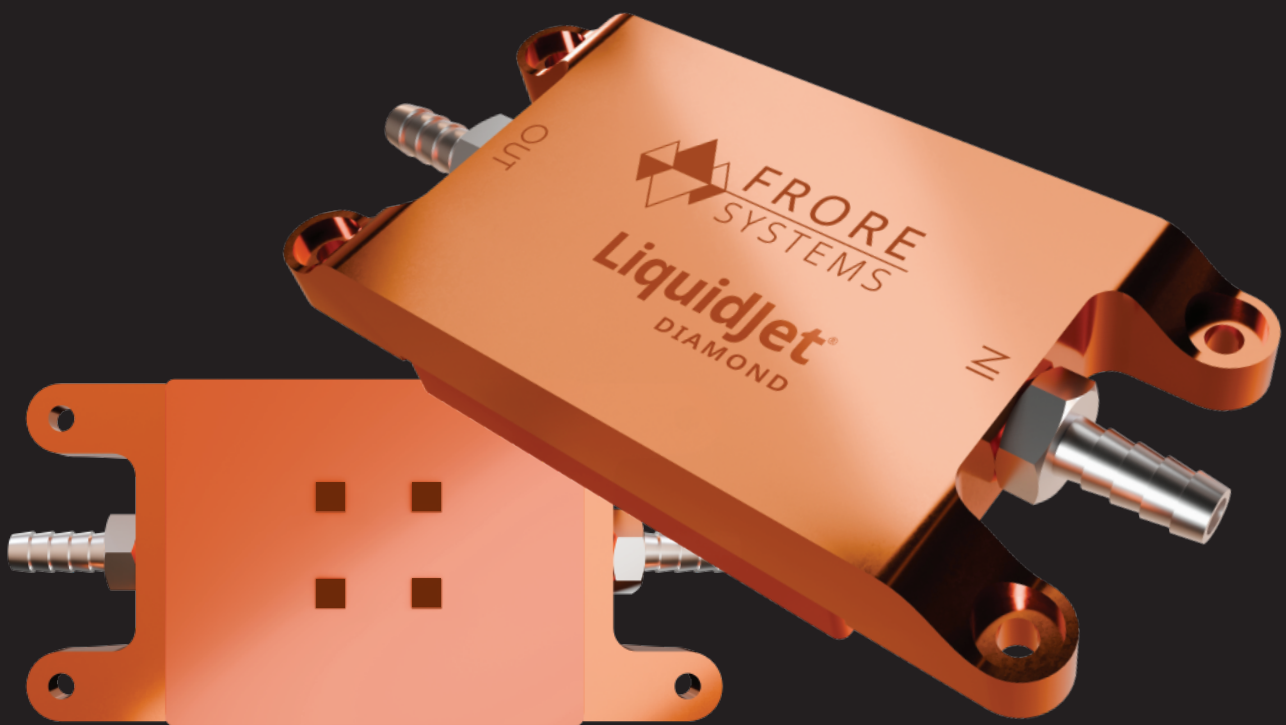




Do More.



LiquidJet[®] DIAMOND

The most advanced DLC coldplate for high power density hotspots

LiquidJet® DIAMOND

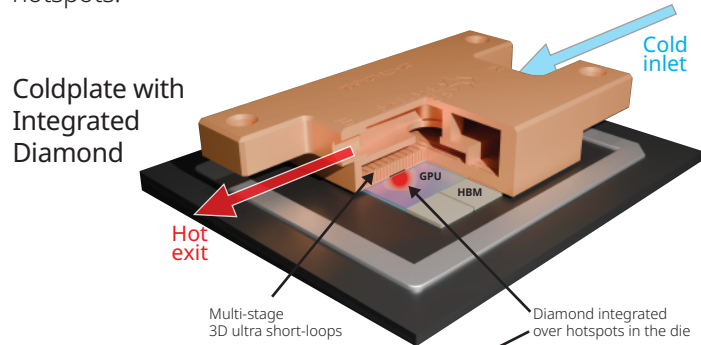
The most advanced DLC coldplate for high power density hotspots.

DESCRIPTION:

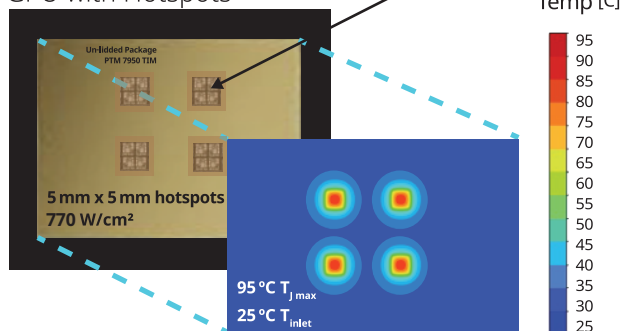
LiquidJet DIAMOND is a 3D ultra short-loop multi-stage coldplate with integrated Diamond spreader. Designed to achieve over 150% higher performance than traditional skived coldplates, LiquidJet DIAMOND's innovative multi-stage architecture delivers 75% higher heat transfer efficiency. It enables the entire flow to be concentrated to first cool the hotspots, before cooling the other areas of the GPU die, HBM's and other chiplets in the SoC. LiquidJet DIAMOND supports hotspot cooling up to 770 W/cm^2 for a $5 \text{ mm} \times 5 \text{ mm}$ hotspot @ 25°C inlet temperature, $95^\circ\text{C } T_{j\text{max}}$ with PTM7950 TIM in an unlidded package, exceeding the requirements of future GPUs: Rubin Ultra, Feynman, MI455, MI500, and custom hyperscaler ASICs.

3D MICROSTRUCTURE CORE WITH INTEGRATED DIAMOND:

Fore Systems takes a unique approach to LiquidJet coldplate manufacturing, adapting semiconductor processes to metal wafers, fabricating multi-stage cooling architecture with innovative 3D ultra short-loops, that are designed precisely to the power maps of data center GPUs. Diamond is embedded in the bottom surface of the coldplate, placed directly above the hotspots.



GPU with Hotspots



LIQUIDJET DIAMOND PERFORMANCE COMPARED TO MULTI-INLET SKIVED:

- Hotspot cooling:
Over 150% higher max power density
- 75% higher heat transfer efficiency
- $16 - 22^\circ\text{C}$ cooler GPU
- 30 - 35% more AI Tokens per watt
- Seamless drop-in upgrade

SPECIFICATIONS:

LiquidJet DIAMOND dimensions shown are customized to the target GPU.
Measurements for NVIDIA GB300
Length: 104.6 mm Width: 62 mm Height: 20.4 mm
Material: Copper, Diamond

