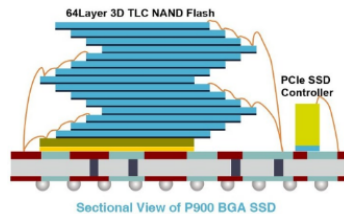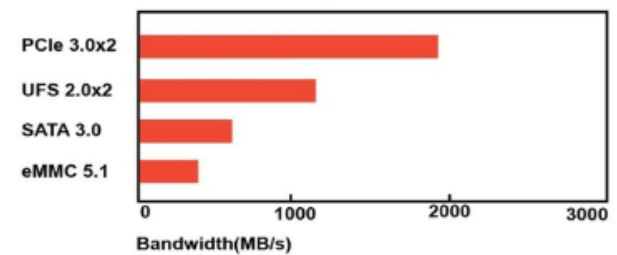# FMS17 – Open Session 202-C
"Mobile Applications"

❑ **Implementing Mobile Storage with 3D-NAND**

❑ **New Innovations in SD Cards Lead the Way to Mobile Everything**

❑ **PCIe BGA SSD**

64Layer 3D TLC NAND Flash

PCIe SSD Controller

Sectional View of P900 BGA SSD

11.5mmx13mm

Bandwidth by Interface

PCIe 3.0x2 / UFS 2.0x2 / SATA 3.0 / eMMC 5.1

Bandwidth(MB/s)

Session Description:

- **Implementing Mobile Storage with 3D-NAND:** how mobile storage with 3D NAND is evolving. UFS equipped with 3D NAND could provide higher performance and larger storage capacity to meet the UX requirement and the emerging 4K or 8K content. SMI will present how SMI UFS controllers support 3D NAND for mobile applications and how to enable the ecosystem of UFS card.

- **New Innovations in SD Cards:** new SD-PCIe card is the latest standard that the SD Association is working on. It is expected that such a 'big jump' in SDA will open significant new opportunities for product manufacturers and consumers. And even more capabilities are coming as SD Association continues to lead the way to mobile everything and everywhere.

- **PCIe BGA-SSD:** the small form factor, mobile PCIe BGA-SSD is ideal in the 11.5x13 mm package compatible with eMMC and UFS chips, which usually are DRAM-Less designs. With the benefit of Host Memory Buffer (HMB) technology, the small 11.5x13mm form factor can excel in PC and mobile applications in terms of performance. DRAM and DRAM-Less with/without HMB, the different NVMe/PCIe BGA-SSD options in terms of performance, power consumption and the potential will be discussed.

Speakers' Biographies:

- Robert Hsieh leads mobile embedded product marketing at Silicon Motion, and involves strategic product planning and OEM project management for mobile embedded products. He managed to mass production eMMC/UFS controllers in company and successfully design in key OEM customers. He has more than 15-year experience in storage product design and mobile product marketing.

- Yosi Pinto is Director of Standards at Western-Digital (ex SanDisk), a global storage leader, and serves as the Chairman of the Board and the Technical Committee Co-Chair at the SD Card Association. Mr. Pinto work at SanDisk since 1977. He had a major contribution in the first SD Card standard creation, developed the first SD card controllers, has led the Memory Stick project and was responsible on other SD/eMMC products and Standard initiatives at SanDisk, JEDEC and SDA. Yosi is the inventor of more than 30 patents related to memory cards technologies, including most essential ones. Mr. Pinto holds an MSEE from Stevens Institute of Technology and MBA from Tel Aviv University.

- Mason Chen is an SSD product marketing manager at Silicon Motion, where he focuses on the company's widely used DRAM-less SSD controllers. He has over 10 years experiences in project management and product marketing at fabless semiconductor companies, including Genesys Logic and UMC. He holds an MSEE from Santa Clara University.