

# UMC Announces Industry's First 28nm SRAMs

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UMC, a leading global semiconductor foundry, today announced that it has manufactured the foundry industry's first fully functional 28nm SRAM chips. The chips are based on UMC's independently developed low-leakage (LL) process technology. UMC utilized advanced double-patterning immersion lithography and strained silicon technology to produce the chips, which feature very small six-transistor SRAM cell sizes of approximately 0.122  $\mu\text{m}^2$ .

"We are excited about this latest achievement for 28nm, as it provides a solid starting point for further development of this technology node towards mainstream availability down the road. Improvements on areas such as minimum supply-voltage, modeling of strain effects, and natural yield will be our focus going forward," said S.C. Chien, vice president of advanced technology development at UMC.

UMC incorporates a dual approach for its 28nm technology to address different market applications. The foundry uses conventional silicon gate/silicon-oxy-nitride gate oxide technology for its LL (low leakage) process, which is ideal for portable applications such as mobile phone ICs.

UMC's second option will utilize a high-k/metal gate stack for speed-intensive products such as graphic, application processor, and high-speed communication ICs. UMC's 28nm process provides almost twice the density of the 40nm technology, which is currently being produced at its 300mm fabs. UMC will also provide foundry services for customized

32nm technologies based on its 28nm process platform.

Source: UMC

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