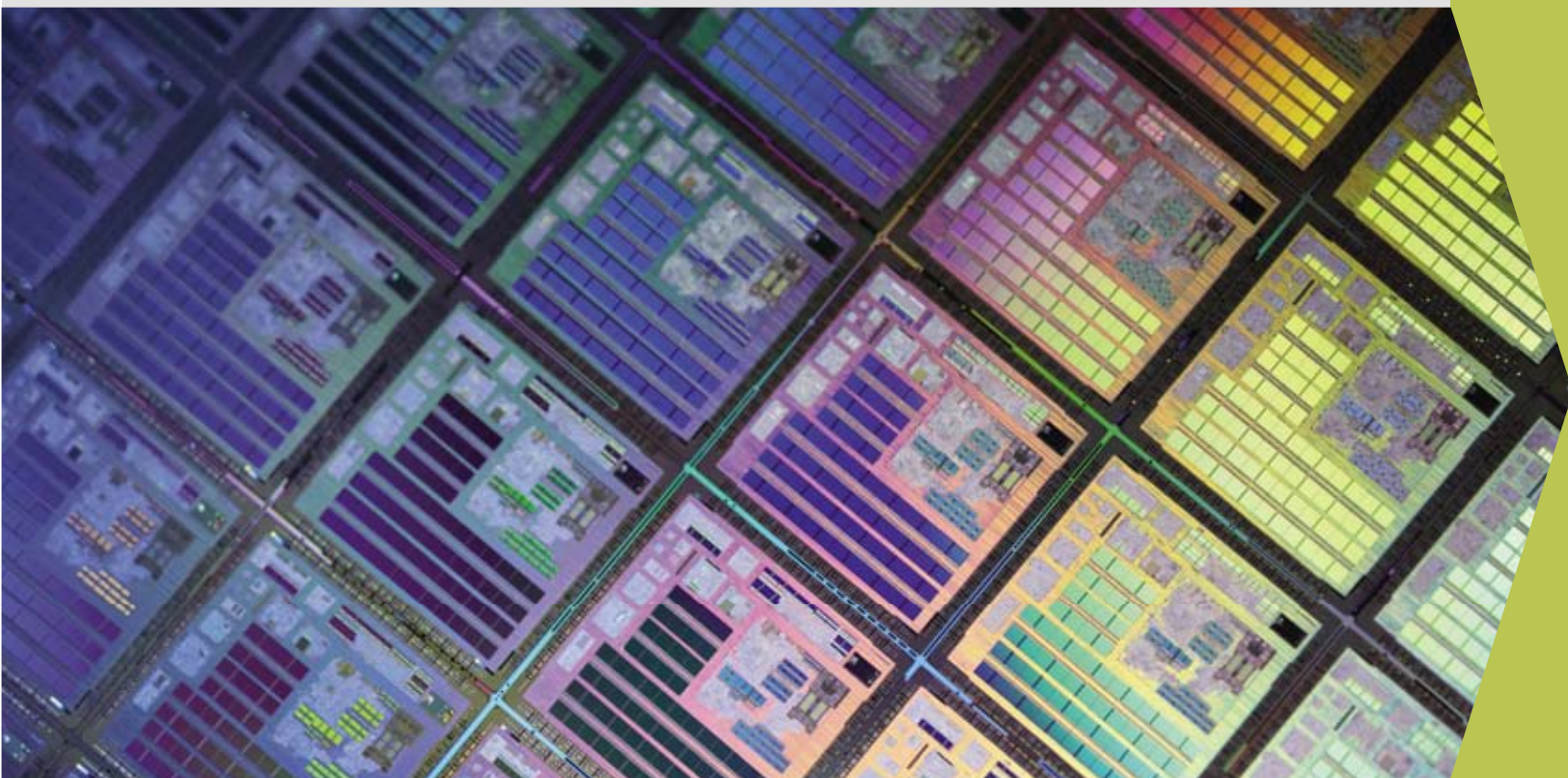


FOUNDRY LEADERSHIP FOR THE SoC GENERATION

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# 28 NANOMETER

# 28

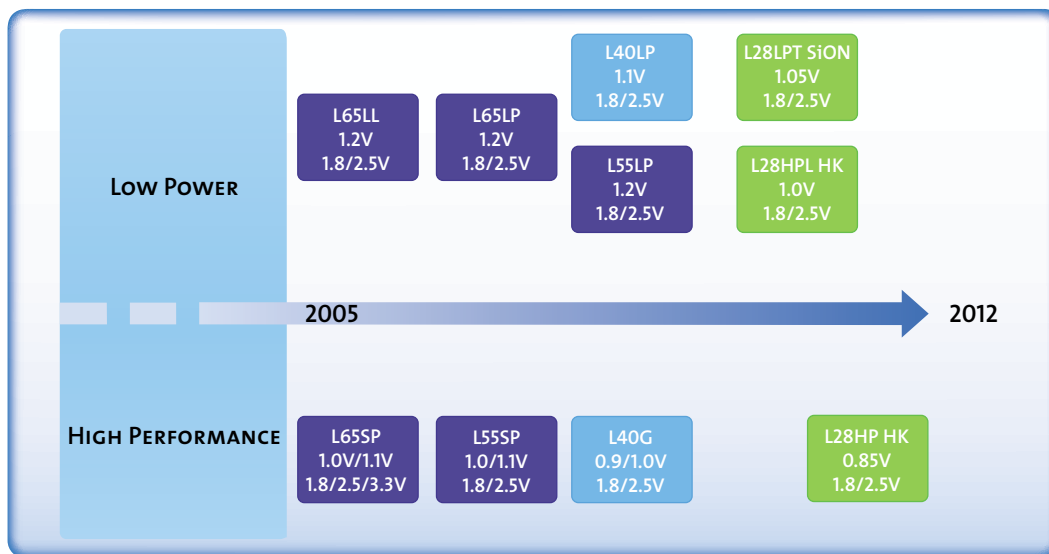


**UMC**

# 28 NANOMETER - CUSTOMER-DRIVEN FOUNDRY SOLUTIONS

To address the fast-changing semiconductor technology challenges of the future, UMC has strengthened its independent R&D for advanced foundry technologies through cooperative partnerships with suppliers, universities, and research institutes around the world with its SEMATECH membership. The relationship will focus on research and development for exploratory technologies on 300mm wafers, including future process generations.

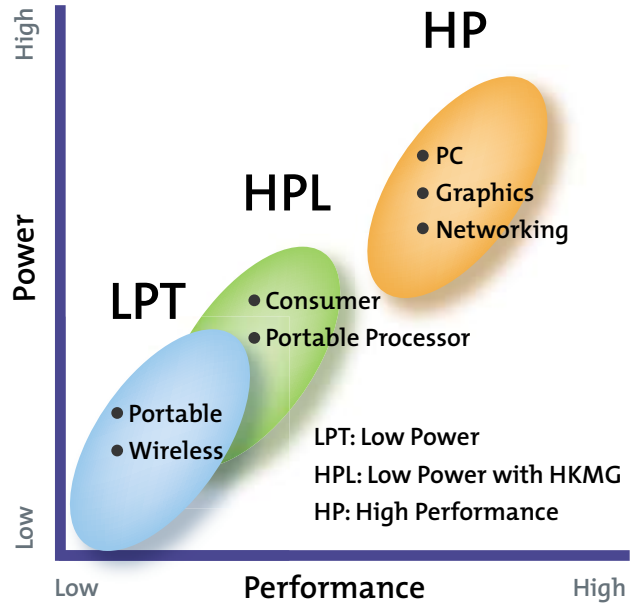
## ADVANCED TECHNOLOGY ROADMAP



UMC's 28nm process technology is developed for applications that require the highest performance and lowest leakage, enabled by the implementation of High-K/Metal Gate technologies. UMC focuses on the industry-adopted Gate Last approach for this process node. In October 2008, UMC was the first foundry to deliver fully functional 28nm SRAM chips. UMC's 28nm progress was also recognized by the industry, with the foundry being selected to present at the 2009 International Electron Devices Meeting (IEDM) on an internally developed hybrid High-K/Metal Gate approach. Currently, UMC is already working with several customers to adopt their products on 28nm technology.

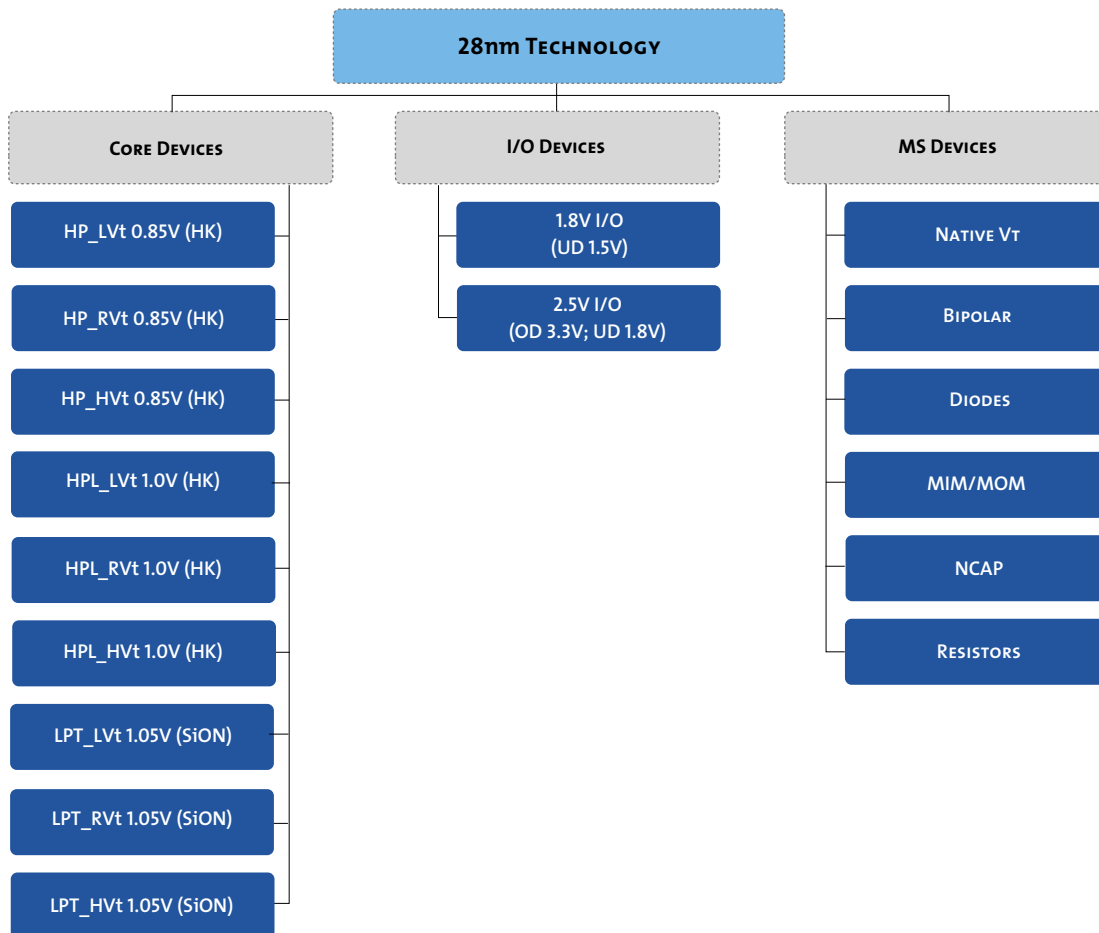
## 28NM TECHNOLOGY FOR BROAD APPLICATIONS

UMC incorporates three approaches for its 28nm technology to address different market applications. The first option is conventional silicon gate/silicon-oxy-nitride gate oxide technology used for our Low Power (LPT) process, which is ideal for portable applications such as mobile phone and wireless ICs. UMC's second option will utilize a High-K/ Metal Gate stack on a low power platform (HPL) for speed-intensive and power consumption optimization products such as digital TV applications or portable processors. Finally, the high performance platform (HP) with High K/ Metal Gate technology boosts performance to the highest to satisfy particular graphics, high-speed networking and CPU applications.



## 28NM DEVICE SOLUTIONS

UMC's 28-nanometer solution begins with a flexible technology design platform. Customers are able to choose the process device options that are optimized for their specific application, such as HP, HPL and LPT transistors with their multiple Vt options. Technologies such as mixed signal/RFCMOS and embedded memories can then be implemented to further customize the process.



To take advantage of today's most comprehensive SoC foundry solutions, please contact one of our worldwide sales offices.

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The UMC logo is displayed in a large, bold, blue sans-serif font.