MicroICE (Microcooling for Intensely Concentrated Electronics)

**OBJECTIVE**

Design, fabricate, and characterize a hierarchical manifold micro-channel heat sink to dissipate high heat fluxes at low pressure drops using evaporative cooling.

**Test Vehicle**

- Working Fluid: HFE-7100
- ~3000 Flow Paths in ~70 mm³
- ~15 μm-wide Channels
- 20:1 Channel Aspect Ratio

**Performance**

- >1000 W/cm² Heat Flux
- 2.6 kW/cm² Hotspot
- ~2000 W/cm³ Heat Density

**Publications**