

NEOMAGIC VANISHES, REAPPEARS

By Peter N. Glaskowsky {5/8/00-03}

NeoMagic, once the leading provider of graphics chips to PC laptop makers, has withdrawn entirely from the graphics market. NeoMagic was the first company to ship embedded-DRAM graphics accelerators. These chips offered substantial cost and power savings

over competing discrete solutions and were used in some of the industry's most popular notebook PCs.

Embedded DRAM was a good match for 2D-graphics chips, but the technology's disadvantages—the long manufacturing cycles of DRAM fabs, limited memory capacity, and lower clock speeds for on-chip logic—hurt NeoMagic as laptop buyers began looking for 3D acceleration. Though the company eventually released a 3D-capable chip, the Magic-Media256XL+ (see *MPR 12/6/99-msb*, “NeoMagic Adds 3D to Mobile Graphics”), it was too little, too late. NeoMagic will continue to supply chips to its current customers, but it has terminated all further graphics-chip development.

The announcement came a day after ATI released sales figures for its line of laptop-graphics chips. ATI says it is selling nearly one million Rage Mobility graphics chips each month, a figure that would account for more than half of all laptops sold worldwide. We attribute ATI's success over NeoMagic to two factors: its more rapid incorporation of 3D-graphics and DVD-playback features, and its use of package-scale integration to combine a graphics chip with DRAMs in a single device. The latter technique nearly matches the low power consumption of embedded DRAM while allowing

much larger memory configurations with a lower cost per bit, due to the use of commodity DRAM chips. Package-scale integration allows the graphics chip to be manufactured in a normal ASIC process, yielding higher speeds and quicker fab turnaround.

NeoMagic will now attempt to reinvent itself as a developer of wireless multimedia communications technology, an area in which it has little experience. The company will focus on three areas of technology development: MPEG-4 video processing, broadband wireless communications, and Internet-enabled system-on-chip (SOC) products. None of these areas depends on embedded-DRAM technology, though there are sure to be some opportunities to use embedded DRAM in SOC products.

NeoMagic's graphics products were profitable right up to the end. The company reported net sales of about \$260 million and a net income of almost \$13 million in its most recent financial year, and held about \$97 million in cash and equivalents at the end of that year. These resources, along with the remaining revenue from its existing products, should give NeoMagic a chance to pull another rabbit from its hat. ♦

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