

3D IC Architecture for SSD-in-a-Chip

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Summary

Even though SSDs have many advantages over HDDs, replacement of HDDs by SSDs is slow because SSDs are substantially more expensive per unit of capacity than HDDs. In order to accelerate the SSD era, BeSang's 3D IC architecture for SSD-in-a-Chip is being designed to reduce the price gap between SSDs and HDDs using low-cost 3D memory layer stacking combined with high-density vertical flash memory cells. Reliable thin, single crystalline silicon layer formation in 3D, unrestricted and small pitch 3D interconnects using conventional via, and conventional flash memory cells with vertical orientation enables low-cost and high-performance 3D ICs.

Biographical Statement

Dr. Sang-Yun Lee has served as president and CEO since BeSang's inception in 2003, during which BeSang has successfully developed world first 3D IC. He is a pioneer in 3-dimensional integrated circuit with more than 30 US and foreign patents. He has 20 years experience in the semiconductor industry. His earlier experience in the semiconductor industry included work at Samsung, Motorola and Integrated Device Technology in the area of image sensor, DRAM, SRAM and analog devices. Sang-Yun holds M.S. and Ph.D. degrees in electrical engineering from Washington University in St. Louis, MO and Arizona State University in Tempe, Arizona, respectively.