



User manual

GeForce 9 Series
GeForce 8 Series
GeForce 7 Series
GeForce 6 Series

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GeForce 9 Series

nVidia® GeForce® 9 Series GPUs turn your PC into a powerful and interactive entertainment system, with features designed to enhance every aspect of visual computing on a PC. From playing the latest, graphic intensive games, to editing and watching HD videos, to viewing photos and getting 3D directions, GeForce 9 Series GPUs are essential for a visually immersive, optimized PC experience.



Available models:

GeForce 9800GX2, GeForce 9800GTX+, GeForce 9800GTX, GeForce 9600GT, GeForce 9600GSO, GeForce 9500GT, GeForce 9300GS, GeForce 9300GE, GeForce 9800GT



Features

nVidia SLI™ Technology

nVidia® SLI™ is a high-performance technology that intelligently combines and scales graphic performance and visual quality by having multiple nVidia GPUs in a single system. SLI Technology can scale both geometry and fill rate performance for two GPUs.

Essential Vista

nVidia® GPUs are essential for accelerating the Windows Vista experience by offering an enriched 3D user interface, increased productivity, vibrant photos, smooth, high-definition videos, and realistic games.

nVidia PureVideo HD

This technology provides a premium HD DVD or Blu-ray movie viewing.

Extreme HD

Go beyond standard high definition (HD) and experience Extreme High Definition (XHD), the ultimate widescreen, ultra-high-resolution PC experience made possible by nVidia® GeForce® graphics processing units (GPUs). XHD offers eightfold the picture clarity of native 1080i HD televisions and twice the picture clarity of 1080p HD televisions on today's latest PC games.

GeForce 8 Series

nVidia 's unified architecture GeForce 8 Series GPUs - first to support Microsoft DirectX 10 games and applications.

nVidia ® GeForce® 8 series graphics processing units (GPUs) redefine the PC gaming experience. With a revolutionary unified architecture and full support for Microsoft® DirectX® 10 games, GeForce 8 series GPUs deliver unprecedented performance, extraordinarily detailed environments, and film quality game effects.



Available models:

GeForce 8800Ultra, GeForce 8800GTX, GeForce 8800GTS, GeForce 8600GTS, GeForce 8800GT, GeForce 8600GT, GeForce 8500GT, GeForce 8400GS



Features

Full Microsoft® DirectX® 10 Support

World's first DirectX 10 GPU with full Shader Model 4.0 support delivers unparalleled levels of graphics realism and film-quality effects.

Unified Shader

Fully unified shader core dynamically allocates processing power to geometry, vertex, physics, or pixel shading operations, delivering up to 2x the gaming performance of prior generation GPUs.

16X Anti-aliasing Technology

Lightning fast, high-quality anti-aliasing at up to 16x sample rates obliterates jagged edges.

128-bit Floating Point High Dynamic-Range (HDR) Lighting

Offers twice the precision of prior generations, for incredibly realistic lighting effects-now with support for anti-aliasing.

GigaThread™ Technology

Massively multi-threaded architecture supports thousands of independent, simultaneous threads, providing extreme processing efficiency in advanced, next generation shader programs.

i-DSS – Support

i-DSS adapts the GPU clock of the graphic card if it is necessary automatically, until the optimized clock rate for the appropriate 3-D application is reached. This over clocking is working dynamically and monitored, it depends on the requirements of appropriate application and the temperature of the graphic processor unit.

The more fastidiously application, the more highly clocks i-DSS the graphic processor unit.

Contrary to the conventional, manual over clocking methods i-DSS makes an impressive increase in performance of the graphic card possible, without exposing them to the danger of overheating.

GeForce 7 Series

The new nVidia GeForce 7 series of graphic processing units (GPUs) represent a significant leap forward in 3D graphic design, delivering the unparalleled horsepower and revolutionary technologies you need to tear through the latest games. The GeForce 7800 GPUs deliver blazing frame rates and outstanding image quality - so you can experience full throttle graphic performance.



Available models:

GeForce 7950GT, GeForce 7900GS, GeForce 7600GT, GeForce 7600GS,
GeForce 7300GT, GeForce 7300GS, GeForce 7300LE, GeForce 7200GS,
GeForce 7100GS



Features

Full Microsoft® DirectX® 9 Support and Shader Model 3.0

Complete DirectX support, including the latest version of Microsoft DirectX 9.0 and Shader Model 3.0. The norm of the new PCs and paddles of the next generation, allows breathtaking effects and complex graphics in highest quality.

The GPUs of nVidias 7 series offers an enclosing implementation of Shader Model 3.0 and Vertex Texture Fetch (VTF) and with this it is suitable for all DirectX 9 application.

nVidia CineFX™ 4.0 Engine

nVidia® CineFX™ 4.0 engine, brand new programmable superscalar shader architecture, delivering twice the graphics horsepower of the previous generation notebook GPUs.

Support for the latest games and applications with DirectX 9 Shader Model 3.0 and Film Quality HDR, the must have feature for developers delivering more realism to Real-Time Gaming.

nVidia® PureVideo™ technology

PureVideo allows users to experience home theatre quality video on the notebook or PC.

OpenGL 2.0 Support

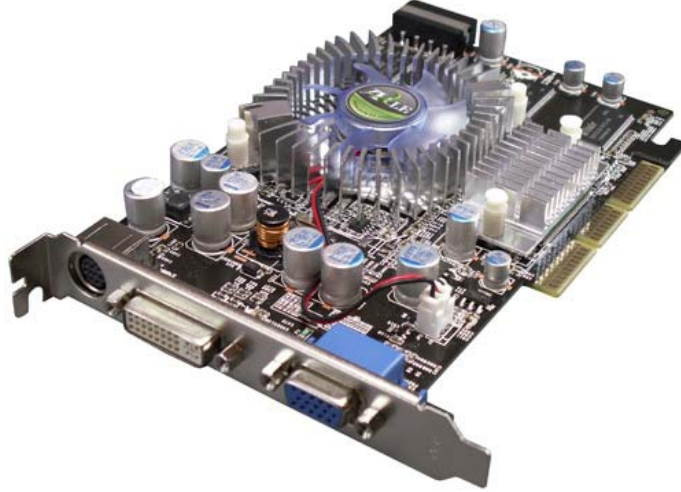
Support for OpenGL 2.0-the latest API and new extensions enable rich shader effects on nVidia GPUs.

128-Bit-Accuracy

The GPUs of 7 Series are offering full 128-bit studio-quality floating point precision through the entire rendering pipeline with native hardware support for 32bpp, 64bpp, and 128bpp rendering modes.

GeForce 6 Series

The nVidia GeForce 6 Series of GPUs provides a groundbreaking feature set for computing, including full support for Microsoft® DirectX® 9.0 Shader Model 3.0 for unparalleled gaming effects. Delivering a revolutionary superscalar architecture, and an advanced on-chip video processor, the GeForce 6 Series of GPUs powers the ultimate PC experiences. Providing unparalleled visual quality and realism, the GeForce 6 Series delivers graphics to immerse your mind.



Available models:

GeForce 6800Ultra, GeForce 6800GT, GeForce 6800GS, GeForce 6800, GeForce 6800XT, GeForce 6800LE, GeForce 6600GT, GeForce 6600, GeForce 6600LE, GeForce 6500, GeForce 6200, GeForce 6200TC, GeForce 6200LE

Features

nVidia CineFX™ 3.0 Technology

nVidia CineFX 3.0 is poised to unleash a new level of programming creativity. With full DirectX 9.0 Shader Model 3.0 support, the latest GeForce GPUs will soon power a new generation of games with unmatched realism, digital worlds with mind-blowing complexity, and lifelike characters that move through cinematic-quality environments.

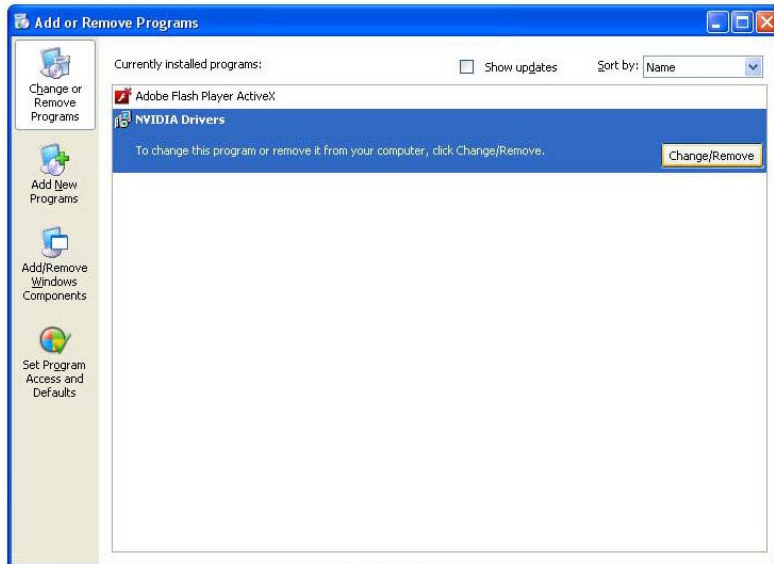
nVidia UltraShadow™ II Technology

nVidia's UltraShadow II technology will empower developers with more programming flexibility and the hardware muscle they need to create unprecedented effects in their games and 3D applications.

Uninstall a graphic card driver

If you had a prior graphic card installed on your computer, it is very important that you first remove that card's drivers before proceeding with the new one. To do so, perform the following:

- Go to Start menu>System>control panel.
- In the control panel click on add or remove programs
- Search the list of installed programs after the entry "NVIDIA DRIVERS" and click "Change/Remove"



Click "Yes" in order to confirm the uninstalling of the drivers. All driver components are removed from the system.



To finish the uninstalling, you must restart the computer.



After the uninstalling you can remove the existing graphic card. To do that, turn off your PC and disconnect all power supply. Open the computer case and locate the graphic card slot (PCI, AGP or PCI/Express). To prevent shock, secure yourself with antistatic wrist strap. Unscrew the graphic card from the back plate and remove it.

Hardware Installation

Installation of a PCI-Express graphic card

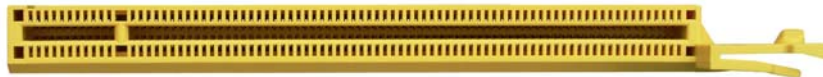
Instructions

Turn off your PC and disconnect all power supply. Open the computer case and locate the PCI-Express graphic card slot. To prevent shock, secure yourself with antistatic wrist strap.

Insert the graphic card



PCI-Express-Connector (ill. 1)



PCI-Express-Slot (ill. 2)

Convince yourself that the structure of the slot (ill. 2) and the graphic card connector agree (ill. 1). Insert the graphic card carefully and without force into the card location. Please make sure that the graphic card is inserted completely.

Put two fingers to the backmost end of the graphic card and prove that the card fits correctly into the PCI-Express-Slot (ill. 2).

The most frequent source of error with the installation of the graphic card is that the graphic card was not inserted correctly into the card slot.

Screw the graphic card to the back plate.

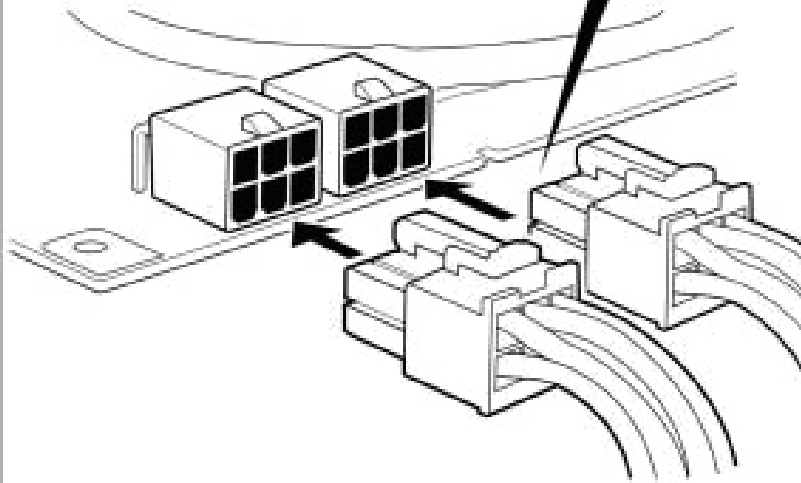
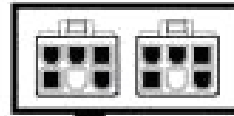
If the graphic card has an additional power connection, connect it with a power cable to the power supply unit of your computer (maybe an adapter is necessary).

The data bandwidth of PCI express 16x graphic cards amounts up to 8GB/s.



ATTENTION

Some models of our graphics cards require supplementary power. Before booting your PC, please make sure you connect all 4-pin / 6-pin supplementary power connectors.

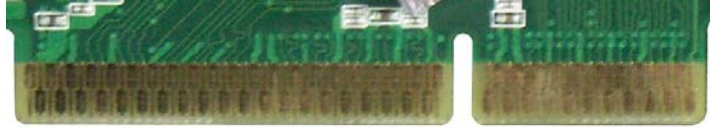


Installation of an AGP-8x graphic card

Instructions

Turn off your PC and disconnect all power supply. Open the computer case and locate the AGP-8x graphic card slot. To prevent shock, secure yourself with antistatic wrist strap.

Insert the graphic card



AGP-8x-Connector (ill. 1)



AGP-8x-Slot (ill. 2)

Convince yourself that the structure of the slot (ill. 2) and the graphic card connector agree (ill. 1). Insert the graphic card carefully and without force into the card location. Please make sure that the graphic card is inserted completely.

Put two fingers to the backmost end of the graphic card and prove that the card fits correctly into the AGP-Slot (ill. 2).

The most frequent source of error with the installation of the graphic card is that the graphic card was not inserted correctly into the card slot.

Screw the graphic card to the back plate.

If the graphic card has an additional power connection, connect it with a power cable at the power supply unit of your computer (maybe an adapter is necessary).

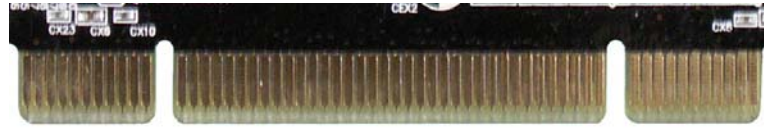
The data bandwidth of AGP-8x graphic cards amounts up to 2.1GB/s.

Installation of a PCI graphic card

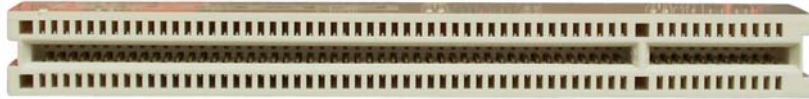
Instructions

Turn off your PC and disconnect all power supply. Open the computer case and locate the PCI graphic card slot. To prevent shock, secure yourself with antistatic wrist strap.

Insert the graphic card



PCI-Connector (ill. 1)



PCI-Slot (ill. 2)

Convince yourselves that the structure of the slot (ill. 2) and the graphic card connector agree (ill. 1). Insert the graphic card carefully and without force into the card location. Please make sure that she is inserted completely.

Put two fingers to the backmost end of the graphic card and prove that the card fits correctly into the AGP-Slot (ill. 2).

The most frequent source of error with the installation of the graphic card is that the graphic card was not inserted correctly into the card slot.

Screw the graphic card to the back plate.

The data bandwidth of PCI graphic cards amounts up to 133MB/s.

Installation of the graphic card drivers

Please insert the configuration disc onto your computer.

1. An auto run process should automatically start the disc's contents. If the disc does not start automatically, go to „My computer” and right-click the CD/DVD device. Here you should choose “Autoplay”.
2. Choose your language (German or English).



3. The following options can be selected:

- Install drivers
 - o 9 Series
 - o 8 Series
 - o 7 Series
 - o 6 Series
 - o 5 Series
- User manual
- i-DSS Software
 - o i-DSS Software
 - o i-DSS Driver



Choose your appropriate graphic card series. You can identify the right series comparing it with the first digit of the name of your graphic card.
e.g.: AXLE nVidia GeForce 7600GT => 7 Series

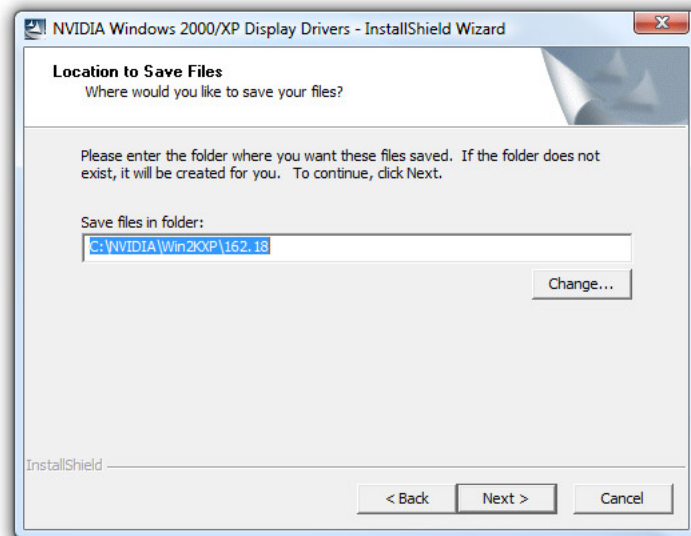


Choose the suitable driver for your operating system by clicking on the button.

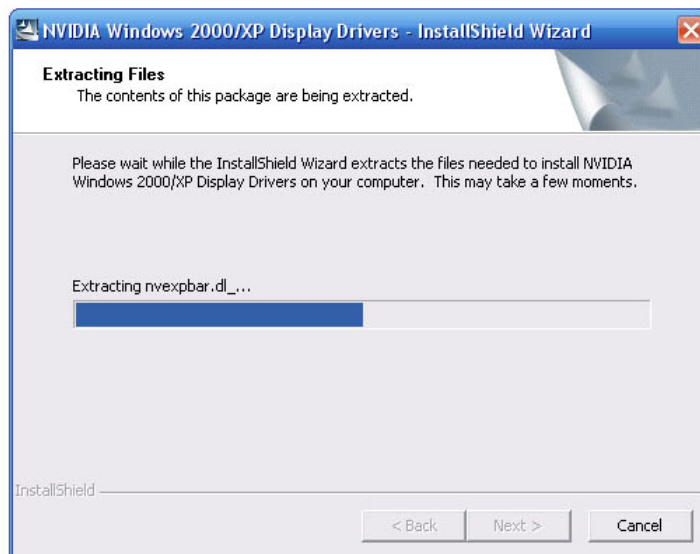


The installation of the driver starts. Click "Next" to go on.

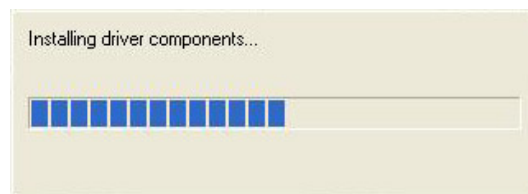
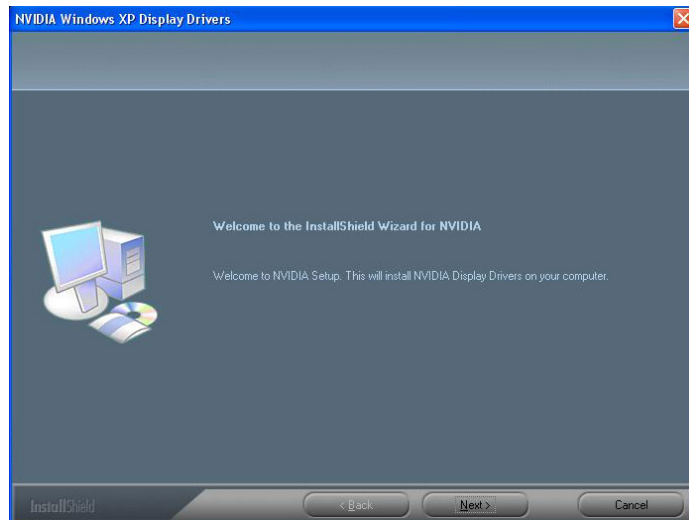
Click again on "Next" in order to continue.



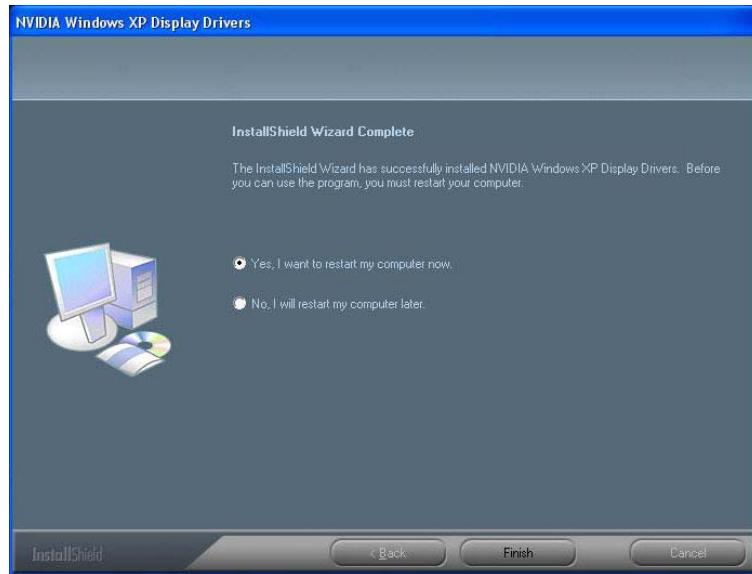
The software for the driver installation will be unpacked on your computer.



Click the button „Next“. The driver will be installed on your system.



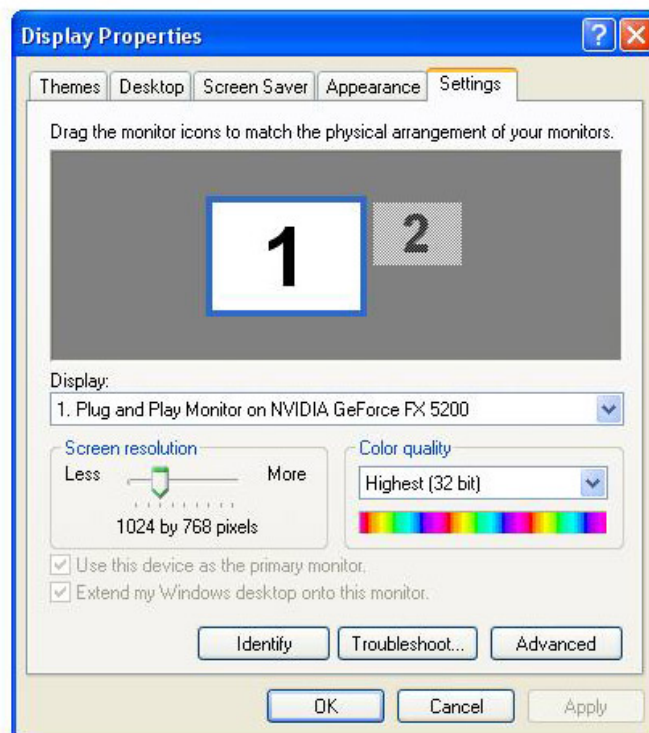
To complete the installation of the driver click the button „Finish“. Now the computer restarts.



Graphic card settings and nView

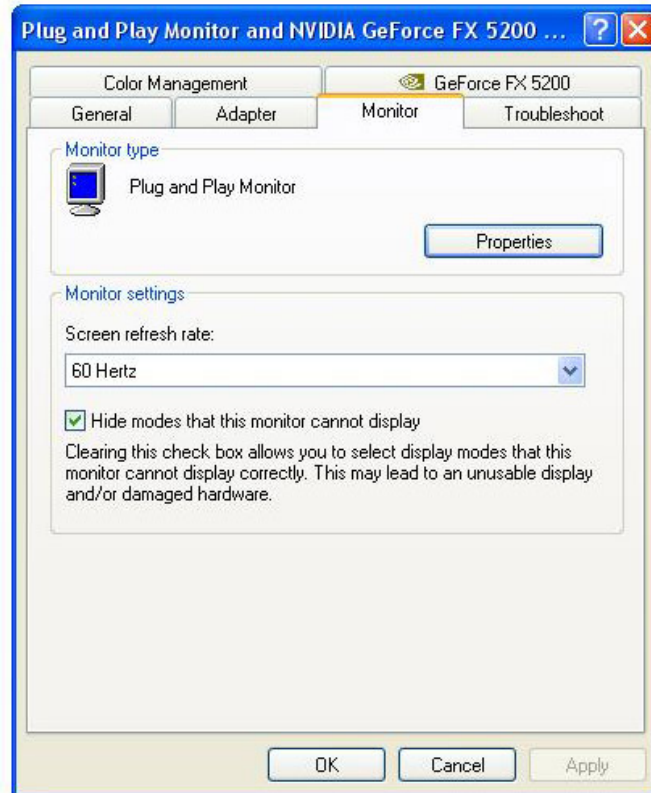
Change colour and display settings

1. Click the "Start" button on your desktop to display the start menu. Choose the "Control Panel" option from the right side of the start menu. The "Control Panel" window will open on your desktop.
2. Double-click the "Display" icon from the control panel to open the dialog box "Display Properties". Then you select the tab "Settings" on the top of the dialog box.
3. Slide the bar under the "Screen resolution" setting of the dialog box "Display Properties" to decrease or increase the screen resolution. The chosen resolution will be displayed under the sliding bar.
4. Use the "Colour quality" drop-down list to choose the type of quality you want your computer to use. You can choose between the colour qualities of "Medium," "High" or "Highest."
5. Click the "Apply" button at the bottom of the dialog box "Display Properties" to apply the settings. If you are not satisfied with the settings you can change them as instructed in the steps above.
6. Choose the "OK" button when you are satisfied with your display setting changes. The dialog box "Display Properties" will close and the settings will be saved.



Change display refresh rate

1. Click "Start" and then click "Control Panel." If you are using an older version of Windows you have to click "Start," point to "Settings" and then click on "Control Panel."
2. If your "Control Panel" is in "Category View," click the option in the task pane that says "Switch to Classic View."
3. Double click "Display." The dialog box "Display Properties" will open.
4. Click on the "Settings" tab. Click the "Advanced" button.
5. Click on the "Monitor" tab. Under "Screen Refresh Rate" choose a refresh frequency from the drop-down list.
6. Click "Apply" and "OK."

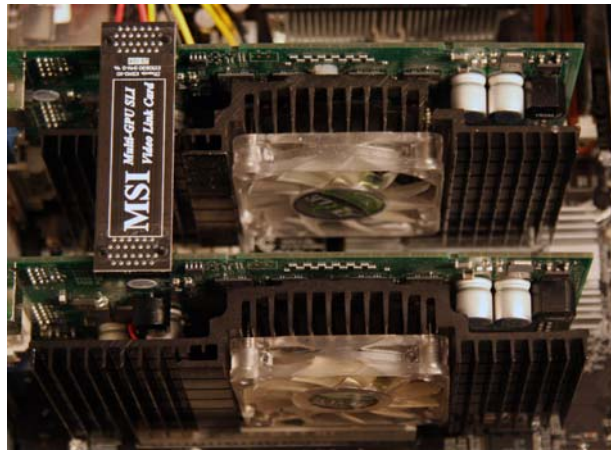


Using several graphic cards

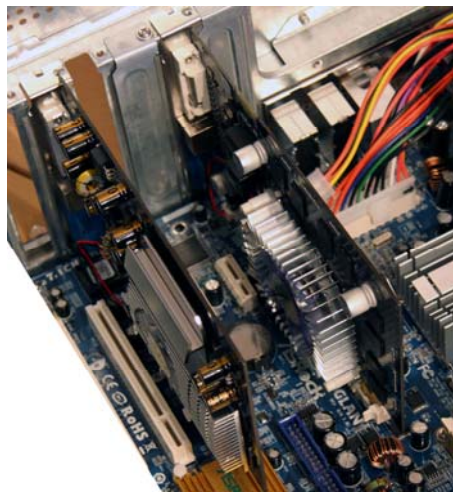
There is the possibility to use several graphic cards on one mainboard to use up to 4 monitors. Depending upon available card slots different combinations for the use of several graphic cards are possible. For instance an AGP graphic card and a PCI graphic card can be used at the same time.

By using two PCI-Express graphic cards it is possible to couple two identically constructed cards over nVidia SLI technology with the help of a SLI bridge. So you can use two cards as one and enforce the performance of the cards.

To avoid conflicts with the drivers it is recommend to use only graphic cards from one manufacturer.



Using two PCI-Express cards with SLI technology



Using an AGP-card and a PCI-card

What is nVidia SLI?

nVidia SLI is a high-performance technology, with which the performance of several nVidia graphics processor units can be bundled intelligently in a system, in order to improve the graphic card performance and the quality. With SLI geometry and filling achievement are combined concretely to one.

For using two PCI-Express graphic cards in one computer you need a special mainboard, which supports the SLI technology.

Connecting two monitors on a graphic card



You can connect two monitors to the graphic cards of AXLE 3D. There are two different kinds of interfaces: VGA-out and DVI-out. In each case you can connect directly a monitor to VGA or DVI. Otherwise you need a DVI-VGA adaptor, e.g. for using two VGA-monitors.

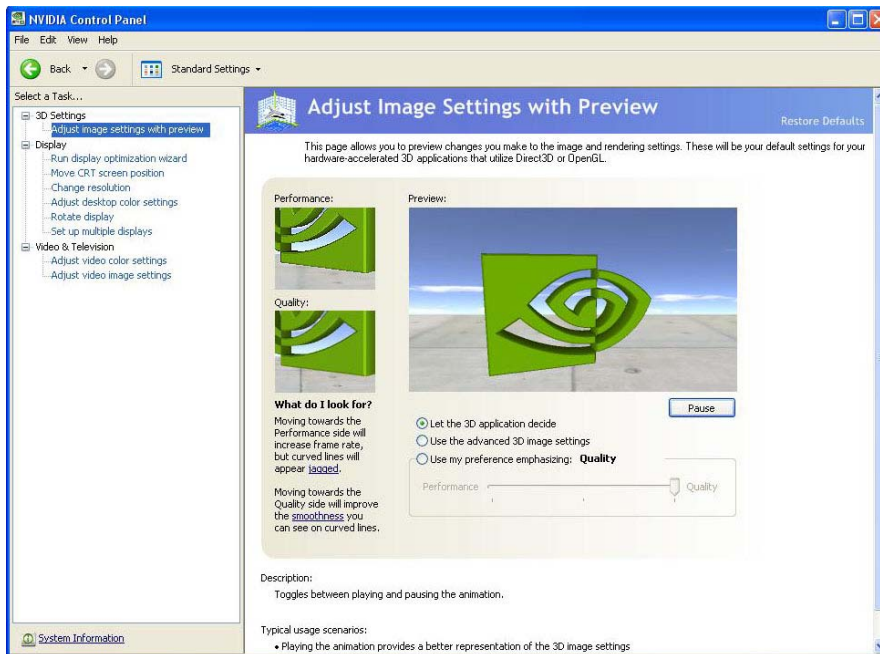


If you use two graphic cards as described before on page 23, you can connect up to four Monitors on one computer.

Adjust two monitors

To use dual monitor on a computer, please follow these instructions:

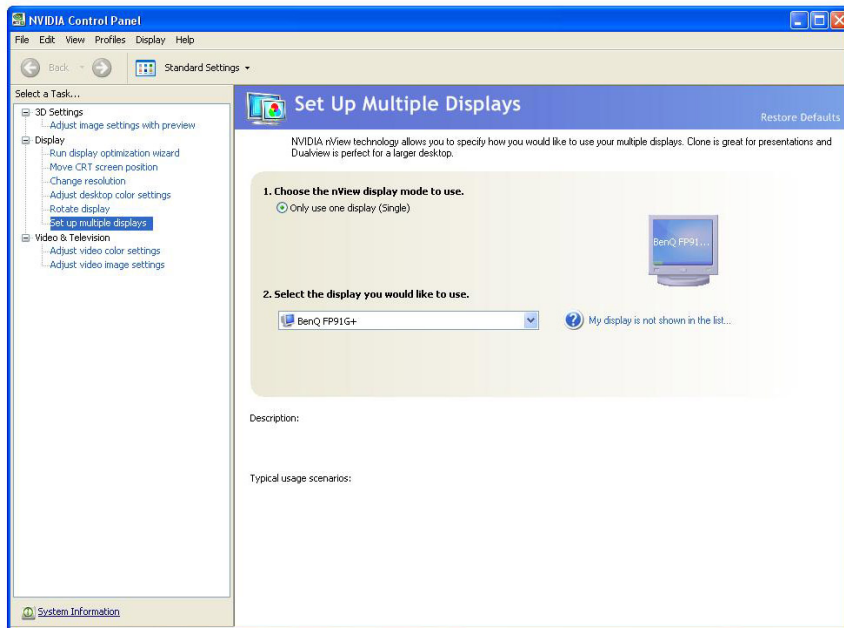
1. Right-click on the desktop and a new window will pop up. An alternative way to get to this window is to go to "Start," "Settings," "Control Panel" and "Display."
2. Click on "Properties." A new window will pop up called "Display Properties."
3. Go to the tab "Settings". Display box 1 and 2 will appear representing your two monitors.
4. Choose display number 2 by clicking on it. Monitor number 2 is the new monitor. Adjust the resolution so the resolution of monitor 2 matches the resolution of monitor 1.
5. Check the box that says "Extend my windows desktop onto this monitor."
6. Select "Apply" in the display properties window. Your new monitor should be working now. You can drag minimized windows and icons back and forth between the two monitors.



NView settings

In the Drop-Down Menu “nView” you can make the following settings:

- Select “Single-Modus”, if there is only one monitor connected to the computer.
- Select “Clone-Modus”, if there are two or several monitors connected to the computer and you want to have the same desktop being showed on every monitor.
- If you chose “Dualview-Modus”, all the connected monitors are working as one virtual display. But Windows treats the monitors as separate devices. That is why you have only on one monitor the windows task bar.
- To watch videos or DVDs on your TV-screen over s-video-out, you have to activate “complete picture” for the secondary display.



Intelligent dynamic stability system (i-DSS)



A system for automatic controlled over clocking of the graphic card.

- up to 50% performance increase -

The i-DSS-Technology was developed by AXLE nVidia and at the moment it is available with their graphic cards of 8 series.

i-DSS increases or decreases the GPU clock of the graphic card if it is necessary automatically, until the optimized core clock for the appropriate 3-D application is reached. This overlocking takes place dynamically and controlled, it depends on the requirements of the appropriate application and the temperature of the graphic chipset. The clock frequency of the graphic chip increases only as long as the temperature of the GPU is in the permissible range.

i-DSS makes the increase for the maximum performance of the graphic card possible, without exposing it to the danger of overheating. (contrary to the conventional, manual overlocking methods).

The more demanding the application the more i-DSS is overlocking the graphic processor unit.

Because of the permanently temperature-control the PC system always runs stably.

The i-DSS-Technology is a performance upgrade which you will feel.



The graphic cards of AXLE 3D, supporting *i*-DSS are provided with a nearly noiseless and extremely efficient cooling combination. A big cooling element leads away the heat from the GPU, a small and much quit fan provides for sufficiently fresh air.

The normal temperature of the GPU with desktop or office applications and a clock rate of 450 MHz does not exceed over 48°C. Even with the most superior 3D application and a clock rate of 650 MHz the GPU-temperature does not exceed over 60°C. The temperature dependent GPU-control and the excellent cooling system increase the life time of the graphic card and especially the durability of the GPU.

System requirements for *i*-DSS:

- A graphic card supporting *i*-DSS
 - Available models:
 - AXLE nVidia 8600GT 1024MB
 - AXLE nVidia 8600GT 512 MB
 - AXLE nVidia 8500GT 1024 MB
 - AXLE nVidia 8500GT 512 MB
- Windows XP (32-Bit)
- Forceware 162.18
- *i*-DSS Software

How to install the i-DSS software

Please insert the configuration disc into the CD/DVD device of your computer.

The disc starts automatically. If the disc does not start automatically, go to „My computer” and right-click the CD/DVD-Device. Here you should choose “Autoplay”.

The i-DSS software supports Microsoft Windows XP 32-Bit.

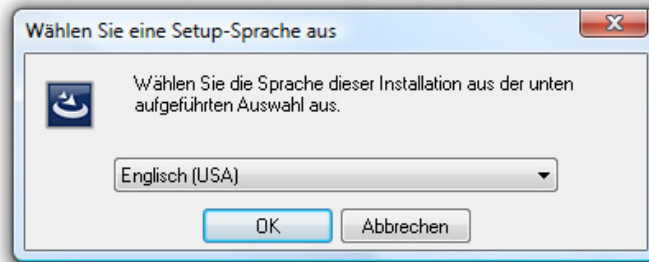
Click the button **i-DSS Software**.



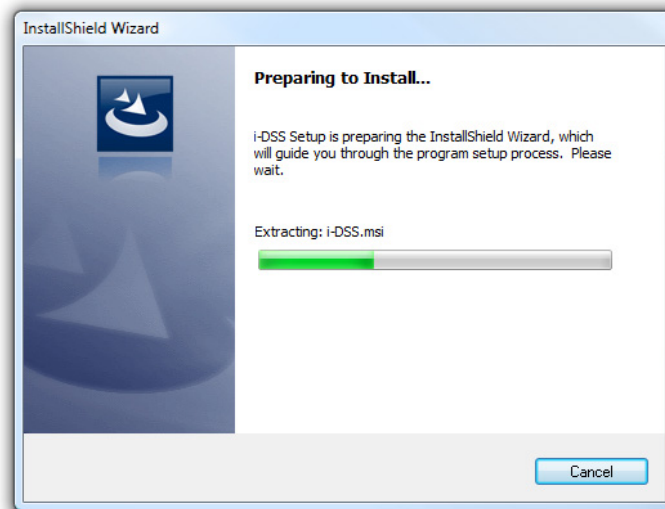
Install the i-DSS Software by clicking the button of the same name.



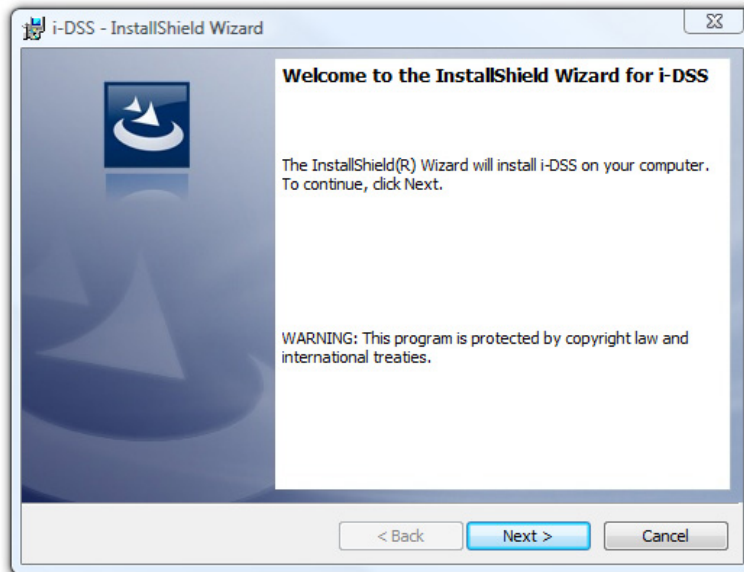
Choose your language.



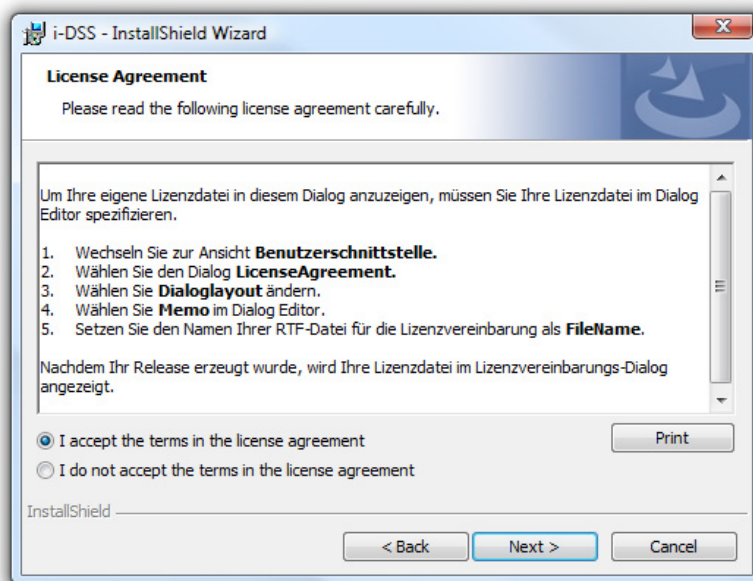
The software for the driver installation will be unpacked on your computer.



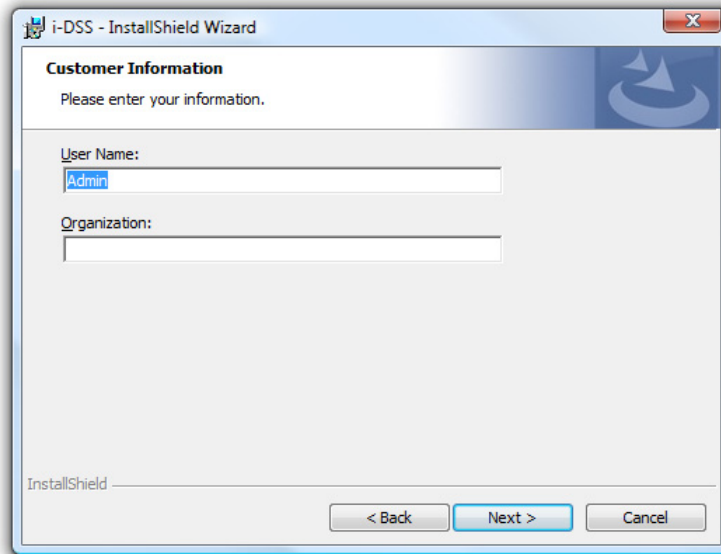
Click the button "Next".



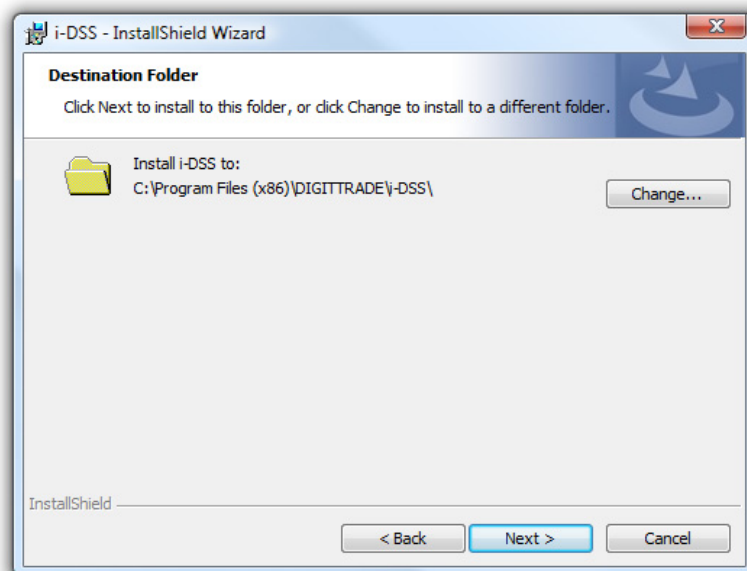
Accept the license agreement and click "Next".



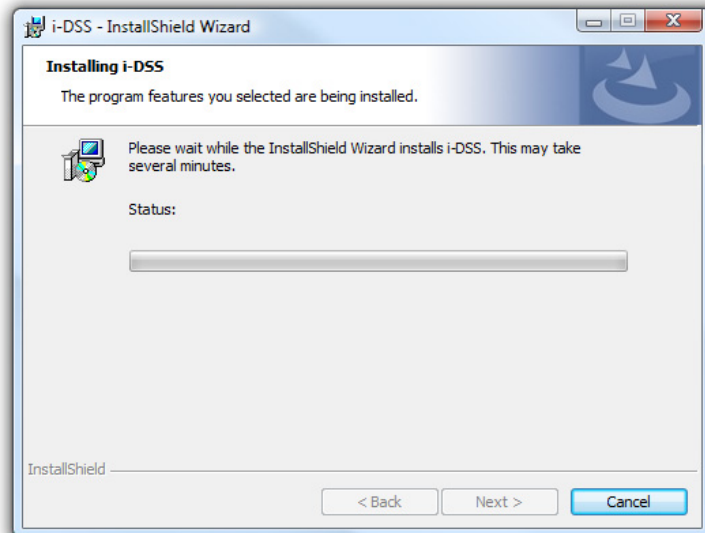
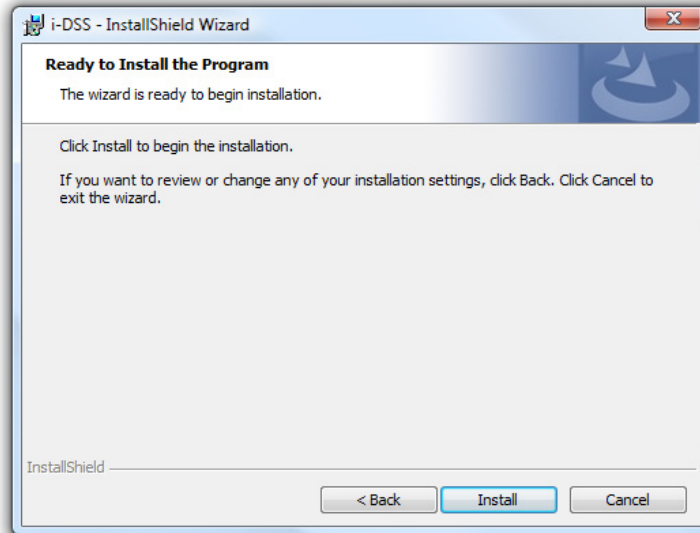
Fill in your name and if necessary your company name.



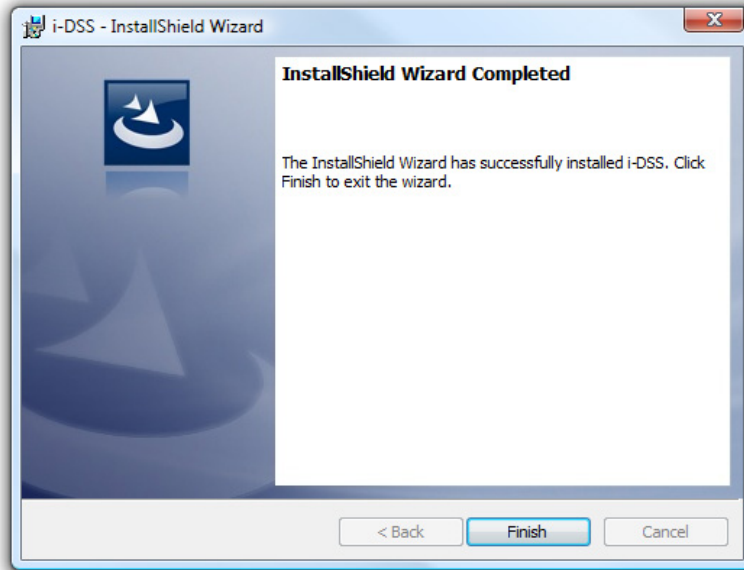
Click the button "Next".



Click the button "Install".



Click the button "Finish".



Now the i-DSS Software is installed on your computer. It is loaded automatically with each start of the computer. You can find it in the taskbar.

The i-DSS Software shows you every time the actual temperature und the current core clock of the GPU.



i-DSS sample



1. Office application
GPU – core clock: 450MHz (default clock rate)



2. Computer game "FIFA 2006"
GPU - core clock: 525MHz (easily increased clock rate)



3. Computer game "Need for Speed Pro Street"
GPU – core clock: 650MHz (extremely increased clock rate)

In the example above *i*-DSS makes an increase of the core clock from 450 MHz (office application) to 525 MHz ("FIFA 2006") up to 650 MHz ("Need For Speed Pro Street") possible.

For this sample we are using an AXLE nVidia 8600GT 1024MB PCI-E graphic card.



The actual versions of the software or drivers are available for download in our support centre on www.digittrade.de.

We gladly answer your questions by e-mail to beratung@digittrade.de.

Reference to the protection and preservation of the environment



In accordance with the EU Directive old electrical and electronic devices no longer may be disposed as municipal waste.

For the avoidance of spreading of the devices or components of them in your environment and for the saving of natural resources we ask you to deliver this product at the end of the product's life to a local collecting point for old electrical and electronic devices.

Owing to these measures the materials of your product can be reused in an environment-friendly way.

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