

COURSE OFFERING

3D Packaging

THE NEW PACKAGING REVOLUTION



Understand the key technical issues that will allow 3D packaging technology to revolutionizing electronic systems.

duration:

One Day

course brief:

This course presents a clear and technically current description of the revolutionary new technology of 3D packaging. Learn how this new packaging paradigm will dramatically enhance speed, packing density, power consumption, functionality and system performance.



instructor:

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course objectives:

- 1) To present the underlying technological forces that have driven the development of 3D packaging technology
- 2) To illustrate the different types of 3D packages that may be adopted and how they are designed and fabricated
- 3) To identify and discuss the key technical hurdles to the widespread adoption of this technology and their most probable solutions

appropriate for:

Designers, R&D, Product, Packaging, Device, Test and Process engineers, managers and other personnel who desire a deeper understanding of 3D packaging technology

course outline:

The Motivation for 3D Packaging:

- 3D market drivers
- Moore's Law: No exponential lasts forever ...

2.5 3D Packaging:

- A stepping-stone technology or a permanent solution?
- 2.5D and the role of interposers in 3D packaging design
- Silicon interposers attributes and design configurations
- The impact of interposers on mechanical and thermal performance

Thru-Silicon Vias:

- Thru-silicon technology:
 - design, processing and production
 - TSV formation: barrier & seed fill
 - Copper fill & CMP

Thru-Silicon Via Design:

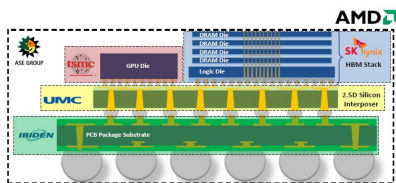
- Thermal analysis of 3D applications & hot spot mitigation
- CAD tools and design flows for 3D applications
- Design for test issues

Wafer Bonding/De-Bonding:

- Wafer bonding technologies
- Thin wafer handling and chip stacking methods
- Can 3D packaging be made cost effective?

The course content is presented in a clear, highly visual and easy-to-understand manner. It is taught by a world-class instructor who has over 25 years of hands-on experience in the field of silicon fabrication and who is an award winning public speaker.

The course notes are technically current, reproduced in high resolution color and profusely illustrated with high-quality graphics.



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