

# The City In The Tower: 3D ICs Transform The Electronics System Landscape

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**Abstract:** Each Industrial Revolution resulted in advancements that propelled humans forward into a seemingly different world: now, we are living, witnessing, and enjoying the benefits provided by the fourth Industrial Revolution, Industry 4.0, with novel technologies like artificial intelligence (AI), 5G, and the internet of things (IoT). The challenge is that new advancements exceed the physicality and needed power of the current monolithic chip, causing System-on-a-Chip (SoC) manufacturers to struggle with difficulties like higher cost, lower yield and restricted reticle size. To overcome the limitations of traditional monolithic SoCs, advanced designs require adopting alternative solutions: a three-dimensional integrated circuit (3D IC). Learn in this session the benefits of using chiplets and 3D IC and the required advanced and integrated planning, designing and verification flow.