

CXL: Enabling New Pliability in the Modern Data Center

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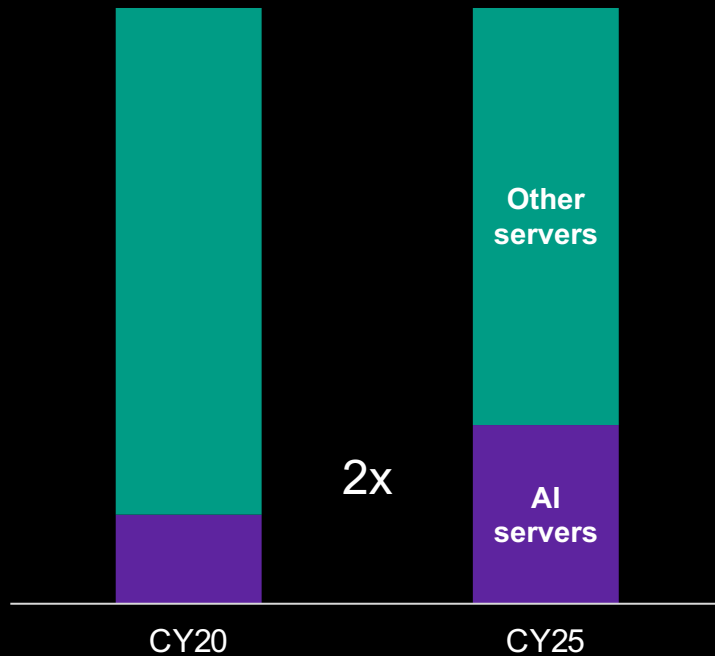
Flash Memory Summit | August, 2022

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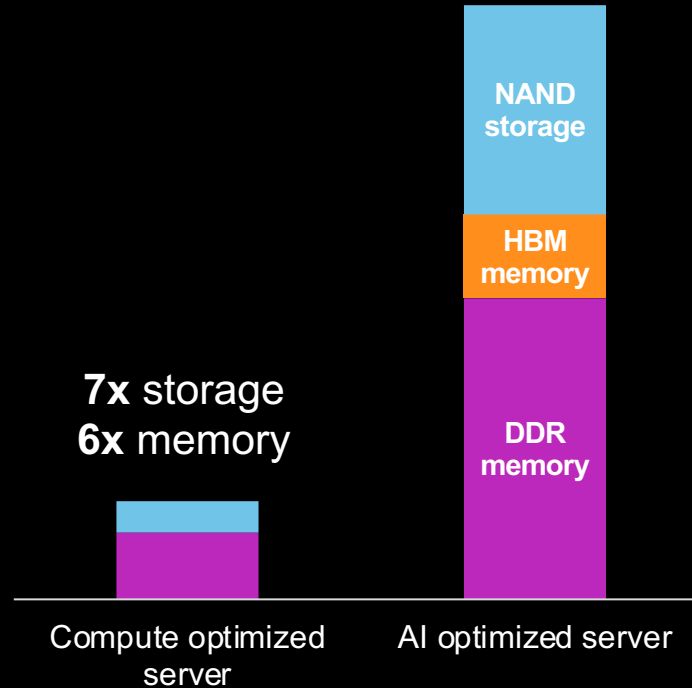


Data centers = memory centers

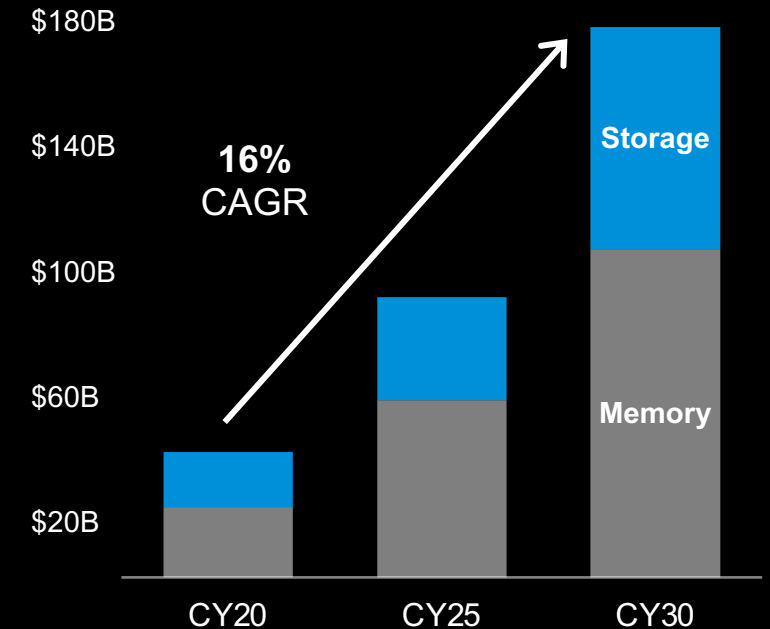
Hyperscale adoption of AI



Drives memory & storage growth



Micron's global data center market

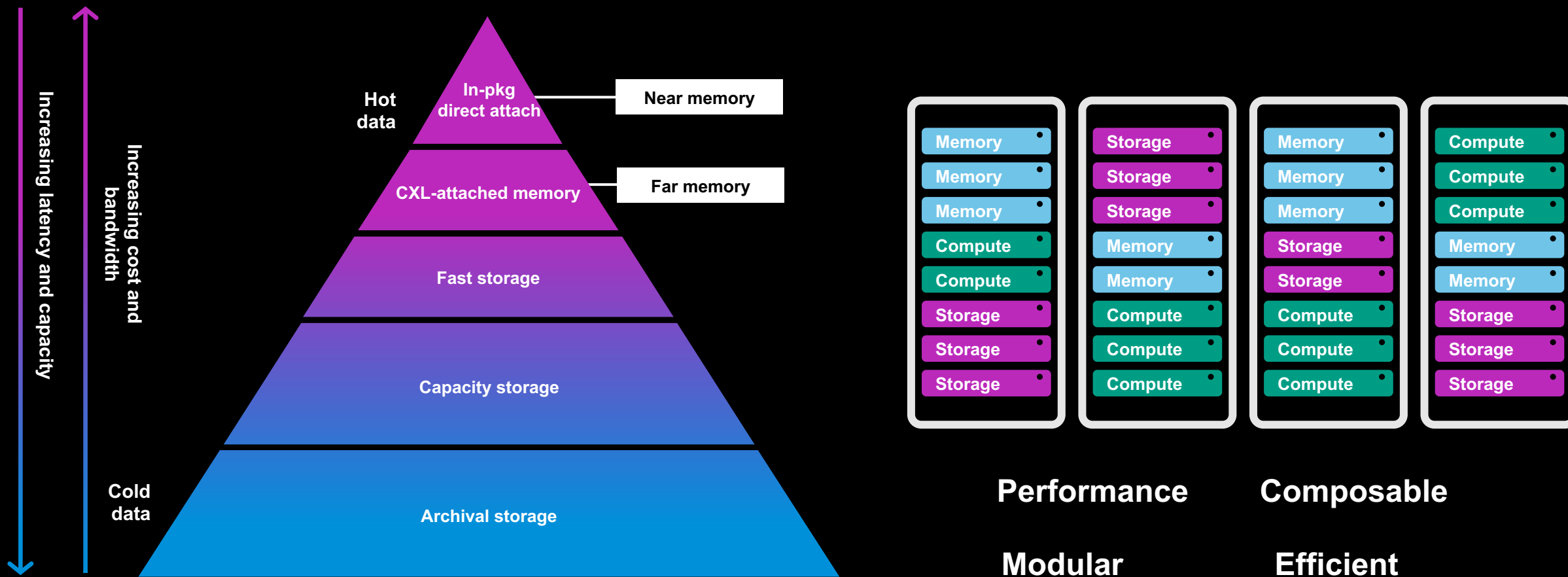


Memory and storage growth will never be as slow as before, and possibly never as fast as now.

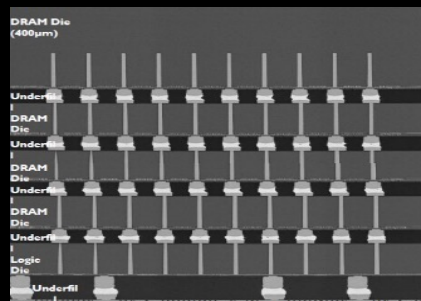
Sources: 1. Hyperscale AI Adoption: Internal Bain research
 2. Server Content referencing two published AWS EC2 hardware configs:
 AWS Instance types 3/1/22
 Standard server Config = 256GB DRAM, 0GB HBM, 1.2TB SSD Storage
 AI Server Config = 1152 DRAM+ 320GB HBM, 8TB SSD Storage
 3. Global Data Center Market = Micron MI Market Model

Memory-centric innovations in the data center

Applying the power of software-defined infrastructure

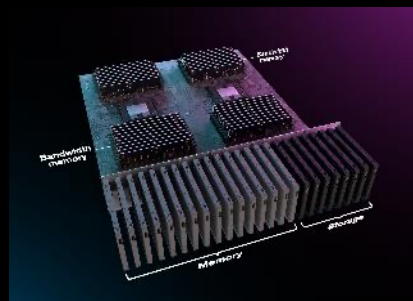


CXL Use Cases



Alternative to Stacking

Stacking drives non-linear cost/bit



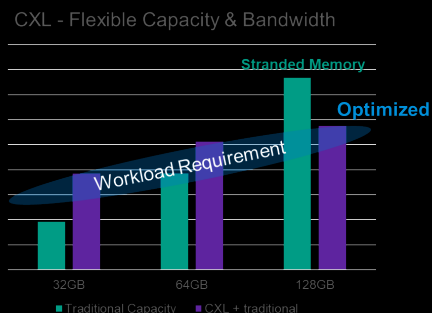
Provide Ultra-High Capacity

Expansion beyond 4H 3DS TSV



Add Memory Bandwidth

CXL enables memory attached points



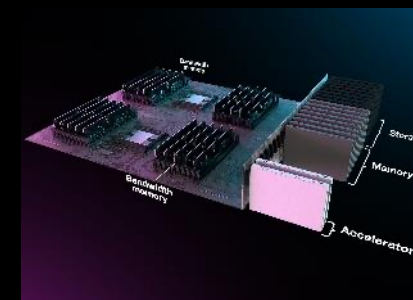
Balance Memory Capacity/BW

- DRAM capacity/BW on demand
- Balances GB/core and BW



Reduce System Complexity

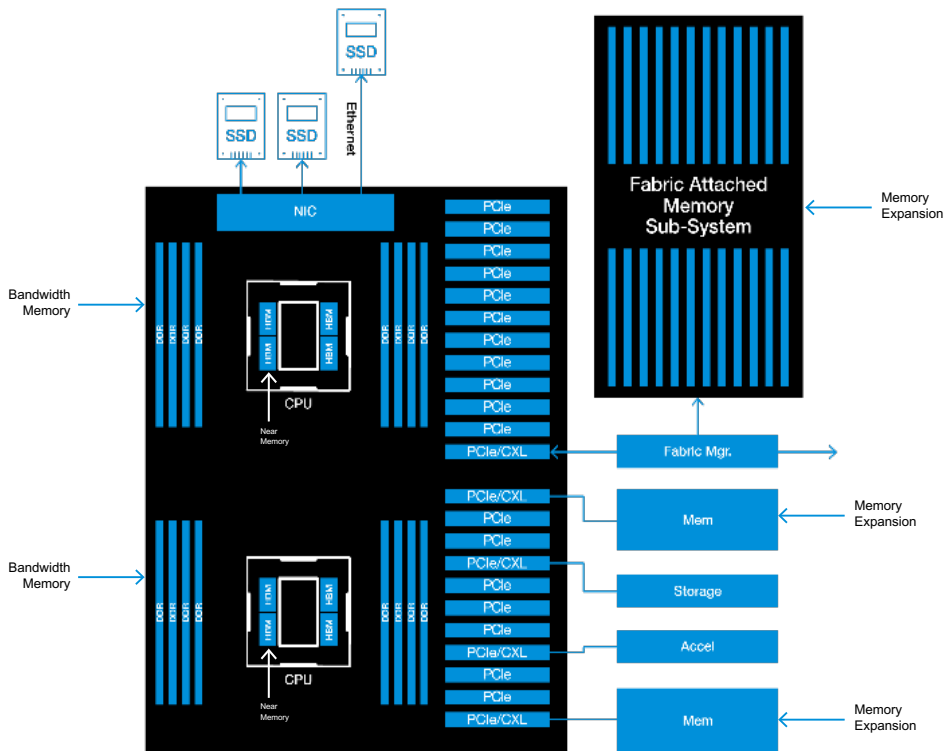
- Fewer memory channels
- Thermally optimized solutions



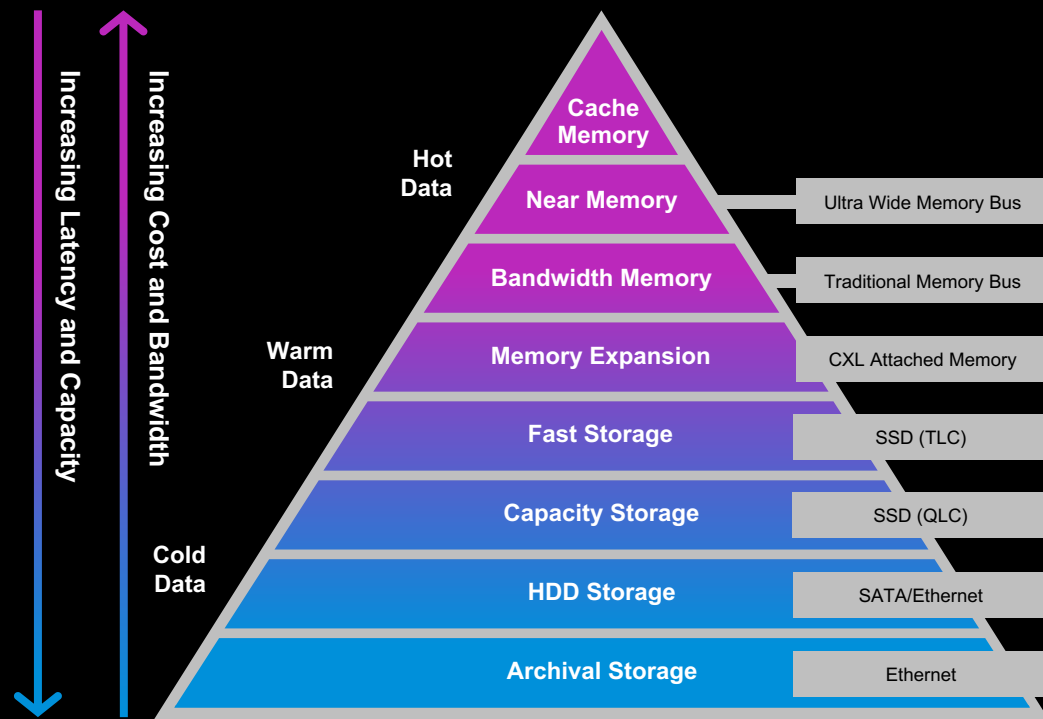
Enablement After 2DPC

Future 50% slot reduction

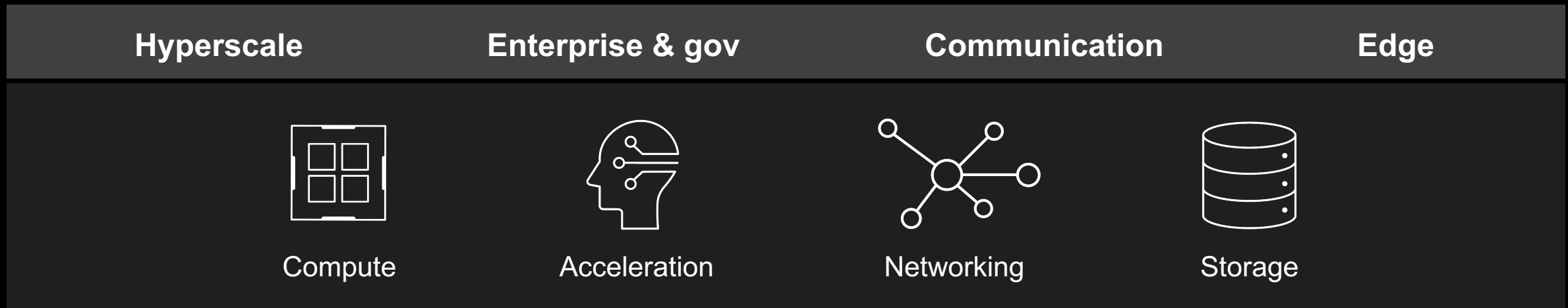
The Industry's Fully Composable, Scalable Vision



Memory and Storage Hierarchy



Micron's "data centric" portfolio



HBM	GDDR	LPDDR	DDR	TLC NAND	QLC NAND
Deep customer relationships		Standards body leadership		Ecosystem enablement	
Silicon technology		Tech node leadership		Advanced packaging	
				Emerging memory	

A complete portfolio built on silicon technology, world class manufacturing, and a diversified supply chain.

Micron is committed to partnering with the industry; ultimately serving and delighting our customers

Strategic ecosystem partnerships

- Define, develop and prove technologies
- DDR, LP, & GDDR
- GPU Direct Storage
- Enable differentiated solutions
- Extend the ecosystem



Industry organizations

- Provide leadership in industry organizations to enable scalable advancement



The logo features a stylized white 'M' with a white orbital ring around it, followed by the word 'micron' in a bold, lowercase sans-serif font. A registered trademark symbol (®) is located at the top right of the word.

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