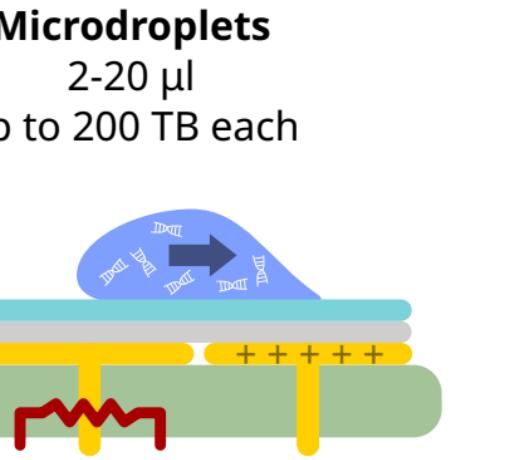
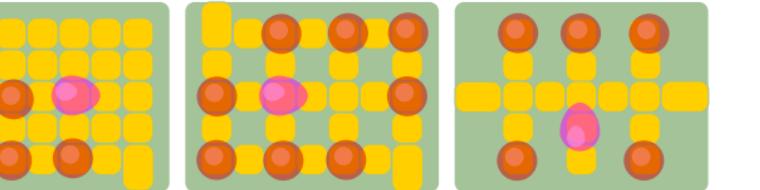


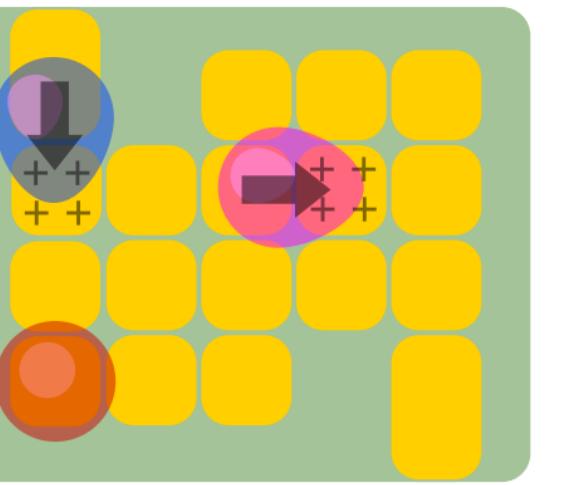
Hydrophobic Layer
Dielectric Layer
Heaters & Electrodes
Printed Circuit Board



Microcontroller to control electrodes, as well as other actuators (e.g., heaters)
These are needed to perform biochemical protocols to handle DNA, such as Polymerase Chain Reaction, Primer based-retrieval, Microbeads, and DNA sequencing and synthesis.

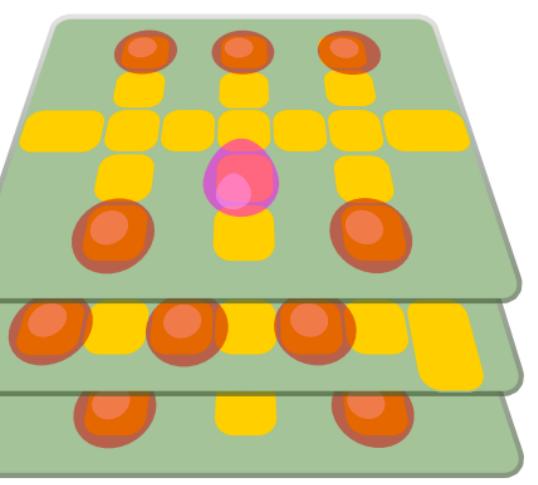


Individual Droplet Control (move, merge, split)



Different layouts to optimize for Cost, Capacity, Access Latency, or Throughput

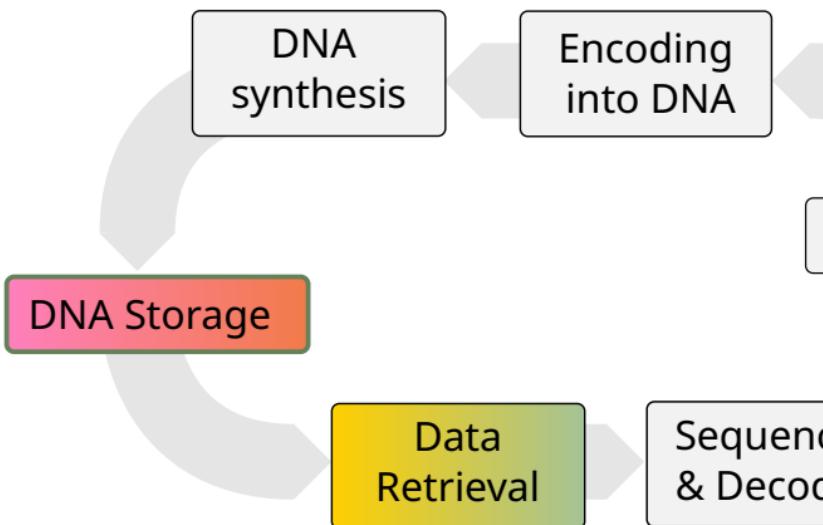
Stackable into High-Density Parallel Storage Arrays



Current Industry Standard:
LTO-9 (18 TB raw, 45 TB compressed)
Sequential Access
Cartridge Dimensions
102 mm x 105 mm x 21 mm

Using DNA the same volume fits 2 EB of data but with many opportunities for random parallel access.

Enzymatic
Chemical



Selective PCR
Microbeading
Hierarchical Retrieval Strategies

...GCCTCGGTACACGGTATGAG ...

Binary Data

Illumina
Nanopore