

■ THE EDITOR'S VIEW

Intel Takes a Breather

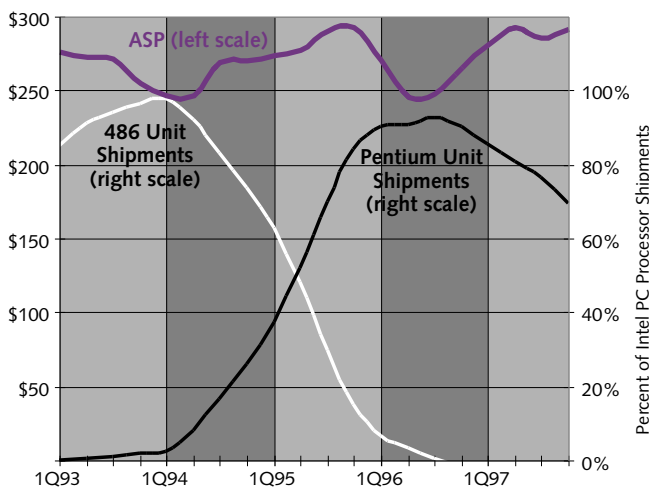
Processor Introductions Slow, ASPs Fall as Pentium Cycle Nears Peak

As industry watchers, we have become addicted to Intel's rapid-fire product announcements. In the best of times, Intel rolls out a new clock speed per quarter for each of its major product lines. But for most of 1996, the forecast is for few new processors from Intel, a trend that will slow the company's revenue growth this year despite a significant increase in unit shipments.

Although Intel will spend much of this year talking about the P55C, relatively few P55C systems will be sold before 1997. Between now and then, Intel's product roadmap shows the Pentium-200 as the only new desktop processor. For notebooks, we don't expect any new processors that fit within the current thermal envelope until the P55C. After its big debut late last year, Pentium Pro gets no new clock speeds at all in 1996, according to Intel's latest plan.

Intel's predicament is that, to spur growth in PC sales, it must continue to rapidly cut the prices of its processors. Another company, seeing a slow product cycle, might choose to keep prices high and milk its current products for revenue. Intel, however, must keep its fabs full, and that requires shipping more and more units every year, which in turn requires low prices that encourage purchases.

The company has indicated it will drop Pentium prices by 20–25% per quarter this year, just as it did last year, bringing the list price of a Pentium-120 down to about \$100 in 4Q96, for example. But without a fleet of new speed grades to fill the higher price points during the year, the product mix will shift to the lower levels. Exacerbating the problem is Pentium Pro's poor price/performance on Windows 95,



Intel's average selling price (ASP) for its PC processors fluctuates according to its processor product cycle. (Source: MDR)

which prevents that processor from filling high-end price points in the consumer market.

Thus, the lack of new products in 1996 will have a negative effect on Intel's average selling price (ASP), as the graph below shows. Our forecast is that the ASP for Intel's PC processors will decline by 12% between 3Q95 and 2Q97.

The graph also shows that this decline in ASP is part of a normal product cycle. During 1993, for example, Intel introduced no new 486 clock speeds between the DX2-66 in 4Q92 and the DX4-75 and -100 in 1Q94. The only new processor it introduced in 1993 was the original Pentium, but high prices and lack of availability kept that part from having a significant revenue impact. As a result, Intel's PC processor ASP dropped between 1Q93 and 1Q94.

The 1993 ASP decline occurred even as 486 shipments continued to rise, as the graph shows. In fact, part of the decline was due to the 486 moving into the market segments with the highest volume but the lowest prices. Intel's 486 shipments peaked in 1Q94, just as the ASP reached its nadir. Similarly, Pentium shipments are forecasted to rise to a peak in 3Q96, just as the ASP bottoms out.

The flip side of the cycle, in which the ASP increases rapidly, occurs when a new processor begins to catch on. For example, after the introduction of the P54C Pentium in 2Q94, Pentium shipments began to soar, as the graph shows. During this period of rapid acceptance, Intel's PC processor ASP rose by 21%. We expect a similar surge after Klamath debuts, causing P6 shipments to begin to ramp. These increases in ASP may be due to PC buyers' willingness to pay a premium to get the latest processor technology; once that technology becomes a commodity, however, the ASP dips.

Fluctuations in ASP have a direct impact on revenue. We expect Intel's quarterly PC processor revenue to improve only slightly during most of 1996, as unit shipment increases barely compensate for the decline in ASP. Intel's stellar revenue increases in 1994 and 1995 came as unit volumes and ASPs rose in tandem.

The company has already warned that revenues will be flat through at least 2Q96. Our forecast shows that, after a modest 10% increase in revenue in 1996, both ASPs and volumes will see a strong gain in 1997, restoring Intel's revenue growth to above 20%. This growth should continue until the next downturn in the product cycle, which shouldn't occur until the P6 begins to peak in 1999. □

Ainley Gwenny