

1 MW CDU

# 1 MEGAWATT TWO-PHASE COOLING HAS ARRIVED



# Next-Gen Technology Engineered for the Future of Al Data Centers

The hum is no longer just a sound—it's the pulse of power, precision, and performance coming to life.

Introducing the source: the industry's first 1 MW Two-Phase, Direct-to-Chip CDU engineered for the Al era.

Purpose-built for the next generation of high-density computing. This isn't evolution. It's innovation ignited.

# **TALK TO AN EXPERT**

Scan the QR code or visit

1-act.com/contact



\*Capacity based on R515B, consistent with recent NVIDIA CDU specifications: Evaporating temperature of  $54^{\circ}$ C, leaving vapor quality of 60%, 490 GPM of  $41^{\circ}$ C facility water.

#### PERFORMANCE

Cooling Capacity	1 MW
Method/Medium to Cool Refrigerant	Facility water
Maximum Inlet Temperature (Water)	≥45°C
Minimum Inlet Temperature (Water)	7°C
Maximum Refrigerant Pressure	300 PSIG
Maximum Pump Differential Pressure	100 PSID
Maximum Refrigerant Temperature	60°C
Minimum Refrigerant Temperature	20°C

#### **TECHNICAL**

Dimensions (W x H x D)	50" x 81" x 48"
Weight (Dry/Wet)	3200 lb/3500 lb
Display	Color touchscreen HMI
Pumps	3 with N+1 redundancy
Condenser	Liquid-to-liquid
Accumulator	Accommodates up to 8 racks
Hot Swappable Connections	Yes
Refrigerant	Dielectric, low GWP, non-corrosive

#### **ELECTRICAL**

Power Supply	460 V, 60 Hz, 3-phase, 60 A
<b>Pump Capacity</b>	180 GPM at 100 PSI differential pressure
Pump Reliability	Minimum 61,500 hours continuous operation at full load

# PERFORMANCE & DESIGN INSIGHTS

### **Two-Phase Cooling Advantage**

Ultra-high heat flux, minimal flow. Two-phase cooling outperforms single-phase to cut thermal resistance—and cuts operating expenses and total cost of ownership.

#### **Passive Fluid Control**

Precision-engineered flow management minimizes pressure drops, ensuring balanced control and uniform chip temperatures under all loads.

#### Smart, Connected, Adaptive

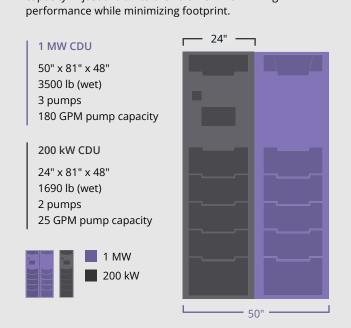
Integrated monitoring enables predictive maintenance, dynamic load balancing, and seamless BMS/DCIM integration for optimized operation.

# **Engineered for Reliability**

High-reliability components (pump ≥61,500 hrs), N+1 redundancy, and dielectric refrigerant ensure safe, continuous uptime and simplified service.

## **High-Density Footprint**

ACT's 1 MW Two-Phase CDU delivers *five times* the cooling capacity in just *two times* the volume—maximizing performance while minimizing footprint.



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