THE PUBLISHER'S VIEW

AMD, Cyrix Chase Intel's High End

Intel's Competitors to Have Stronger Products in '97, But Challenges Remain

No one ever said that life as an Intel competitor would be easy—but the past year or so has been especially tough. Cyrix has a strong product but is having trouble selling it, putting the company in a weak financial position. AMD's K5 was late to arrive and modest in performance; AMD has sold more units than Cyrix but at very low prices. Both companies have been losing money.

Next year, AMD and Cyrix each will have new products that promise to improve their performance positions *(see* **101406.PDF** *and* **101405.PDF***)*. I can't help but be reminded, however, of the view from last fall—which suggested a similar resurgence of AMD and Cyrix as they moved past the 486 era. Will 1997 be any different? The past year has brought several lessons about the trials and tribulations of taking on Intel.

First, the K5 showed that delivering a well-optimized x86 design is tough—the company's designers severely misestimated the instruction mix of Windows applications and, as a result, made some poor tradeoffs in the design. AMD is only now shipping parts faster than Pentium at a given clock speed, and AMD's clock speeds remain slow.

Second, Cyrix's 6x86 showed that having a good product aggressively priced and with two sources isn't necessarily enough. Cyrix was so focused on delivering on its engineering goals that the company grossly underestimated the sales challenge. Selling a high-end Pentium competitor turned out to be a lot harder than selling into the low end of the market, where Cyrix had previously dwelled.

Third, product names became problematic. Cyrix calls its chip the 6x86 to position it as a sixth-generation device, but in reality it has competed against Pentium. AMD tried recasting its high-clock-speed 486DX4 as a 5x86, an even more questionable move that may have helped sell chips but didn't do anything for the company's credibility. And AMD ended up in a product-naming mess with the K5, which was officially christened the 5K86, had a brief incarnation as the SSA/5, and finally ended up as—ta da!—the K5.

So where does this leave AMD and Cyrix going into 1997? Their product portfolios continue to get stronger; if the M2 and K6 deliver on their promises, they will be only months behind Intel in delivering processors with MMX. They will have Pentium-pinout processors faster than any offered by Intel, following the strategy that led AMD to success in the 386 and 486 markets, but at an earlier stage, when there is more of a market left to attack. AMD's Fab 25 will be well on its way to a 6,300 wafer/week capacity—enough to produce about 19 million K6 chips per year even before process shrinks. Cyrix should be able to get plenty of wafers from IBM, especially since NexGen won't be needing IBM's services and PowerPC growth will be modest.

If we assume the vendors deliver products as promised—a significant leap of faith, some would argue—the challenge comes down to getting customers. This is one area where AMD has been more successful than Cyrix and IBM Microelectronics, due in part to its longer history as a chip supplier and its worldwide sales force. AMD has also been adaptable; when the K5 was too slow to penetrate the U.S. market, the company sought and gained design wins in China, South America, Russia, and Poland, as well as from the usual third-tier U.S. makers and nearly anonymous Taiwanese motherboard and PC manufacturers.

AMD's success is also due, in part, to targeting a segment of the market that isn't threatening to Intel. Cyrix's sales difficulty can be directly traced, in the view of some industry executives, to pressure from Intel on key OEMs. Going after Intel's most profitable chips was a sure way for Cyrix to put itself in the center of Intel's crosshairs.

Next year, the RISC players aren't going to be much for Intel to worry about, enabling Intel to focus on keeping AMD and Cyrix from gaining too much ground. Intel has formidable weapons—the broadest product line, a huge advertising budget, one of the world's top brands, deep customer relationships, and a dominant position in the motherboard market—to wield in this battle.

AMD and Cyrix seem driven to compete at Intel's leading edge—where, after all, profit margins are the highest. Thus, they want their K6 and M2 to compete against P6-class processors, not just against the P55C. The problem is, this is the business Intel can't afford to let them have. AMD and Cyrix are likely to take over the Pentium-pinout market, but their market share will remain small (though it can only go up from its level of under 5% this year) until Intel shifts all its efforts to the P6 family in 1998.

Selling the K6 and M2 as Klamath competitors is not only a difficult challenge from a customer perspective—even if they match Klamath's performance, these chips won't have the same hardware upgrade path or multiprocessor capabilities—but it keeps the companies highlighted on Intel's radar screen. Settling for selling "a better P55C than the P55C" may be harder on the egos, and it would require that the K7 and M3 be ready in 1998 to keep prices from collapsing, but it could be a better business strategy. M