

HBM2E : Outclassing the Data-Driven Era

- *World's First and Fastest HBM Now in Mass Production (3.6Gbps speed, 460GB bandwidth)*
- *High Bandwidth, High Power Efficiency, Small Form Factor*
- *Optimal Memory Solution for Data-Driven Fourth Industrial Revolution*

- High Performance Computing, Datacenter
- Graphic-Intensive Applications
- 5G Network
- Autonomous Driving, Artificial Intelligence

New and Innovative Packaging Technology

World's first to utilize TSV and OSAT 2.5D SiP CoWoS process

More compact system-level form factor with greater chipset area efficiency

**High
Bandwidth**

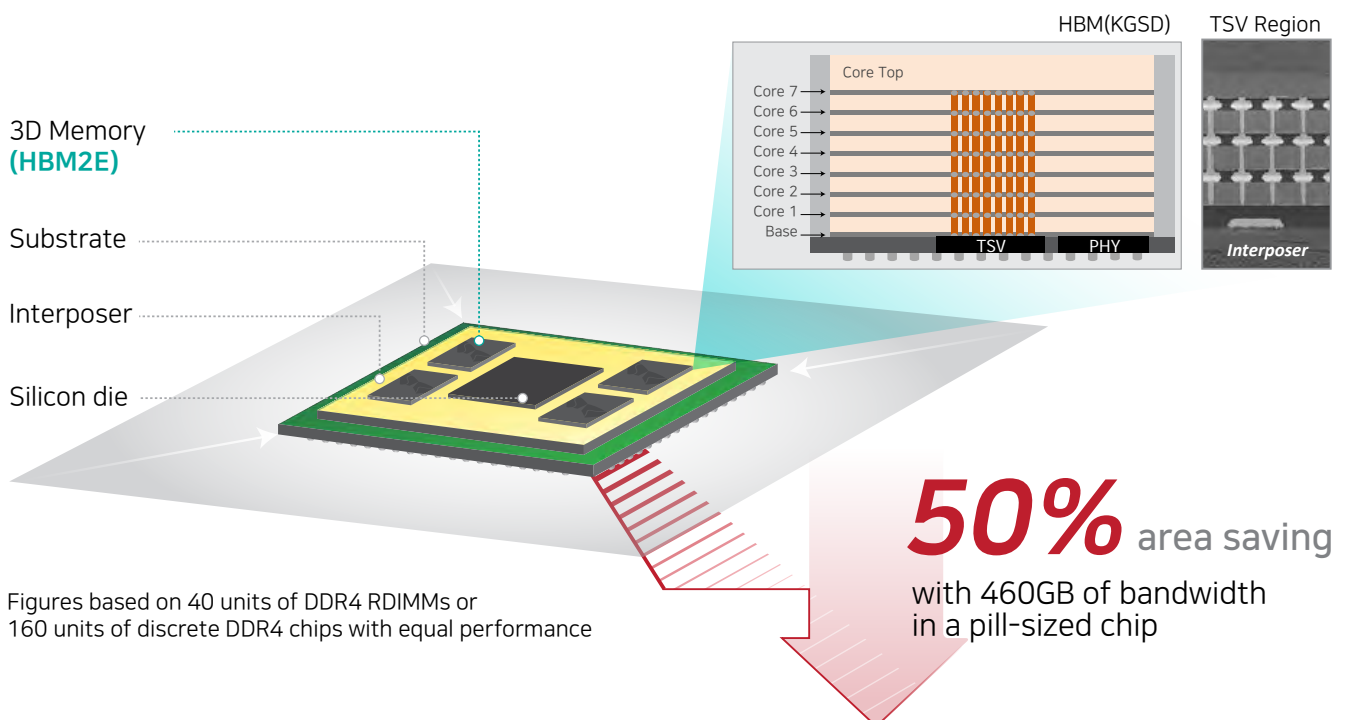
Max 9X Faster Data Transmission
Compared to Commodity
DDR products

**High
Power Efficiency**

More than 60%
efficient power saving vs. GDDR6

**Small
Form Factor**

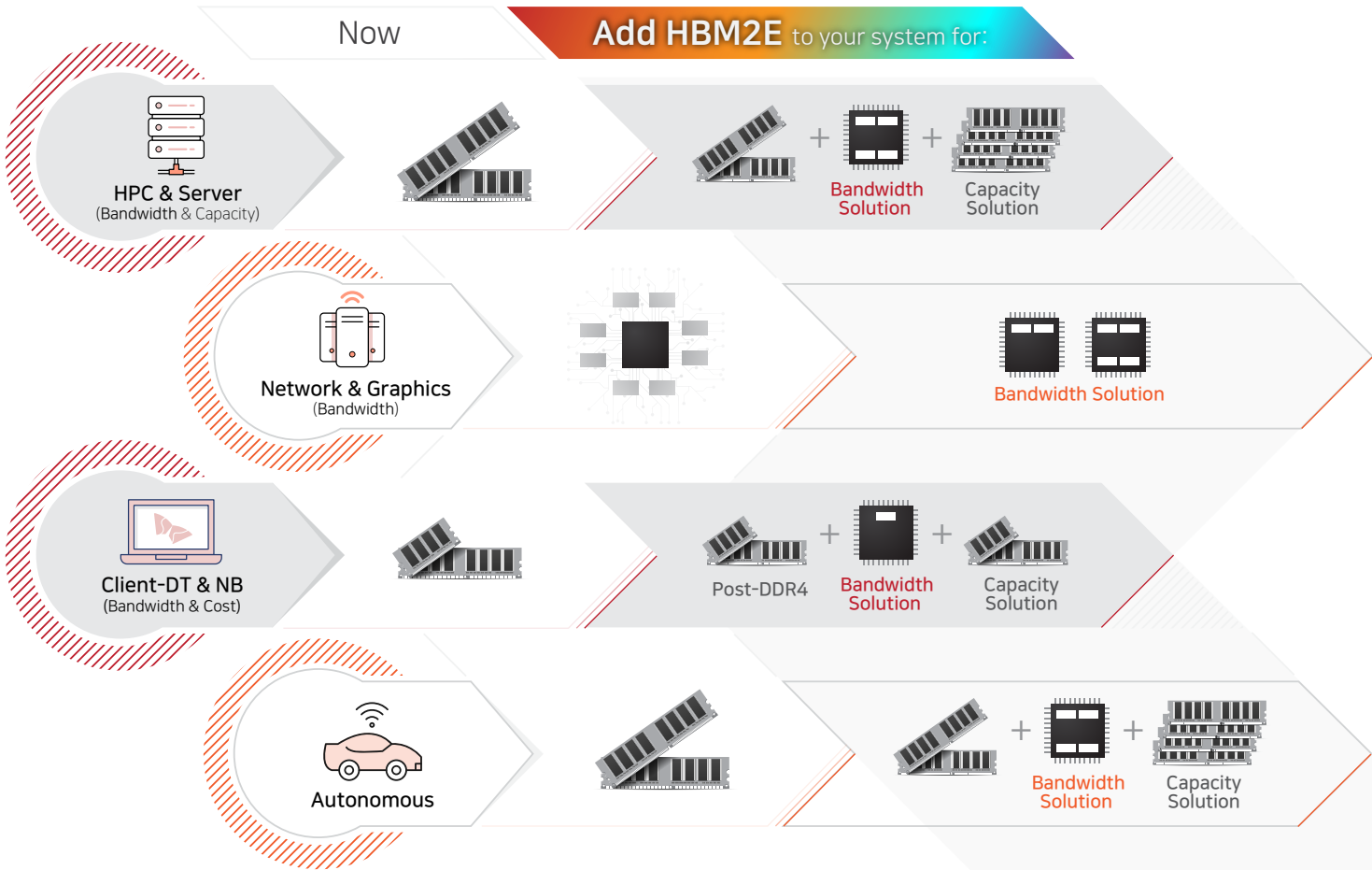
More Density Per Form Factor
For 16GB Capacity
Only 1pc x 16GB HBM2E vs.
16pcs x 16Gb GDDR5



System-level Benefits from HBM Adoption

High bandwidth and capacity for HPC/Server applications

High bandwidth and small form factor for Networking/Graphics/Desktop/Notebook PCs



	DDR4	LPDDR4(x)	GDDR6	HBM2	HBM2E
Data rate	3200Mbps	3200Mbps (up to 4266Mbps)	14Gbps (up to 16Gbps)	2.4Gbps	3.6Gbps
Pin count	x4/ x8/ x16	x16/ch (2ch per die)	x16/ x32	x1024	x1024
Bandwidth	5.4GB/s	12.8(17)GB/s	56GB/s	307GB/s	460GB/s
Density (per package)	4Gb / 8Gb	8Gb / 16Gb/ 24Gb / 32Gb	8Gb / 16Gb	4GB / 8GB	8GB / 16GB

Related Articles

- SK hynix Starts Mass-Production of High-Speed DRAM, "HBM2E"
- Official Statement: Recent Media Reports regarding SK hynix's HBM2E and AMD's Next-Gen GPU are Misleading
- SK hynix Develops World's Fastest High Bandwidth Memory, HBM2E