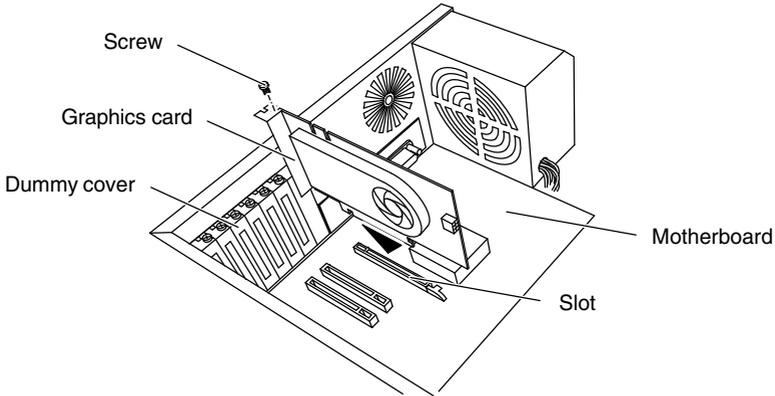


Installation Manual for Graphics Cards (AGP, PCI, PCIe)

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Notes

- This installation manual describes the installation of graphics cards in computers with motherboards equipped with slots for AGP, PCI or PCI-Express cards.
- The RAM used on the graphics card (e.g. DDR2 or DDR3) need not be of the same type as the RAM on the motherboard of your computer.



Installing a Graphics Card in a Computer



Danger, electricity. Failure to observe the information could lead to fatal injury!



Wear a grounding strap or something similar before touching components sensitive to electrostatic discharge. This protects devices from damage through electrostatic discharge from your body.



If an old graphics card is installed, it is essential to deinstall the related graphics driver before removing the graphics card. This prevents driver conflicts.

1. Shutdown the computer and disconnect it from the mains power supply.
2. Open the computer housing to be able to access to slots. Information on this is provided in the operating manual supplied with the computer.

If your computer is already equipped with a graphics card, you must remove it.

- Remove the screws with which the existing graphics card is fixed to the rear panel of the computer. Keep the screws in a safe place for use later.
 - Pull the existing graphics card carefully out of the slot.
3. Study the graphics card to determine which slot is appropriate for the new graphics card (refer to *Slots* on Page 6).

4. Remove the dummy cover from the rear panel of the computer which is behind the slot in which you want to install your graphics card. Keep the dummy cover and screws in a safe place for use later.



In the case of graphics cards with a larger cooler, it is normally necessary to remove two dummy covers.

5. Remove the new graphics card from its antistatic packing. Pay attention to the information on earthing.
6. Press the graphics card carefully in the selected slot until it is firmly fixed in place. The contact strip of the graphics card has one or more notches which simplifies alignment and correct, accurate installation.



Before screwing the graphics card in place, check that it is fitted properly.

7. Fix the graphics card in place by inserting the screw in the rear panel of computer housing.



If the new graphics card is in a different slot to that of the old one, fix the dummy cover removed on the rear panel by means of the screw in order to close the space left open by the old card.

8. Ensure that no cables are in the vicinity of the graphics card fan.
9. Ensure that there is sufficient air circulation for the high-performance graphics card. If necessary, install an additional fan in the computer.
10. Close the computer housing. Information on this is provided in the operating manual supplied with the computer.
11. Connect the computer to the mains power supply again.



To install the necessary drivers, please refer to the operating manual supplied with the graphics card.

Maintenance information



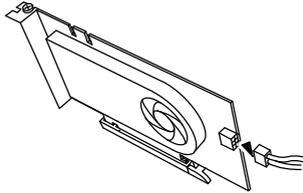
Check the graphics card fan at regular intervals and remove any dust deposits. This prevents defects.

Additional power supply for the graphics card

High-performance graphics cards require additional power. Therefore, the power supplies are normally equipped with additional connectors in order to provide the necessary power.

1. Plug the corresponding connector in the socket on the graphics card.

- ☞ The various graphics cards have different sockets for connection to the power supply.
- ☞ If the power supply on your computer is not equipped with the connector necessary for the graphics card socket, you need an adapter.

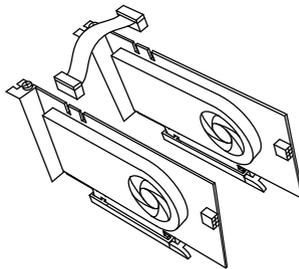


Interconnecting several graphics cards

Graphics cards are available which enable the interconnection of two or more graphics chips for increased performance for rendering (SLI Frame Rendering) or the use of up to four monitors (SLI Multi View).

If you have a motherboard equipped with an SLI-capable chipset and at least two PCIe slots, you can install several identical graphics cards in your computer and interconnect them.

A special bridge (SLI-Bridge) is required to connect the graphics cards, meaning that only graphics cards equipped with these bridge connections can be interconnected with each other.

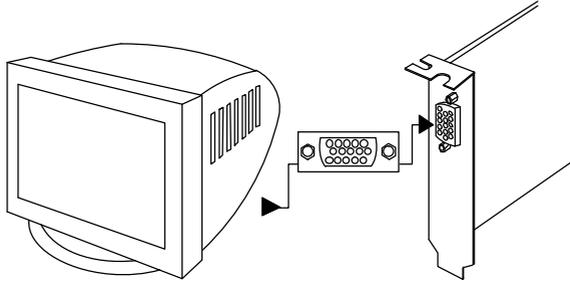


1. Interconnect the two graphics cards by connecting the bridge.

Connecting a Monitor

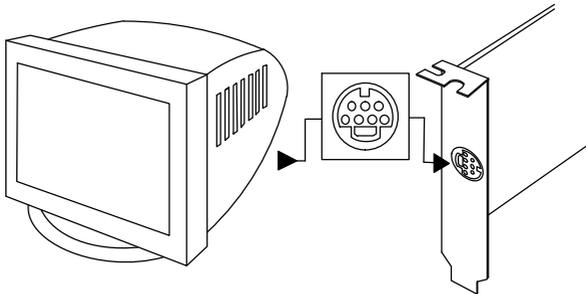
Your graphics card can be equipped with various connection sockets. Select the correct connection socket according to the connection options of the monitor.

VGA connection



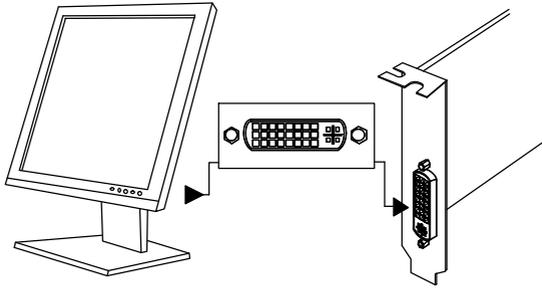
1. Connect the VGA connector on the monitor to the VGA connection on the graphics card.

Composite or S-Video connection



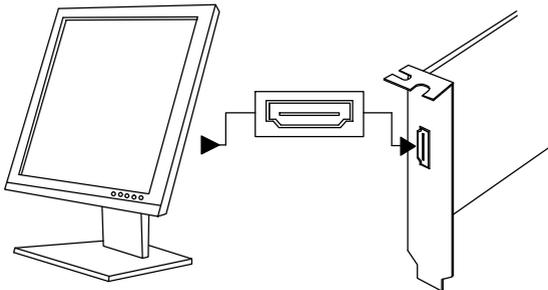
1. Connect the Composite/S-Video connector on the monitor to the Composite/S-Video connection on the graphics card.

DVI connection



1. Connect the DVI connector on the monitor to the DVI connection on the graphics card.

HDMI connection



1. Connect the HDMI connector on the monitor to the HDMI connection on the graphics card.

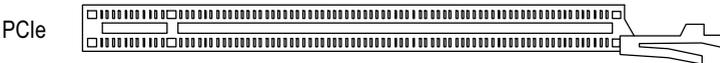
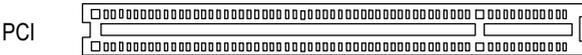
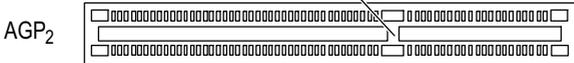
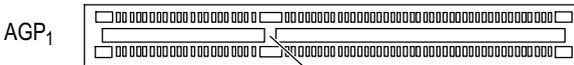
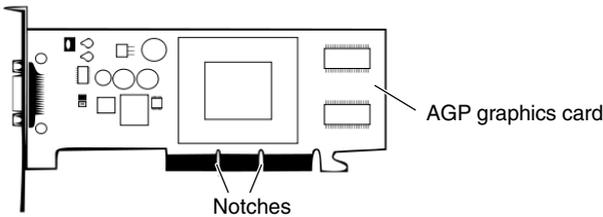
Slots

The following diagrams illustrate the most common slots in used in computers. There are various versions of all the slots illustrated which cannot all be depicted here.

Use the operating manual supplied with the new graphics card to determine the slot designed for it.

 Never attempt to insert the graphics card in a slot for which it is not intended. Doing so could damage the motherboard or graphics card.

 In the case of AGP slots (refer to AGP₁ and AGP₂), the webs could be at different positions. If your AGP graphics card has two notches, it is suitable for both AGP slots.



Disposal

In order to dispose of your device, take it to a collection point provided by your local public waste authorities (e.g. recycling centre). According to laws on the disposal of electronic and electrical devices, owners are obliged to dispose of old **electronic and electrical devices** in a separate waste container. The adjacent symbol indicates that the device must not be disposed of in normal domestic waste!



Risks to health and the environment from batteries!

Never open, damage or swallow batteries or allow them to pollute the environment. They could contain toxic and ecologically harmful heavy metals. You are legally obliged to dispose of power packs and batteries at the point of sale or in the corresponding containers provided at collection points by local public waste authorities. Disposal is free of charge. The above symbols indicate that the batteries must not be disposed of in domestic waste and that they must be disposed of at an authorised collection point.



Packaging materials must be disposed of according to local regulations.

Guarantee

The terms of guarantee comply with the legal stipulations. The period for claims under the terms of guarantee is two years. It begins on the date of supply, i.e. the date on which it was handed over to the customer. In the case of a deficiency in respect of the product, the customer has a right to supplementary performance. If the customer is the consumer, he can choose between repair of the defect or supply of a flawless product. We are permitted to refuse the type of supplementary performance selected if it would lead to unreasonable costs and the other type of supplementary performance would be of no significant disadvantage to the customer. If the customer is a contractor, we can choose between repair of the defect or supply of a flawless product. Assuming all legal requirements have been fulfilled, the customer is also entitled to rights of reduction and withdrawal as well as compensation. A manufacturer's guarantee provided by a manufacturer of our products remains unaffected.