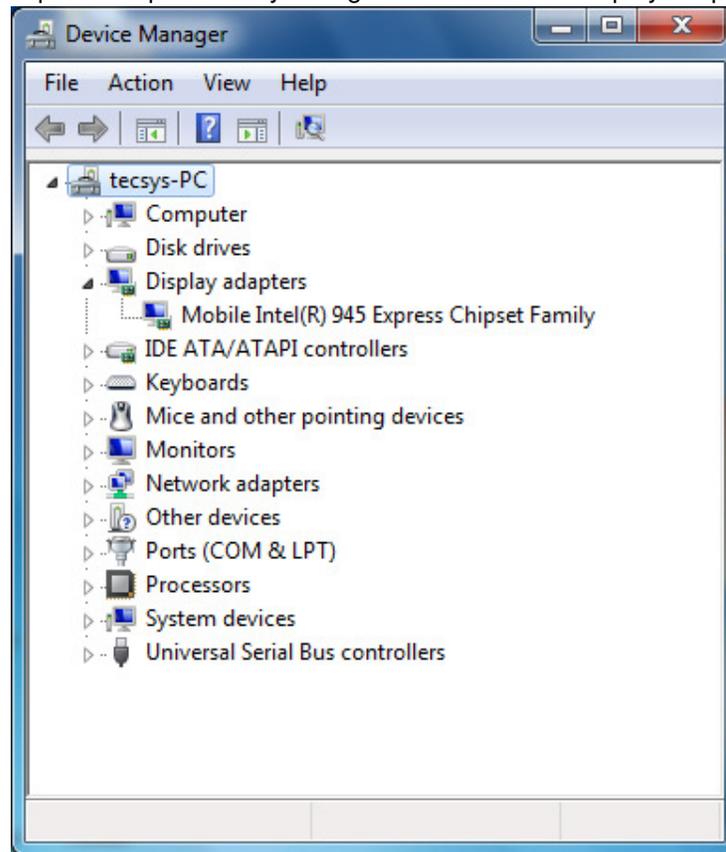
After the “Next” button changes to the status that you can click, click on the button.



When the installation is completed successfully, the following window appears. Check the “Yes, I want to restart this computer now” radio button, then click on the “Finish” button to reboot your computer.



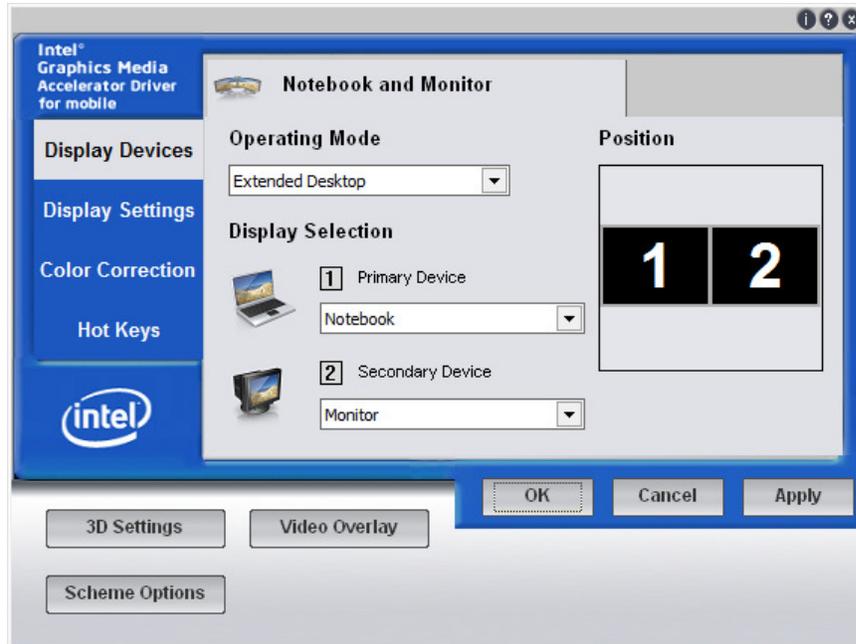
Open Device Manager to confirm the graphic driver has been installed. Make sure that “Mobile Intel(R)945 Express Chipset Family” is registered under the “Display adapters” icon.



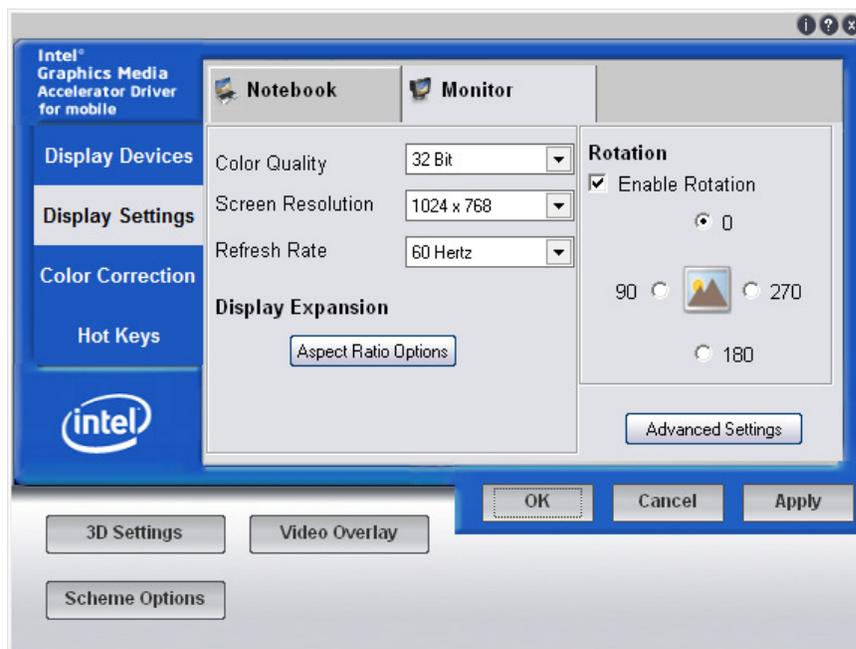
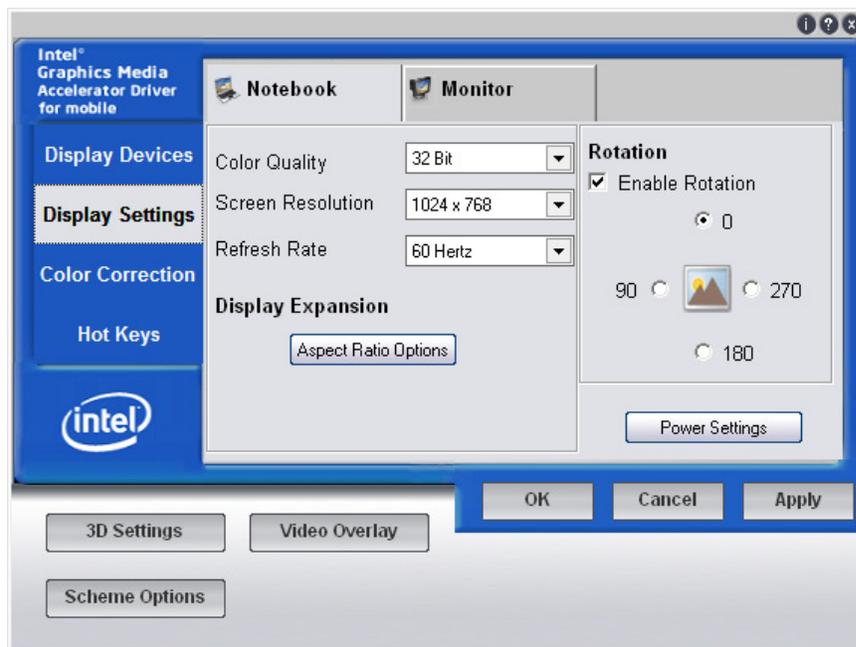
5.3.2. Additional Setting When Connecting TFTST-A20

When using TFTST-A20, it is necessary to change setting as follows by Intel Graphic control panel.

Below is Intel Graphic Control Panel (From Task tray or Control Panel)



Select [Display Devices] Tab and select "Extended Desktop" pull-down menu.
Click [Apply] button, then, TFTST-A20 available.



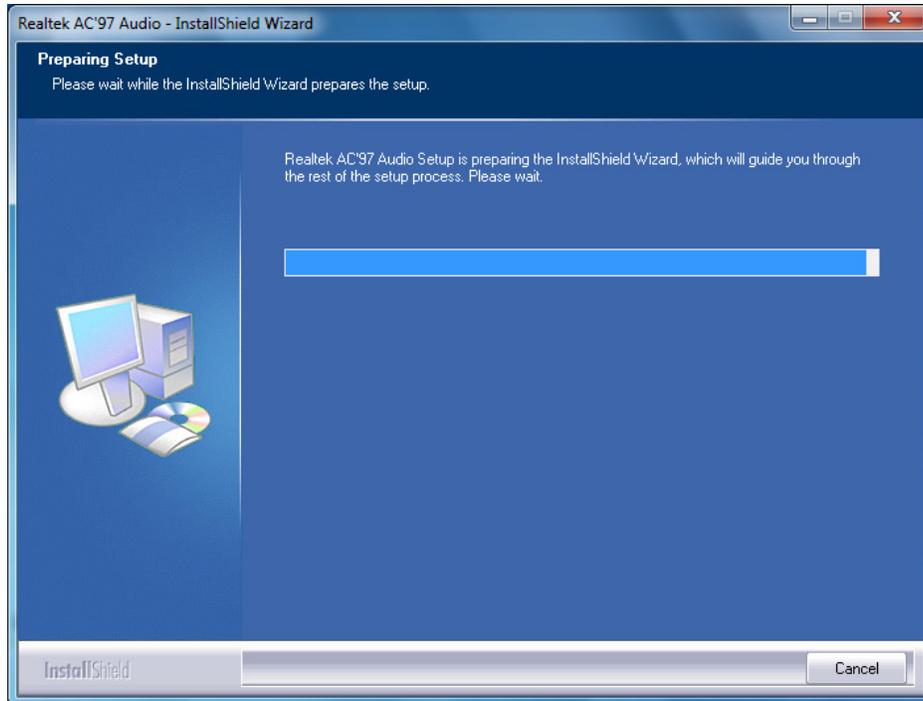
About the other performance (Screen resolution, Color Quality, etc):
Please set TFTST-A20 for your environment by two Control Panel above at any time.

5.4. Installation for Intel Network Driver

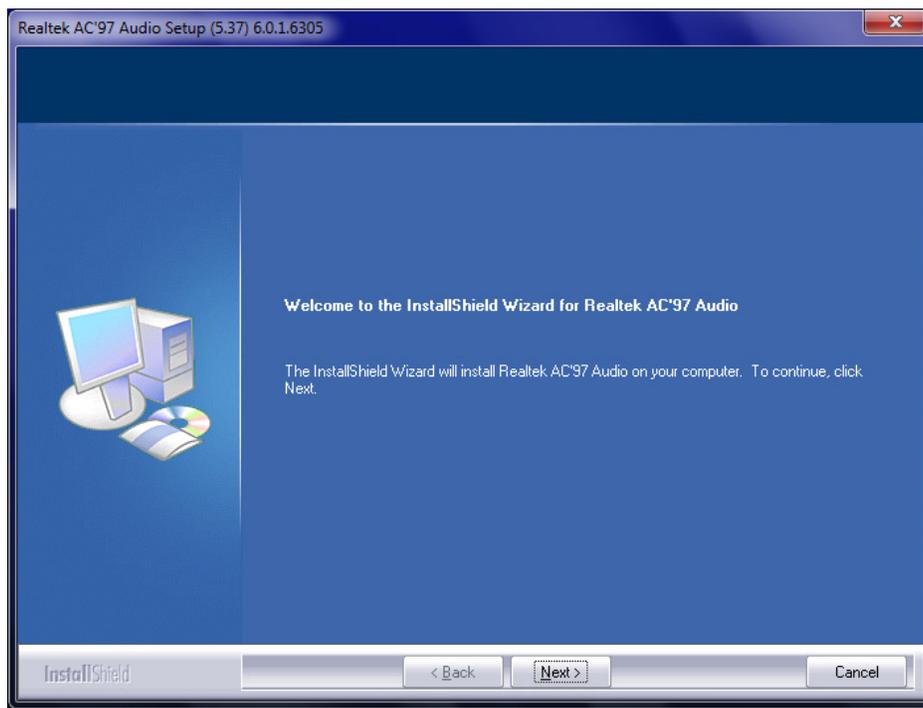
In windows 7 environment, driver of ST-A20's network adapter is already included in OS itself. Therefore, we don't need to install the driver of network adapter manually.

5.5. Installation for Realtek Audio Driver

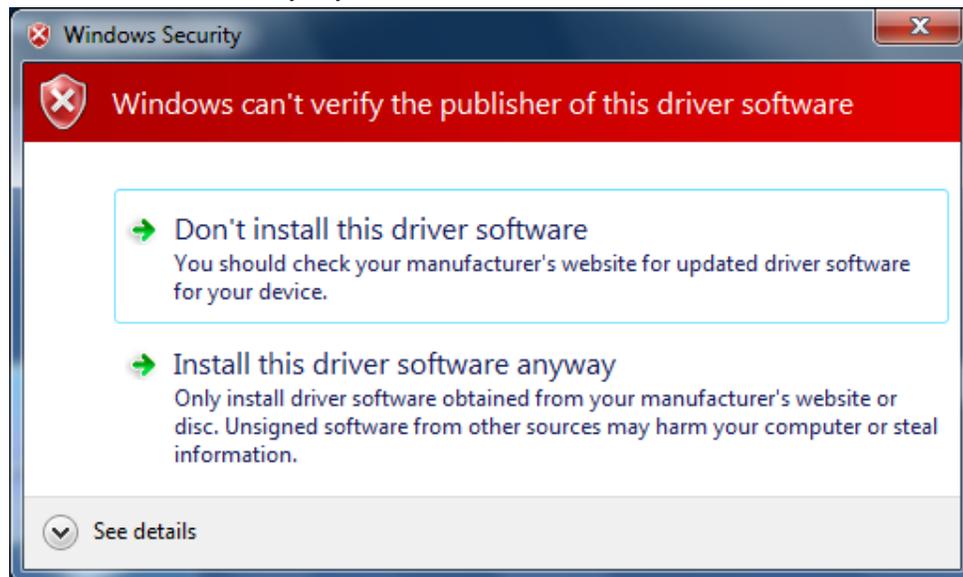
Run “setup.exe” in the “ST-A20\Intel\Audio\Vista” folder in the Driver kit CD-ROM, and the installer starts.



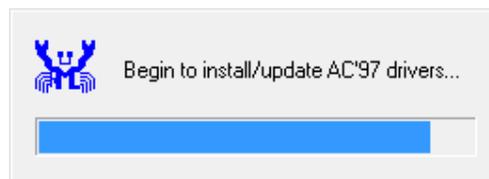
After a while, the following window appears. Click on the “Next” button.



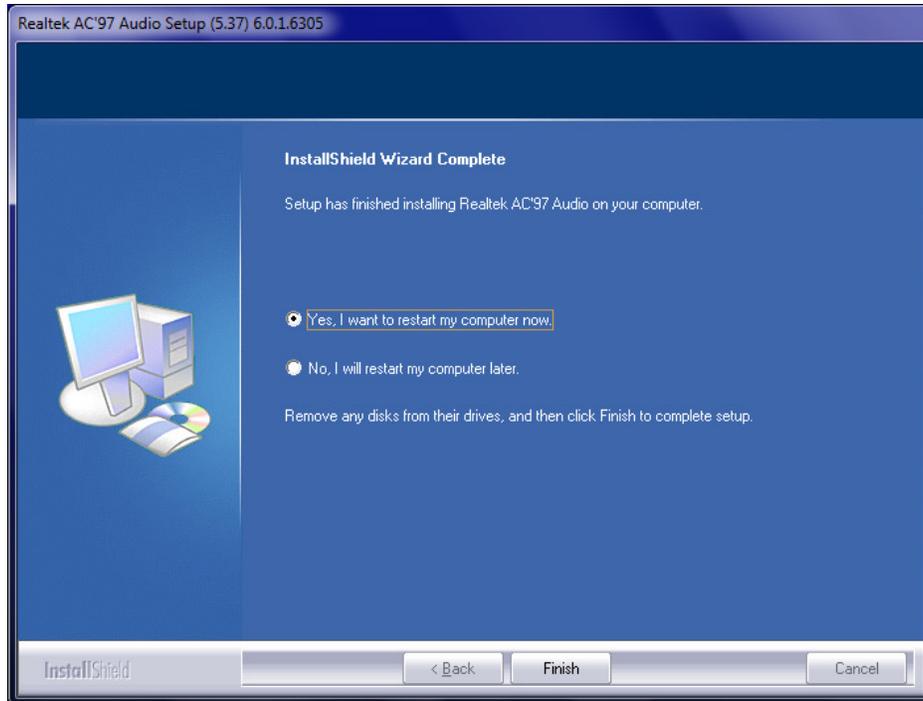
After a while, the following window appears. This is a security notice of Windows. Click on the “Install this driver software anyway” button.



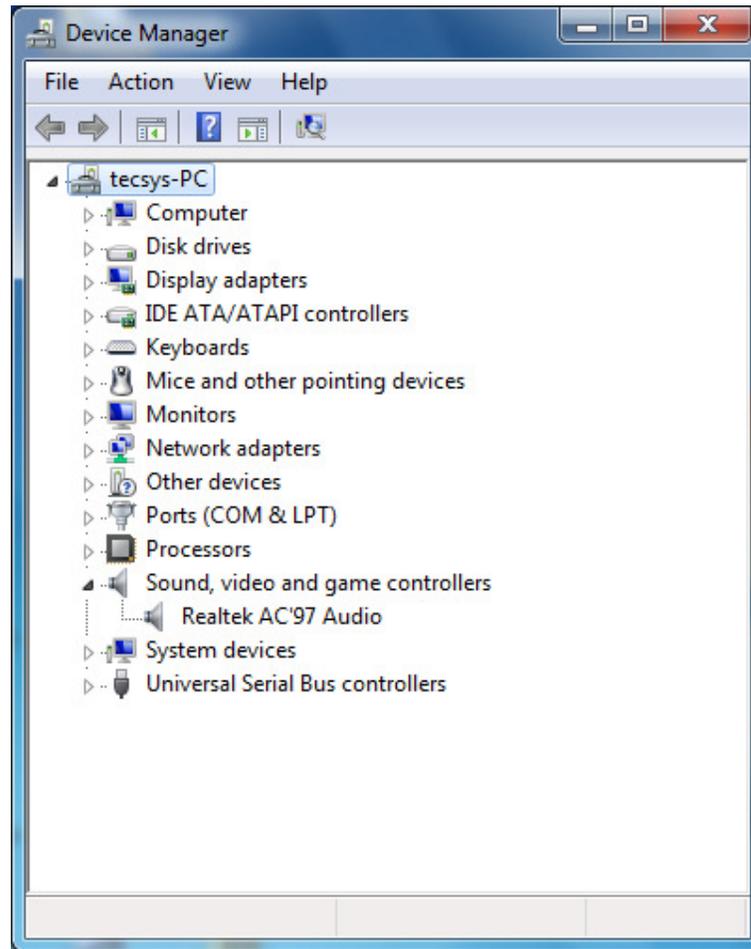
After a while, the installation starts.



When the installation is completed successfully, the following window appears. Check the “Yes, I want to restart my computer now” radio button, then click on the “Finish” button to reboot your computer.



Open Device Manager to confirm the audio driver has been installed. Make sure that “Realtek AC’97 Audio” is registered under the “Sound, video and game controllers” icon.

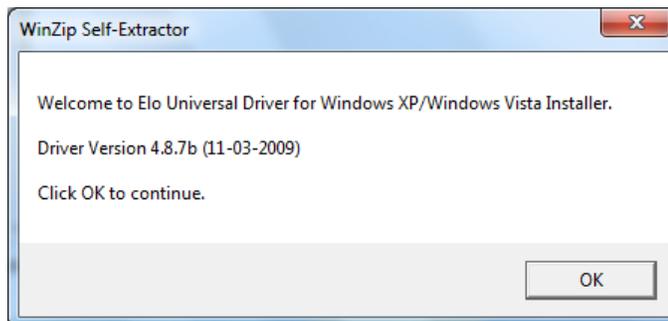


5.6. Installation for Elo Touch Panel Driver

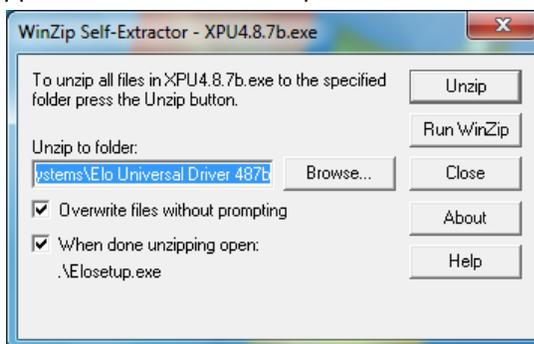
5.6.1. Installation for Standard Model

Open the “ST-A20\Tablet\7” folder in the Driver Kit CD-ROM. Right-click on the “XPU4.8.7b.exe” icon, and select “Run as administrator” menu. The following window appears. Click on the “OK” button.

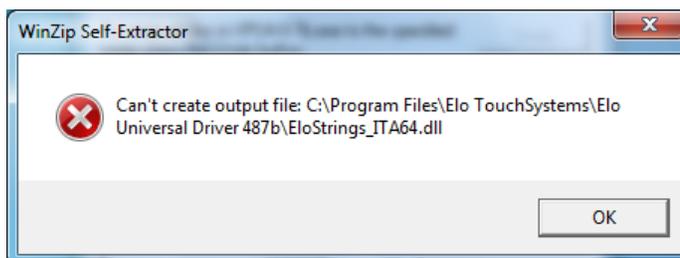
Note: If you forget it, the installation will not be completed.



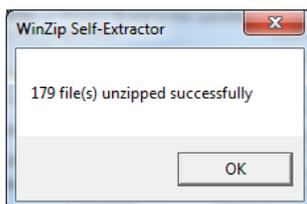
The following window appears. Click on the “Unzip” button, then the files are decompressed.



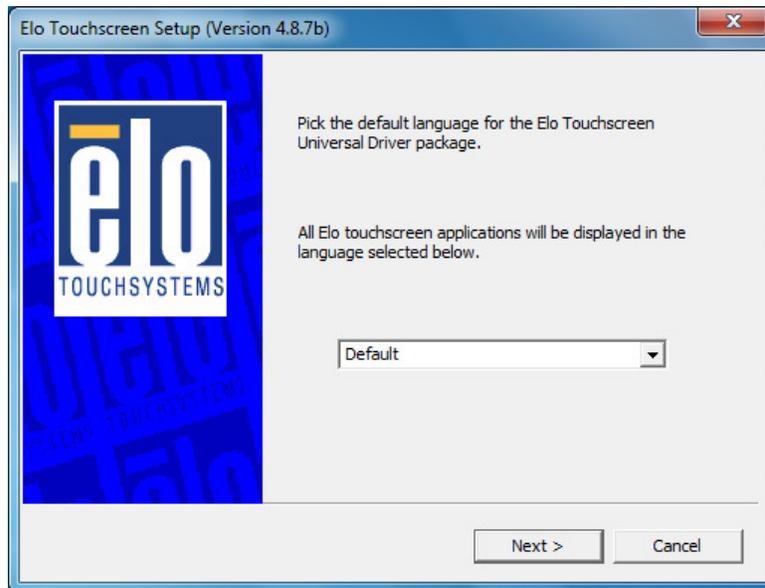
Note: If you forget to run the installer as an administrator, writing to the system area is limited and the installation fails. Then, the following window appears.



The following window appears. Click on the “OK” button.



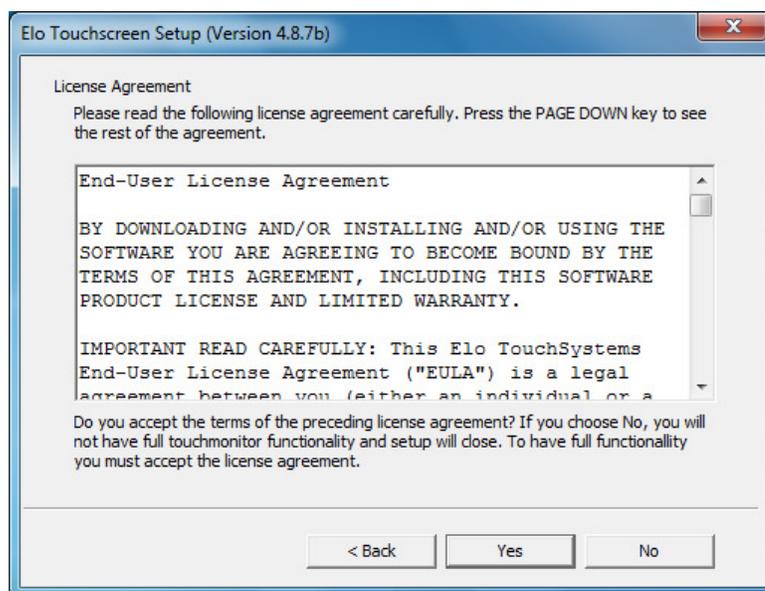
The following window appears. Choose a language, if necessary, and then click on the “Next” button.



The following window appears. Check the “Install Serial Touchscreen Drivers” check box, and click on the “Next” button.



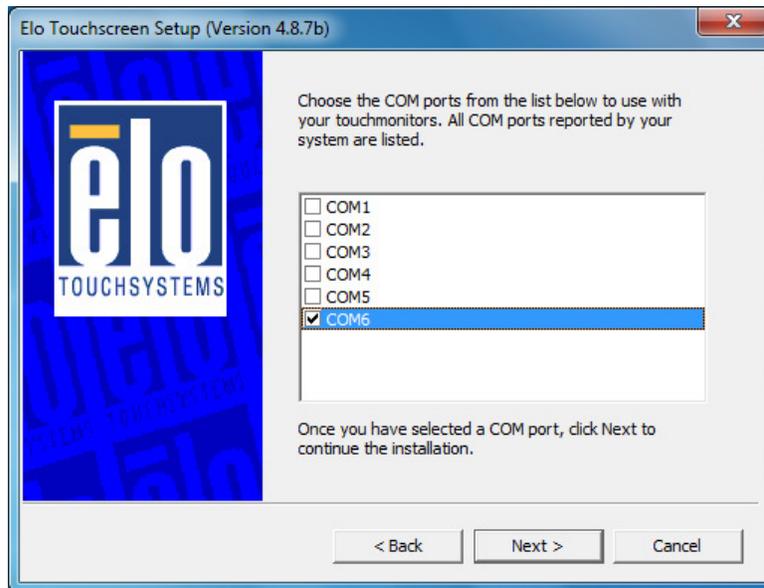
The “License Agreement” window appears. Confirm the contents. If you agree, click on the “Yes” button.



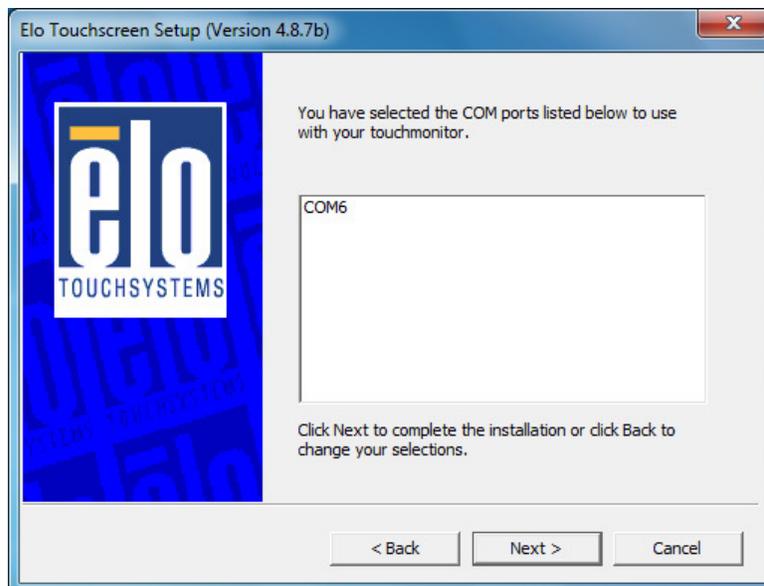
The following window appears. Check the “Auto-detect Elo devices” check box, and click on the “Next” button.



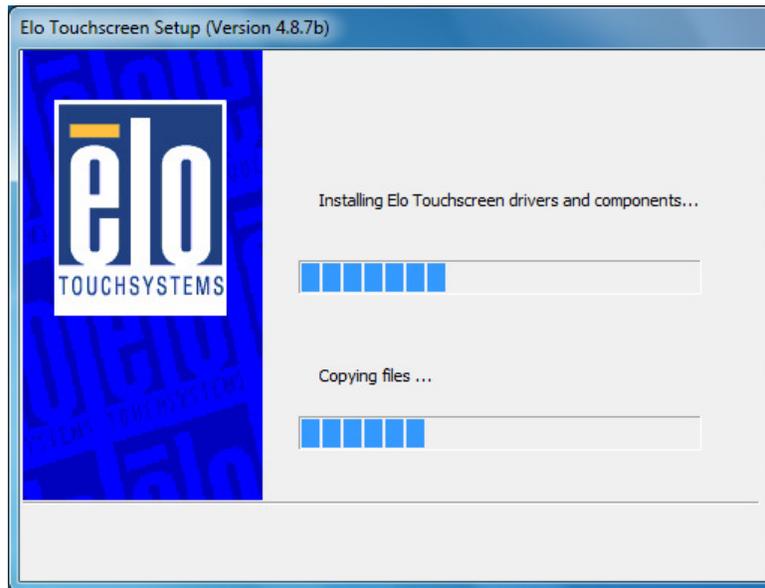
The following window appears. The touch panel connected to the ST-A20 is detected, and “COM6” is chosen. If “COM6” is not chosen, there may be a problem. Click on the “Next” button.



The following window appears. Confirm that “COM6” is chosen, then click on the “Next” button.



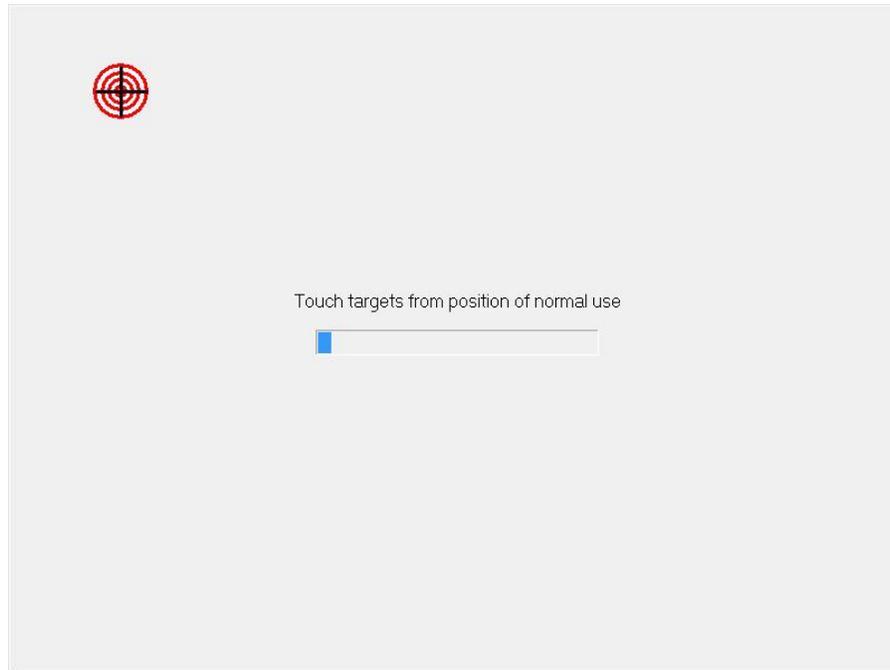
After a while, the installation starts.



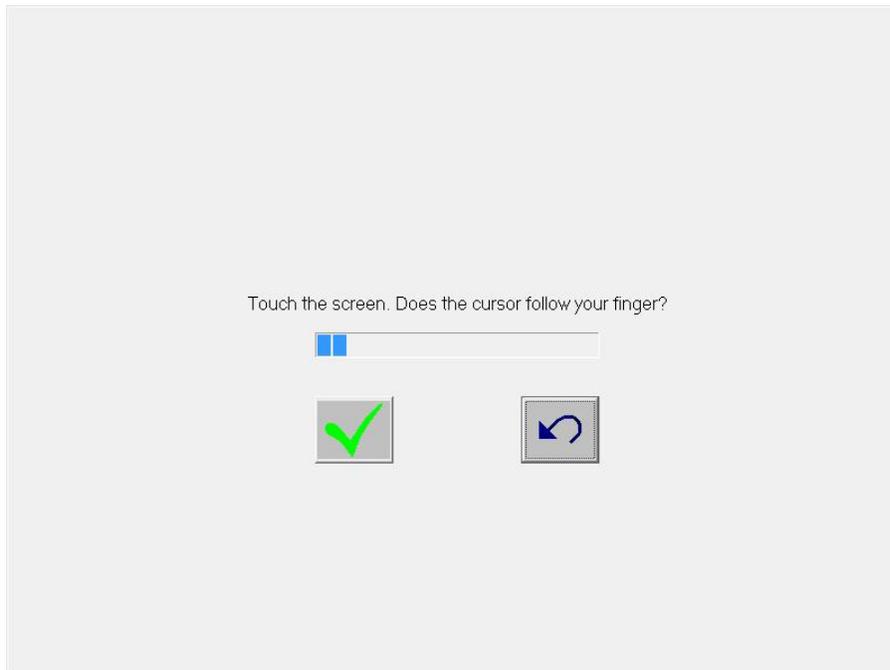
After completion of the installation, the following window appears. Check the “Calibrate Elo Touchscreen monitors” check box, and click on the “Finish” button.



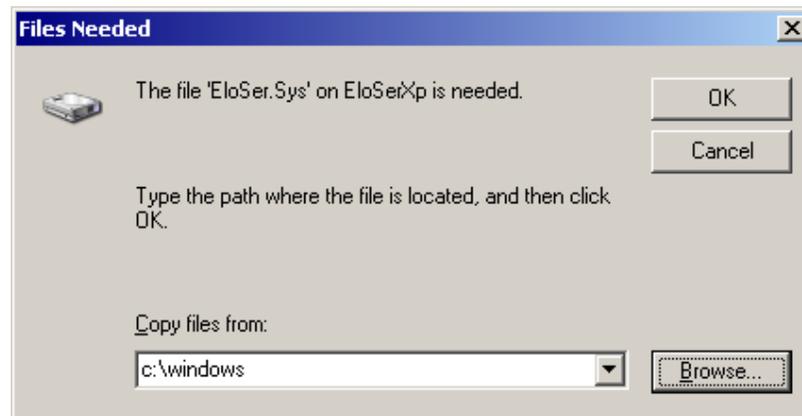
The following calibration screen appears. Perform a calibration by touching the mark whenever it appears. (The mark appears three times.) (Transparent background on 5.41 & above)



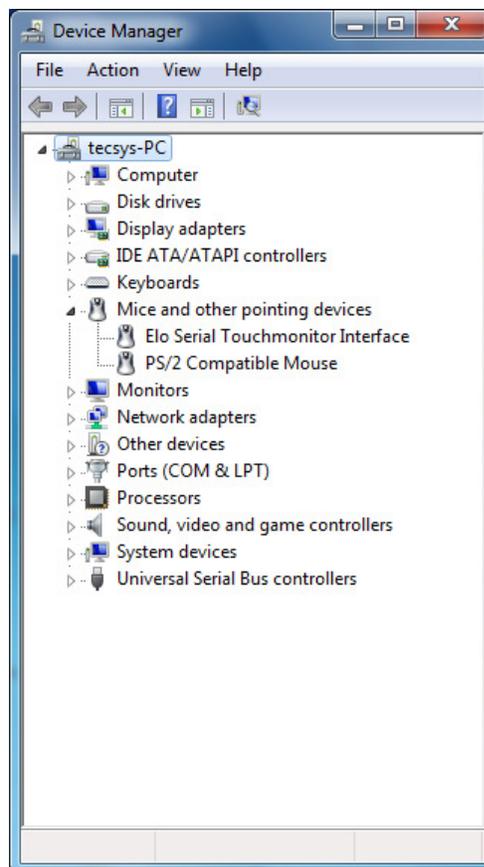
After the mark was touched three times, two buttons appear at the center of the screen. Click on the check mark button to complete the calibration



If the “Files Needed” window appears during installation, click “Browse” button and select “C:\Program Files\EloTouchSystems” folder. Then click on the “OK” button.



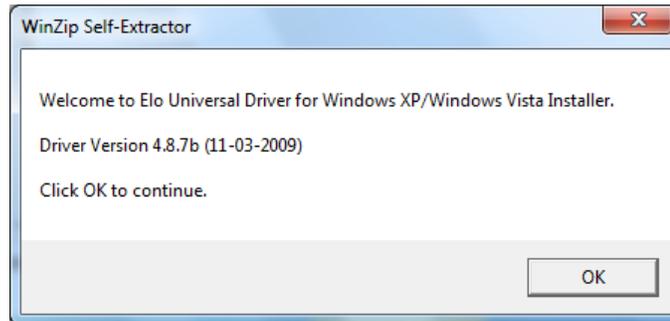
Open Device Manager to confirm the touch panel driver has been installed. Make sure that “Elo Serial Touchmonitor Interface” is registered under the “Mice and other pointing devices” icon.



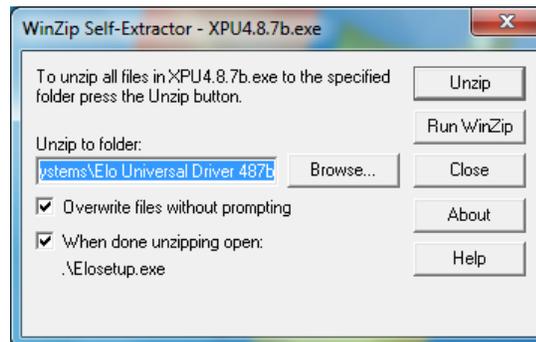
5.6.2. Installation When Connecting TFTST-A20

Open the “ST-A20\Tablet\7” folder in the Driver Kit CD-ROM. Right-click on the “XPU4.8.7b.exe” icon, and select “Run as administrator” menu. The following window appears. Click on the “OK” button.

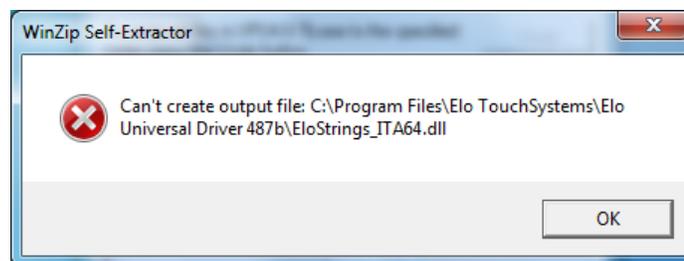
Note: If you forget it, the installation will not be completed.



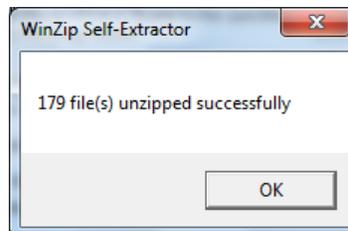
The following window appears. Click on the “Unzip” button, then the files are decompressed.



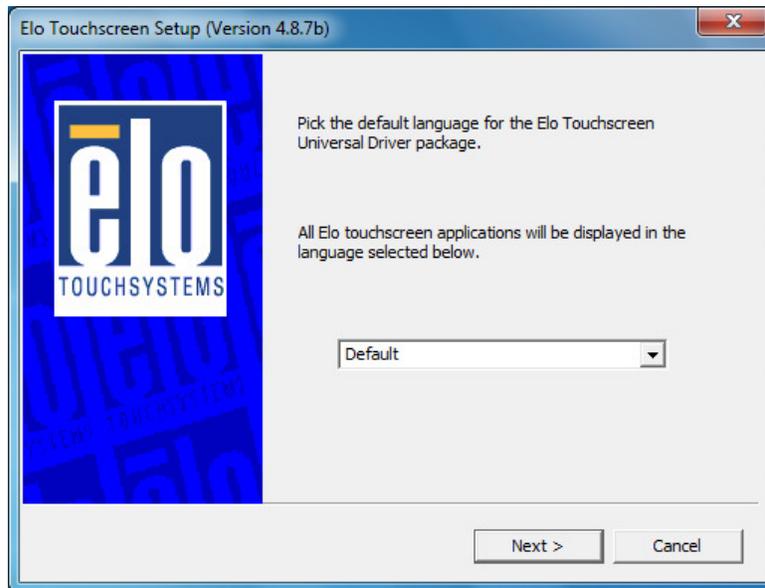
Note: If you forget to run the installer as an administrator, writing to the system area is limited and the installation fails. Then, the following window appears.



The following window appears. Click on the “OK” button.



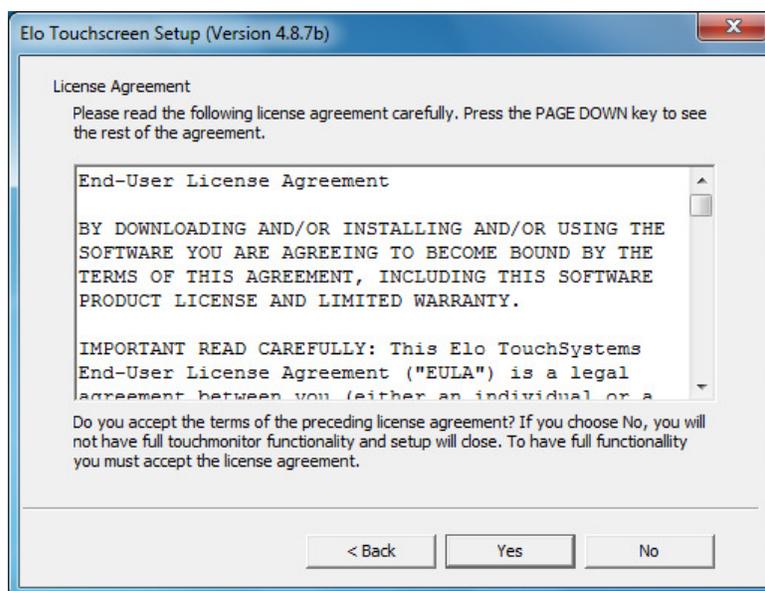
The following window appears. Choose a language, if necessary, and then click on the “Next” button.



The following window appears. Check the “Install Serial Touchscreen Drivers” check box, and click on the “Next” button.



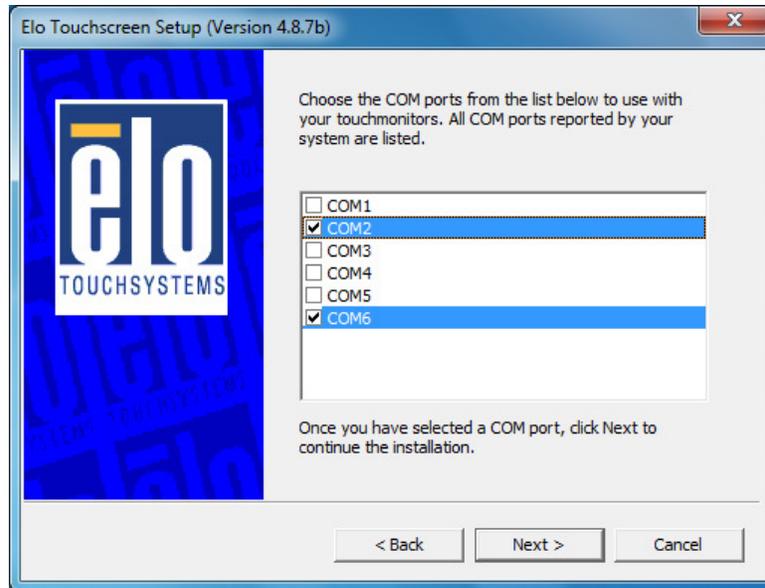
The “License Agreement” window appears. Confirm the contents. If you agree, click on the “Yes” button.



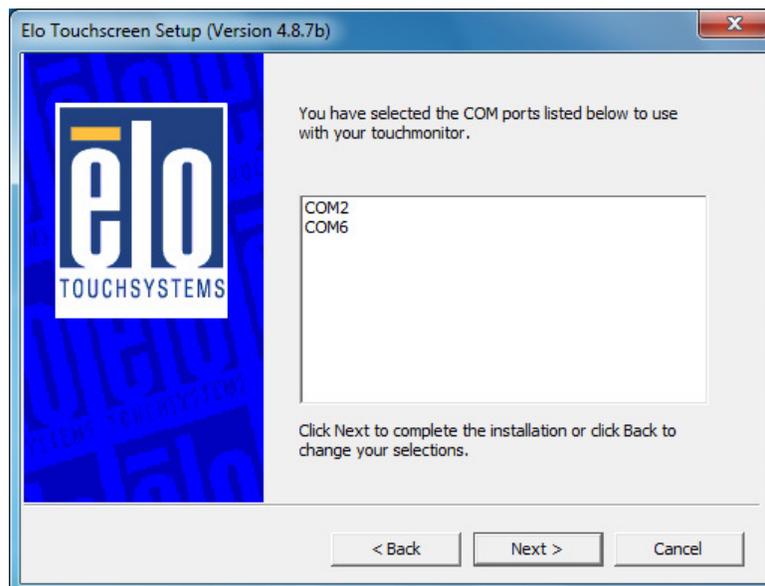
The following window appears. Check the “Auto-detect Elo devices” check box, and click on the “Next” button.



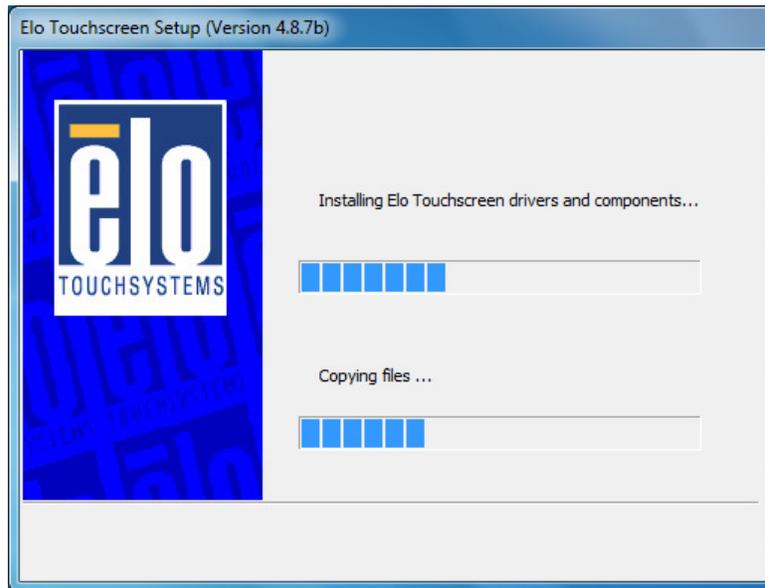
The following window appears. The touch panel connected to the ST-A20 and the TFTST-A20 are detected, and “COM6” and “COM1 or 2” are chosen. If “COM6” and “COM1 or 2” is not chosen, there may be a problem. Click on the “Next” button.



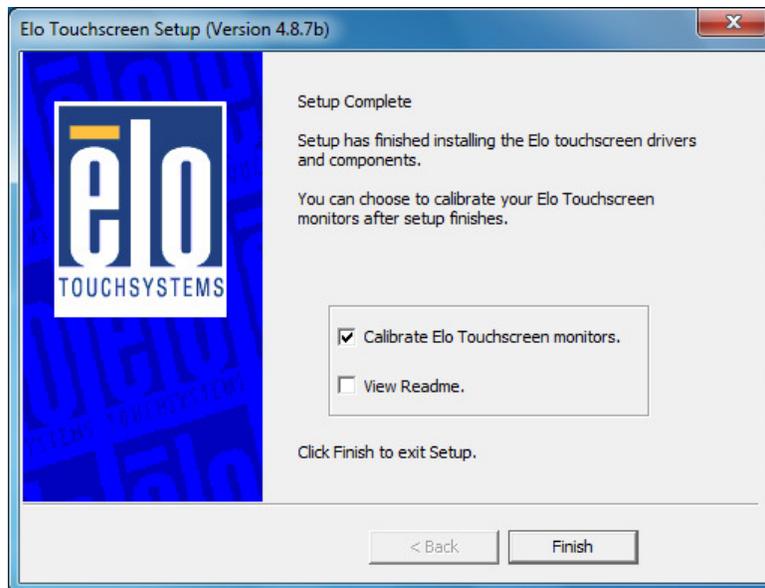
The following window appears. Confirm that “COM6” and “COM1 or 2” are chosen, then click on the “Next” button.



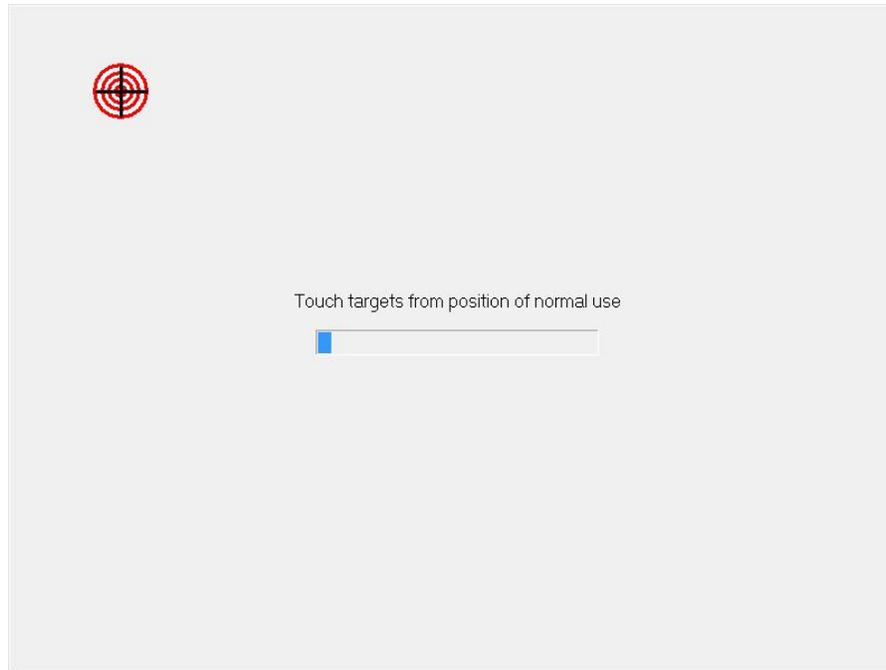
After a while, the installation starts.



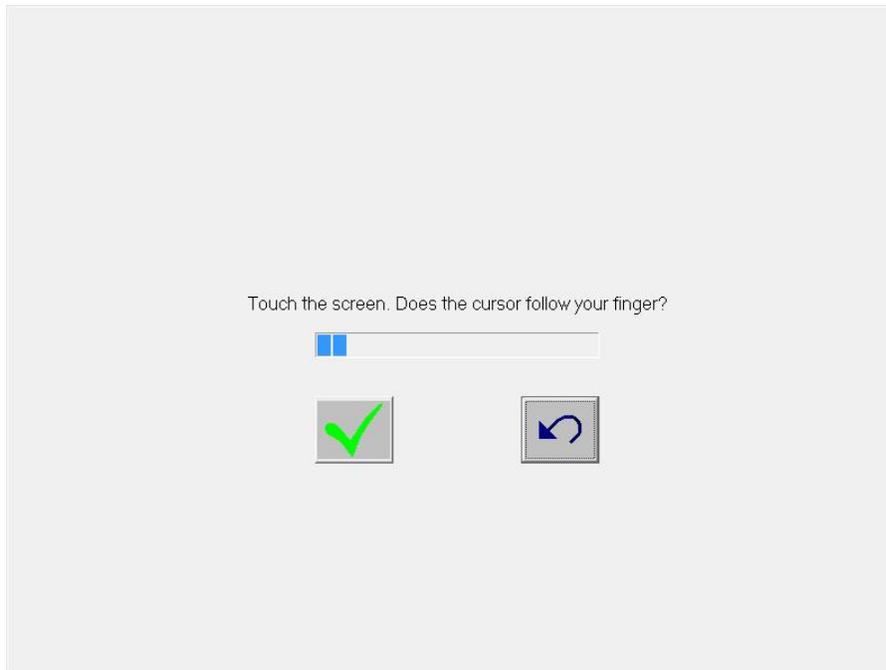
After completion of the installation, the following window appears. Check the “Calibrate Elo Touchscreen monitors” check box, and click on the “Finish” button.



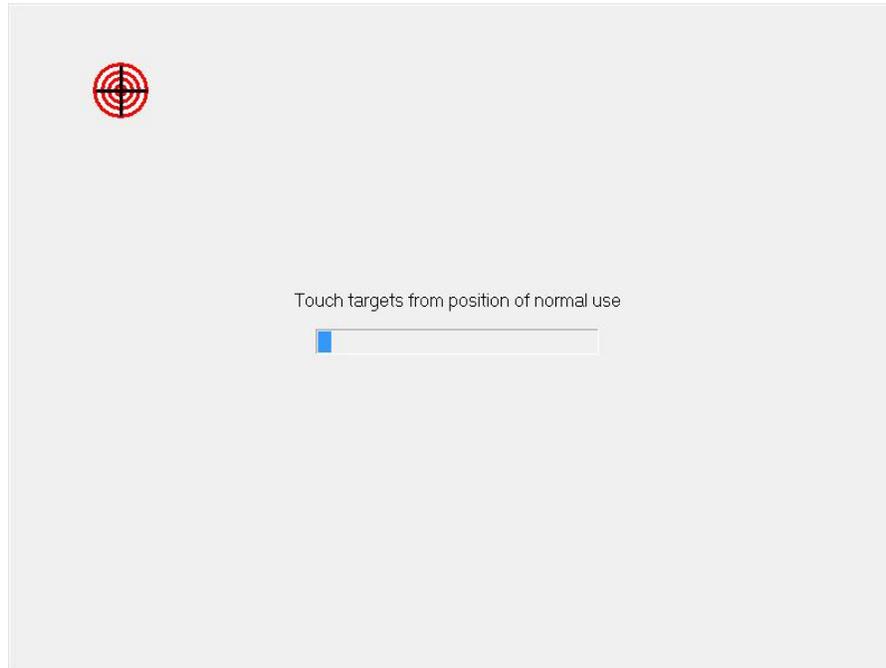
The following calibration screen appears on ST-A20 main screen. Perform a calibration by touching the mark whenever it appears. (The mark appears three times.)



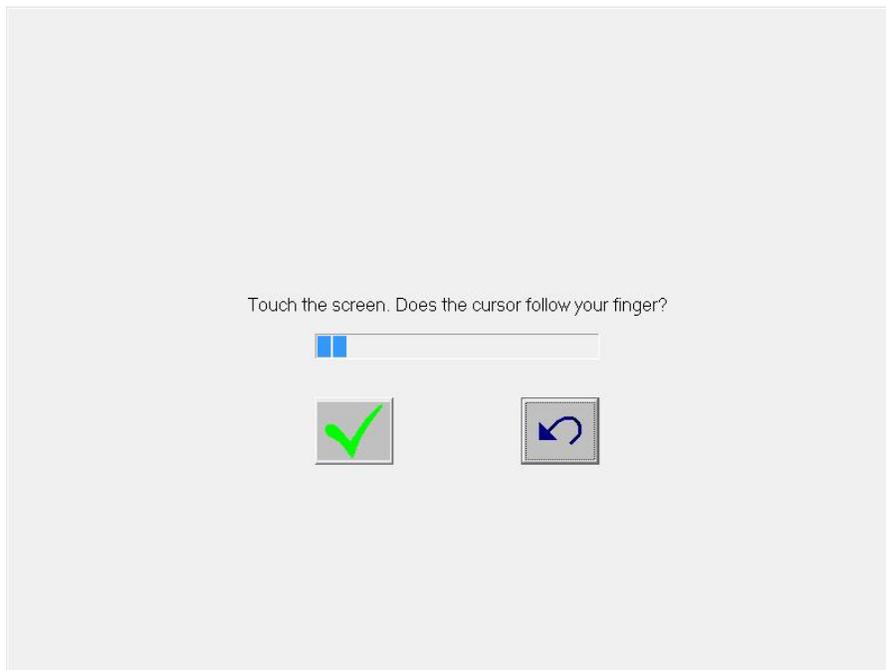
After the mark was touched three times, two buttons appear at the center of the screen. Click on the check mark button to complete the calibration



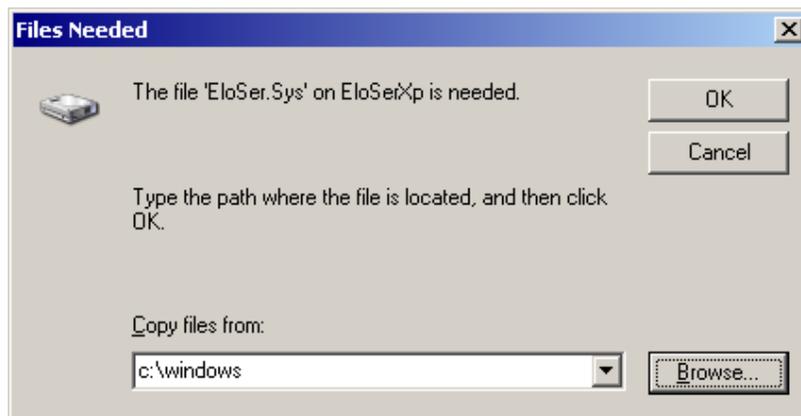
The following calibration screen appears on TFTST-A20 screen. Perform a calibration by touching the mark whenever it appears. (The mark appears three times.)



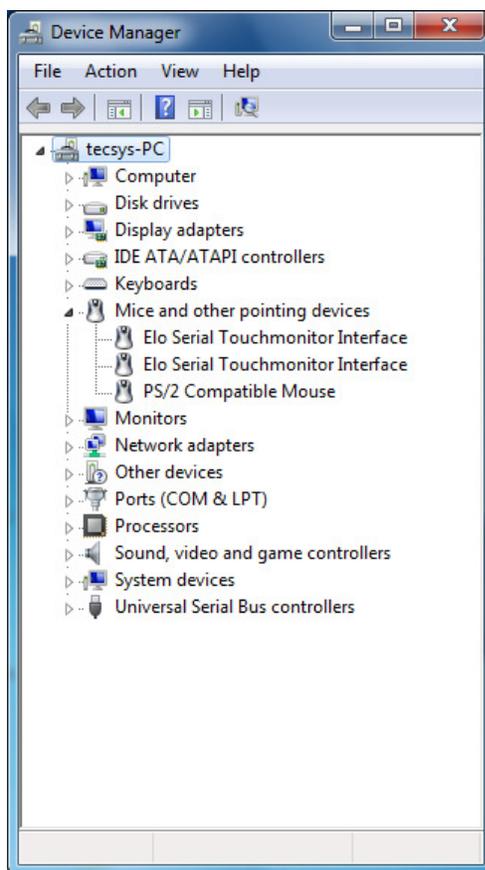
After the mark was touched three times, two buttons appear at the center of the screen. Click on the check mark button to complete the calibration



If the “Files Needed” window appears during installation, click “Browse” button and select “C:\Program Files\EloTouchSystems” folder. Then click on the “OK” button.

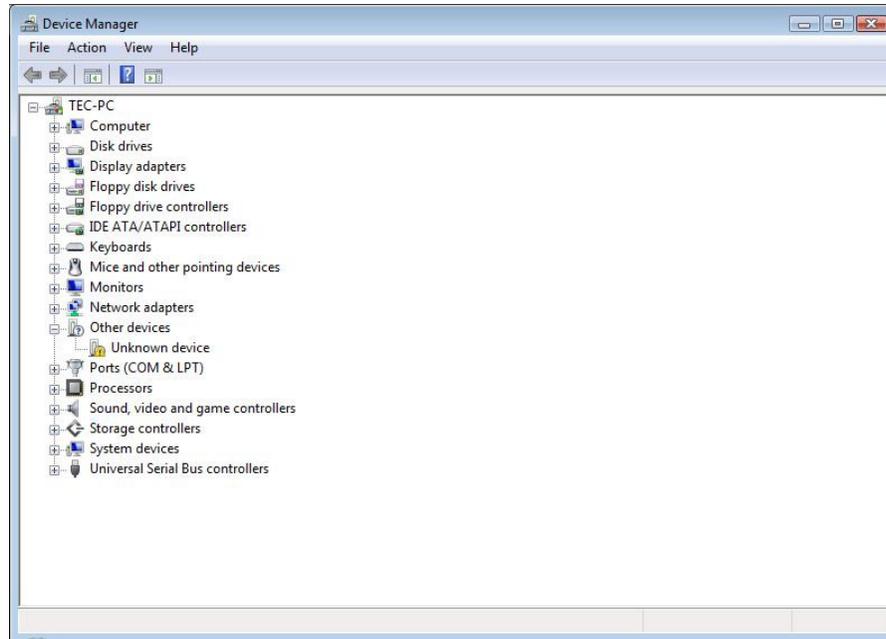


Open Device Manager to confirm the touch panel driver has been installed. Make sure that “Elo Serial Touchmonitor Interface” is registered under the “Mice and other pointing devices” icon.



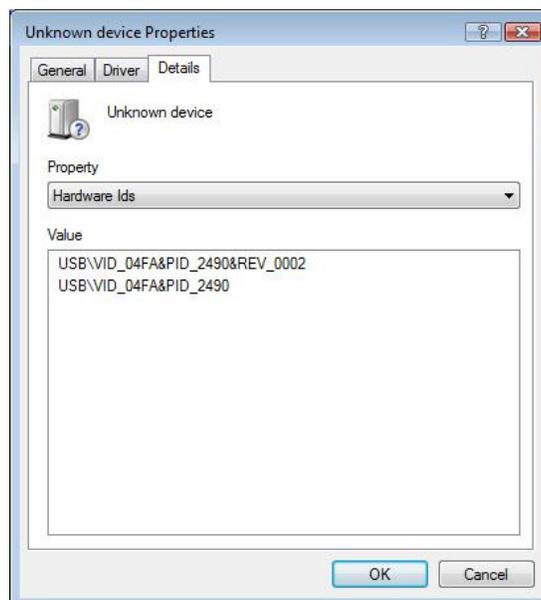
5.7. Installation for i-Button Driver

When the iButton is connected to the ST-A20, “Unknown Device” is shown with an exclamationmark (!) under the “Other devices” icon in the Device Manager window.



Note : A confirmation of iButton device

Open Device Manager, right-click on the “Unknown device” icon, then click on “Properties” to open the “Unknown device Properties” window. Click on the “Details” tab, confirm that there is “USB\VID_04FA&xxxxxx”.



We can not redistribute this installation driver.

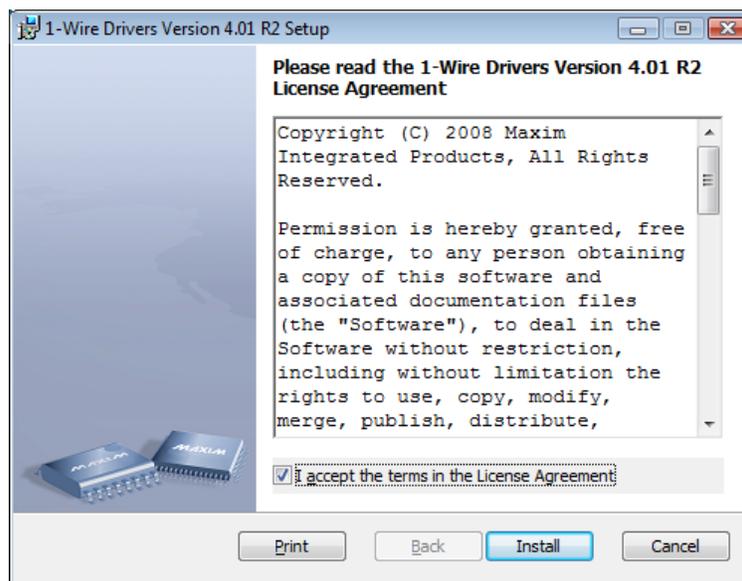
Therefore, if you need the driver, you have to download the driver from following site.

<http://www.maxim-ic.com/products/ibutton/software/tmex/>

Note: This URL was written on 2008/7/30.

Run the "install_1_wire_drivers_x86_v40xxx.msi" which you downloaded.

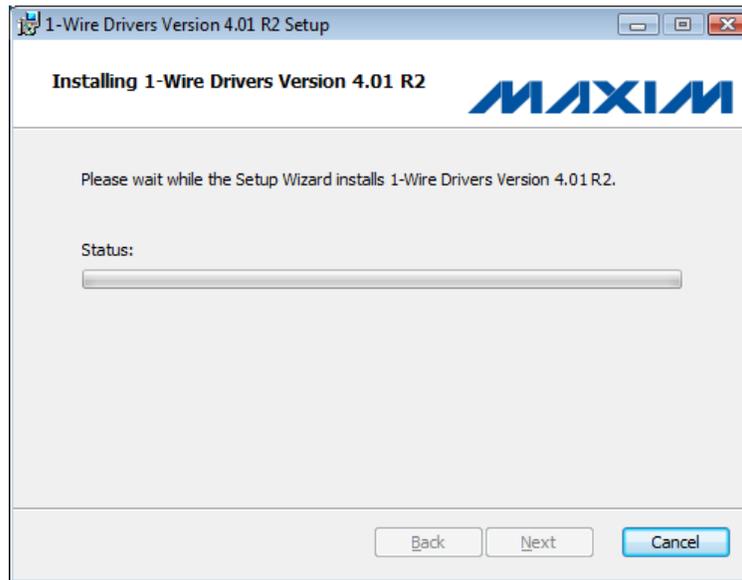
After a while, the "License Agreement" window appears. Confirm the contents. If you agree, check the "I accept the terms in the License Agreement" check box and click on the "Install" button.



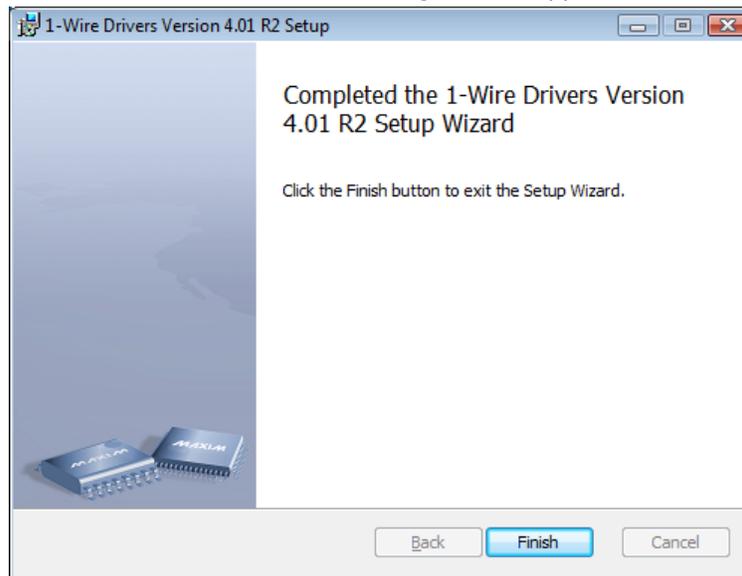
After a while, the following window appears. This is a security notice of Windows system. Click on the "Install" button.



After a while, the installation starts.

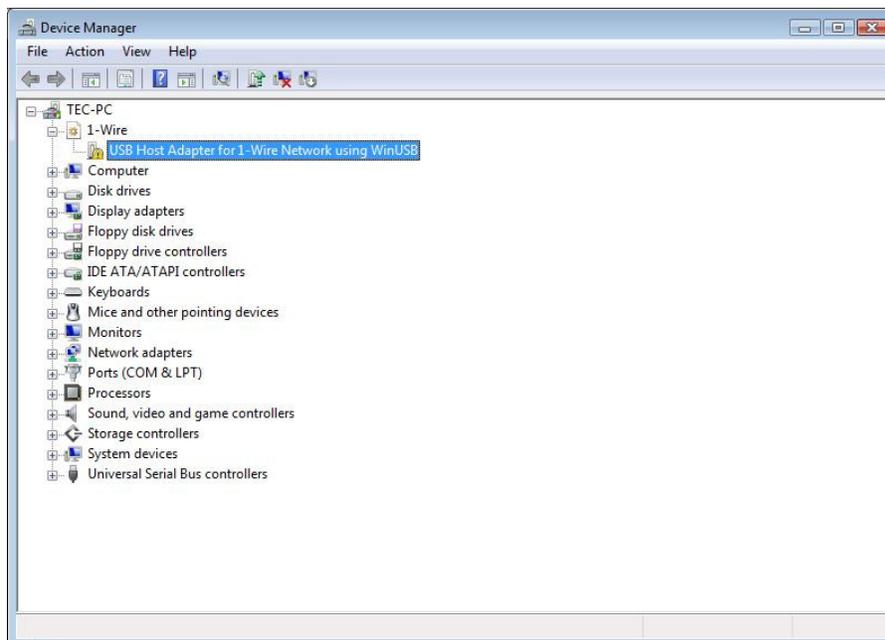


After completion of the installation, the following window appears. Click on the "Finish" button.

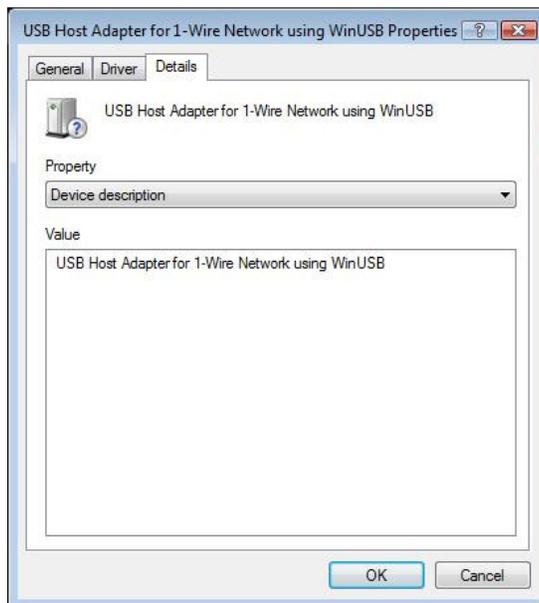


Next, we explain the method of updating driver from device manager.

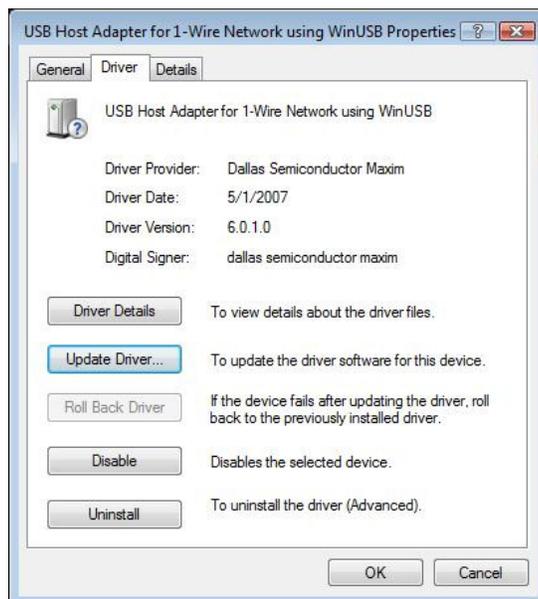
Open Device Manager, right-click on the “USB Host Adapter for 1-Wire Network using WinUSB” icon under the “1-Wire”, then click on “Properties” to open the “USB Host Adapter for 1-Wire Network using WinUSB Properties” window.



Click on the “Details” tab, and confirm that it is same as following window.

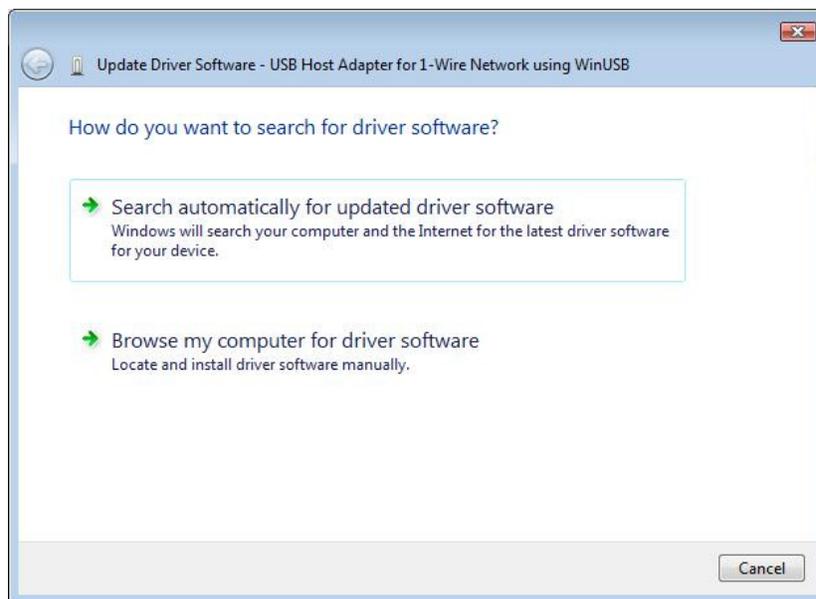


Click on the “Driver” tab, and click on the “Update Driver...” button.



After a while, the “How do you want to search for driver software” window appears. Click on the “Browse my computer for driver software” button.

Note : If you install it from the media(CD etc.), appoint a media drive path in the search range.



Note: To use the RAID, subsequently install the RAID Utility with reference to Section 6.3 Installation of RAID Utility JMB36X RAID CONFIGURER.

6. Creation of RAID

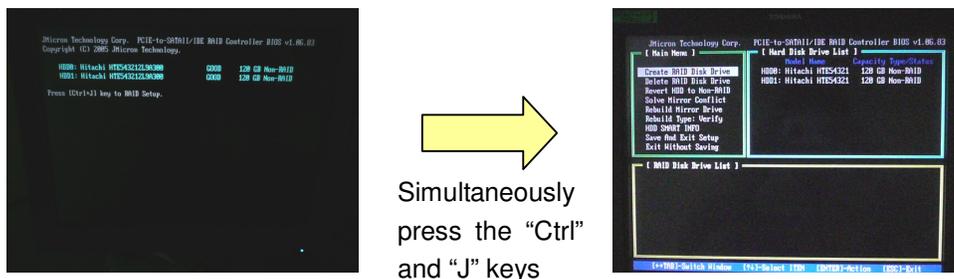
6.1. Creation of RAID from RAID BIOS Menu

6.1.1. Getting Started

Make sure the power is not turned on. Connect two SATA HDDs on which no RAID has been created. And create a RAID from the RAID BIOS menu.

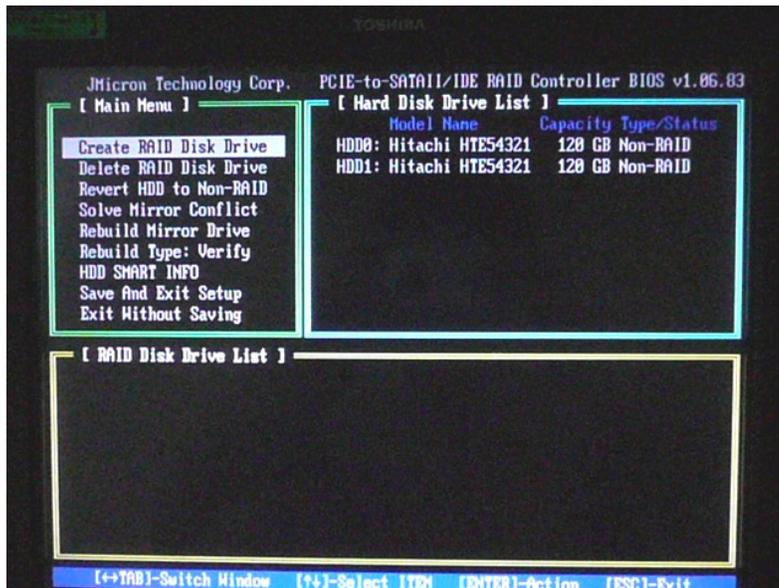
6.1.2. Startup of RAID BIOS Menu

After checking the HDDs are connected to the RAID controller, turn the power on and wait for the RAID BIOS screen to appear. On the RAID BIOS screen, simultaneously press the “Ctrl” and “J” keys to start the RAID BIOS menu.



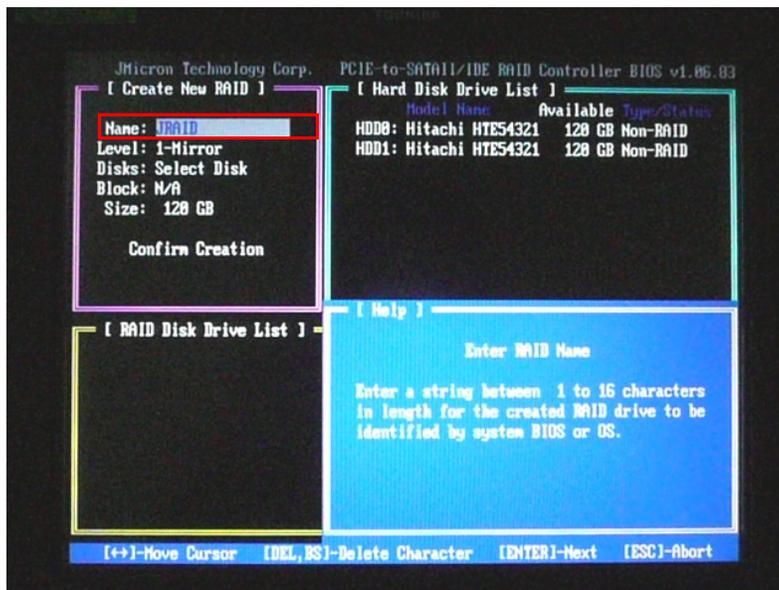
6.1.3. Creation of RAID

To create a RAID, select “Create RAID Disk Drive” on the main RAID BIOS menu and set up the two items: Name and Size.



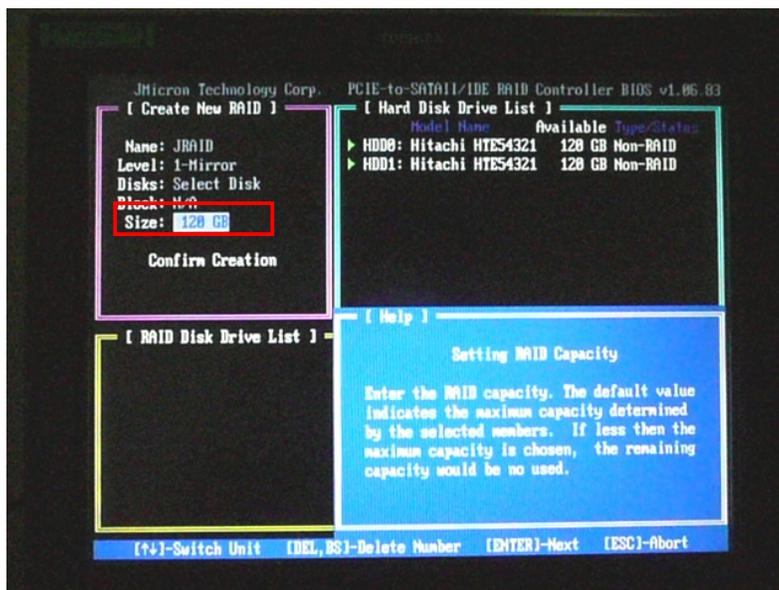
6.1.4. Setup of RAID Name

With the cursor on “Name”, where you can specify a RAID name, enter the RAID name from the keyboard, and press the “ENTER” key. Then, move the cursor to “Size”.



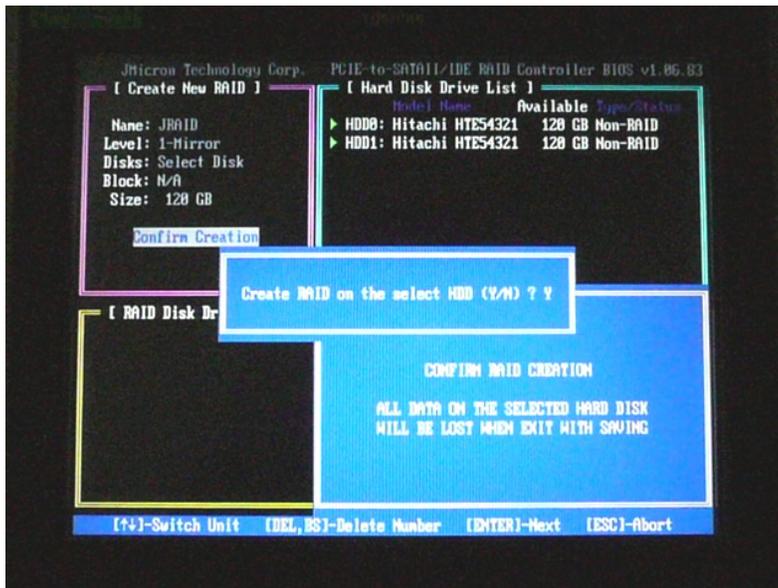
6.1.5. Setup of RAID Size

With the cursor on “Size”, where you can specify a RAID capacity, enter the RAID capacity from the keyboard, and press the “ENTER” key. The Confirm Creation screen appears.



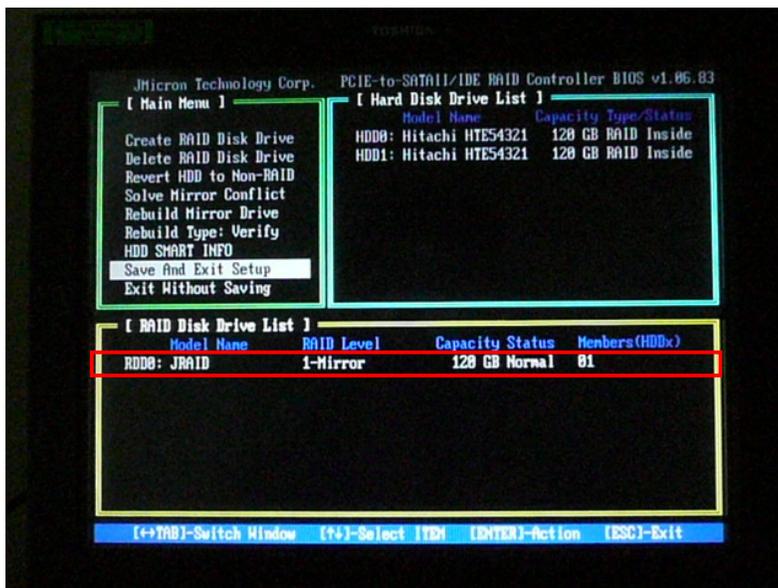
6.1.6. Confirm Creation Pop-up Screen

Upon completion of the setting of Name and Size, the RAID Confirm Creation pop-up screen appears. If both the name and size entered are correct, press the “Y” key to complete the creation of the RAID. If either/both of them need to be changed, press the “N” key, and try to create a RAID again.



6.1.7. Completion of Creation of RAID

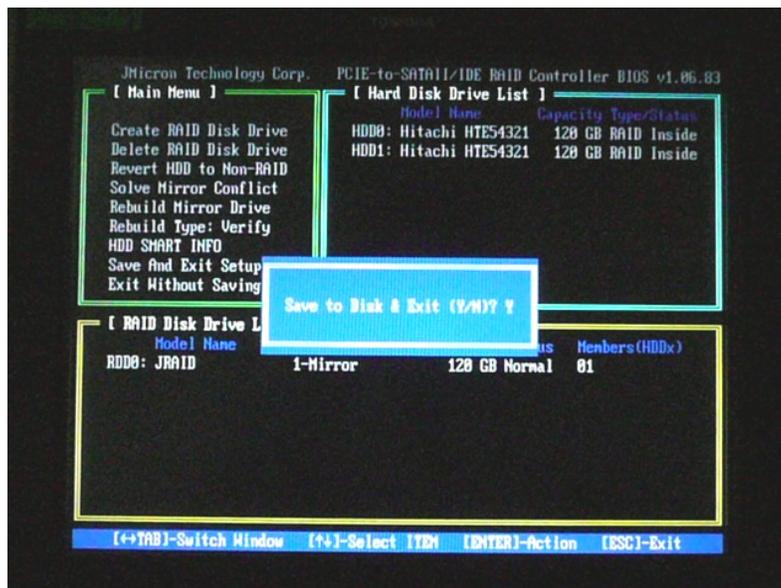
When the creation of the RAID is completed, the RAID information you set is displayed in the “RAID Disk Drive List” on the RAID BIOS menu. Note the information is only shown and has not been saved yet. To save it and exit the setup, complete the setup by selecting “Save And Exit Setup” on the RAID BIOS menu as explained in Section 6.1.4 Exit from BIOS Menu.



6.1.8. Exit from RAID BIOS Menu

To save the items you set up in the RAID BIOS menu and exit the menu, always select “Save And Exit Setup” and press the “Y” key. When the RAID BIOS menu exits, ST-A20 is automatically restarted.

Note: When the RAID BIOS menu is exited by any other operation, the setup information is not saved.



6.2. Installation of Each Operating System in RAID Environment

6.2.1. Windows 2000/Windows XP

6.2.1.1. Getting Started

The JMicron RAID driver must be installed from a floppy disk (FD) during an installation of the operating system. For this purpose, connect the floppy disk drive (FDD) and copy the JMicron RAID driver on the FDD before installing the operating system.

[How to Create a RAID Driver Floppy Disk]

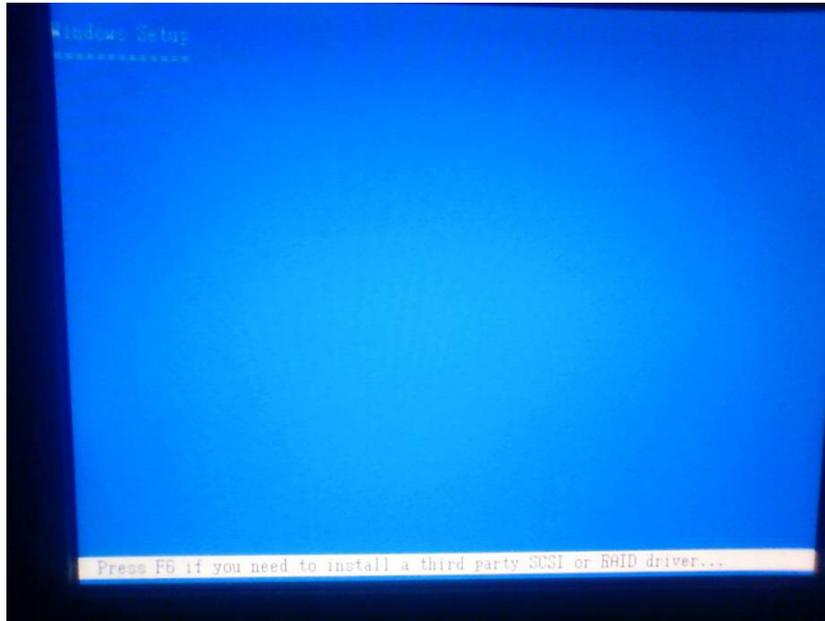
Copy all files in the "ST-A20\RAID\Driver\Floppy32" folder contained in the driver kit CD to the FD.

As soon as the boot up from CD-ROM starts, a message will be displayed at the top left area of the screen as shown below. Do not press the "Ctrl + J" key. (Note the message is shown only for about 8seconds. If necessary, press the "Ctrl + J" key to enter RAID Setup.)

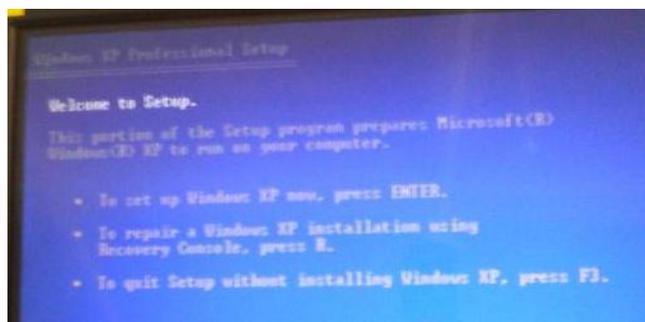


6.2.1.2. Installation of JMicron RAID Driver

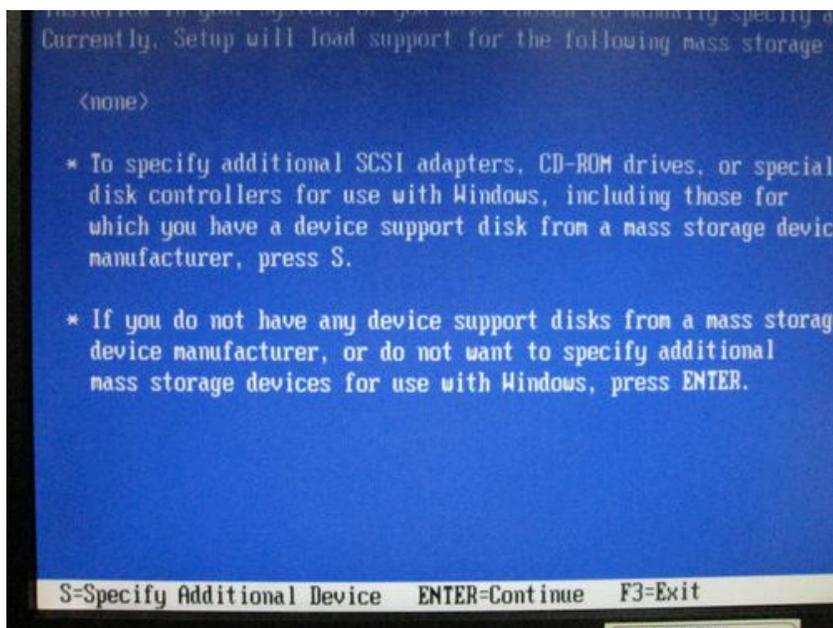
A short time after the installation of the operating system starts, a message “Press F6 if you need to install a third party SCSI or RAID driver...” appears at the bottom of the operating system installation screen as shown below. On this screen, press the “F6” key to give the operation system installer an instruction to start installing the driver.



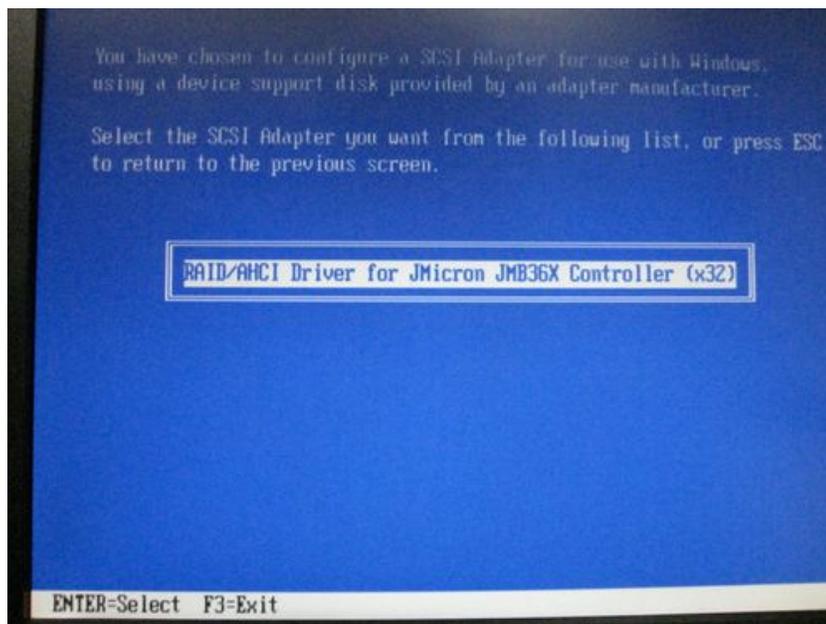
Note: The driver installation screen will not appear as soon as the “F6” key is pressed. It appears after the installation of the operating system proceeds to some extent. If the screen shown below appears, it means the instruction of the driver installation has failed. In this case, reboot ST-A20 and start the installation of Windows from the beginning.



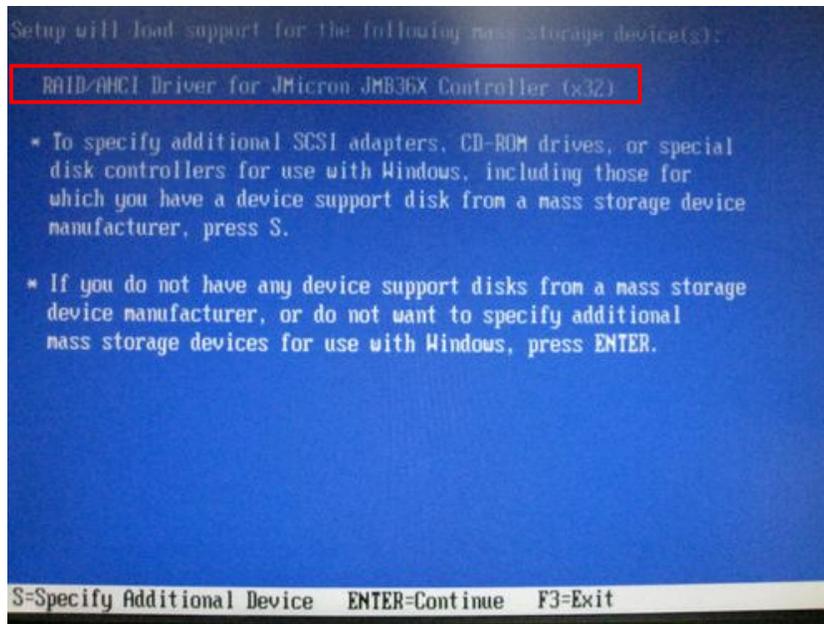
A short time after the instruction to install the driver is given to Windows XP, the driver installation screen shown below appears. On this screen, press the “S” key, and the screen to select a driver to be installed appears.



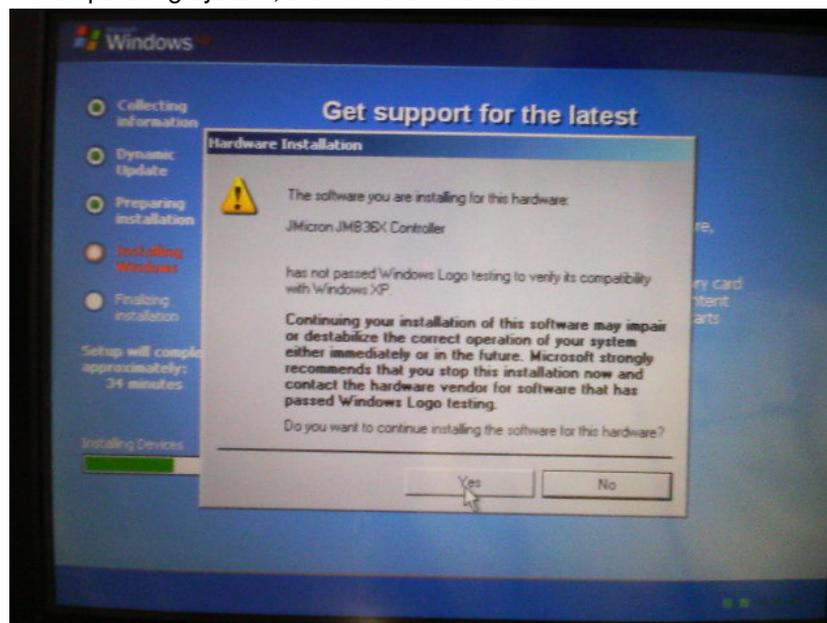
On this driver selection screen, you will select a driver to be installed. Among the drivers read from the FD and shown on the screen, select “RAID/AHCI Driver for Jmicron JMB36X Controller(x32)” and press the “ENTER” key. And, the driver installation screen is displayed again.



After selecting the driver to be installed and the driver installation screen appears again, the driver selected is shown on the screen as indicated with the red box in the figure below. If the driver shown is correct, press the “ENTER” key to continue the installation of Windows. If the driver shown is not correct, press the “S” key again and select a correct driver.



After installing the RAID driver, follow the instructions of the Windows installer to complete the installation. When the hardware installation screen shown below appears during the installation of the operating system, click on the “Yes” button.



Upon completion of the installation of Windows, creation of the RAID is also completed.

6.2.2. Windows Embedded for Point Of Service (WEPOS)

6.2.2.1. Getting Started

The JMicron RAID driver must be installed from a floppy disk (FD) during an installation of the operating system. For this purpose, connect the floppy disk drive (FDD) and insert a RAID Driver Floppy Disk into FDD before installing the operating system.

[How to Create a RAID Driver Floppy Disk]

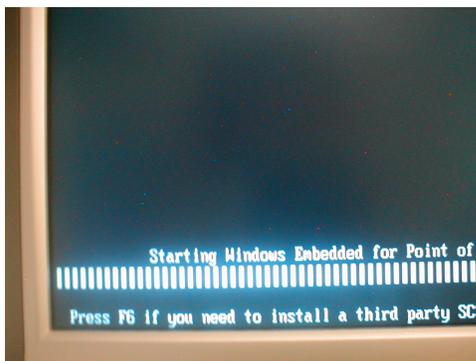
Copy all files in the "ST-A20\RAID\Driver\Floppy32" folder contained in the driver kit CD to the FD.

As soon as the boot up from CD-ROM starts, a message will be displayed at the top left area of the screen as shown below. Do not press the "Ctrl + J" key. (Note the message is shown only for about 8seconds. If necessary, press the "Ctrl + J" key to enter RAID Setup.)



6.2.2.2. Installation of JMicron RAID Driver

The next message is displayed at the bottom left area of the screen as shown below. Do not press the “F6” key. (Note the message is shown only for about 5 seconds)



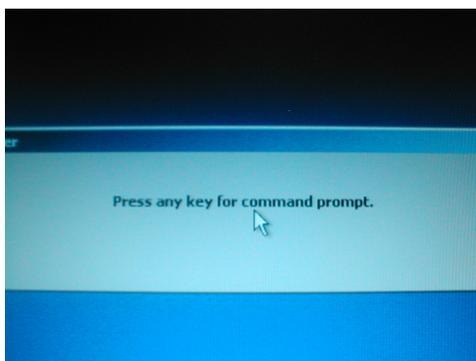
While a wait, the “Windows Flag” screen appears.



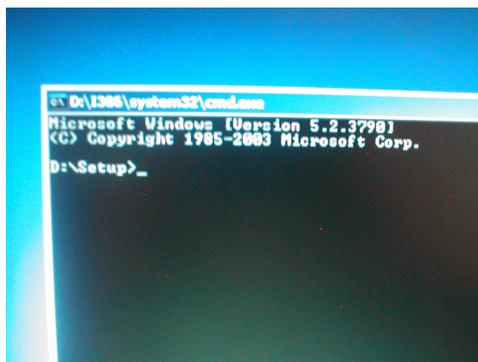
Important!

When a message is displayed at the middle area of the screen as shown below, **press any key to run command prompt.** (Note the message is shown only for about 2 seconds.)

If we failed to press any key when the message appears, the command prompt window will not be displayed instead the “Welcome to Windows Embedded for Point of Service Setup” window will appear, press the “Esc” key to cancel. We need to do the installation from the start.



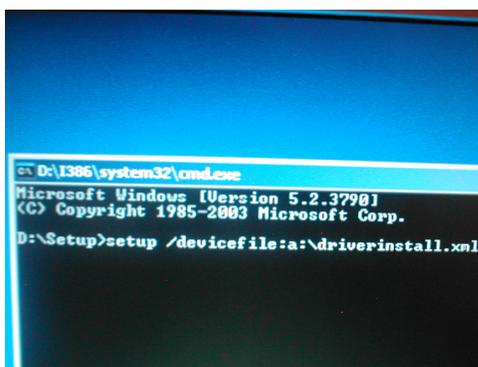
Afterward this command prompt will be shown.



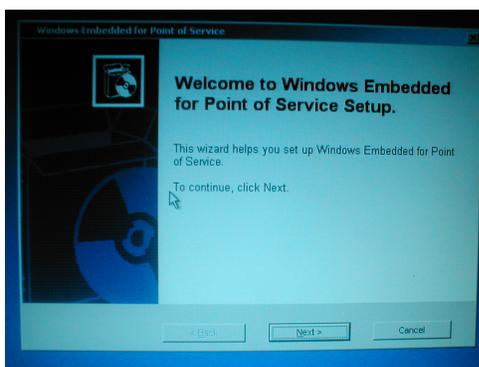
On command prompt, type "**setup /devicefile:a:\driverinstall.xml**" and press the "Enter".

d:\setup>setup /devicefile:a:\driverinstall.xml[Enter]
(Note there is only one space between characters "setup" and "/".)

After we press "ENTER" the command prompt will not close, please wait for the installation to begin. **Do not type "EXIT" and press enter on the command prompt.**



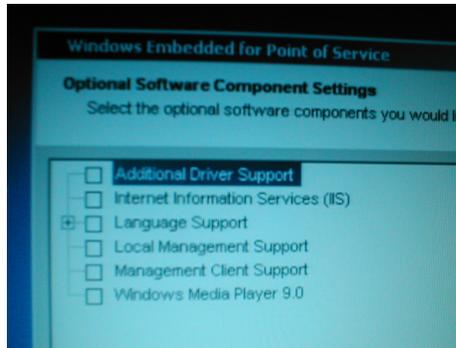
The "**Welcome to Windows Embedded for Point of Service Setup**" window will appear. Click on the "Next" Button to start the installation.



Follow the instructions to continue installation.

When the “Optional Software Component Settings” window appears, please select the required check box. Click “Next” when finish selecting the option.

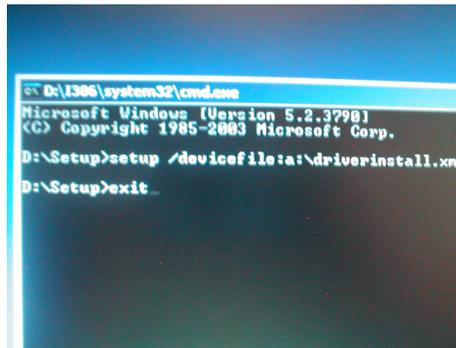
- Additional Driver Support
- Internet Information Services (IIS)
- Language Support
- Local Management Support
- Management Client Support
- Windows Media Player 9.0



Follow the instructions to continue installation.

After the installation complete, the “Command Prompt” window will appear again. Type “**exit**” and press “Enter” key to reboot your computer.

```
d:\setup>exit[Enter]
```



If the operating system successfully installed, the “User name and Password” window will appear.

Upon completion of the installation of Windows Vista, creation of the RAID is also completed.

6.2.3. Windows Embedded POSReady 2009

6.2.3.1 Getting Started

The JMicon RAID driver must be installed from a floppy disk (FD) during an installation of the operating system. For this purpose, connect the floppy disk drive (FDD) and copy the JMicon RAID driver on the FDD before installing the operating system.

[How to Create a RAID Driver Floppy Disk]

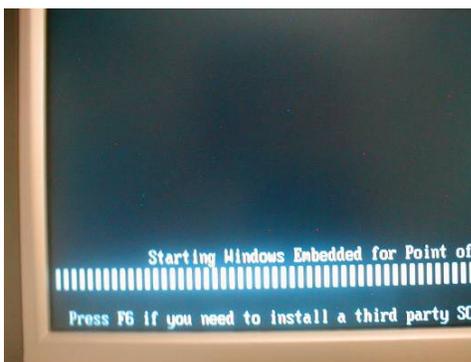
Copy all files in the "ST-A20\RAID\Floppy32" folder contained in the Driver kit CD to the FD.

As soon as the boot up from CD-ROM starts, a message will be displayed at the top left area of the screen as shown below. Do not press the "Ctrl + J" key. (Note the message is shown only for about 8seconds. If necessary, press the "Ctrl + J" key to enter RAID Setup.)



6.2.3.2. Installation of JMicon RAID Driver

The next message is displayed at the bottom left area of the screen as shown below. Do not press the "F6" key. (Note the message is shown only for about 5 seconds)

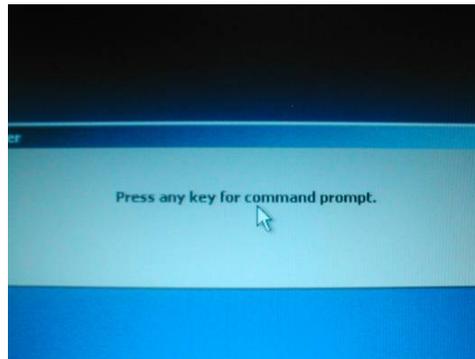


While a wait, the "Windows Flag" screen appears.



The next message is displayed at the bottom left area of the screen as shown below. Do not press any key.

Note: the message is shown only for about 2 seconds



The windows installer displayed.



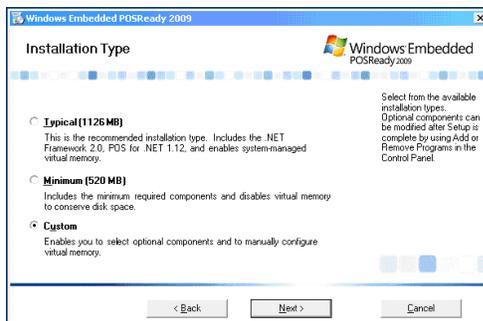
Follow the instructions of the Windows installer, then “Storage Drivers” window is displayed. Please select “Install Third-Party Storage Drivers” and click on the “Next” button, though default setting is “No Additional Storage Drivers are Required”.



The connected FDD is read automatically, and the RAID driver is installed. The message “Installing Mass Storage Device Drivers” is displayed. The message “Please wait while setup loads drive and partition information” is displayed. If RAID driver is installed correctly, HDD is detected. Please continue to install by following the instructions of the Windows installer.



“Installation Type” window is displayed. Select “Custom” and select necessary option on “Optional Component”. (Refer to Notice 6.1.3)



Follow the instructions of the Windows installer to complete the installation.

6.2.4. Windows Vista / 7

6.2.4.1. Getting Started

During an installation of the operating system, the JMicron RAID driver must be installed from a FD or an USB flash memory. For this purpose, create the JMicron RAID driver media in the FD or the USB flash memory before installing the operating system.

[How to Create the JMicron RAID Driver Media]

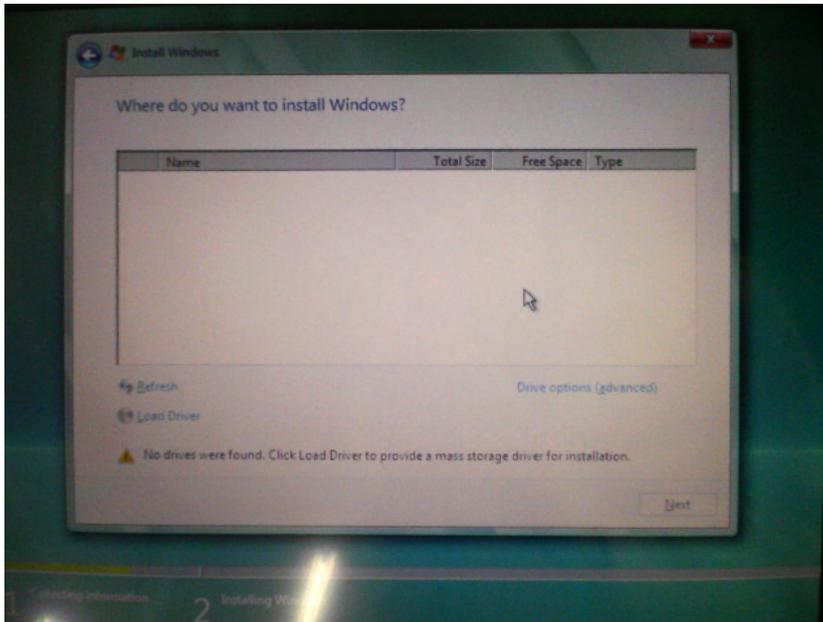
Copy all files in the "ST-A20\RAID\Driver\Floppy32" folder contained in the driver kit CD to the FD or the USB flash memory.

As soon as the boot up from CD-ROM starts, a message will be displayed at the top left area of the screen as shown below. Do not press the "Ctrl + J" key. (Note the message is shown only for about 8seconds. If necessary, press the "Ctrl + J" key to enter RAID Setup.)

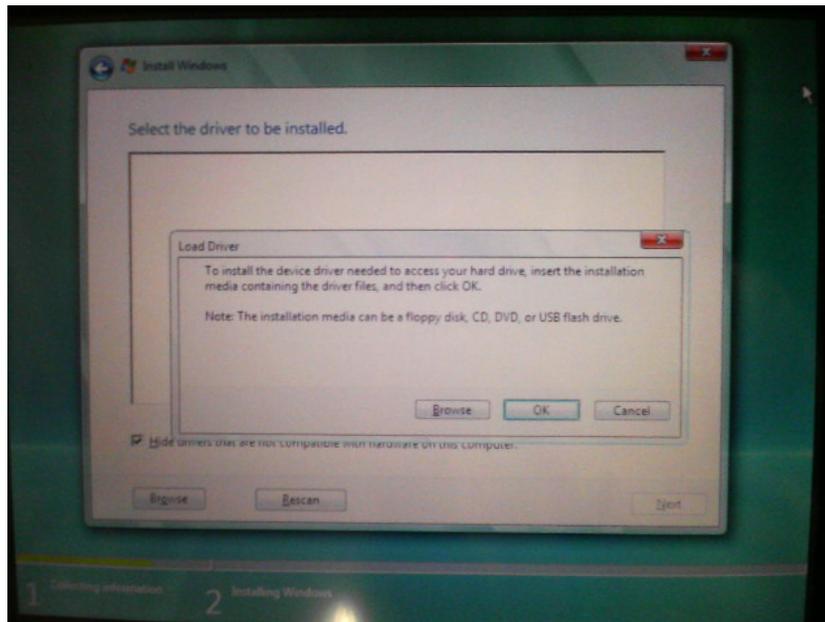


6.2.4.2. Installation of JMicron RAID Driver

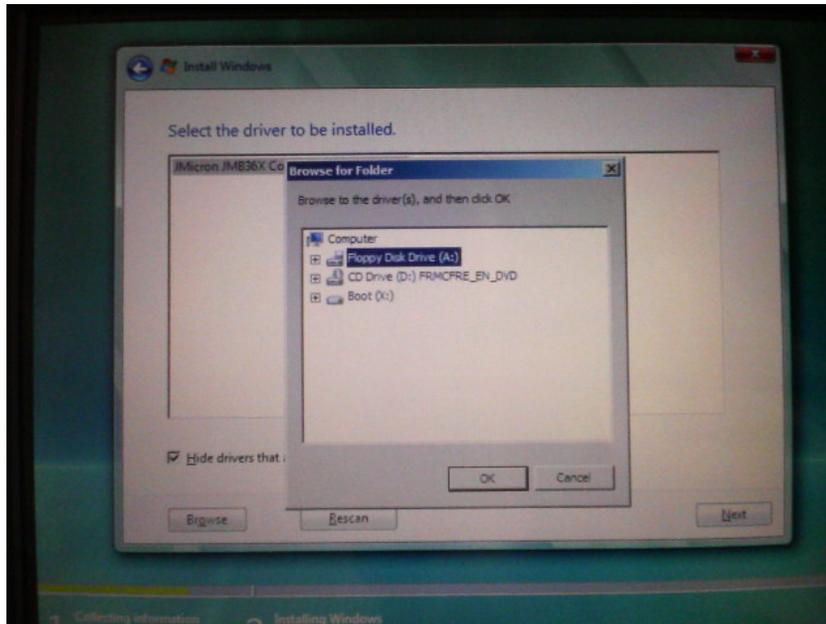
A short time after the installation of the operating system starts, the screen to select a drive, where the operating system is to be installed (OS installation drive selection screen), appears as shown below. (As a default, no drives are shown because the RAID driver has not been installed.) On this screen, click on “Load Driver”.



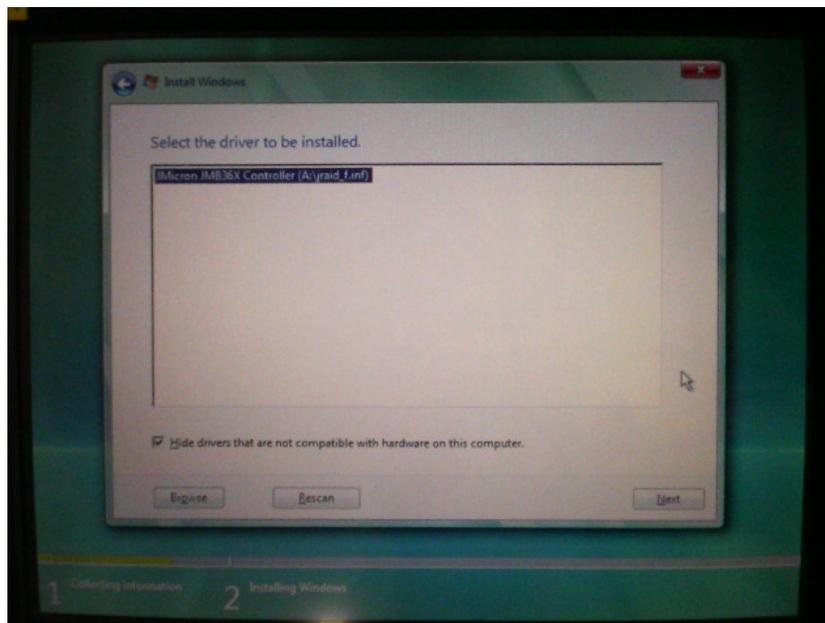
The driver file selection screen as shown below appears. Click on the “Browse” button.



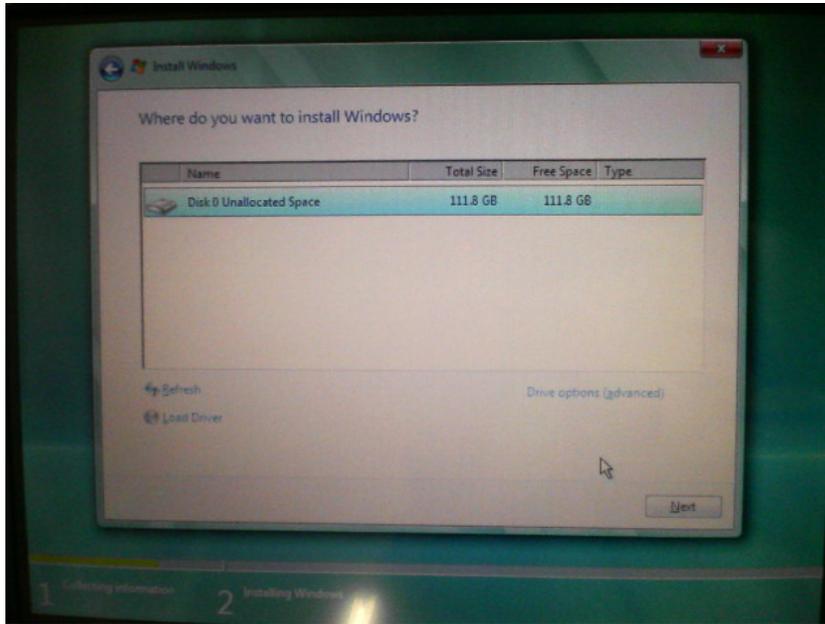
The driver file selection screen as shown below appears. On this screen, select the JMicon RAID driver media which was previously created in the FD or the USB flash memory, and press the “OK” button.



The drivers read from the FD or the USB flash memory are shown on the screen. Select “Jmicron JMB36X Controller (C:\jraid_to.inf)”, then click on the “Next” button. The OS installation drive selection screen appears again.



When the OS installation drive selection screen appears again, it shows the HDD connected with the RAID. Select the drive where the operating system is to be installed and click on the “Next” button. The installation of the operating system resumes.

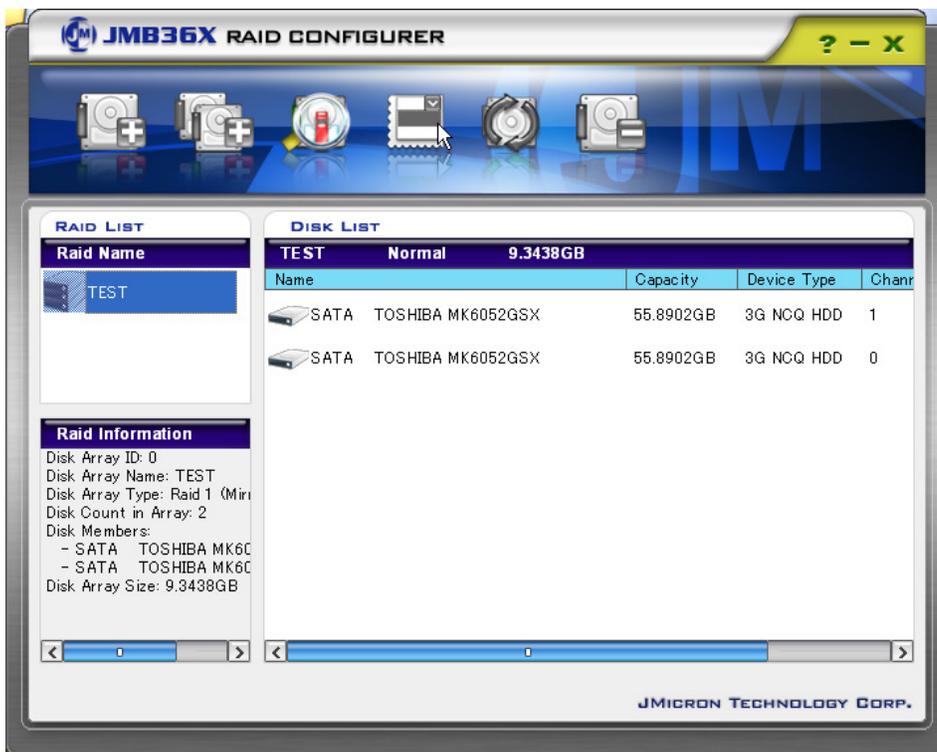


Upon completion of the installation of Windows Vista, creation of the RAID is also completed.

6.3. Installation of RAID Utility JMB36X RAID CONFIGURER

The JMB36X RAID CONFIGURER (RAID Application) is an operating system resident application which monitors and maintains the RAID. It monitors a status, for example, disconnection and connection of an HDD from/with the RAID controller. When the HDD is connected, it performs rebuilding or resynchronization so that the connected HDD can be used in the RAID environment. It also provides the same features as those provided by the RAID BIOS menu including status monitor of the HDD connected with the RAID controller, RAID configuration and rebuilding.

Note: The RAID Application cannot be used unless it is installed as described in the next section.



[RAID LIST]

Lists the RAIDs created.

[Raid Information]

Displays the information about the RAID selected from the RAID LIST.

[DISK LIST]

Displays the information about the HDD connected with the RAID controller and the information about the HDD related to the RAID selected from the RAID LIST.

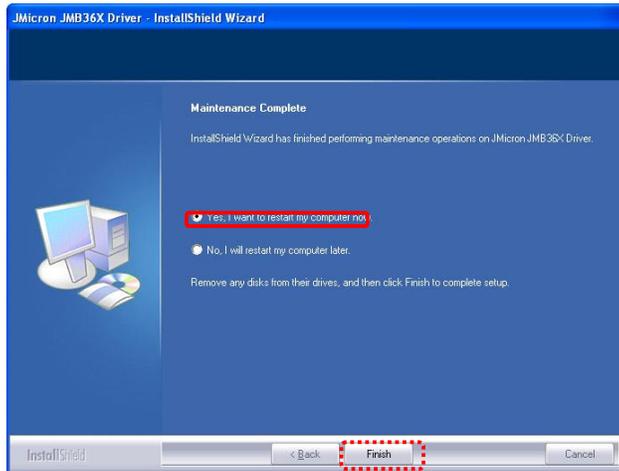
- The figure below shows the JMB36X RAID CONFIGURER icon in the task tray (as indicated with the red box). When the icon is double clicked, the RAID Application is displayed. (It is not displayed if the RAID Application already exists in the task bar.)



6.3.1. Installation

This section describes the procedure to install the JMB36X RAID CONFIGURER.

Run setup.exe in the “ST-A20\RAID\Driver” folder in the ST-A20Windows driver kit. For the subsequent installation procedures, follow the instructions of the installer. When the screen asking you to reboot your computer appears as shown below, check the “Yes, I want to reboot my computer now.” radio button, then click on the “OK” button to reboot your computer.



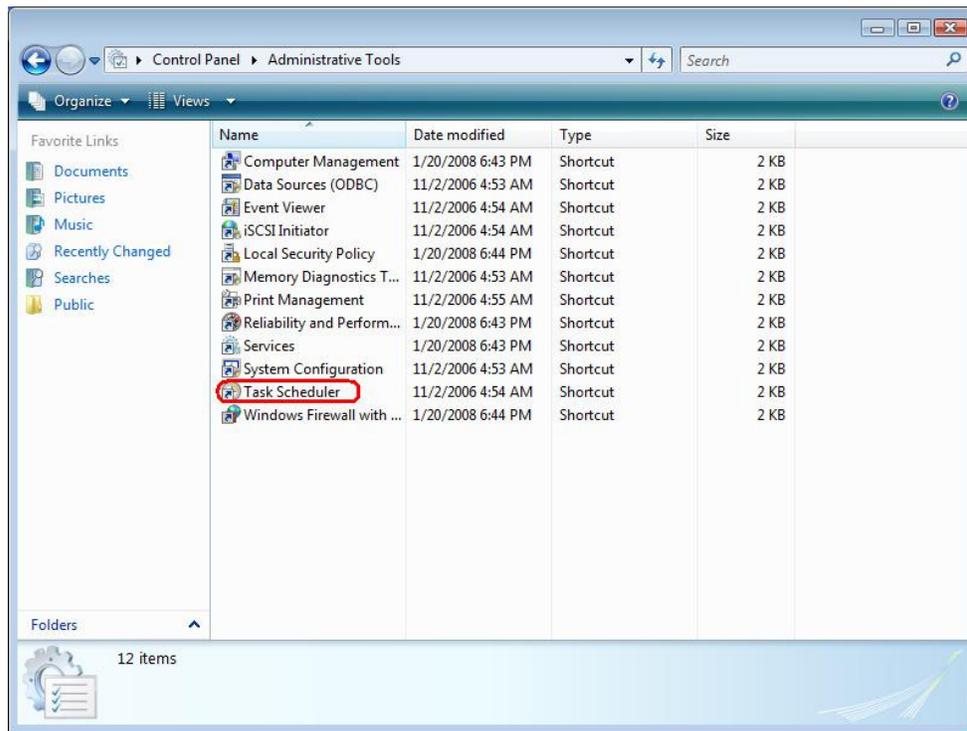
After the computer is rebooted and the desktop screen appears, make sure the JMB36X RAID CONFIGURER icon is shown in the task tray as indicated in the red box in the figure below. If it is in the task tray, the installation is completed.



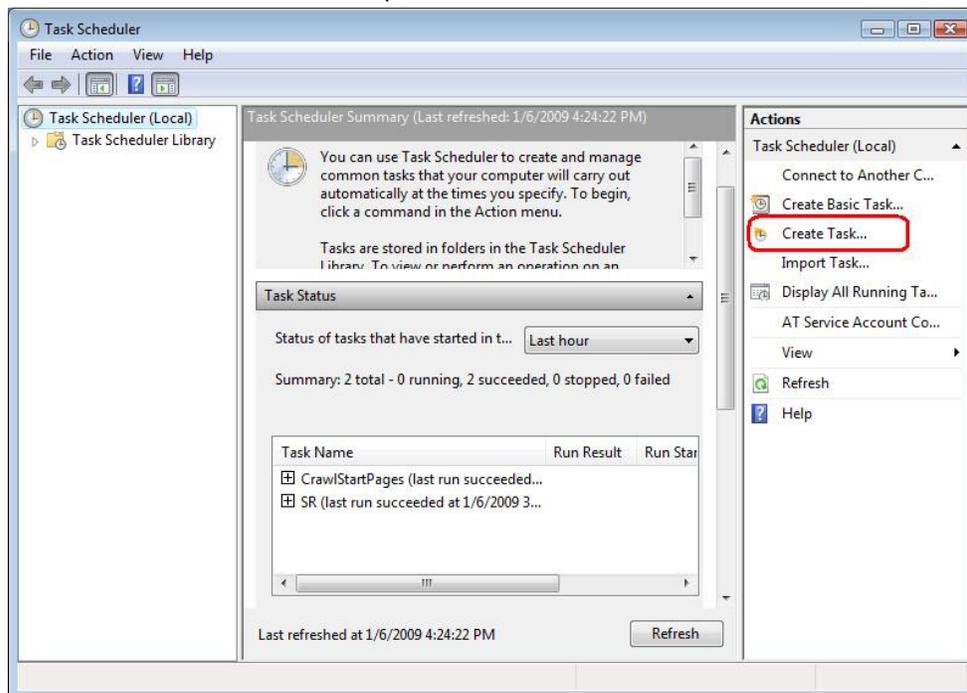
When the operating system is Windows Vista and 7, the JMB36X RAID CONFIGURER does not automatically start up when the operating system starts up. Please perform the following additional settings.

6.3.2. Setup for Windows Vista / 7

Open the Control Panel, then Administrative Tools. Click on Task Scheduler to start.



After the Task Scheduler starts up, click on "Create Task...".

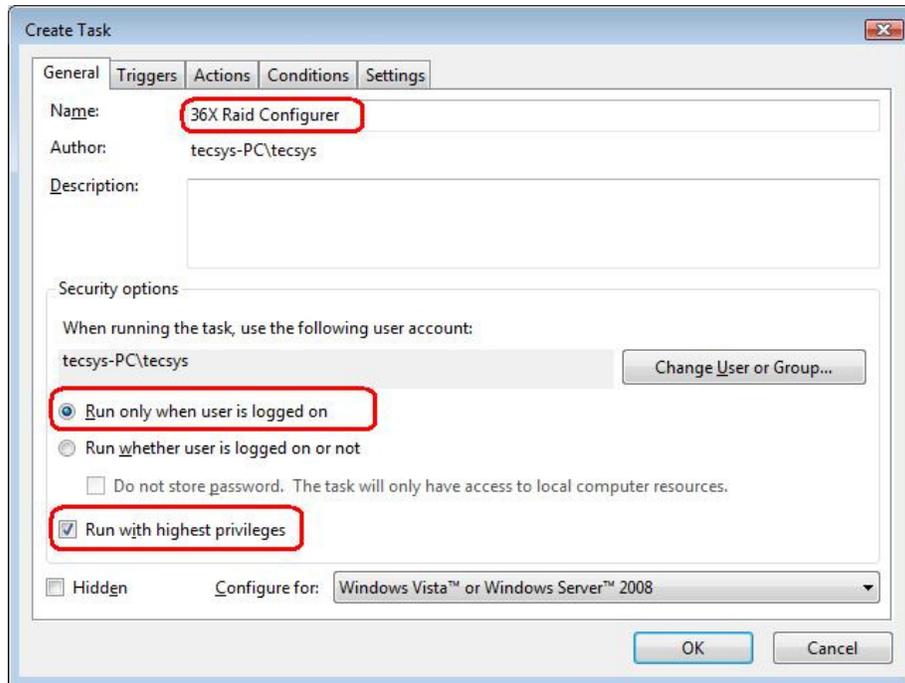


Click on the “General” tab and make settings as shown in the figure below.

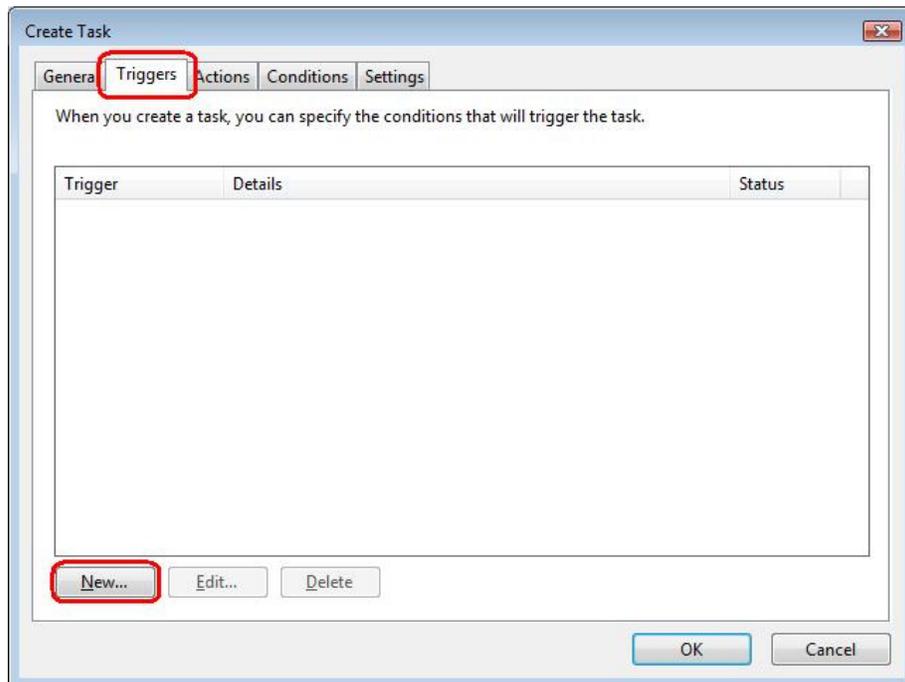
Name: 36X Raid Configurer

Security options: Click on the “Run only when user is logged on” radio button.

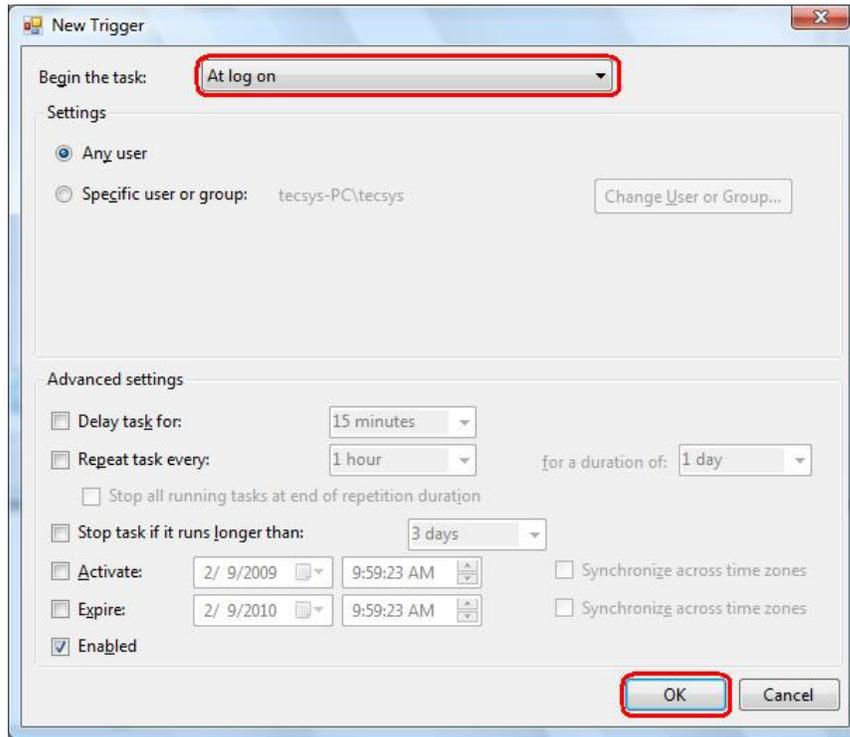
Check the “Run with highest privileges” box.



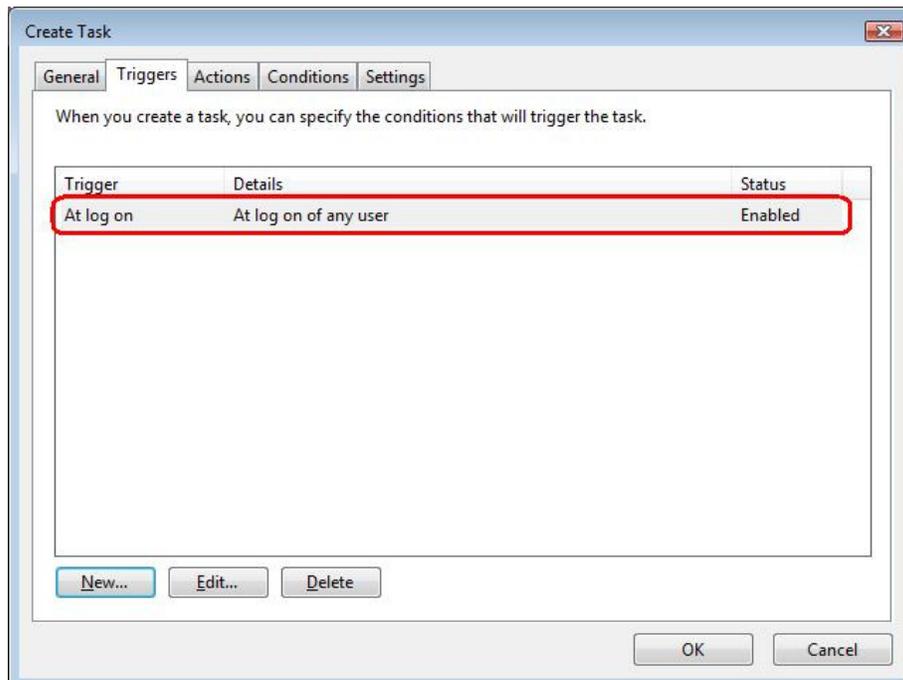
Click on the “Triggers” tab and click on the “New...” button.



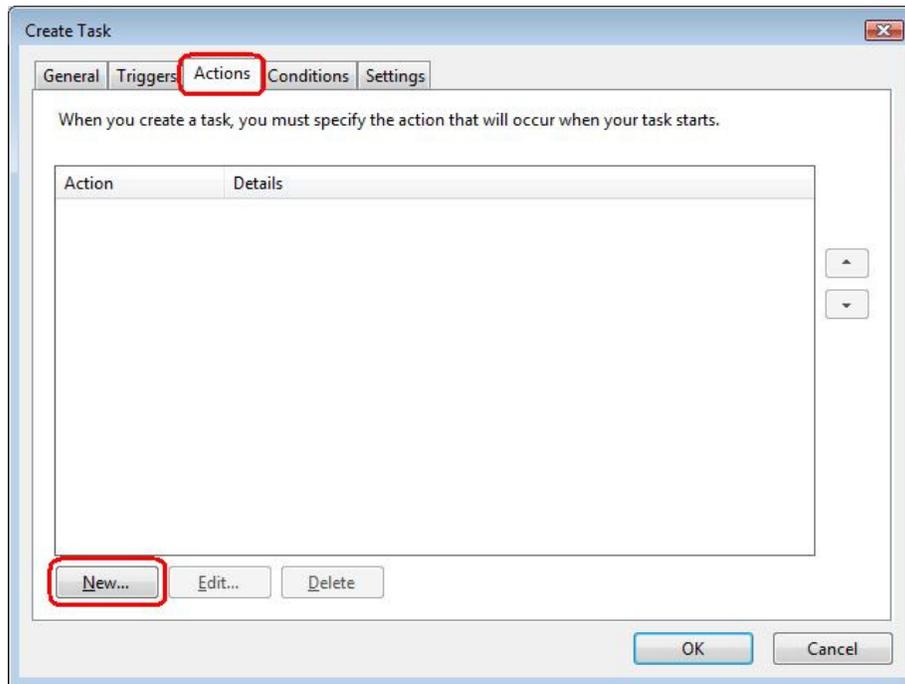
The “New Trigger” screen appears. Select “At log on” from the “Begin the task:” pull-down menu, then click on the “OK” button.



Confirm the new trigger has been added.

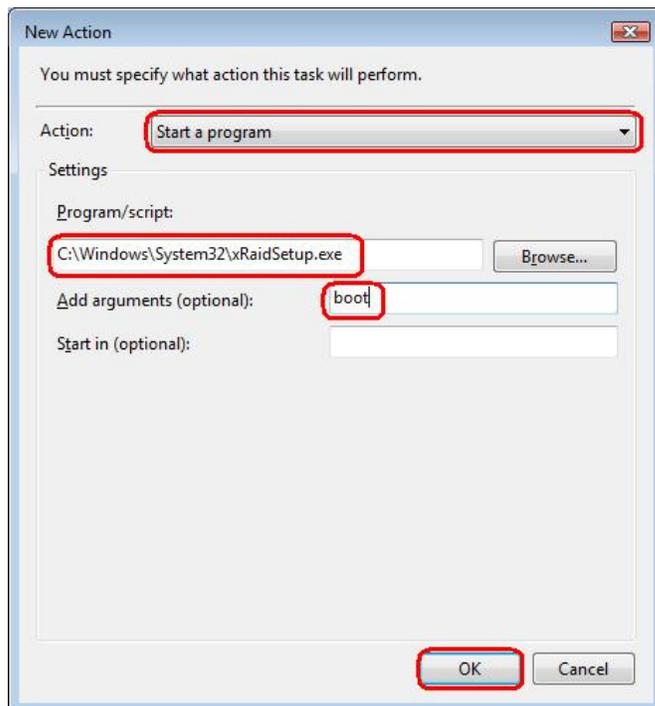


Click on the “Actions” tab and click on the “New...” button.

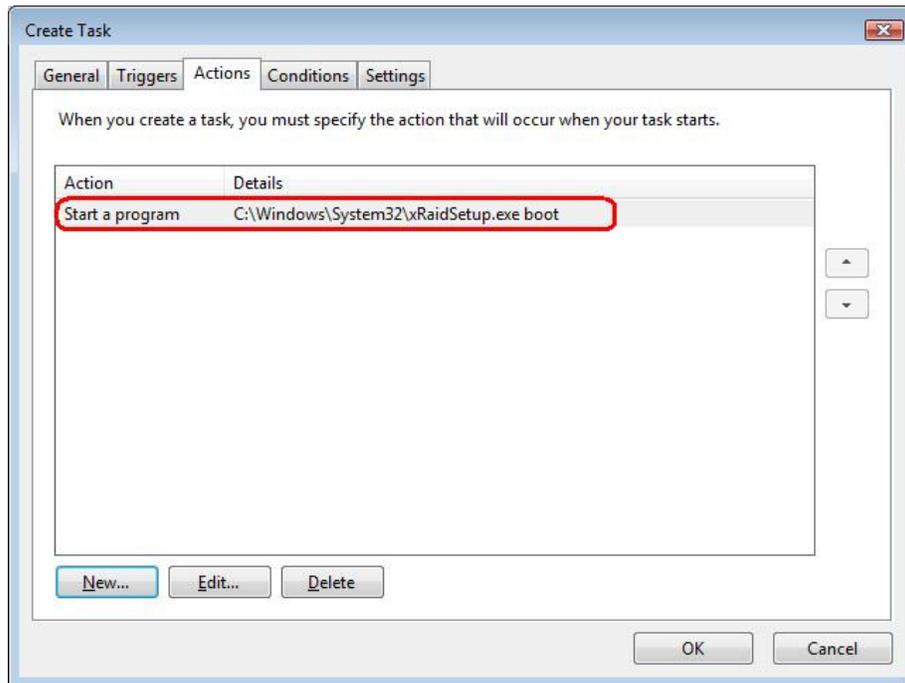


After the “New Action” screen appears, make settings as shown in the figure below and click on the “OK” button.

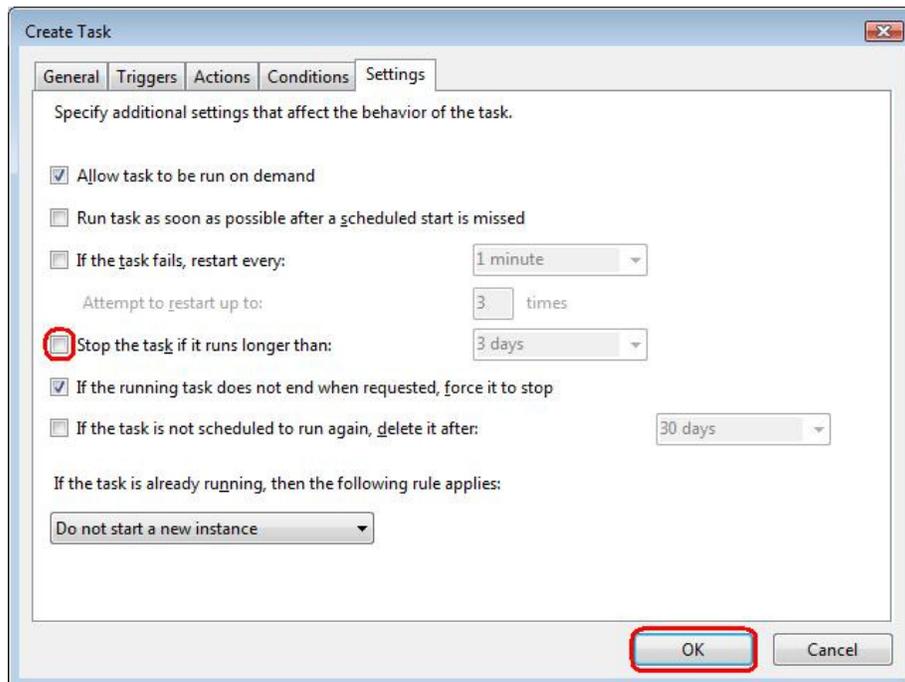
Action : Start a program
Program/script : C:\Windows\System32\xRaidSetup.exe
Add arguments (optional) : boot



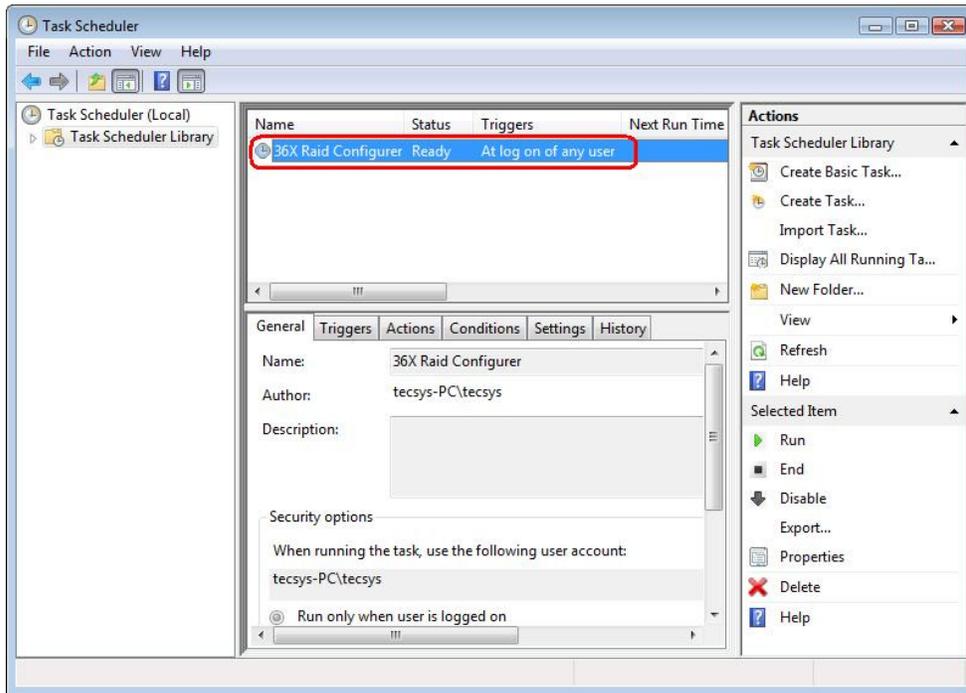
Confirm the new action has been added.



Click on the "Settings" tab, uncheck the "Stop the task if it runs longer than:" box, and click on the "OK" button.



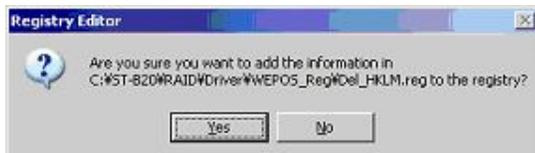
Confirm the new task has been added. Close the screen and reboot the operating system.



6.3.3. Setup for WEPOS

Run the "Del_HKLM.reg" file in the " ST-A20Win\RAID\ Driver\WEPOS_Reg" folder contained in the driver kit CD to delete the following registry information from "HKEY_LOCAL_MACHINE\Software\Microsoft\Windows\CurrentVersion\Run".

- Name: "JMB36X IDE Setup" Data: "C:\\Windows\\RaidTool\\xInsIDE.exe"
- Name: "36X Raid Configurer" Data: "C:\\Windows\\system32\\xRaidSetup.exe boot"



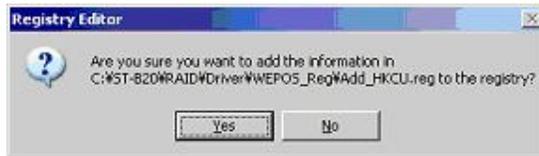
Reboot your computer.

After the OS has started up, run the "JMB36X Raid Configurer" form [Start] -> [All Programs]->[JMicron Technology Corp].



Run the "Add_HKCU.reg" file in the "ST-A20Win\RAID\ Driver\WEPOS_Reg" folder contained in the driver kit CD to add the following registry information to "HKEY_CURRENT_USER\Software\Microsoft\Windows\CurrentVersion\Run".

- Name: "JMB36X IDE Setup" Data: "C:\\Windows\\RaidTool\\xInsIDE.exe"
- Name: "36X Raid Configurer" Data: "C:\\Windows\\system32\\xRaidSetup.exe boot"



Reboot your computer.

After the OS has started up, check the task tray to confirm whether the icon exists.



6.4. Creation of RAID from JMB36X RAID CONFIGURER

This section describes the procedures to create the RAID from the HDD which has been installed OS without RAID.

6.4.1. Getting Started

Connect the source disk to channel 0, connect the destination disk to channel 1.

6.4.2. Startup of RAID Application

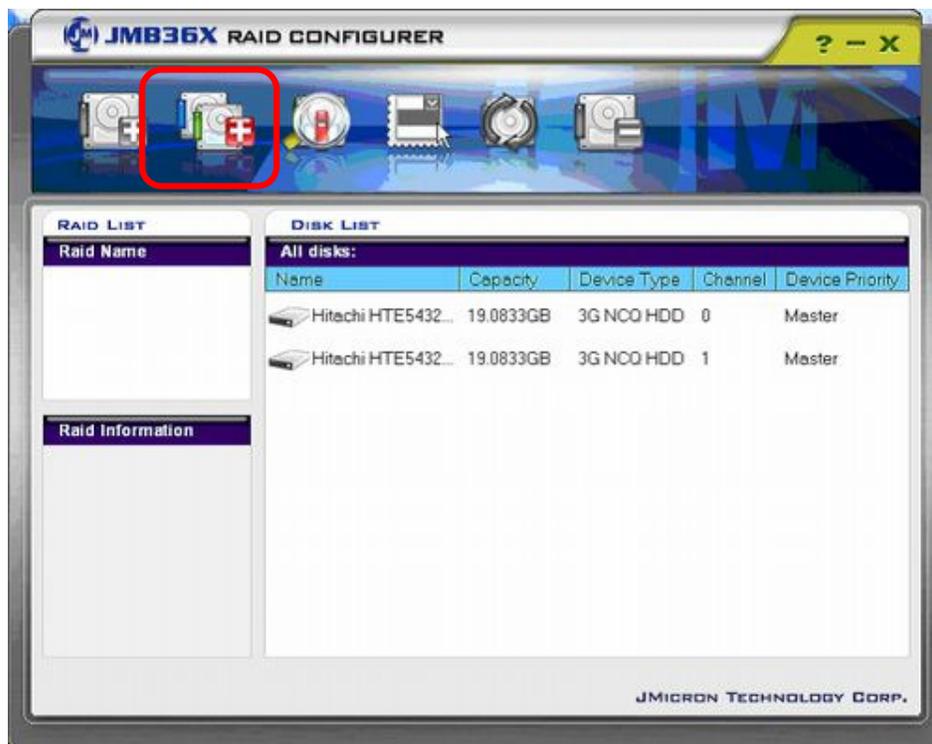
Run the JMB36X RAID CONFIGURER from the task tray.



6.4.3. Creation of RAID

Confirm the Create RAID From Existing Disk icon on the RAID Application screen indicated with the red box in the figure becomes effective.

Click on this icon to show the Create RAID From Existing Disk dialog screen.

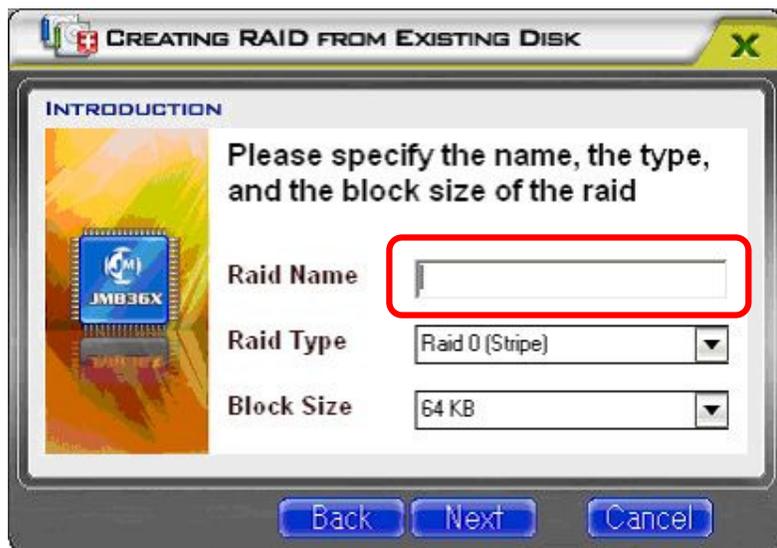


Click on the "Next" button on the screen, and the screen to create a RAID appears.



6.4.4. Setup of RAID Name

Input Raid Name at your disposal in the text box.



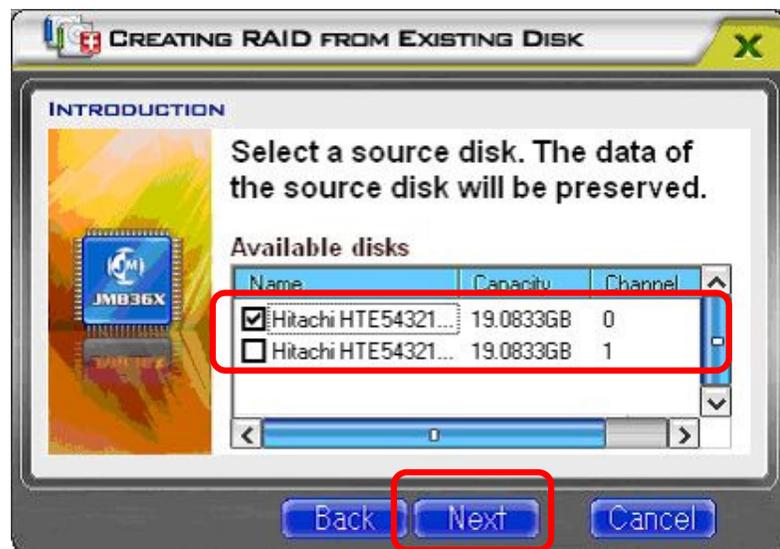
6.4.5. Setup of RAID Type

Select Raid Type as "Raid 1 (Mirror)". Click on the "Next" button on the screen, and the screen to select a source disk appears.



6.4.6. Select a source disk

Check the radio button, channel 0. Click on the “Next” button on the screen, and the screen to select a destination disk appears.



6.4.7. Select a destination disk

Check the radio button, channel 1. Click on the “Next” button on the screen, and the screen to New Raid Creation appears.

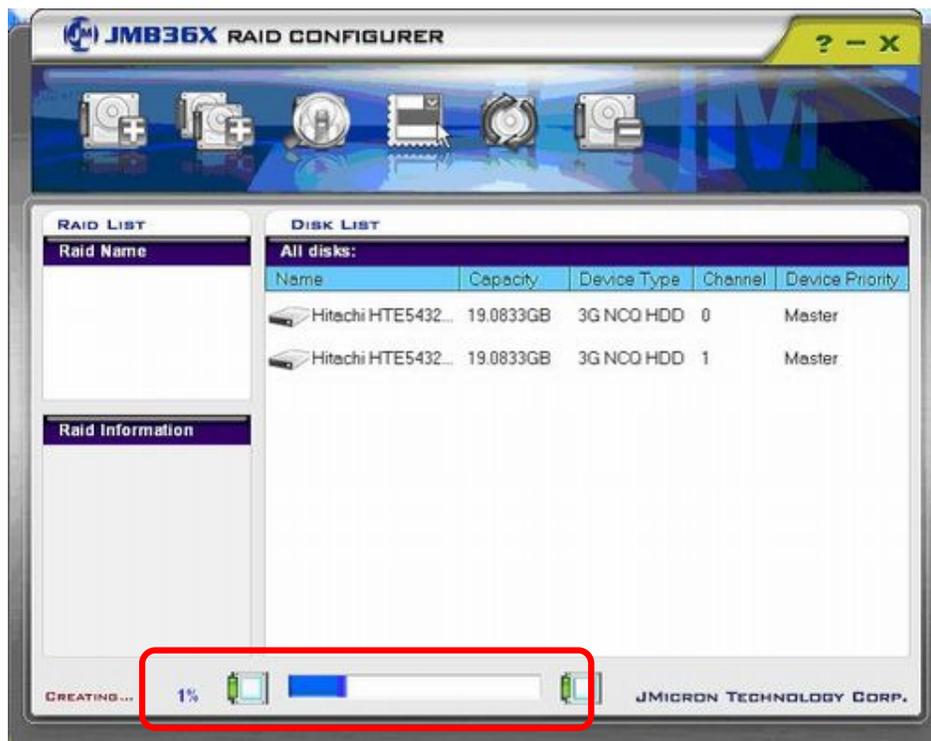


6.4.8. Confirm Creation Screen

Click on the "Finish" button on the screen and start to create RAID.

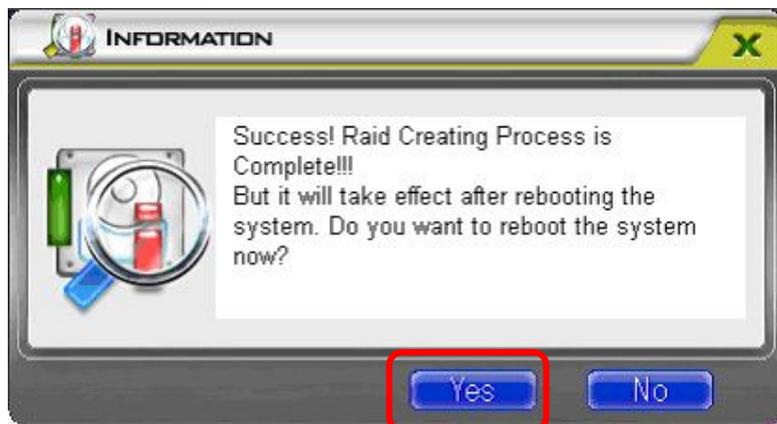


If creating RAID begins, the progress bar appears like the following screen.

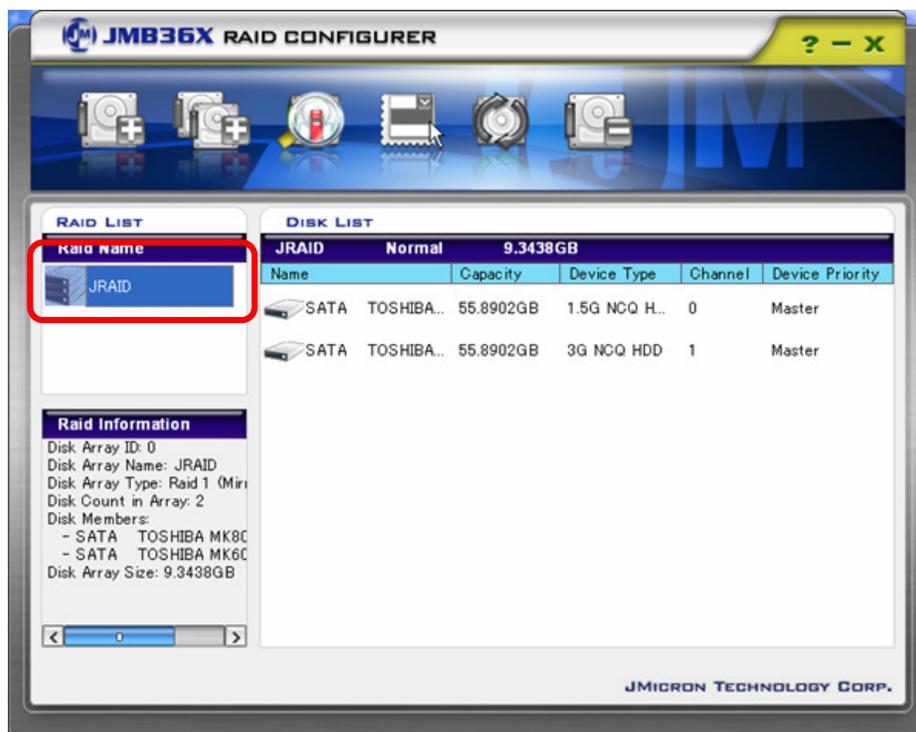


6.4.9. Completion of Creation of RAID

When the progress percentage reaches 100%, the rebuilding process is completed and the process completion dialog appears. Click on the “Yes” button to reboot your Computer.



When the RAID configuration works properly, the Raid Name you created appears in the RAID LIST.



6.5. Procedure from Occurrence of HDD Error to Rebuild of RAID

This section describes the procedures to rebuild the RAID when an HDD error has occurred.

When an HDD error occurs, replace a defective HDD with a new one and rebuild the RAID in accordance with Sections 6.4.1 to 6.4.4.

6.5.1. Two Methods to Rebuild RAID

There are two types of methods to rebuild the RAID: “with verify” and “without verify”.

Note: A recommended method is the “with verify” method by the “Verify” function of the RAID BIOS.

Rebuild Method	Type	Time to rebuild (120 GB)
“Verify” of RAID BIOS	With verify	Approx. 300 min.
“No Verify” of RAID BIOS, or RAID utility on operating system	without verify	Approx. 50 min.

6.5.2. HDD Error Handling

When an HDD error occurs, replace the HDD and rebuild the RAID following the procedures described below. If a defective HDD is continuously used, an unexpected system error may occur. To avoid such a case, replace the HDD and rebuild the RAID as soon as possible following the next chapter.

When an HDD error occurs, a pop-up message requesting resynchronization appears. Click on the “No” button.



Note 1: When the “No” button is clicked on, the POS system continues operating but only one HDD is running without the RAID configuration. If an HDD error occurs under this condition, data cannot be recovered.

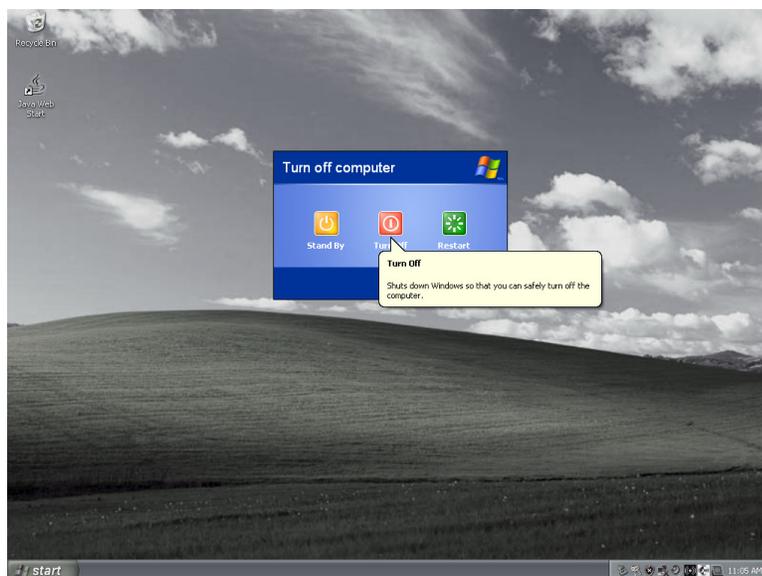
Note 2: When the HDD is continued to be used without being replaced after the “No” button is clicked on, the above pop-up screen appears whenever the operating system is rebooted until the defective HDD is replaced with a new one.

6.5.3. Replacement of HDD

When replacing the defective HDD with a new one, confirm the defective HDD on the RAID BIOS screen, then replace the HDD. After the replacement, follow the next chapter to rebuild the RAID.

Note: Be careful not to replace a non-defective HDD.

Shut down the operating system.

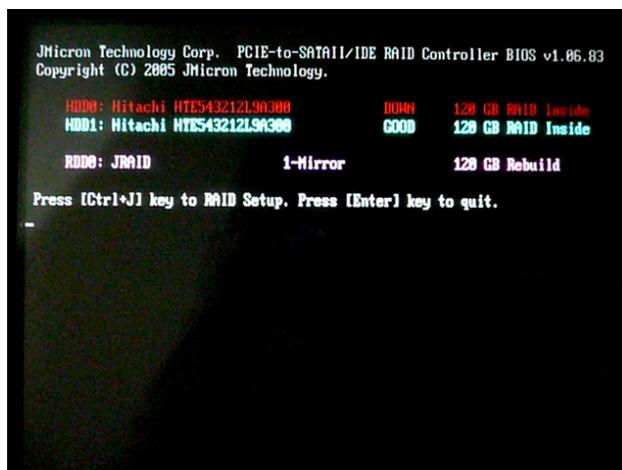


On the BIOS screen as shown below, confirm the defective HDD. “DOWN” indicates the HDD is defective.

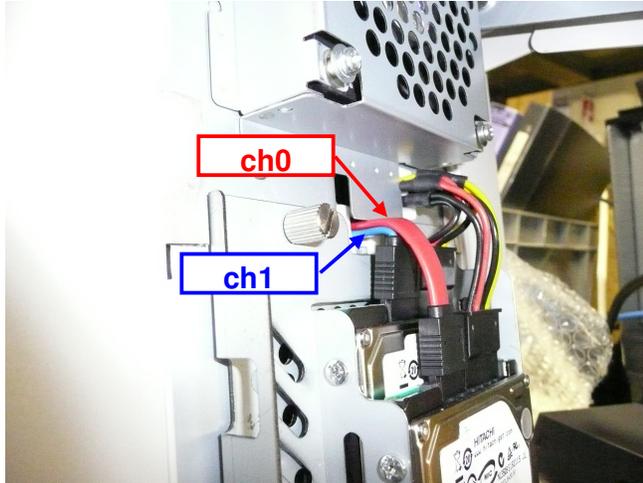
HDD0 : ch0 (Red cable)

HDD1 : ch1 (Blue cable)

Note: For details of the cable location, please refer to the ST-A20 Product Specification.



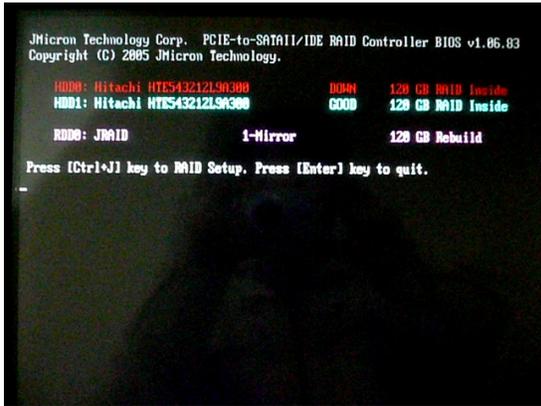
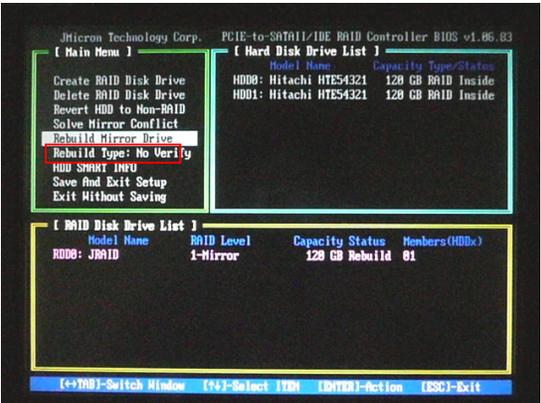
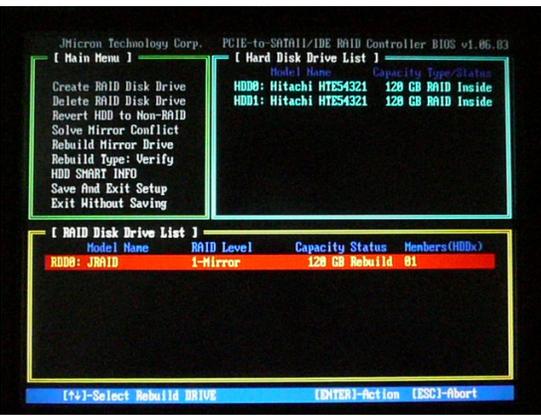
In the above example, “DOWN” is indicated for HDD0, which means the HDD, which is connected with ch0, is defective. After confirming the defective HDD, turn the HDD power off and replace the HDD, which is connected with ch0 (Red cable), with a new HDD.

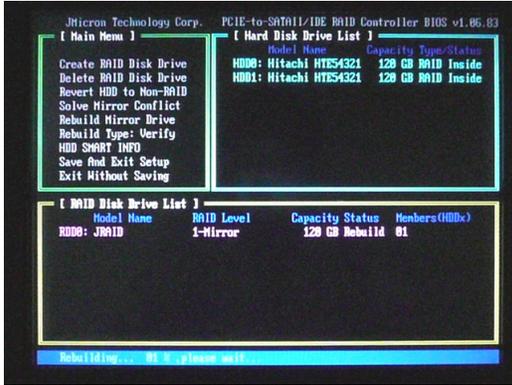
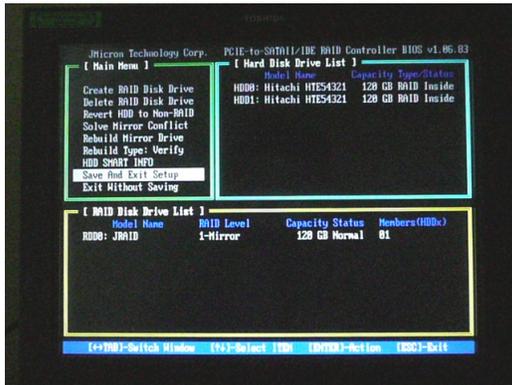
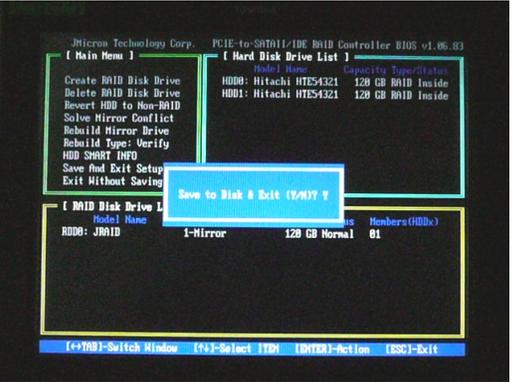


6.5.4. Rebuild of RAID

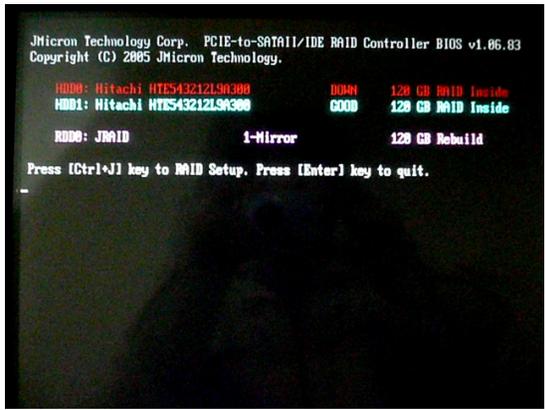
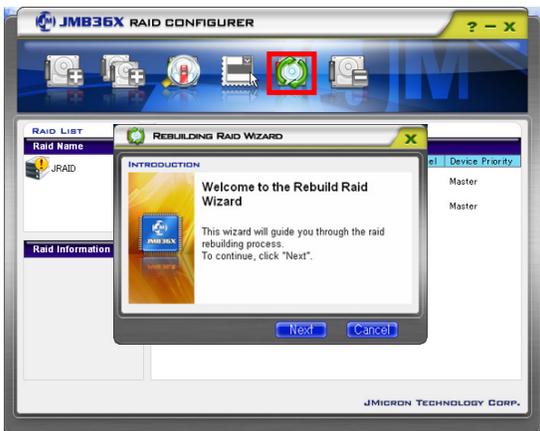
After replacing the HDD, rebuild the RAID.

[Rebuild from RAID BIOS]

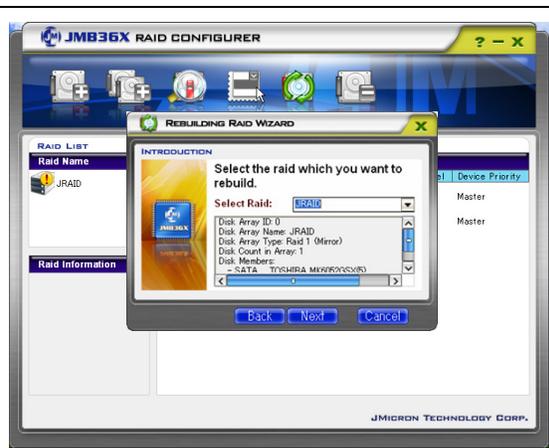
Description	RAID BIOS Menu Screen
<p>After a short time since the power is turned on, the display stops at the RAID BIOS screen. On this screen, press the [Ctrl]+[J] keys to start the RAID BIOS menu.</p> <p>Note the display always stops at this screen whenever the POS system is started up until the RAID is rebuilt.</p>	
<p>On the “[Main Menu]”, select “Rebuild Type: Verify”. Press the [Enter] key and select whether or not “Verify” is to be executed when the RAID is rebuilt.</p> <p>“Rebuild Type: Verify” : “Verify” “Rebuild Type: No Verify” : “No Verify”</p> <p>Select “Rebuild Mirror Drive” from “[Main Menu]”, and press the [Enter] key.</p>	
<p>Select “Rebuild Mirror Drive” from “[RAID Disk Drive List]” and press the [Enter] key. Then rebuilding starts.</p>	

<p>While rebuilding, It is displayed with "Rebuilding... xx% ,please wait..." under the screen. (When xx becomes 100%, it means rebuilding has completed.)</p>	 <p>The screenshot shows the RAID Controller BIOS interface. The top menu includes options like 'Create RAID Disk Drive', 'Delete RAID Disk Drive', and 'Rebuild Mirror Drive'. The 'RAID Disk Drive List' table shows RAID0 with a status of 'Rebuild' and 01 members. At the bottom, a blue bar displays 'Rebuilding... 01 %, please wait...'.</p>
<p>When rebuilding is completed, RAID status turns into "Normal" from "Rebuild".</p>	 <p>The screenshot shows the RAID Controller BIOS interface. The 'RAID Disk Drive List' table now shows RAID0 with a status of 'Normal' and 01 members. The bottom blue bar contains navigation instructions: '(F7) Switch Window (F4) Select Item (ENTER) Action (ESC) Exit'.</p>
<p>Select "Save And Exit Setup" from "[Main Menu]", and press the [Enter] key.</p>	 <p>The screenshot shows the RAID Controller BIOS interface. The 'Save And Exit Setup' option in the main menu is highlighted with a white cursor. The RAID status remains 'Normal'.</p>
<p>A confirmation screen ("Save to Disk & Exit") is displayed, and press the [Y] key.</p>	 <p>The screenshot shows the RAID Controller BIOS interface with a confirmation dialog box overlaid in the center. The dialog box contains the text 'Save to Disk & Exit (Y/N)?'. The RAID status remains 'Normal'.</p>

[Rebuild from Operating System]

Description	JMB36X RAID CONFIGURER Screen
<p>After a short time since the power is turned on, the display stops at the RAID BIOS screen. On this screen, press the [Enter] key to start the operating system.</p> <p>Note the display always stops at this screen whenever the POS system is started up until the RAID is rebuilt.</p>	
<p>Clicking on the RAID Utility icon in the task bar displays information of the HDD being connected in the RAID LIST on the RAID application screen.</p> <p>[the RAID Utility icon]</p> 	
<p>When the RAID unconfigured HDD is connected, the Rebuild Raid Wizard icon on the RAID Application screen indicated with the red box in the figure becomes effective. Click on this icon to show the Rebuild Raid Wizard dialog screen. Click on the "Next" button on the screen, and the screen to select a RAID, which you want to rebuild, appears.</p>	

On the screen select a RAID which you want to rebuild, then click on the "Next" button. The screen to select a disk to rebuild the RAID appears.



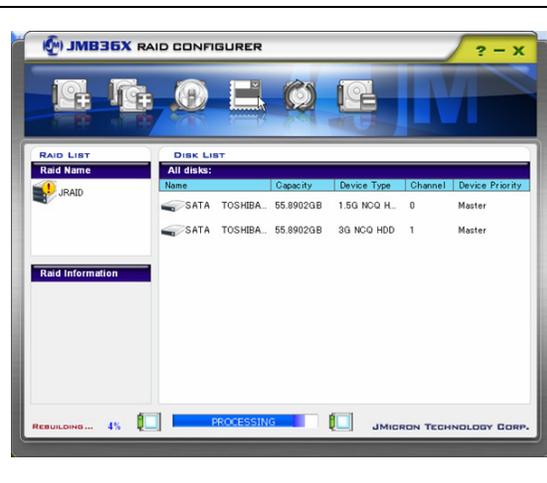
On the disk selection screen, select a disk to rebuild the RAID selected. Note that only the RAID unconfigured HDDs are available. After selecting the disk, click on the "Next" button, and the Raid Rebuilding Process screen appears.



On the Raid Rebuilding Process screen, click on the "Finish" button, and the RAID rebuilding process starts.



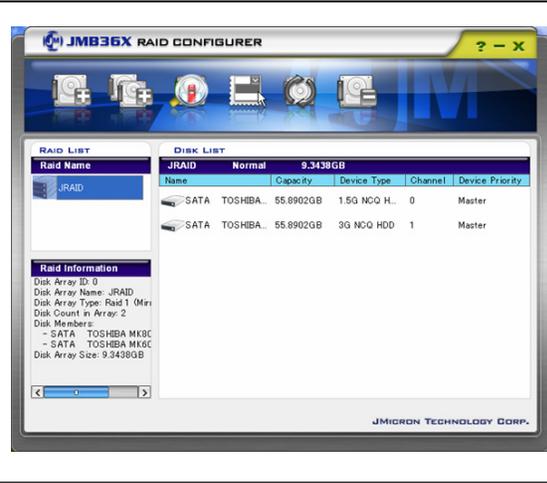
This process rebuilds the same RAID configuration as that of the HDD in operation. The progress of the rebuild process is shown in percentage at the bottom of the RAID Application screen.



When the progress percentage reaches 100%, the rebuilding process is completed and the process completion dialog appears. Click on the "OK" button to close the dialog.



When the RAID configuration works properly, the exclamation mark "!" in the RAID LIST disappears.

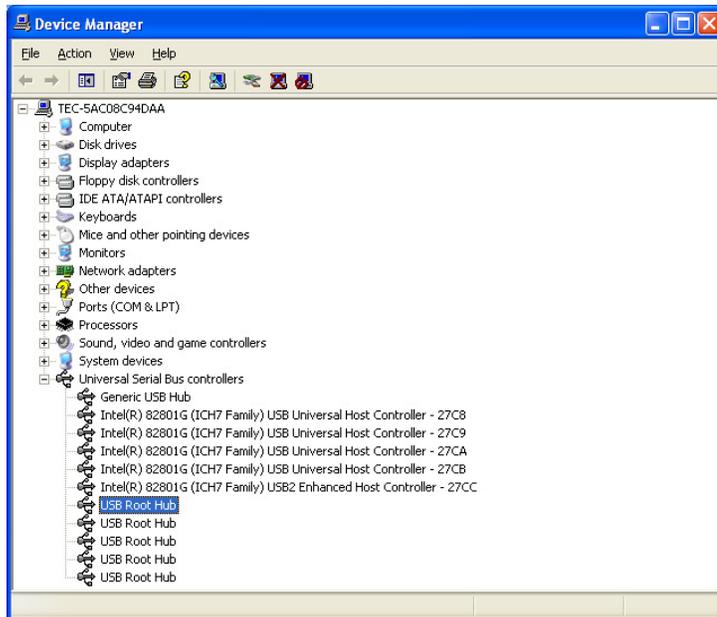


7. Notice and Limitation

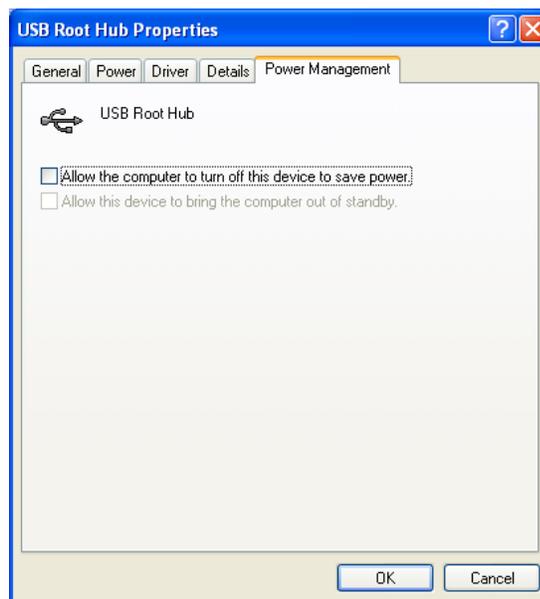
7.1. Notice

7.1.1. About Power management of USB-HUB

Open the “Device Manager”, right-click on the “USB Root Hub” icon under the “Universal Serial Bus controllers”, and then click on “Properties” to open the “USB Root Hub Properties” window.



Click on the "Power Management" tab. Uncheck the "Allow the computer to turn off this device to save power" check box, and click on the “OK” button.



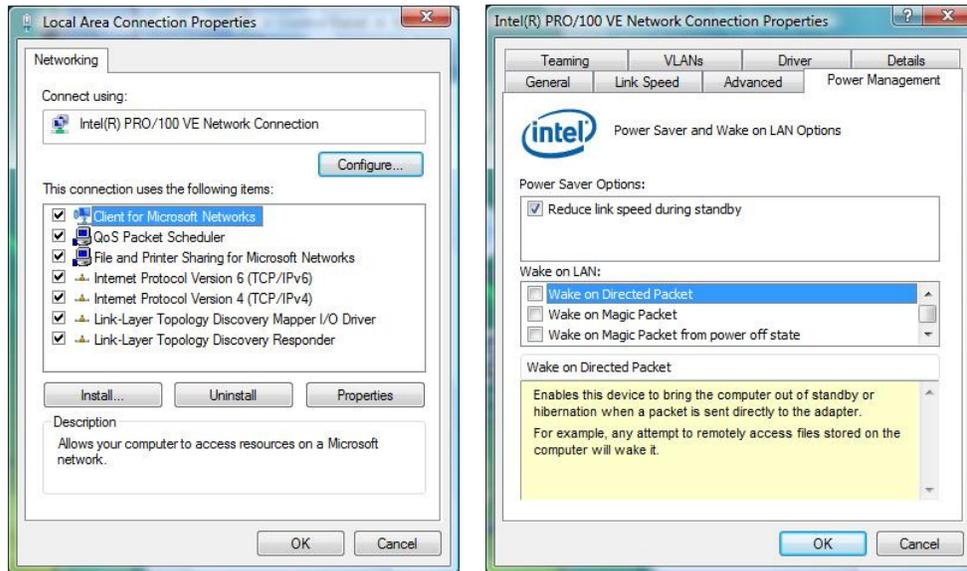
About all the "USB Root Hub", you have to operate the above.

7.1.2. Setting of Wake On LAN

The LAN controller of ST-A20 possesses a function of the Wake On LAN. However, it is disabled in the default setting. When you need this function, you have to enable the Wake On LAN function by the following settings.

First, open the “Property” window. And click on the “Configure..” button. (Left-hand figure)

Choose the Wake On LAN function as you like. (Right-hand figure)



There are four settings in Wake On LAN. Choose the best for your system.

Wake on directed packet

Enables this device to bring the computer out of standby or hibernation when a packet is sent directly to the adapter.

For example, any attempt to remotely access files stored on the computer will wake it.

Wake on Magic packet

Enables a management station to bring the computer out of standby or hibernation when a Magic Packet is sent directly to the adapter.

Wake on Magic Packet from power off state

Allows the adapter to wake an Advanced Power Management (APM) enabled system from a power-off (S5) state. ACPI systems can wake from an S5 state if the system's BIOS supports it.

Wake on Link

Allows the adapter to wake an Advanced Power Management (APM) enabled system from a power-off (S5) state when the network connection establishes link.

ACPI systems can wake from standby (S3) or Hibernate (S4). If the system's BIOS supports it, ACPI systems can wake from an S5 state.

NOTE: Link must be lost before the system enters an S5 state in order to wake the system with a link up event.

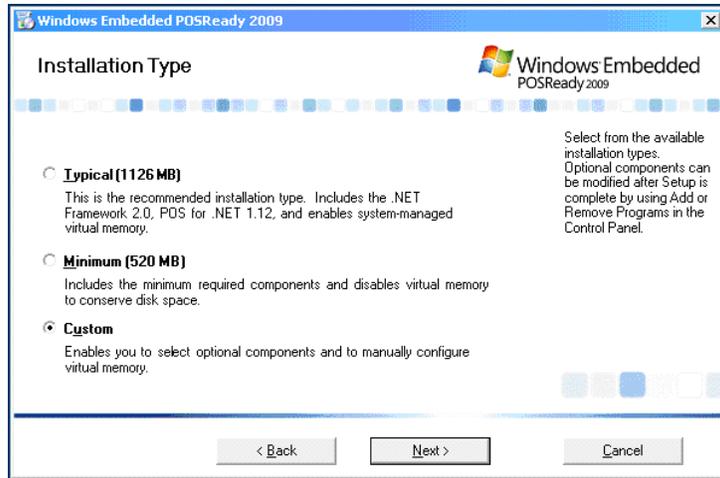
7.1.3. “Optional Components” setting in POSReady 2009 installation

It is necessary to select “Custom” installation on “Installation Type” and install “Additional Drivers” of “Optional Components” additionally in POSReady 2009 installation.

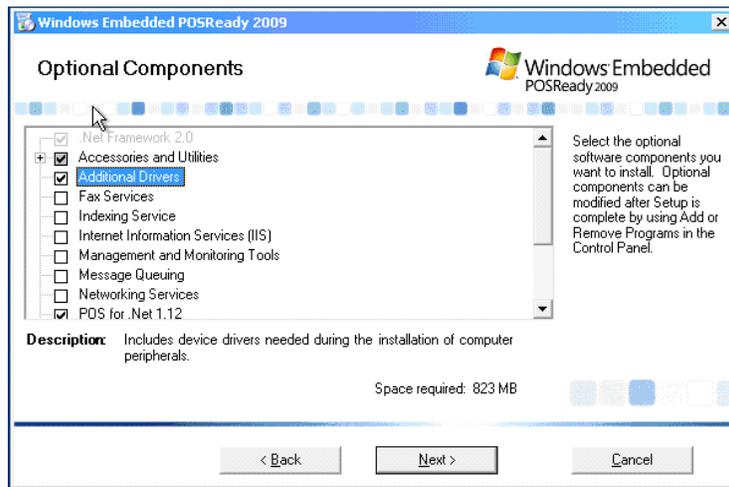
If “Typical” or “Minimum” is selected on “Installation Type”, or “Additional Drivers” is not checked on “Optional Components”, the screen that requests “*.sys” file or “*.dll” file is displayed during driver installation. (Chipset, Audio, OPOS driver, etc)

Refer to below instruction to install “Additional Drivers” of “Optional Components”.

Select “Custom” on “Installation Type” and click on the “Next” button.



Check “Additional Drivers” on “Optional Components”.



Check other options if necessary, and click on the “Next” button.

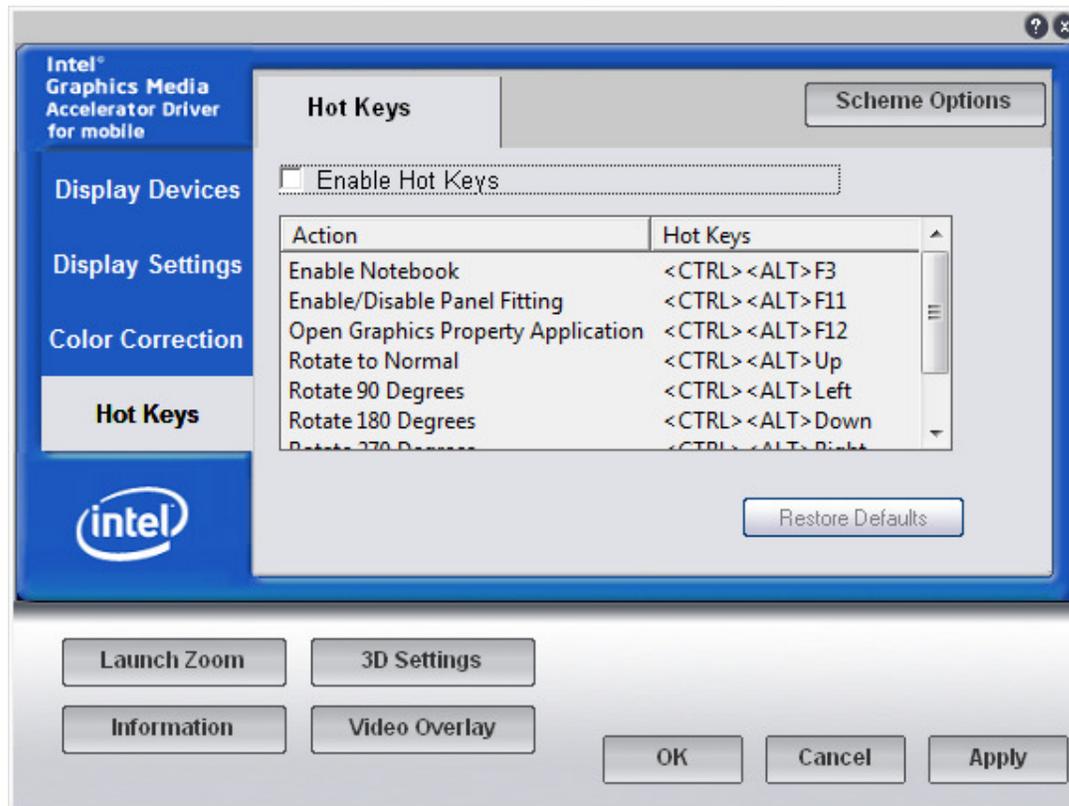
Follow the instructions of the Windows installer to complete the installation.

7.2. Limitation

7.2.1. Limitation about Graphic Driver

The graphic driver of ST-A20 possesses Hot Key (shortcut key) to offer the option settings.

However, we strongly recommend that you don't use it. When you take the wrong handling of this hot key, inconveniences in the display and false setting with the touch panel occur.



So that Hot Key does not work carelessly, you should disable it by above settings.

For example, if you work Hot Key of "Static Device Detection" carelessly, driver recognize the television device which is the inside device of the chip set.

Such an unnecessary indication disappears by rebooting.

However, changing the setting of unnecessary device causes the unexpected malfunction.

7.2.2. Limitation of Windows Time Service

In usual Windows system, Windows Time Service adjusts system time automatically via network with NTP protocol.

Usually, this service functions effectively in the environment that can access the Internet.

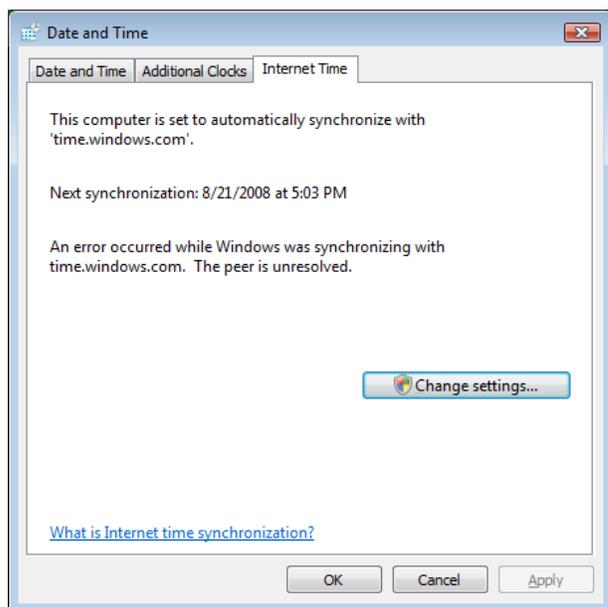
However, it does not function definitely in the network environment of the local area.

The self-adjustment function of the clock does not work unless above service functions definitely. And it generates a gap in the standard time.

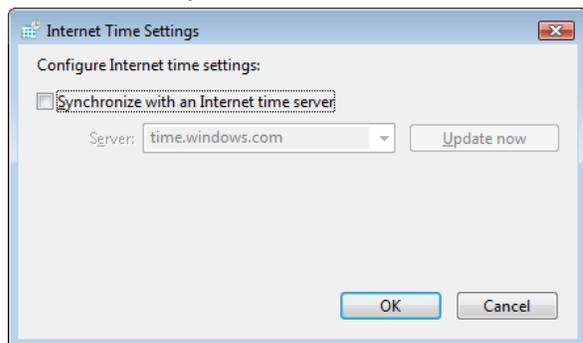
So, we recommend that you stop this service when using ST-A20 in the environment that does not connect with the Internet.

This service can be stopped by sequences below.

Open “Date and Time” from “Control Panel”. And then, select the “Internet Time” tab and click on the “Change settings...” button.



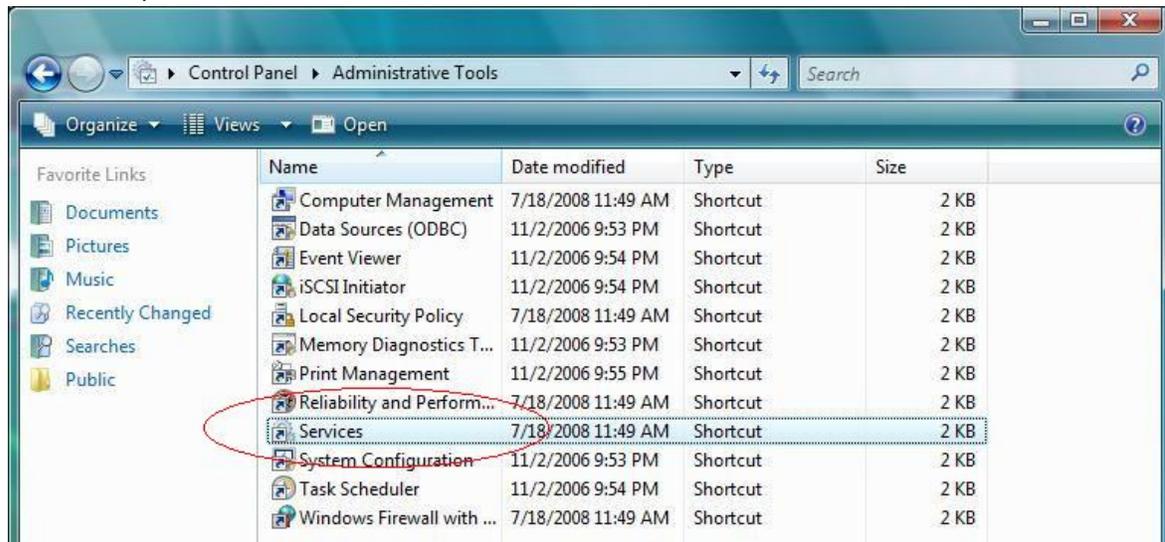
Uncheck the “Synchronize with an Internet time server” check box.



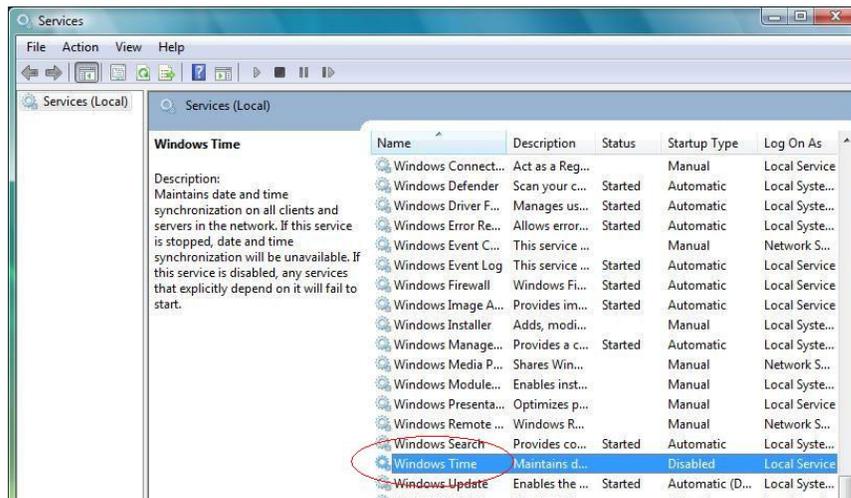
Next, open "Administrative Tools" from "Control Panel".



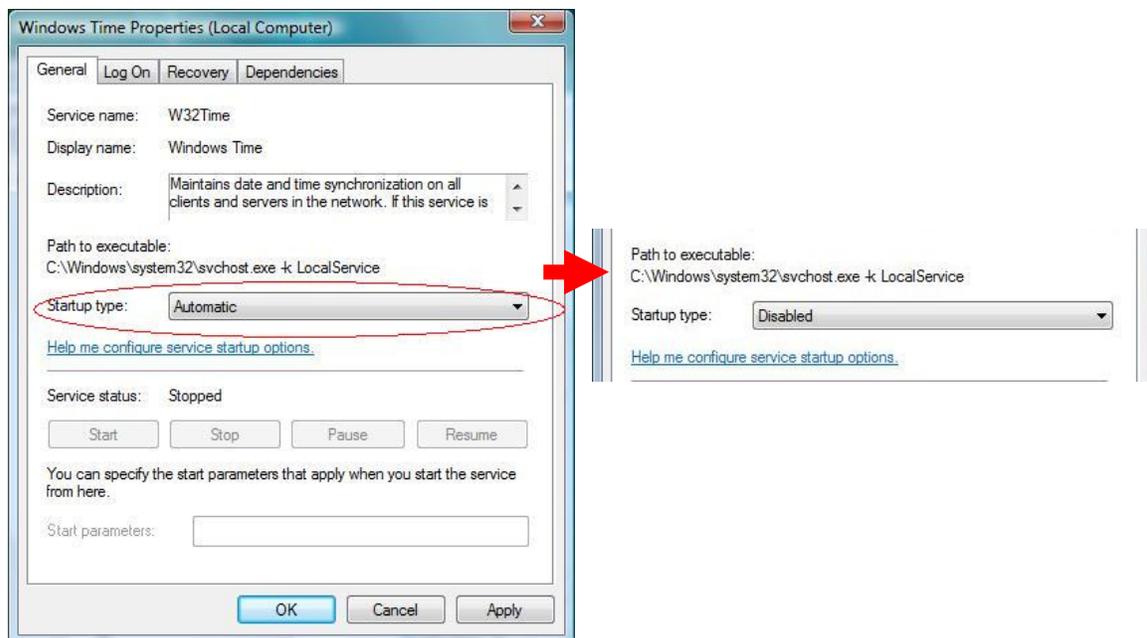
And then, open "Services" as below.



From displayed service, double-click the "Windows Time" as below.



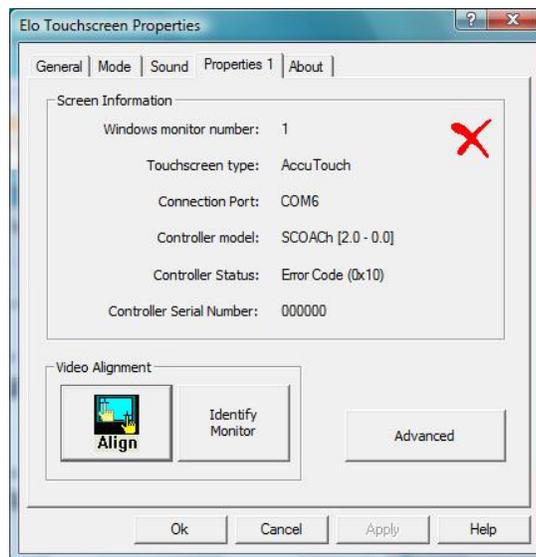
In the service setup window, change the Startup type value from "Automatic" to "Disabled" as below.



If you need detail information about it, refer to the technical support site of Microsoft.
There is detail information about it

7.2.3. Warning message on Control Panel of Touch Panel driver

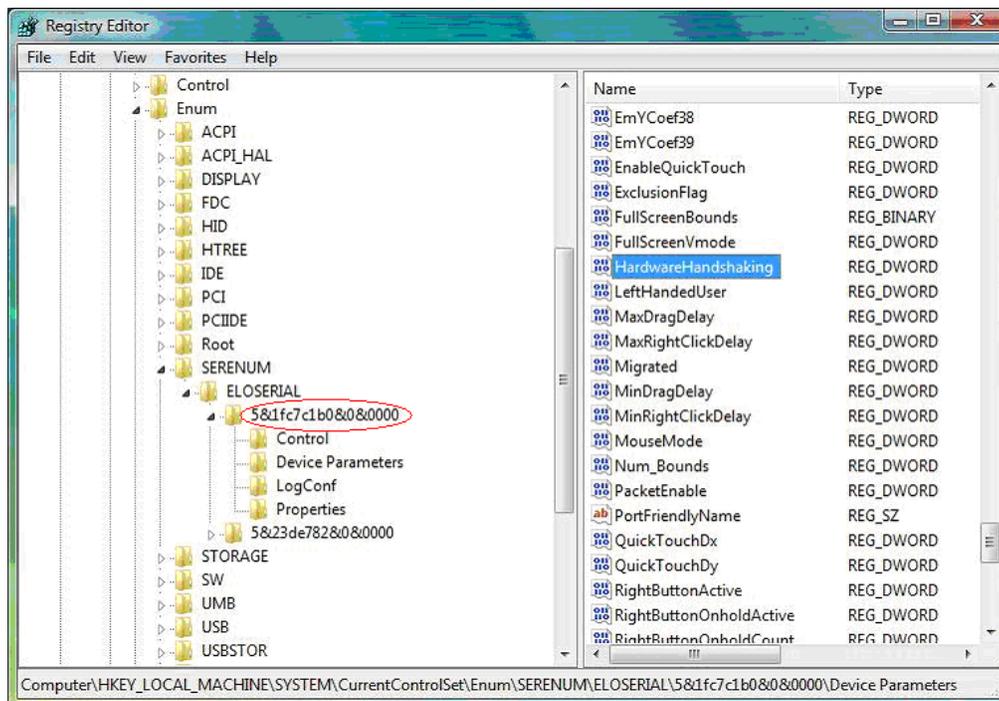
As a default, the ST-A20 shows the following warning on the control panel of the touch panel.



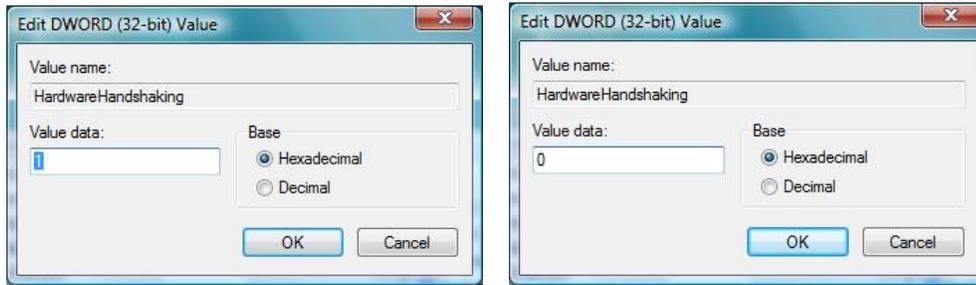
You have to change a value of the next registry to use it definitely.

\HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Enum\SERENUM\ELOSERIAL\xxxxx\DeviceParameters\HardwareHandshaking

Note: The part of above “xxxxx” is a monitor ID. Refer to the following window.

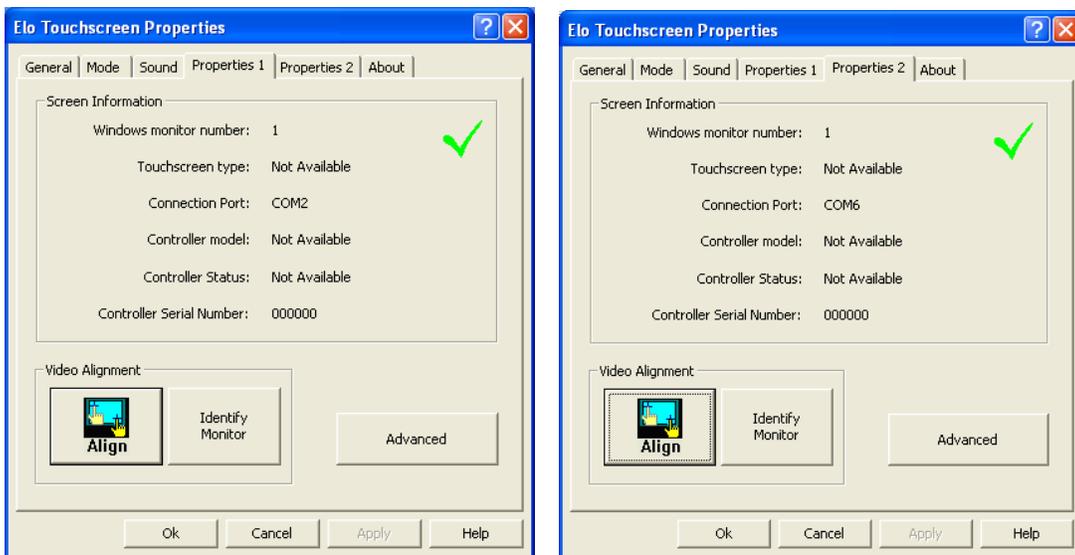


Default is 1 (Left-hand figure). Change it to 0(Right-hand figure).



In "Properties1" and "Properties2" tab, there are three items to become the "Not Available" indication after changing registry setting.

Touchscreen Type
Controller model
Controller Status



It mean, the reason is because it stopped the acquisition / an indication function of the hardware information by a setting change of the registry, and there is not the influence in touch panel performance.

7.2.4. About the necessity of the touch panel reset related to a setting change of the display

When you changed the resolution / indication method of the display via Intel Graphic Driver, it is recommended that you set the touch panel function using the "Video Alignment" function.

Because the touch panel driver doesn't do the automatic adjustment by itself when the setting of graphic changes.

Otherwise the wrong click point of the touch panel might happen unless you do this procedure.