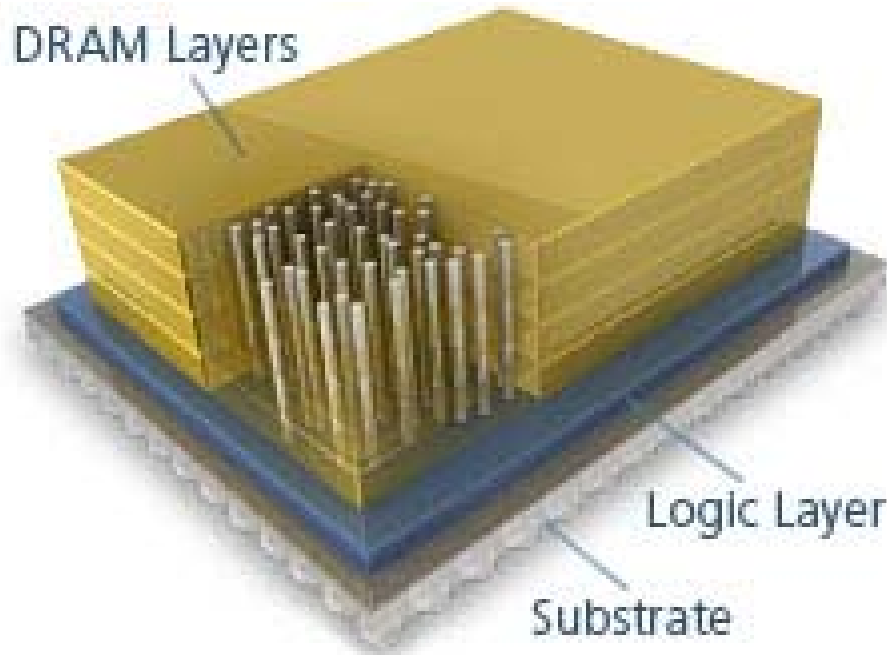


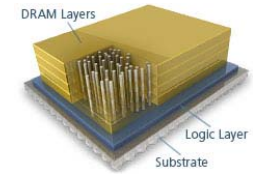
Micron's Hybrid Memory Cube (HMC)



- August 2011: Announced by Micron
- September 2011: Intel announced it is working with Micron on HMC

- Memory chip with 4 or 8 DRAM dies over 1 logic die
- Can be placed in an MCM with processor dies
- DRAM dies only store data while logic die handles DRAM control

Micron's Hybrid Memory Cube (HMC)



- Current logic die:
 - Advanced memory controller functions + self test
 - Improves bandwidth, latency, and energy
- Future logic die:
 - Support for Intelligent Memory Operations?
 - Preprocessing data as it is read from memory
 - Performing processor commands “in place”
- Still uncertainties: Who will design and test the logic? A memory company?