CAD2 INSIGHT 3D-5110

- **Platform**: *Workstation/Graphics*
- **Price**: *Check with workstation vendor*
- **Company:** <u>CAD2</u>
- **Conclusion:** The most powerful card we've seen so far for high-end 3D work, but you will have to pay heavily for the privilege of using it.

Rating ⬤⬤⬤⬤◔ 🏅**BUY**

Graphics cards are an important part of any computer system, and for 3D graphics they are even more so. The 3Dlabs Wildcat II 5110 is, without question, the top high-end card designed for professional 3D graphics and other intensive applications. As such, it's only available as part of a computer system from third-party workstation vendors – so unfortunately, you can't buy this card separately. However, it is available from both brand-name system builders (HP, SGI, IBM) and independent vendors. In this case, the card came packaged within a full-spec computer system from CAD2 which featured Win 2000 Pro, 512MB RAM and a 1.7GHz Pentium 4 processor – important, since the card is heavily optimized to work more efficiently with the Pentium 4, according to 3Dlabs.
3Dlabs is the new owner of the Wildcat range having bought the technology from Intergraph last year. It also markets the Oxygen range of cards that fit the mid- to high-end bracket.

Full-length unit
The card itself is a full-length unit, taking up a single AGP slot, but because of the height of some of the components, the card renders the adjacent PCI slot unusable. A blank PCI cover prevents you from forcing a smaller card into the wasted PCI slot. The bus supports 4x AGP as you'd expect, and the card comes with single analogue and digital video connectors for hooking up to your display, whichever type it may be. Dual-screen support is claimed, though how this would work is not clear since the unit did not come with any sort of adaptor. We can only assume you'd need one of each type of connector, which can cause problems. Since the board takes up the extra PCI space it seems odd not to have used this space to provide the extra connectors for dual-analogue output at least. On board are two 200MHz OpenGL graphics processors plus two 225MHz geometry processors. Complementing these is 128MB SDRAM, divided equally for texture and frame buffer usage.

The bottom line though is how well the card performs in the real world. Forget speed test and benchmarks for a moment, since they don't always tell you the full story. The good news is that the Wildcat is damned fast. Using Maya 4 we tried to choke the card using a very simple test. Duplicate a NURBS sphere with a 1MB texture (set to display at highest quality) 100 times and try to rotate the scene.

Lesser cards will gag at this point, but the Wildcat maintained total interactivity thanks to its onboard OpenGL and 64MB texture RAM. Only at 400 spheres did things begin to slow, but it was still fast. At scenes upwards of 170,000 textured polys, the card begins to slow, though it's still workable. This corresponds to a heavy scene, so for most work you probably won't even come up against the card's upper limits.

In LightWave – a traditionally punishing program for graphics accelerators – the Wildcat also performed well. In 3DS Max, the card offers a few extra niceties such as full-scene antialiasing and volumetric texture acceleration. With results like these, it's easy to see why it kicks the arses of 3Dlabs' own Oxygen GVX210 workstation card and the Elsa Gloria II desktop card that we've used to show just how good it is.

The 3Dlabs Wildcat 5110 is the fastest card we've come across – and it really makes a difference especially when working on dense scenes. The card is very expensive, as it will add £1,500 to £2,000 to the cost of your workstation – but for the most demanding, high-end 3D work, it's a godsend.

Mike Williams