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CHARTERED SEEKS LUCRATIVE CUSTOMERS

By Tom R. Halfhill {3/3/03-02}

Reeling from what it describes as the sharpest market decline in the history of the industry, Chartered Semiconductor plans to close its oldest fab and refocus on customers that need advanced fabrication processes. The Singapore-based company's goal is to increase its

fab capacity for 0.18-micron and smaller processes from 15% in 2002 to 50% by the end of 2004, without expanding total capacity.

Chartered was the third- or fourth-ranking independent chip foundry last year, according to revenue estimates by various market analysts. TSMC is by far the largest foundry, commanding slightly more than half the market. UMC has about a quarter of the market, followed at a considerable distance by Chartered and IBM Microelectronics, whose market shares are both in the single-digit range. But while IBM gets premium prices for its primo technology, 85% of Chartered's fab capacity is geared toward trailing-edge 0.25-micron and larger processes, which are less profitable. Chartered's net losses for the past two years total \$801.1 million.

To turn its business around, Chartered will close the oldest of its five fabs in Singapore by March 2004. That is the only Chartered fab still limited to making 150mm wafers; the company's other four fabs produce 200mm wafers. Chartered was planning to begin pilot production of 300mm wafers at its newest Fab 7 in Singapore by 3Q03, but a recent deal with IBM to jointly develop new technology and share fab capacity is allowing Chartered to delay 300mm production until 3Q04. (See *MPR 12/16/02-02*, "IBM and Chartered Join Forces With Fabs.")

Meanwhile, Chartered is ramping up 0.13-micron production to serve the rising demand for leading-edge fabrication processes. Chartered shipped its first 0.13-micron chips for revenue in 4Q02. Although that was about a year behind TSMC, it was a significant departure for a foundry that has historically concentrated on mature fabrication processes. Chartered says 0.13- and 0.18-micron chips accounted for 39% of revenue in 4Q02, up from 13% in 4Q01. The company's goal is to expand capacity for 0.18-micron and smaller processes to 50,000 200mm-equivalent wafers a month by December 2004, with about half that capacity devoted to 0.13-micron production.

Under its reciprocal manufacturing agreement with IBM, Chartered can begin pilot production in the next-generation 90nm process in 3Q03, because that's when IBM plans to begin producing 90nm chips at its new 300mm-wafer fab in Fishkill, New York. Chartered doesn't anticipate starting 90nm pilot production at its own Fab 7 in Singapore until 3Q04—and possibly even later, if there is insufficient demand.

Despite the new emphasis on advanced technology, Chartered says it will continue offering older processes, as well as specialized processes, such as those for mixed-signal and RF CMOS chips. Currently, Chartered has processes as large as 0.6 micron still in production. ♦

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