

Rise Lays Out Roadmap to Mainstream

Faster mP6 and mP6 II Hoped to Fill Cyrix Role in Sub-\$600 PCs

by Michael Slater

After lingering at the lowest fringes of the PC processor market since the debut of the mP6 late last year (see MPR 11/16/98, p. 1), Rise Technology has laid out its plan to reach into the value PC mainstream with enhanced products due to roll out over the course of the year. Rise hopes to fill the role that has been occupied by Cyrix as a leading CPU supplier for PCs selling for \$599 and below.

Figure 1 shows Rise's roadmap. In July, Rise plans to add versions of the mP6 rated at 333 and 366, matching Cyrix's current ratings. The 333 part runs at 238 MHz with a 95-MHz bus; the 366 uses a 250-MHz core and a 100-MHz bus. These parts are built with an enhanced version of the 0.25-micron process used for the initial 266 chips.

Rise plans to begin volume production of 0.18-micron chips in October, initially at performance ratings of 366, 380, and 400. The 400 grade runs at 300 MHz with a 100-MHz bus. An enhanced process is expected to deliver 433 and possibly 466 grades in November. The 0.18-micron process is important not only for its higher clock speed but also for the smaller die size of 75 mm². This is much larger than other low-end chips will be in similar processes (indeed, it is larger than other chips in 0.25-micron processes), but Rise claims it can be cost-competitive because of high yields, low-cost packaging, and close relationships with low-cost foundries.

Rise has built 0.25-micron prototypes of its mP6 II, which integrates an on-die 256K L2 cache, but it does not plan to ship this product until it is moved into the 0.18-micron process. Volume shipments are slated for November at performance ratings of 366, 380, 400, 433, and 466. Rise expects the mP6 II to be the lowest-power processor available with comparable performance; it anticipates power consumption to be half that of AMD's K6-2.

Rise plans to focus the mP6 II, whose die size is just over 100 mm², solely on notebooks. For the desktop, the company plans to launch a processor with a Socket 370 interface by the end of the year. No further details on this product have been disclosed.

Rise rates its current 200-MHz mP6 as a 266 performance grade. Rise's chip falls far behind Cyrix's M II on Winstone, but according to Rise's tests, it slightly beats the Cyrix chip on SYSmark, which also includes common business applications but uses more FP. Rise's position is that users don't need more performance on word processors and spreadsheets; the performance is needed on multimedia applications, where FP and MMX come into play. Rise's lack of 3DNow limits its 3D performance, however, compared with that of AMD's K6-2 or Cyrix's forthcoming

Gobi (see MPR 5/31/99, p. 13). Rise expects to compete with only the very low end of the Celeron line, operating primarily in a market space below Intel's.

Rise continues to decline to discuss its fab partners, but sources indicate that the company is using STMicroelectronics as its official supplier, which then contracts the actual manufacturing to other foundries (reportedly UMC, initially). Thus, the parts are "blessed" by STM's Intel patent license but are built in fabs that do not have a license.

Succeeding Where National Has Failed

Although National's abandonment of PC processors potentially leaves a hole for Rise to fill (depending on Cyrix's fate), it also raises the question of how tiny Rise can succeed where National has failed. Rise hopes its fabless model, complemented by an in-house process team, will keep its costs lower, and that its close relationships in Taiwan will give it an edge there. Rise also touts its superior MMX performance, but this is likely to be a transient advantage.

Cyrix's Gobi, if it reaches the market in a timely manner, could be a potent competitor to Rise's planned Socket 370 part. Rise is expecting that AMD, as it seeks to boost ASPs, will not reach down into the very low price space. If AMD has enough capacity, however, the K6-2 could be a powerful competitor for Rise's offerings, which lack 3DNow; it would be tiny in a 0.18-micron process.

IDT has been similarly hobbled in clock speed, and it has been repeatedly delayed getting WinChip 2 into production. It is also reportedly looking for a partner. IDT has shipped far more chips than Rise, however; is aiming for the same market; has a much smaller die; and, like Rise, plans to move up the performance curve later this year. Even with its revised roadmap, Rise has a challenging road ahead. □

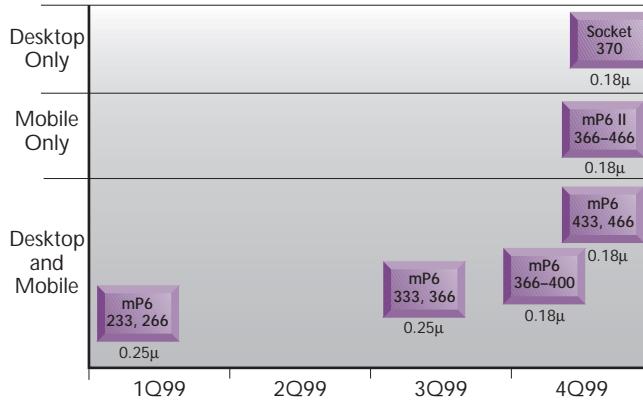


Figure 1. Rise's roadmap calls for a steady increase in speed ratings and a complete switch to 0.18-micron by year end.