

Chartered Launches 0.13-Micron, 0.11-Micron and 90-Nanometer Processes at 300-mm Fab

September 8 2004

Chartered Semiconductor Manufacturing, one of the world's top three dedicated semiconductor foundries, has achieved functional 0.13-micron 300-millimeter (mm) wafers from its Fab 7, demonstrating [silicon](#) results which exceeded internal targets within five months of the first equipment installation. Additionally, Chartered has launched engineering 300-mm wafers at Fab 7 for its 0.11-micron process, as well for the 90-nanometer (nm) platform it is jointly developing with [IBM](#).

For 200-mm and 300-mm manufacturing, Chartered is already engaging with customers on its 0.13-micron and 0.11-micron solutions, as well as on the landmark 90-nm cross-foundry platform that will be available at both Chartered's Singapore-based Fab 7 and IBM's East Fishkill, New York fab.

"Chartered continues to make progress in readying production and lining up customers for Fab 7, our first 300-mm facility," said Kay Chai "KC" Ang, senior vice president of fab operations at Chartered. "Our design-ready 0.13-micron solutions and the growing industry participation on the Chartered and IBM platform increase customers' confidence that our approach will enable a shorter learning curve to adopt new technologies, greater efficiencies through 300-mm manufacturing, and a cost-effective, flexible model for all their manufacturing needs."

Customers are utilizing Chartered's 0.13-micron solutions from Fab 6, a

200-mm facility, to deliver a broad variety of leading-edge and next-generation system-on-chip (SoC) products, such as high-performance graphics chips, storage and networking products, wireless local area network (WLAN) products, PC peripherals and optical drives.

Additionally, Chartered is offering its 0.11-micron process as an intermediary node to 0.13 micron from its Fab 6 and Fab 7. Chartered's 0.11-micron process offerings are achieved with a 10 percent shrink of Chartered's 0.13-micron design rule, and therefore, reduce implementation risks while lowering the cost per die. Chartered's 0.11-micron solutions support faster speed and enhanced performance, and are targeted for today's fast-moving products such as graphic chips, optical drives and high-speed SRAMs.

Simultaneously, as part of the joint development and reciprocal manufacturing agreement between Chartered and IBM, a team of IBM technical experts are in Singapore to transfer the jointly developed 90-nm technology from IBM's 300-mm facility in East Fishkill, New York. The teams from Chartered and IBM are also working together to qualify the equipment set at Fab 7, and align Fab 7's equipment configuration and process flow with those at IBM's facility to enable the industry's first dual-source 90-nm platform. Following the launch of 90-nm engineering wafers, Fab 7 remains on schedule to manufacture 90-nm silicon-on-insulator (SOI) products for IBM in mid-2005, with Chartered becoming the only dedicated foundry to have advanced SOI capabilities.

Citation: Chartered Launches 0.13-Micron, 0.11-Micron and 90-Nanometer Processes at 300-mm Fab (2004, September 8) retrieved 3 May 2024 from <https://phys.org/news/2004-09-chartered-micron-nanometer-mm-fab.html>

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