

MANUFACTURER: ATI PRICE: \$399 (price charged by Dell to install card in new Inspiron XPS)

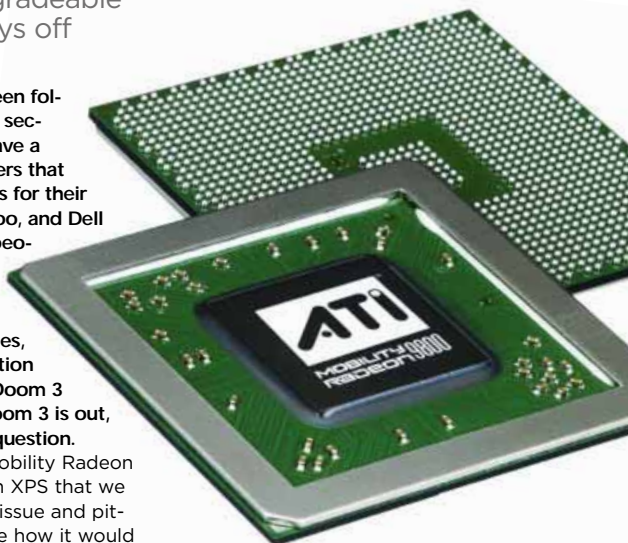
ATI'S LATEST MOBILE CHIP HANDLES DOOM 3

The promise of upgradeable mobile graphics pays off


 Anyone who has been following CGW's Tech section knows that I have a thing for laptop manufacturers that offer graphics-card upgrades for their machines—Alienware, Voodoo, and Dell come to mind. While most people agree that many of the so-called gaming laptops on the market are powerful enough to handle most games, there was always a big question regarding the two biggies: Doom 3 and Half-Life 2. Now that Doom 3 is out, we can answer part of that question.

We took the 128MB ATI Mobility Radeon 9700-powered Dell Inspiron XPS that we reviewed in the September issue and pitted it against Doom 3 to see how it would fare. "Not too well" is the answer. Now keep in mind this machine is a beast with a 3.4GHz Intel Pentium 4 processor and 1GB of DDR memory. Only by knocking Doom 3's settings down to 640x480 and turning off every single visual detail were we able to achieve a benchmark score of 65 frames per second. This may sound OK, but remember, at these settings, the game is hideous. And this is where upgradeable mobile graphics come into play.

ATI recently released its 256MB Mobility Radeon 9800 graphics chip, and we had one installed in our Dell Inspiron XPS. Sweet Jesus! Not only did this card fly in our benchmark and game tests, but most important, we were able to play Doom 3 at 640x480 with most of the visual details turned on at 66 frames per second, as well as at 800x600 at 45 frames per second. How does the Mobility Radeon 9800 do this? In addition to an



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additional 128MB of memory, it rocks eight pixel pipelines (instead of four like its predecessor) and runs at an even higher clock speed.  William O'Neal

BY THE NUMBERS

Graphics Processor	128MB ATI Mobility Radeon 9700	256MB ATI Mobility Radeon 9800
3DMark2003 Pro v. 340	3,362	6,464
AquaMark 2003	31	45
3DGameGauge 3.5	60	73
Comanche 4	60	61
Serious Sam: TSE	97	115
Dungeon Siege	100	100
UT2003 Botmatch	80	79

NOTE: ALL TESTS WERE RUN AT 1024 X 768 WITH AA AND AF TURNED OFF.




Wil Power
His monthly spew of filth

Is there a ghost in the machine?

Being a hardware enthusiast as well as a journalist means balancing the enthusiasm I have for things shiny and new with the skepticism that I'm supposed to levy on the same shiny and new objects—case in point, small form-factor PCs.

When I first began to look at these machines, I was so impressed that I was quick to overlook many of their shortcomings. In my reviews, I mentioned that their weak power supplies meant that you were severely limited in your upgrade options. "But so what," I thought, "they're still just so damn cool."

In my excitement to play with something new, I overlooked a critical aspect of these machines. Outfits like Voodoo and Falcon are known for building gaming machines from the ground up. After doing a ton of research, they pick the best components and put them together in machines that they stroke and nurture like brand-new babies. Building a machine based on a Shuttle XPC box means that you're going with Shuttle's case, power supply, and motherboard. While Voodoo and Falcon do their best to squeeze as much as possible from these boxes, either way, you're getting Shuttle's or FIC's case, power supply, and motherboard.

I suppose these first attempts were more of a test of the small form-factor market. However, whether from dead power supplies or other hardware incompatibilities, these machines are, at best, "quirky." Having sold a ton of FragBoxes, though, Falcon has now designed its own box from the ground up. For the FragBox 2, the company designed the case and chose the motherboard and power supply. If you bought an early small form-factor machine, you may be wondering if there's a ghost in the machine. I'm happy to say that what you're experiencing with that little baby is nothing more than old-fashioned growing pains.  William O'Neal