

Interposers – Silicon, Organic and Glass

Course Outline

1. Introduction to Interposers

- What is an Interposer?
- 2.5D vs. 3D interposer
- Why 2.5D interposer?
- Why 3D Interposer?
- Interposer Fundamentals
- Interposer Options

2. Silicon Interposers

- Historical perspective
- TSV as an enabling technology
- Wafer BEOL Si Interposer Process
- Cost Barrier & Lower Cost Si Interposer Approaches

3. Organic Interposers

- Low CTE Core Materials
- Fine Pitch Wiring on Build-up Layers
- Wafer RDL processes applied to Organic Core for 2.1D Interposers

4. Glass Interposers

- Why glass?
- Status of Through Glass Via Technology
- Latest advances in glass interposers

5. Electrical Design

- Interposer signal and power delivery
- Electrical Design & Test challenges

6. Chip & Board Level Interconnections

7. Application Examples

- Mobile & High Perf Logic-Memory
- Die Break-up for Improved Yield
- Photonics
- RF/Analog/Power/MEMS Integration

7. Manufacturing Infrastructure

- Wafer Based
- Panel Based

8. Closing Thoughts