

Buying advice: graphics cards

The graphics card is one of the most important components in your PC, so it should be chosen carefully. To help you see your way to the best choice, read our buying guide

Graphics card technology is so sophisticated today that, for standard 2D Windows use, virtually any card available on the market will make a decent job of running everyday tasks. On the other hand, you may want a little extra boost in performance. You could be a hardened gamer, for instance, in which case you'll want the fastest graphics chip you can afford. You may want advanced TV or multiple monitor options, in which case, Matrox's versatile Millennium G550 is probably the best bet. Whatever your needs, read on for our lowdown on what's important and what, frankly, isn't worth the board it's printed on.

Meet your maker

The first point of confusion is the difference between a graphics chip manufacturer and a graphics board maker. Intel and AMD make the processors that are installed in virtually every home PC, but these companies don't physically build any PCs themselves. It's the same with graphics chip manufacturers – they may not necessarily build the graphics card.

Checklist

- nVidia GeForce3 or ATI Radeon 8500 **for top games speed.**
- nVidia GeForce2 Ti or PowerVR Kyro II **for solid all-round performance.**
- Matrox G550 **for multiple monitor support.**
- AGP or PCI **All new PCs have AGP slots. If yours is an older system, you might want to check.**
- DVI **Not essential, although worth snapping up if you're buying one of the top-of-the-range cards.**

For example, nVidia manufactures the GeForce family of chips, but other companies (Hercules, Elsa, Gainward and so on) construct the actual cards. Likewise, PowerVR's Kyro II chips are featured in boards manufactured by Hercules. Matrox and ATI manufacture both the chips and the cards, although with its latest Radeon technology, ATI is looking to follow nVidia's lead and license its chips to other board manufacturers.

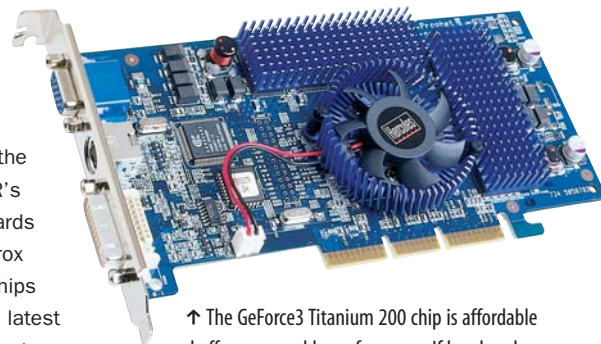
Visual range

Having got that out of the way, we'll get down to the graphics chips themselves. For raw performance, the chip is the make-or-break component. The nVidia GeForce3 family is arguably the fastest on the market, with the GeForce3 Ti 500 chip the most powerful of all. These ultimate performers will cost you, though, with card prices nearing the £300 mark.

Far more affordable is the GeForce3 Ti 200. Unless you're looking for the best performance possible, this is the ideal purchase. The standard GeForce3 is actually a little faster than the Ti 200, but unless prices fall dramatically, the Ti 200 remains better value. Look for card manufacturers like Hercules, Elsa and Gainward, and specify 64MB of DDR (double data rate) RAM.

Another alternative to the nVidia GeForce3 is ATI's Radeon 8500. Just released, this graphics card has quite a few driver problems, while few of the games currently available have made the most of its more advanced features. Potentially this card could be a trailblazer, but for the cautious, the Ti 200 remains a can't-lose prospect.

↓ If you're after solid performance at a price that won't break the bank, opt for a card that uses the nVidia GeForce2 graphics chip



↑ The GeForce3 Titanium 200 chip is affordable and offers reasonable performance. If breakneck speed is a necessity, opt for the high-priced Ti 500 chip

Setting your sights lower

At the lower end of the market, the GeForce2 family is a safe bet; look for the GeForce2 Ultra or the GeForce2 Ti chips. Gainward's GeForce2 Ti (confusingly titled the Ti/500, even though it's not the same as the GeForce3 Ti 500) is an excellent performer on a tight budget.

Cheaper still are the Kyro II cards (don't buy the Kyro I), and the likes of the Videologic VividXS and Hercules 3D Prophet 4500 are good value with their sub-£100 prices. These cards are likely to be left behind by the games market in 2003. However, keep the resolutions down to 1,024x768 or 1,280x1,024 and the detail levels to a minimum, and you'll enjoy your time with the Kyro range. For memory, 32MB will be fine, although 64MB will give you extra oomph.

Peripheral vision

You shouldn't worry about resolution support – all of these cards will have more than enough to drive modern monitors. If your machine is older than 18 months, you might want to check that it can support AGP cards. The alternatives for users with the older PCI slots are limited, although Elsa is planning to bring out PCI versions of some of its latest cards. If you will be using your card with Windows XP, ensure that the manufacturers have brought out XP drivers.

A DVI (digital video interface) socket isn't essential, but if the digital revolution does take off in the near future, cards without DVI might be outdated. TV-out is a good feature for anyone looking to use TV and video with their cards. ■

