BUY (INIT) | $25.87 PT

March 26 2025

SAIHEAT (SAIH.US)

A Hybrid Computing Provider and Energy Infrastructure Play at the Forefront of AI Acceleration

SPX	**5712.20**
IXIC	17899.01
NDX	19916.99
BTC($)	86829.48
12m PT($)	25.87
Upside(%)	201.2

Key Data

Price($)	8.589
52Week High/Low($)	26.98/5.3
Market Cap(MM)	14.56
Free Float(MM)	8.30

Price Performance

% Chg	1m	3m	12m
Absolut	-15.79	-21.71	-47.94
Relative	-5.00	-5.43	9.47

Source: Capital IQ, uSMART Global Research

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Summary

❑ **Sustainable Augmented Intelligence (SAIHEAT) is a computing and energy operator providing BTC and AI computing services, alongside liquid cooling and modular nuclear power solutions.** As an emerging AI and BTC computing provider, SAIHEAT is capitalizing on the exponential growth in computing demand driven by efficiency innovations. Large language models like DeepSeek V3, leveraging MoE architecture (671B parameters, 37B activated) and R1-Zero reinforcement learning, have achieved 10-14x efficiency gains. According to Jevons Paradox, these improvements, by lowering entry barriers (input costs of $0.27/1M tokens), will catalyze even greater computing demand. Against the backdrop of accelerating AI computing requirements, the company's innovative containerized IDC solution reduces traditional construction cycles from 1.5-2 years to 3-6 months, while its modular design optimizes scaled deployment costs. SAIHEAT has built a customer base of small and medium-scale computing clients across Southeast Asia and North America, strengthening its competitive position in the computing infrastructure upgrade cycle through an integrated computing-energy model. In digital assets, the company employs a dual-track strategy of self-operated and hosted services at its U.S. Marietta facility (106 PH/s) and Mexico's La Pachuca operations (44 PH/s), generating multiple revenue streams from hardware sales, hosting fees, electricity charges, and cryptocurrency returns.

❑ **As a pioneer in data center liquid cooling solutions, SAIHEAT leverages its dual product line (A/B Series) strategy and ACCE ecosystem to capture critical opportunities driven by AI computing expansion.** A Series products cover 30-384kW power range for AI data centers, while B Series excels in bitcoin mining with 80% noise reduction. The company integrates liquid cooling technology, heat recovery, and Small Modular Reactor (SMR) innovations to redefine data center infrastructure standards. With hyperscale cloud providers' CapEx projected to reach $336 billion (+32% YoY) by 2025, SAIHEAT is well-positioned to benefit from AI infrastructure expansion.

❑ **SAIHEAT's differentiation manifests in four key dimensions:** 1) Innovative containerized AI computing solution enabling rapid 3-6 month deployment, offering flexible customization for small to medium-scale AI computing demands of 5-20 servers (40-160 GPUs); 2) Proprietary liquid cooling technology supporting 40-200kW+ power ranges, leading the response to rapidly increasing AI GPU power requirements (400W→1200W); leveraging 5 years of ASIC cooling experience, the company has validated 10kW per rack cooling capacity, significantly outperforming traditional air cooling's 15-20kW limit; 3) Innovative three-tier thermal system (WITBOX liquid cooling servers + HEATBOX waste heat conversion + USERBOX application solutions) achieving 97% thermal efficiency, optimizing PUE to 1.05, supporting 49-80°C heating range, generating 0.97kWh heat energy per 1kWh computing power, creating an "electricity-computing-heat" business cycle; 4) Addressing U.S. grid supply-demand imbalance (5x demand growth to 128GW over five years, with only 19% grid connection rate for new 85GW capacity requirement) through OpenSMR initiative and OrbitBTC solar innovation.

❑ **SAIHEAT, an emerging computing and energy infrastructure operator dedicated to advancing sustainable augmented intelligence,** delivers both BTC mining and AI cloud computing services through its Computing Division, while providing liquid-cooled data centers and modular nuclear solutions through its Energy Division. Despite its current modest revenue scale, the company's innovative containerized IDC solution (3-6 month rapid deployment) and strategic global footprint across North America and Singapore enable efficient response to surging AI/BTC computing and liquid cooling demands while addressing L-T power supply-demand imbalances in clean energy transition. **We initiate coverage with a Buy rating and $25.87 PT** (25E P/S=4x, 26E P/S=1.5x, 26E EV/EBITDA=23.1x, P/E=55.2x), supported by four key factors: 1) the company's first-mover advantage in capturing accelerating AI computing demand through rapid deployment capabilities and global presence; 2) strong pricing power through its ACCE ecosystem (WITBOX, HEATBOX, USERBOX) amid structural S/D imbalance in data center infrastructure; 3) significant revenue growth potential from major client expansion, projecting 3-4x growth over next 2-3 years with revenue forecasts of $5.45M/$10.62M/$28.15M for FY24-26E and EBITDA turning positive in FY26E (-$4.67M/-$0.19M/+$1.85M); 4) and sustainable competitive advantage in data center infrastructure and clean energy transition through the integration of computing services, liquid cooling technology, waste heat recovery, and SMR energy innovation.

❑ **Risk Factors:** intensifying industry competition, technology innovation falling short of expectations, slower-than-expected major client acquisition, and cash flow pressures. Key monitoring metrics: 1) major customer wins and order pipeline; 2) commercial validation of ACCE ecosystem; 3) progress on SMR technology and OrbitBTC initiatives.

uSMART Forecast

uSMART Forecast	2021	2022	2023	2024E	2025E	2026E
Revenue (USD 000)	17,038.0	10,638.0	6,776.0	5,446.8	10,621.3	28,146.3
EBITDA (USD 000)	(16,165.0)	(5,008.0)	(5,992.0)	(4,574.7)	(166.1)	1,873.0
EPS (Rmb)	(1.43)	(0.46)	(0.26)	(0.24)	(0.79)	0.47
P/E (X)	-	-	-	-	-	55.2
P/B (X)	-	2.8	1.6	1.3	3.0	2.6
P/S	-	28.7	2.1	2.0	4.00	1.5
N debt/EBITDA (ex lease,X)	0.3	0.4	(0.1)	1.6	43.3	(5.1)

Source: Company data, uSMART estimate

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SAIHEAT: Next-Generation Computing and Energy Infrastructure Operator

SAIHEAT (NASDAQ: SAIH) is a computing and energy infrastructure operator dedicated to advancing sustainable augmented intelligence. SAIHEAT provides joint BTC mining and AI cloud computing services (Computing Div.), while offers liquid-cooled data center solutions and modular nuclear products (Energy Div.). The company is led by founder Arthur Lee, one of the youngest Chinese founders of a NASDAQ-listed company. Lee, a consecutive Forbes China 30 Under 30 honoree, has authored influential works including "Computing: The Future of Computing and Energy" and "Energism". The core management team includes COO Dr. Tao Wu and CTO Harry Sun. Dr. Wu, holding a Ph.D. in Chemical Engineering from North Carolina State University, brings extensive semiconductor expertise from his tenure at Intel (INTC.US) as a substrate technology development engineer. He has spearheaded the design and operations of data centers ranging from 10MW to 500MW for industry leaders including Bitmain；CTO Harry Sun contributes 15 years of specialized experience in data center cooling technologies, having served as R&D Director at industry pioneers such as Bitmain and VNET (VNET.US). We believe Arthur Lee's vision is to redefine the infrastructure standard for next-generation green data centers through the integration of computing power, thermal energy, and electricity.

Exhibit 1: Company Management

SAIHEAT Executive Management		
Name	Position	Experience
Arthur Lee	Founder & CEO & Chairman	□ The youngest Chinese founder of a NASDAQ-listed company □ Author of "Energism" □ Entrepreneurial alumni from Zhejiang University's Energy Department □ Over 7 years of experience in global distributed computing industry □ Forbes Asia 30 Under 30 consecutive honoree
Tao Wu	COO	□ Over 16 years of experience in semiconductor technology and 5 years in cryptocurrency mining data center construction □ Started his professional career at the National Institute of Standard Technology and worked in multiple semiconductor companies, including over 13 years at Intel (INTC.US) managing substrate material and manufacturing technology development □ Served as Director of Engineering & US Projects at two world-leading Bitcoin mining companies – Bitdeer (BTDR.US) and BITMAIN, followed by VP of Operation & Engineering at Ambergroup □ Led the design, planning, construction, operation, and maintenance of 10MW, 100MW, and 500MW cryptocurrency mining data centers in the USA □ Received a Ph.D. in chemical engineering from North Carolina State University
Harry Sun	CTO	□ 15 years experience in data center cooling technology R&D and project management; □ Former R&D Director at two world-leading Bitcoin mining companies – Bitdeer (BTDR.US) and BITMAIN; in charge of liquid cooling technology and product development; □ Prior to Bitdeer and BITMAIN, served as R&D Director and General Manager at leading data center company VNET Group (VNET.US).

Source: Company Website, uSMART Global Research

Headquartered in Singapore with U.S. operations, the company focuses on reducing computing centers' carbon footprint. Current computing capacity stands at 150 PH/s (~0.15 EH/s, vs. MARA 53.7 EH/s, vs. RIOT 33.6 EH/s as of February 2025). The company focuses on providing computing services for digital asset mining (BTC) and AI development, while integrating thermal and electrical power to reshape sustainable data center development. Two main business divisions are as follows:

Computing Division:

Currently operating 150 PH/s computing power, employing a dual "self-owned + hosting" model in digital asset (BTC) sector, extending to mining equipment sales and hosting O&M services. Meanwhile, strategically deploying AI computing centers, leveraging containerized rapid deployment technology (3-6 months delivery cycle, significantly faster than traditional IDC's 1.5-2 years) to provide highly adaptable computing services. Through optimization with IDC's AI servers and stable chip supply channels backed by US-listed Singapore entity status, the division can swiftly respond to diverse computing demands from large models to various computing-intensive AI applications.

Energy Division:

The company focuses on reducing computing centers' carbon footprint. Unlike traditional mining companies, SAIHEAT uses digital asset computing as a technical validation scenario. Through its core technical architecture ACCE (Advanced Computing Center Ecosystem), the system integrates high-performance computing servers, proprietary liquid cooling technology, and heat recovery systems to explore next-generation data center infrastructure solutions. The energy division's business consists of two main parts:

①**HEATWIT:** Delivers comprehensive liquid cooling solutions through modular racks and container systems. Proprietary technology achieves 80% noise reduction, enhanced overclocking performance, and 97% heat recovery efficiency for industrial, agricultural, and commercial heating applications. Current operations include U.S. Marietta facility (~106 PH/s) and La Pachuca, Mexico hosting (~44 PH/s), with total hash rate of ~150 PH/s (+275% YoY). This platform validates ACCE ecosystem deployment, supporting large-scale AI data center projects.

②**HEATNUC**: Developing Small Modular Reactor (SMR) technology for edge computing centers' clean energy supply, completing full industry chain from energy production to intelligent distribution. Implementation partnerships span U.S., Canada, and Mexico markets. Earth Orbit Solar (EOS) initiative targets 24/7 stable power through orbital solar deployment. This technology roadmap strengthens the company's data center infrastructure innovation leadership.

Exhibit 2: SAIHEAT's Business Divisions: Computing Division (providing computing power for BTC mining and AI) and Energy Division (thermal power HEATWIT and electrical power HEATNUC)
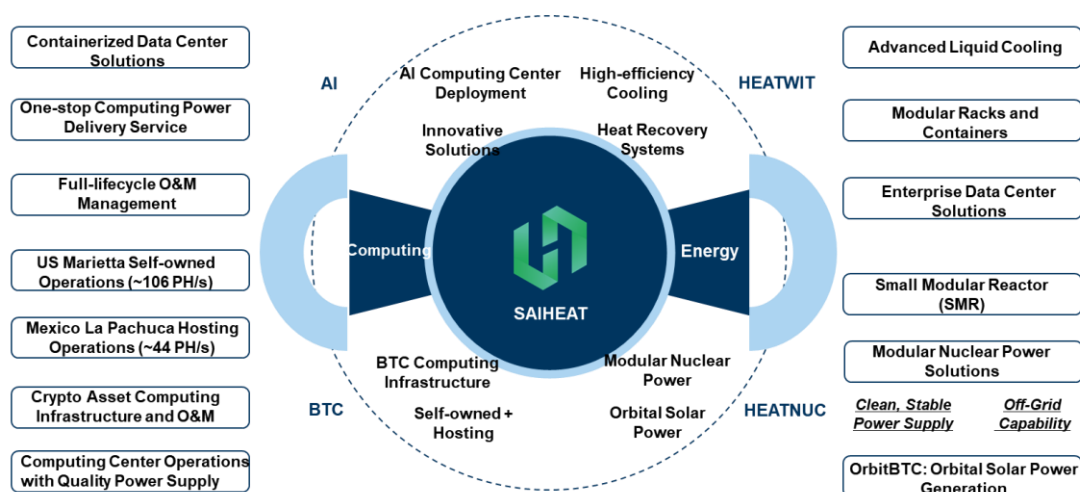
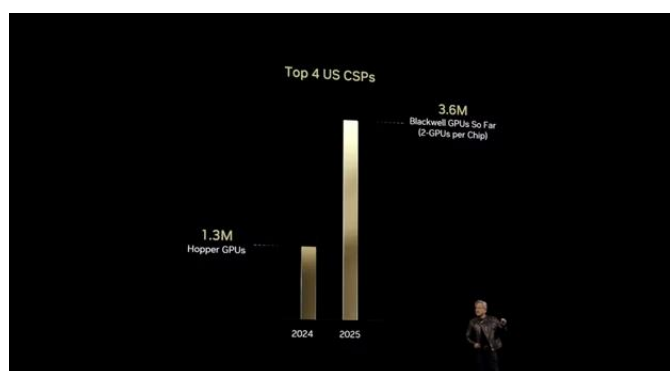Source: Public info, uSMART Global Research

SAIHEAT: Capitalizing on Inflection Point as Efficiency-Driven AI Computing Demand Accelerates

☐ DeepSeek V3 and other large models achieve 10-14x cost efficiency improvements through architectural innovation and reinforcement learning, significantly lowering AI implementation barriers

☐ Efficiency gains coupled with the Jevons Paradox accelerate rather than suppress computing demand growth

☐ SAIHEAT's innovative containerized IDC deployment solution reduces traditional 1.5-2 year construction cycle to 3-6 months, rapidly responding to AI computing demand

☐ As a NASDAQ-listed company, maintains stable supply chain advantages and global service capabilities, having accumulated small and medium-scale AI computing clients across Southeast Asia and North America

AI infrastructure demand is undergoing a paradigm shift, transitioning from pure scale expansion to multi-stage computational efficiency optimization. In our "DEEP-SEEKING ALPHA: CHINA'S AI RENAISSANCE, CROSSING THE AI RUBICON" (Macro Alpha Insights, Issue 11), we detailed the evolution of AI scaling laws. NVIDIA (NVDA.US) CEO Jensen Huang introduced the three-stage scaling laws for AI (pre-training, post-training, inference) at CES 2025, revealing a new paradigm for computing

demand. Subsequently at GTC 2025, he further noted that due to breakthroughs in Agentic AI and inference capabilities, computing demand exhibits "super-acceleration" characteristics - surging (100x) compared to previous year expectations. This assessment is validated in Blackwell orders: orders from just the top four CSPs reached (360k units) in 2025, a significant increase (+177% YoY) from Hopper's (130k units) in 2024.

Exhibit 3: Blackwell GPU Shipments Show Significant Growth vs. Hopper - Top Four CSPs' Orders Up 177% YoY

Source: 2025 CES, Nvidia, uSMART Global Research

Exhibit 4: Three Distinct Computing Scaling Laws - Pre-training, Post-training, and Inference Scaling
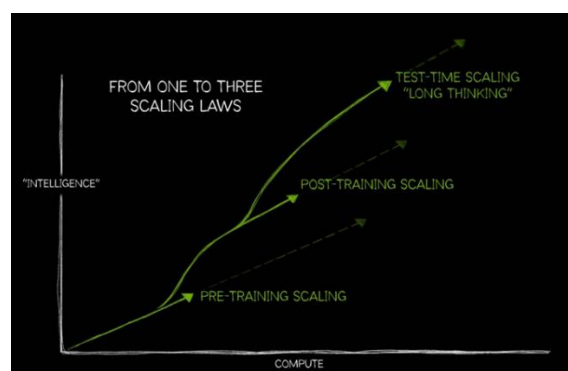
Source: 2025 CES, Nvidia, uSMART Global Research

DeepSeek V3 perfectly exemplifies this new paradigm. Through MoE architecture (671B parameters, 37B activated) and R1-Zero reinforcement learning innovations, it achieves significant efficiency breakthroughs across all three computing phases (10-14x improvement vs. traditional models). According to the Jevons Paradox, such efficiency gains don't suppress demand but rather catalyze larger-scale computing needs by lowering usage barriers (input cost $0.27/1M tokens, output cost $1.10/1M tokens). We observe that this structural shift in computing infrastructure demand creates unique value capture opportunities for technically innovative companies like SAIHEAT.

Against this backdrop, SAIHEAT's innovative computing infrastructure solutions demonstrate distinctive competitive advantages. The company pioneered containerized IDC deployment, compressing traditional data center construction cycles (1.5-2 years) to (3-6 months), rapidly responding to flexible computing demands across AI training phases while significantly reducing marginal costs for scaled deployment through modular design. As a NASDAQ-listed company, SAIHEAT's advantages in chip supply chain and global presence uniquely position it to serve rapidly growing small and medium-scale AI clients. The company has achieved substantial breakthroughs in Southeast Asia and North America, validating its differentiated positioning's commercial viability. SAIHEAT's integrated

computing-energy model (PUE<1.1) further strengthens its value capture capability in the computing infrastructure upgrade wave.
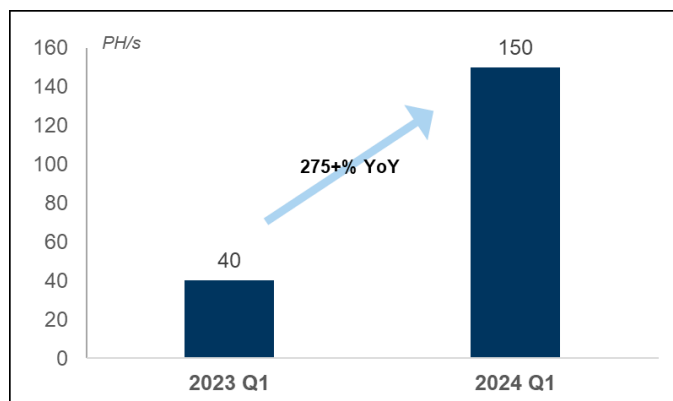
Examining the addressable market, SAIHEAT's AI computing services target two primary customer segments: AI innovation enterprises in international markets (North America, Southeast Asia, etc.) and Chinese companies expanding overseas. For the rapidly growing demands of Chinese AI companies' global expansion, SAIHEAT's strategic presence in North America, Singapore, and other regions provides an ideal implementation solution, ensuring stable computing power supply while meeting data compliance requirements. Typical deployment scale ranges from 5-20 servers (approximately 40-160 GPUs), and using DeepSeek as an example, we estimate a single model training cluster configuration of 8 A100 GPUs (1 standard server). Key application scenarios include: 1) localized large model training for overseas enterprises, particularly vertical large models for specific industries (such as legal, financial, healthcare, education, manufacturing); 2) Agentic AI application development based on open-source models (such as intelligent customer service, process automation, decision support); 3) enterprise proprietary data LLM fine-tuning and deployment; 4) multimodal AI applications (vision, speech, video processing); 5) AI R&D environment setup (including model training, testing, and inference environments); 6) cross-border business localization AI services (such as cross-border e-commerce, social media, gaming).

Exhibit 5: The Jevons Paradox in AI Computing
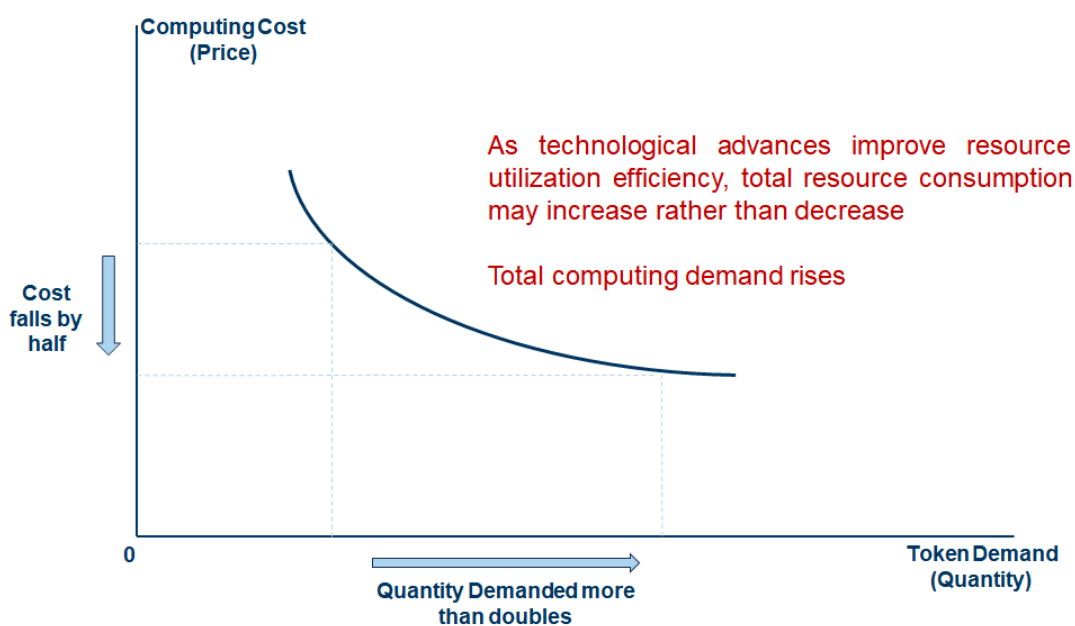
Source: Public info, uSMART Global Research

While expanding its AI computing business, SAIHEAT maintains its strategic position in the digital asset sector. The company currently operates its self-owned Marietta site in the US (c106 PH/s) and hosted operations at La Pachuca, Mexico (c44 PH/s), with a total computing power of c150 PH/s. In the digital asset (BTC) sector, SAIHEAT employs a dual-track model of "self-operated + hosting": the self-operated segment involves deploying mining equipment to acquire and hold BTC, while the hosting business provides operational services to clients, charging for electricity and maintenance. Building on this foundation, the company has extended into mining equipment sales, offering clients hardware sales and hosting services to reduce mining costs, participating in 3-5 year profit-sharing arrangements after reaching agreed production targets, creating a multi-tiered revenue structure encompassing hardware sales, hosting fees, electricity charges, and cryptocurrency gains. Based on our industry research, benefiting from the accelerated adoption of liquid cooling technology in data centers, the company is expected to secure substantial orders in the near term, which will significantly boost revenue scale. While the digital asset business is subject to cyclical factors such as BTC price fluctuations, halving cycles, and network-wide hash rate changes, the company maintains stable operations through its dual-track model, actively pursuing new market opportunities while maintaining its traditional business.

Exhibit 6: Operational Hash Rate (PH/s, Q1'23-Q1'24)

Source: Company filings, uSMART Global Research

Exihibit 7: Hash Rate Distribution by Location

Project	Location	Hash Rate
SAI NODE Marietta (Self-developed)	Marietta, US	~106 PH/s
Mexico Operation (Hosted)	La Pachuga, Mexico	~44 PH/s

Source: Company filings, uSMART Global Research

# SAIHEAT: From Crypto Mining Cooling Pioneer to Data Center Liquid Cooling Leader

☐ AI computing drives unprecedented rack power density (40-120kW/rack), transforming liquid cooling from optional to essential

☐ Global data center demand projected to reach 187.4GW by 2030 (19.8% CAGR), creating market potential for 2.016M liquid-cooled racks

☐ Leveraging crypto mining cooling expertise, SAIHEAT targets AI data center market with comprehensive 40-200kW+ solutions

☐ Liquid cooling penetration expected to exceed 25% within 12 months, accelerating with infrastructure maturation

The necessity of liquid cooling stems from rapidly increasing data center power density. Traditional data center rack power evolved from 2.4kW in 2011 to 8.4kW in 2020, projected to reach 9-10kW by 2024. Modern AI workloads, however, demand over 40kW per rack, with some configurations reaching 120kW, far exceeding traditional air cooling limits (15-20kW). This trend is driven by computing chip evolution: AI GPU TDP surged from 400W in 2022 to 700W in 2023, with next-generation chips expected to reach 1200W in 2024. In dense deployment scenarios (10 compute blades per rack, 8 chips per blade), rack power density is projected to advance from 36kW in 2023 to 50kW by 2027, transforming liquid cooling from optional to essential infrastructure.

Global data center demand has grown from 30.8GW in 2019 to 53.0GW in 2023, according to Bain analysis. Assuming 90% load factor, we project three 2030 scenarios: baseline case (207.3GW, 21.5% CAGR 2023-30), base case (187.4GW, 19.8% CAGR), and bearish case (94.0GW, 8.5% CAGR). Based on base case incremental demand (134.4GW), assuming 75% liquid cooling adoption and 50kW average rack power, we estimate cumulative global demand of 2.016M liquid-cooled racks by 2030 (290K annually). This growth trajectory, driven by continued digital transformation and accelerating AI computing demand, suggests mid-term supply-demand imbalance.

Exhibit 8: Rack Power Density, 2011-2024E
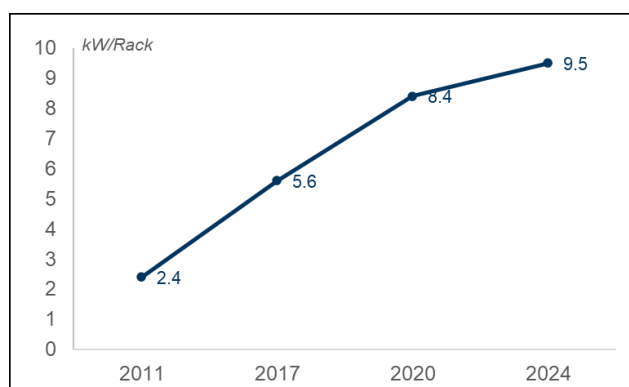
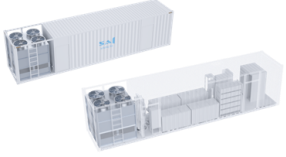Source: Uptime Institute, uSMART Global Research

Exhibit 9: Global Data Center Power Demand: 2019-2035E
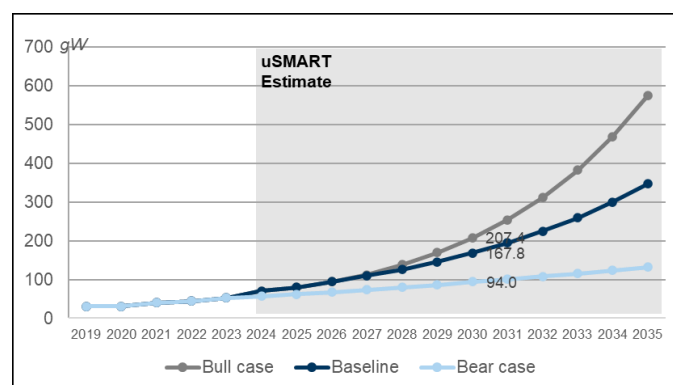
Source: Bain & Company, uSMART Estimate, uSMART Global Research

SAIHEAT leverages its liquid cooling technology from bitcoin mining operations to target the high-growth AI data center market, delivering comprehensive cooling solutions across 40-200kW+ power ranges. Through five years of high-thermal-density computing experience, the company has built extensive patent portfolio in water cooling plates, immersion cooling, and phase-change technologies, particularly validating 10kW-level cooling capabilities in ASIC chip intensive computing scenarios. The company's A/B dual product lines execute strategic expansion from specialized to general markets: B Series, focusing on bitcoin mining operations, achieves 80% noise reduction while enabling overclocking through stable cooling performance, establishing technical barriers in professional cooling; A Series extends this first-mover advantage and high-density cooling expertise to AI data centers with escalating GPU power requirements, offering solutions from 30kW to 384kW+ across cooling grades, supporting current mainstream 25-75kW+ demands while reserving capacity for higher-density deployments. Modular design accommodates deployment requirements across various data center scales, precisely capturing incremental market opportunities from AI computing expansion. Compared to traditional air cooling systems, liquid cooling technology not only breaks cooling bottlenecks but also creates technical foundation for heat recovery through directed thermal management.

Exhibit 10: A Series Product Portfolio: AI Computing Center Solutions

A Series : AI computing center server operation			
Product	**Description**	**Specifications**	**Key Advantages**
TANKBOX-A1	☐ Enterprise-grade containerized data center with immersive liquid cooling ☐ Optimized for GIGABYTE's HPC immersion servers ☐ Advanced thermal management with centralized CDU ☐ Modular tank design	☐ Specifications: 240KW ☐ Number of Tanks: 4 ☐ Single TANK Specifications: 36U ☐ Compatible Devices: Immersion servers	☐ Rapid Deployment: Pre-integrated solution ☐ Scale Efficiency: Optimal for 200kW+ deployments ☐ Ideal for: Large AI training clusters
RACKBOX-A1	☐ Rack-level liquid cooling solution ☐ Available in two cooling configurations: Centralized or Rack-based CDU ☐ Purpose-built for HGX H100 platforms ☐ High-density compute optimization	☐ Total Power: 384kW ☐ 8 racks, 4 HGX H100/rack Cooling Options: • *Centralized: Cooling tower/dry cooler* • *Rack CDU: 40KW/4U/55KG*	☐ Architecture Flexibility ☐ Easy Integration & Management ☐ Suitable for both new builds and retrofits
A1 TANK CAB	☐ Entry-level immersion cooling cabinet ☐ Compact footprint design ☐ Complete solution with CDU & PDU included	☐ Power Rating: 30KW ☐ Server Capacity: 28U ☐ Integrated CDU & PDU ☐ Supports AI computing center server operation	☐ Quick Start Solution ☐ Cost Effective ☐ Ideal for: AI development teams

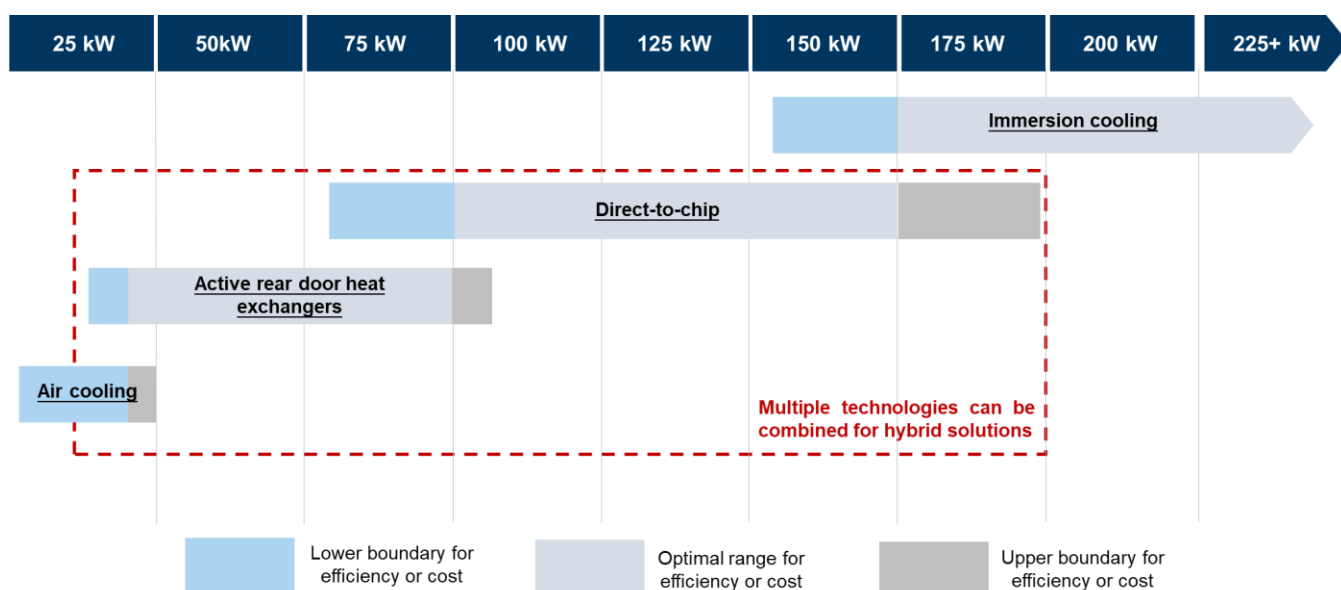Source: Company Website, Company filings, complied by uSMART Global Research

Exhibit 11: B Series Product Portfolio: BTC Computing Center Solutions

B Series : BTC computing center server operation				
Product	**Description**	**Specifications**	**Devices & Price**	
HYDROCAB-B1 / **RACKCAB-B1**	☐ All-in-one liquid cooling cabinet with heat recovery	☐ Total Power: 100KW ☐ IT Power: 90KW ☐ Dimensions: 800×2200×1000mm ☐ Thermal Efficiency: ≥97% ☐ Coolant: 50% Ethylene Glycol ☐ Heating Area: 300m² greenhouse/1800m² apartment/88m2 swimming pool	☐ S21 Hydro Series ☐ 15 units capacity ☐ Price: $14,500	/ ☐ Whatsminer M63/M53/M33 Series ☐ 12 units capacity ☐ Price: $14,500
TANKBOX-B1	☐ Container-based immersion cooling system	☐ Total Power: 240KW ☐ IT Power: 210KW ☐ 40ft container ☐ 4 tanks × 36U ☐ Cooling Tower: 300KW ☐ Heating Area: 2,328~11,640m² greenhouse	☐ Antminer S19/Whatsminer M50/30/ Avalon A1346/1366/and other immersion miners ☐ Miner Capacity 144 Units ☐ Price: $83,000	
RACKBOX-B3	☐ Integrated Rack-mounted liquid-cooling infra	☐ Standard Power: 1,030KW ☐ HP Mode: 1,000KW ☐ Normal Mode: 660KW ☐ 20ft container ☐ Cooling Tower: 1,100KW ☐ Heating Area: 3,880~19,400m² greenhouse	☐ Whatsminer M53/33 ☐ 100 units capacity ☐ Price: $99,800	
HYDROBOX-B3	☐ High hashing power and large capacity liquid cooling system	☐ Standard Power: 1,130KW ☐ IT Power: 1,100KW ☐ 20ft container ☐ Industry-leading PUE: 1.027 ☐ Hashrate: up to 54P with 20.8 J/T	☐ Antminer S21/19 Hydro ☐ 210 units capacity ☐ Price: $97,700	

Source: Company Website, Company filings, complied by uSMART Global Research

Based on growing high-power density computing demands, we project liquid cooling technology penetration to exceed 25% within the next 12 months, with potential to become the mainstream cooling solution for AI data centers in the medium to long term. This trend is driven by high-performance computing scenarios and validated by major industry players: 1) NVIDIA (NVDA.US) has fully integrated liquid cooling solutions into new products, Huawei faces increased cooling demands for high-performance products, and cloud service providers like Amazon (AMZN.US) AWS are actively deploying liquid cooling; 2) Supply chain bottlenecks are expected to gradually ease with greenfield project commissioning and AI accelerator card volume ramp-up; 3) Core components (liquid cooling pipes/UQD connectors) demonstrate high gross margin characteristics (50%/40-50%), indicating potential for value chain restructuring in the liquid cooling industry. We believe SAIHEAT is well-positioned to achieve rapid revenue growth by capturing liquid cooling demand from high-end AI computing deployments. The company offers both distributed and centralized CDU solutions, with its distributed design creating differentiated advantages through standardized cooling modules and cabinet-level units of various specifications, effectively reducing single point of failure risks, enabling precise cooling allocation, and simplifying piping systems and maintenance procedures, providing customers with more flexible deployment options and optimized operating costs. As industry leaders (such as NVIDIA, Huawei, AWS) accelerate liquid cooling adoption, the overall market is expected to enter a rapid growth phase.

Exhibit 12: Cooling Technology Roadmap and SAIHEAT Solutions Across 25-225+kW Power Range in AI Computing Scenarios


Source: Company Website, Company filings, complied by uSMART Global Research

SAIHEAT: Pioneering New Revenue Streams Through Data Center Heat Recovery Solutions

☐ Innovative heat recovery system achieves 97% thermal energy utilization, converting to direct economic value

☐ Zero additional cooling energy consumption design significantly optimizes operating cost structure

☐ ACCE demonstration project validates technical feasibility, showcasing multi-scenario applications and diversified revenue potential

SAIHEAT fundamentally transforms data center economics through innovative liquid cooling and waste heat recovery systems, creating an "electricity-computing-heat" business cycle. According to Deloitte analysis, computing servers (40%) and cooling systems (39%) account for nearly 80% of AI data center energy consumption, making optimization in these areas crucial for overall efficiency. In terms of energy efficiency, SAIHEAT system has optimized PUE to 1.05 (vs China Telecom 2022: 1.20; Meta 2022: 1.08), significantly outperforming global data center average of 1.56 in 2024 as reported by Uptime Institute. For heat recovery, the system achieves 97% efficiency - generating 0.97kWh usable thermal energy per 1kWh computing power consumption, establishing an efficient "electricity-computing-heat" business cycle.

Exhibit 13: Global Data Center Power Usage Effectiveness (PUE) Average Trend (2007-2024)
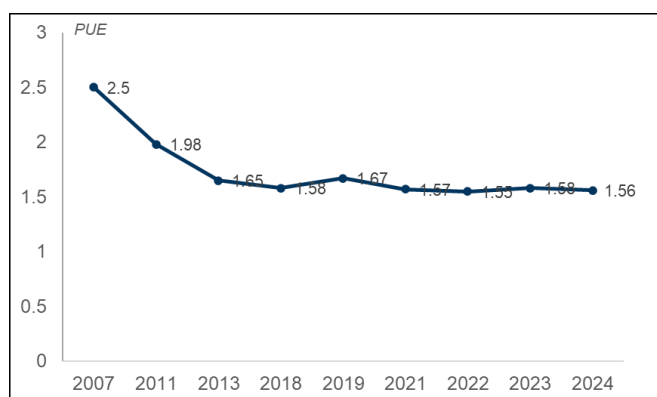
Source: Uptime Institute, uSMART Global Research

Exhibit 14: Computing Power (40%) and Cooling Systems (39%) Are Major Energy Consumption Sources in AI Data Centers
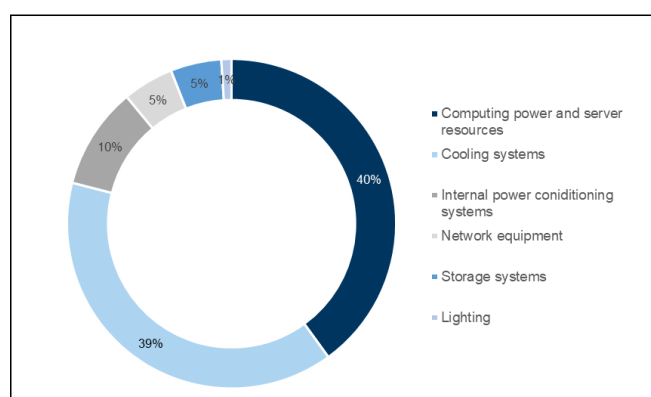
Source: Deloitte, uSMART Global Research

SAIHEAT's Advanced Computing Center Ecosystem (ACCE) comprises three core technical modules:

①WITBOX:

• High-performance computing server system with liquid cooling technology

• Achieves over 97% server heat recovery rate

• Significantly enhances server cooling efficiency while enabling efficient heat capture

②HEATBOX:

• Core system for waste heat transfer, upgrade, supply, and control

• Supports on-demand heating within 49-80°C (120-176°F) range

• H1 model provides stable 55°C hot water; H2 model (with heat pump) delivers 80°C hot water

• Single unit rated heat exchange capacity 200kW-1MW, expandable to 2MW

• Precise temperature control through circulation pump system, heat exchangers, and water treatment

③USERBOX:

• Provides computing heat recovery application solutions

• Supports multi-scenario integrated applications

• Customizable heating solutions for various industries

SAIHEAT's R&D center in Marietta, Ohio completed its first ACCE demonstration project, validating commercial viability of waste heat recovery solutions (1MW scale, 3.4 MMBTUH heat recovery). The project features a 1MW containerized computing server system, 1MW HEATBOX system, and 5,000 square feet greenhouse facility. By recovering data center waste heat to replace traditional natural gas heating, the project reduces monthly CO_2 emissions by 286,000 pounds, equivalent to saving 14,600 gallons of gasoline emissions. As technical support partner for Ohio Clean Energy & Climate (OCEC), on June 17, 2024, the company provided R&D center facilities and greenhouse space, helping secure $7,582 project funding from Marietta Community Foundation, offering local students practical learning opportunities in AI, data center operations, and greenhouse cultivation.

HEATNUC: Innovative Open-Source SMR Solutions for Data Center Energy Challenges

☐   Innovatively integrates land-based SMR with space solar systems, creating sustainable data center energy infrastructure

☐   Reduces industry adoption barriers through OpenSMR initiative, promoting standardization

☐   Proprietary technology optimizes SMR operational efficiency, achieving precise control and passive cooling

☐   Establishes industry ecosystem through partnerships with OCEC and others, accelerating clean energy transition

The U.S. power grid faces unprecedented supply-demand misalignment. Demand is experiencing explosive growth from data centers, EVs, and industrial electrification: projected 57GW by 2028 (vs. 40GW under construction facing grid connection constraints). Grid Strategies' latest data shows five-year demand growth surging 5x to 128GW (vs. 25.6GW 2022 base, +400%), requiring 16% grid capacity expansion by 2029. Growth concentrates in energy-intensive industrial clusters, led by Northern Virginia data centers (demand +300% YoY, planned capacity 85GW) and Texas industrial sector (load growth 200% above 10-year average). Supply side faces grid connection delays: interconnection backlog at 2.6TW (2x existing capacity) with only 19% historical completion rate. Imbalanced grid investment (76% to local projects, regional backbone -50% vs. 2009) has led some regions to restart fossil fuel projects (planned capacity +85% YoY), potentially significantly deviating from U.S. 2030 emission reduction targets (-50% vs. 2005 baseline).

Exhibit 15: FERC 5-Year U.S. National Power Demand Growth (GW) Forecast
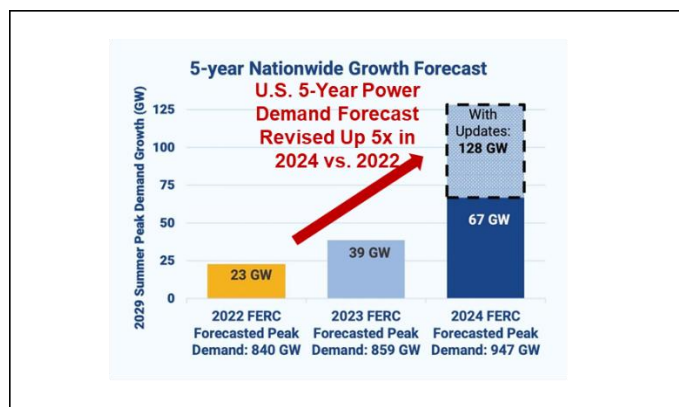
Source: FERC, Grid Strategies, uSMART Global Research

Exhibit 16: Regional Divergence in U.S. Grid Demand Growth (GW)
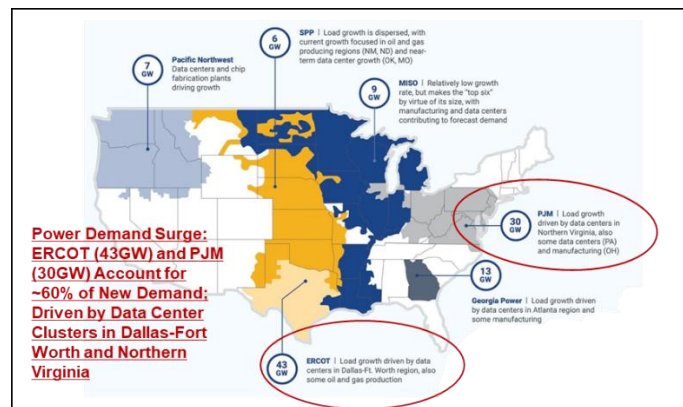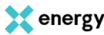
Source: Grid Strategies, uSMART Global Research

Against this backdrop, SAIHEAT's SMR solution addresses core U.S. grid challenges. Small Modular Reactors (SMRs), defined by IAEA as advanced nuclear reactors under 300MW (one-third of traditional nuclear plants), feature compact size, modular design supporting factory prefabrication, and nuclear fission-based power generation. Compared to traditional grid expansion (19% completion rate, 5-7 year investment cycle), SMRs enable rapid deployment as distributed power sources, with 300MW per module matching large data center demands. Leveraging expertise in liquid cooling and heat recovery, SAIHEAT extends energy management capabilities to SMR applications, creating "nuclear-computing-heating" synergies: utilizing year-round stable data center waste heat for seasonal district heating while reducing system TCO. Based on EIA commercial natural gas price of $11.5/MCF, 3.4MMBtu/hour waste heat per MW computing power, and 80%

heat recovery efficiency, each MW computing capacity can generate approximately $300,000 annual heating revenue.

SMR industry achieves dual breakthroughs: regulatory - NuScale (SMR.US) secured first NRC design certification (effective February 2023); market validation - data center clean energy solution provider OKLO (OKLO.US) and liquid cooling leader VERTIV (VRT.US) demonstrate strong market recognition (OKLO +155%, VERTIV +731% vs. SPAC price $10.00, as of March 12, 2025). SMR technology transitions from theoretical to commercial implementation, supported by tech giants' (Microsoft, Google, Amazon) SMR energy procurement initiatives and capital market valuations. SAIHEAT's open-source SMR strategy, similar to LLM evolution in AI (e.g., DeepSeek's open-source approach), aims to reduce industry barriers and promote collaborative innovation, potentially accelerating SMR standardization while establishing first-mover advantages.

Exhibit 17: Hyperscalers/Tech Giants' SMR Investment Landscape

Nuclear Energy Initiatives by U.S. Technology Leaders, CSPs and Nuclear Startups			
Company	Date	Target Capacity	Details
NUSCALE	2023 Feb	na	☐ First SMR Design to Receive NRC Certification in the U.S.
Microsoft / Constellation, ONTARIO POWER GENERATION, HELION	2023 June	na	☐ Diversified nuclear energy initiatives ☐ $1.6B partnership with Constellation Energy to restart Three Mile Island reactor with 20-year power purchase agreement ☐ Strategic agreement with Ontario Power Generation ☐ Collaboration with fusion startup Helion
ORACLE	2024 Sep	1,000MW+	☐ Plans to build 3 SMRs for GW-scale data centers ☐ Timeline and locations pending
Google / Kairos Power	2024 Oct	500MW	☐ Partnership with Kairos Power to develop 500MW molten salt reactor fleet
amazon / energy, ENERGY NORTHWEST, Dominion Energy	2024 Oct	5,000MW+	☐ Plans to support 5,000MW X-energy SMR projects ☐ First project partners with Energy Northwest to build 320MW Xe-100 reactor (4 units) in Washington ☐ Establishes partnership with Dominion Energy to explore 300MW SMR construction near North Anna nuclear site in Virginia
OKLO / OpenAI, EQUINIX, switch	2024 Dec	12GW	☐ April: Signs LOI with data center operator Equinix for 500GW procurement ☐ December: Partners with Switch, Las Vegas-based data center designer/operator, to deploy 12GW Aurora powerplants by 2044 ☐ Deal hailed as "one of the largest corporate clean energy agreements in history"
Meta	2024 Oct	1-4GW	☐ Issues RFP for nuclear developers, targeting 1-4GW new nuclear capacity in U.S. to support AI innovation and sustainability goals

Source: Company Websites, Company filings, complied by uSMART Global Research

SAIHEAT achieves dual breakthroughs in technology and industry deployment: 1) Technology advancement through innovative compact control rod drive mechanism and heat pipe passive cooling system, fundamentally enhancing system safety and resilience, while launching OrbitBTC space renewable energy initiative exploring orbital solar applications for high-density computing; 2) Industry expansion via MoUs with Jiangsu Shentong Nuclear Equipment and Shanghai Kaiquan Pump, strengthening core component

supply chain. The Shentong partnership focuses on electrical instrumentation control systems for nuclear power projects, including nuclear-grade butterfly/ball/check valves; Kaiquan collaboration covers joint production of Class II/III centrifugal pumps, including vertical/horizontal single-stage and double-suction pumps, both aimed at enhancing Middle East and global market competitiveness. Specific project progress:

OpenSMR initiative: an open-source SMR program supporting AI-driven data centers, aims to provide standardized, cost-effective energy models for the computing industry. SAIHEAT will release key patents to advance SMR adoption in data centers worldwide: 1) Control Rod Drive Mechanism for Small Modular Pressurized Water Reactors, introducing a compact control rod drive mechanism enabling precise reactor control under extreme conditions; 2) Containment Cooling Device and Method Utilizing Heat Pipe Cooling, establishing a passive cooling system for SMRs that utilizes heat pipes for efficient, reliable heat transfer without external power.

OrbitBTC: addresses computing sustainability challenges by relocating mining operations to space. Utilizing uninterrupted solar energy in orbit, OrbitBTC's mining rigs eliminate reliance on terrestrial grids, significantly reducing carbon emissions, water usage, and land impact. This innovative, space-based model offers 24/7 renewable energy, lowers operational costs, and enables scalable operations free from regulatory land constraints, setting a new benchmark for eco-friendly cryptocurrency mining.

SAIHEAT adopts an open-source strategy paralleling LLM models (e.g., DeepSeek) while recruiting nuclear industry talent, driving standardization through OpenSMR's core patent releases. This strategy mirrors two successful precedents: LLM development where open-source models like DeepSeek accelerate innovation through global developer collaboration by opening underlying architectures, and Tesla's (TSLA.US) charging standards demonstrating how standardization reduces supply chain costs. The open-source approach enables both global talent attraction for technical iteration and supply chain standardization. Following Meta's (META.US) 2011 Open Compute Project (OCP), which achieved cost reduction and efficiency improvements in data centers through standardized design, this open-source and standardization approach aims to advance modular nuclear power and space photovoltaic technology adoption while reducing costs. In Jan 2025, SAIHEAT appointed Alexandre Nakata Ezzidi as nuclear strategy advisor. With 40+ years of nuclear safety expertise across IAE, AREVA-NP, Mitsubishi Heavy Industries, and Japan Atomic Energy Agency, his focus on severe accident analysis for water-cooled reactors (PWR, BWR) will accelerate global SMR market expansion. This integrated approach combining technical innovation, supply chain integration, and open-source ecosystem positions SAIHEAT for clean energy sector leadership.

Valuation

☐   Based on FY2025E P/S multiple of 4x, SAIHEAT represents a unique investment opportunity in data center infrastructure innovation and clean energy transition.

As an emerging AI and BTC computing power provider and integrated energy solutions operator, SAIHEAT's near-term valuation catalysts stem from rapidly growing demand for AI computing and liquid cooling solutions for AI servers. Despite current modest revenue scale, we highlight several key growth drivers: 1) AI computing demand exhibits "super-acceleration" characteristics, with SAIHEAT's innovative containerized IDC solution (3-6 month deployment cycle) enabling rapid market response; 2) established presence across North America and Singapore with global service capabilities positions the company to capture significant revenue growth from single large customer orders; 3) favorable pricing power amid liquid cooling supply-demand imbalance; 4) differentiated competitive advantage in niche markets versus established players like VRT and SMCI through more flexible, customized solutions. Long-term, the company's integrated strategy combining computing services with energy solutions (liquid cooling technology, waste heat recovery, and SMR innovation) positions it to develop distinctive advantages at the intersection of data center infrastructure and clean energy transition.

For SAIHEAT's comparable analysis, we focus on three core segments best reflecting its business model:

AI Plays:

Hyperscalers/CSPs: Currently accelerating AI capex while actively investing in nuclear power, particularly SMR technology, to meet AI and data center clean energy demands. Despite broader U.S. market pullback amid political and macro uncertainties, major cloud providers maintain aggressive capex expansion plans, projecting $336bn spending in 2025 (YoY +32%). Resilient AI infrastructure demand directly drives upstream liquid cooling needs:

☐   Alphabet (GOOGL): $75bn (YoY +43%)

☐   Amazon (AMZN): $100bn (YoY +29%), historical high

☐   Microsoft (MSFT): $80bn (YoY +6%), maintaining expansion despite cloud margin pressure

☐   Meta: $65bn (YoY +66%)

☐   Oracle (ORCL): $16bn (YoY +133%), doubled capex

Exhibit 18: Hyperscaler Capital Expenditure Forecast (2025E)
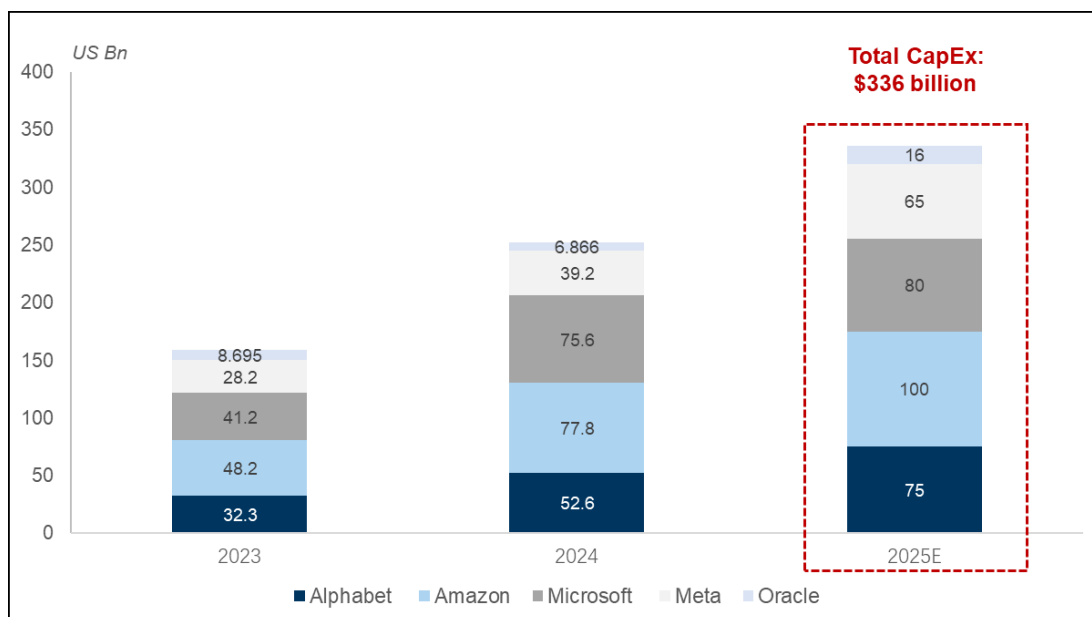
Source: Company Website, complied by uSMART Global Research

Liquid cooling suppliers and data center solution providers: Vertiv (VRT), Super Micro Computer (SMCI), and Equinix (EQIX). In terms of market performance, AI beneficiary stocks experienced significant pullback in 2025 (YTD -7.1%) but still maintained substantial gains compared to 2024 (YTD +27.5%). SAIHEAT, leveraging 5 years of ASIC cooling experience and patented technologies in water cooling, immersion, and phase-change liquid cooling, has validated 10kW-level cooling capability with commercial deployments globally. As GPU power consumption approaches ASIC levels, the company holds first-mover advantage in AI computing thermal management.

Exhibit 19: Liquid Cooling Landscape: SAIHEAT Offers Extensive Portfolio

Comparison of Liquid Cooling Solutions Among Major Players									
Specs	SAIHEAT	SMCI	DELL	HPE	VRT	Hon Hai	Quanta	Wiwynn	CoolIT
Server	●	●	●	●		●	●	●	
Rack	●	●	●	●	●	●		●	
DLC	●	●	●	●	●		●	●	●
Rear Door	●	●			●				●
Immersion	●	●	●	●	●			●	
Phase change	●								

Source: Company Websites, uSmart Global Research

Nuclear Power/Energy Suppliers:

AI computing drives rapid growth in data center power demand. SMR technology innovation and commercialization acceleration drive valuation re-rating in nuclear/clean energy supplier sector (up 91.9% from early 2024, YTD -9.0%, 2025E EV/EBITDA at 13.7x, EV/Revenue at 6.8x), specifically:

☐ NuScale (SMR): +385% from early 2024, YTD -10%, leading SMR technology commercialization

☐ Oklo (OKLO): +189% from early 2024, YTD +23.4%, innovative SMR developer with data center-optimized "Powerhouse" design

☐ Vistra (VST): +216% from early 2024, YTD -1.8%, independent power producer actively expanding data center solutions

☐ Constellation (CEG): +84% from early 2024, YTD -3.1%, nuclear operator

☐ Public Service Enterprise (PEG): +30% from early 2024, YTD -5.8%, integrated energy service provider

Mining Tech Peers：

Significantly impacted by Bitcoin price volatility: Bitcoin price retreated in February after reaching new highs in late 2024/early 2025, coupled with increased computing costs post-April halving, affecting sector earnings outlook. Current sector valuation: 2025E EV/EBITDA at 10.3x, EV/Revenue at 4.2x, specifically:

☐ Mara Holdings (MARA): YTD -23%, continuing capacity expansion

☐ Riot Platforms (RIOT): YTD -23%, clear technological advantages

☐ CleanSpark (CLSK): YTD -12%, awaiting scale effects

☐ Core Scientific (CORZ): YTD -36%, increasing operational pressure

Exhibit 20: Mining Peers' Hash Rate (PH) and Power Efficiency (Watts per TH/s)
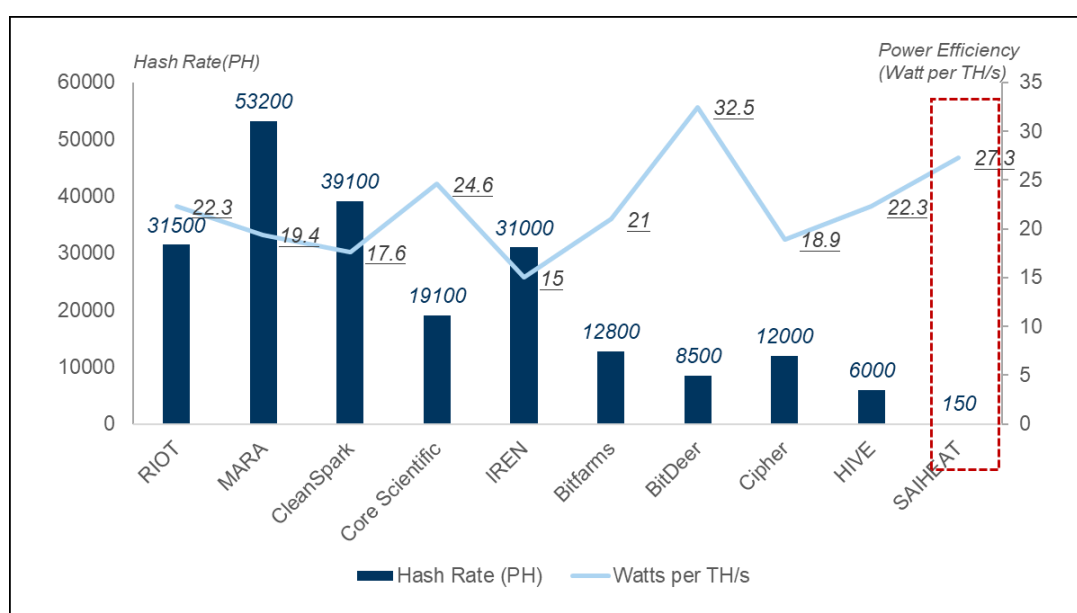
Source: Company Websites, uSmart Global Research

SAIHEAT, an emerging computing and energy infrastructure operator dedicated to advancing sustainable augmented intelligence, delivers both BTC mining and AI cloud computing services (Computing Div.), while providing liquid-cooled data centers and modular nuclear solutions (Energy Div.). Despite its current modest revenue scale, the company's innovative containerized IDC solution (3-6 month rapid deployment) and strategic global footprint across North America and Singapore enable efficient response to surging AI/BTC computing and liquid cooling demands while addressing L-T power supply-demand imbalances in clean energy transition. We initiate coverage with a Buy rating and $25.87 PT (25E P/S=4x, 26E P/S=1.5x, 26E EV/EBITDA=23.1x, P/E=55.2x), supported by four key factors: 1) the company's first-mover advantage in capturing accelerating AI computing demand through rapid deployment capabilities and global presence; 2) strong pricing power through its ACCE ecosystem (WITBOX, HEATBOX, USERBOX) amid structural S/D imbalance in data center infrastructure; 3) significant revenue growth potential from major client expansion, projecting 3-4x growth over next 2-3 years with revenue forecasts of $5.45M/$10.62M/$28.15M for FY24-26E and EBITDA turning positive in FY26E (-$4.67M/-$0.19M/+$1.85M); 4) and sustainable competitive advantage in data center infrastructure and clean energy transition through the integration of computing services, liquid cooling technology, waste heat recovery, and SMR energy innovation.

Exhibit 21: Trading Comps

Ticker	Name	Stock Price (USD)	Primary Industry Group	Market Cap (USD Mn)	YTR Return 2025/1/1	YTR Return 2024/1/1	24 P/Bv	24 P/E	24 EV/Sales	25 fw EV/EBITDA	25 fw EV/Sales	26 fw EV/Sales
AI Plays												
Hyperscalers/CSPs												
GOOGL	Alphabet Inc.	167.11	Interactive Media and Services	15,907,886	-11.7%	19.6%	6.3	20.8	5.7	11.5	5.1	4.6
AMZN	Amazon.com, Inc.	198.89	Broadline Retail	16,376,563	-9.3%	30.9%	7.4	36.0	3.4	12.9	3.1	2.8
MSFT	Microsoft Corporation	383.27	Systems Software	22,137,233	-9.1%	1.9%	10.6	32.5	11.8	19.0	10.4	9.1
META	Meta Platforms, Inc.	619.56	Interactive Media and Services	12,196,313	5.8%	75.0%	8.6	26.0	9.4	13.6	8.2	7.2
ORCL	Oracle Corporation	150.89	Systems Software	3,287,545	-9.5%	43.1%	47.8	40.7	9.7	17.4	9.0	7.9
Liquiding Cooling/Data Center												
VRT	Vertiv Holdings Co	85.38	Electrical Components and Equipment	252,594	-24.8%	77.8%	13.4	66.7	4.3	16.8	3.7	3.2
SMCI	Super Micro Computer, Inc.	42.47	Technology Hardware, Storage and Peripherals	195,833	39.3%	49.4%	4.6	22.2	1.7	11.3	1.1	0.8
EQIX	Equinix, Inc.	854.99	Data Center REITs	646,567	-9.3%	6.2%	6.1	100.6	11.3	22.4	10.8	10.0
Average				71,000,533	-7.1%	27.5%	13.1	43.2	7.2	15.6	6.4	5.7
Median							8.0	34.2	7.5	15.2	6.6	5.9
Clean Energy Peers												
SMR	NuScale Power Corporation	15.98	Heavy Electrical Equipment	15,914	-10.9%	385.7%	3.2	NM	38.9	NM	24.9	7.3
OKLO	Oklo Inc.	26.19	Electric Utilities	24,845	23.4%	148.0%	NM	NM	NM	NM	NM	NM
PWR	Quanta Services, Inc.	249.1	Construction and Engineering	286,823	-21.2%	15.4%	5.0	41.3	1.7	14.9	1.5	1.4
IREN	IREN Limited	7.04	Application Software	11,975	-28.3%	-1.5%	1.2	NM	7.4	4.9	2.6	1.4
VST	Vistra Corp.	121.92	Independent Power Producers and Energy Traders	321,089	-11.6%	216.5%	13.4	17.4	3.5	10.3	3.0	2.8
CEG	Constellation Energy Corporation	215.35	Electric Utilities	523,449	-3.7%	84.2%	5.1	18.1	3.1	14.4	3.2	3.3
PEG	Public Service Enterprise Group Incorporated	79.57	Multi-Utilities	308,223	-5.8%	30.1%	2.5	22.5	6.1	13.7	5.6	5.3
Average				1,492,318	-9.0%	91.9%	5.1	24.8	10.1	11.6	6.8	3.6
Median							4.1	20.3	4.8	13.7	3.1	3.1
Mining Tech Peers												
MARA	MARA Holdings, Inc.	13.11	Application Software	35,225	-21.8%	-44.2%	1.1	7.6	9.8	6.5	6.2	5.2
RIOT	Riot Platforms, Inc.	7.85	Application Software	21,360	-23.3%	-49.3%	0.9	22.8	7.8	15.2	4.3	3.5
CLSK	CleanSpark, Inc.	8.1	Application Software	17,672	-12.1%	-26.6%	1.2	NM	7.0	4.3	3.0	2.2
CORZ	Core Scientific, Inc.	8.95	Application Software	20,453	-36.8%	NM	NM	NM	5.9	20.9	6.1	3.3
BTDR	Bitdeer Technologies Group	10.71	Application Software	16,018	-50.6%	8.6%	6.4	NM	5.2	10.1	3.1	1.5
BITF	Bitfarms Ltd.	1.68	Application Software	4,288	-21.3%	-56.4%	1.4	NM	3.8	9.2	2.6	1.3
CIFR	Cipher Mining Inc.	3.2	Application Software	8,989	-31.0%	-22.5%	1.6	NM	8.0	7.6	4.0	2.0
HIVE	HIVE Digital Technologies Ltd.	2.55	Application Software	2,140	-38.0%	-57.2%	0.8	NM	2.4	6.1	2.2	1.0
HUT	Hut 8 Corp.	12.15	Application Software	9,804	-40.7%	-8.9%	1.2	3.6	9.4	13.2	5.8	3.2
Average				135,949	-29%	-26%	1.8	11.3	6.6	10.3	4.2	2.6
Median							1.2	7.6	7.0	9.2	4.0	2.2

Source: Capital IQ, complied by uSmart Global Research

Exhibit 22: SAIHEAT Key Market Data and Operating & Financial Projections

Key Data	
Tickcer	SAIH
Date	2025/3/24
Market cap (USD '000)	9,246.3
Enterprise value (USD '000)	2,588.3
3m ADTV	7,970
Shares out	1,642,330

uSMART Forecast	2021	2022	2023	2024E	2025E	2026E
Revenue (USD 000)	17,038.0	10,638.0	6,776.0	5,446.8	10,621.3	28,146.3
EBITDA (USD 000)	(16,165.0)	(5,008.0)	(5,992.0)	(4,665.5)	(188.8)	1,850.3
EPS (Rmb)	(1.43)	(0.46)	(0.26)	(0.24)	(0.79)	0.47
P/E (X)	-	-	-	-	-	55.2
P/B (X)	-	2.8	1.6	1.3	4.0	3.4
P/S	-	28.7	2.1	2.0	4.00	1.5
N debt/EBITDA (ex lease,X)	0.3	0.4	(0.1)	0.7	17.8	(3.1)

Ratios & Valuations	2021	2022	2023	2024E	2025E	2026E
P/E (X)	0.0	0.0	0.0	0.0	0.0	55.2
P/B (X)	-	2.8	1.6	1.3	4.0	3.4
FCF yield (%)	-	-	-	-	-	-
EV/EBITDA (excl. leases) (X)	-	244.6	-	-	(238.4)	23.1
ROE (%)	(241.7)	(58.2)	(33.0)	(53.4)	(12.2)	6.1
Net debt/equity (%)	191.1	(76.0)	(54.0)	(30.8)	(31.8)	(44.8)
Days inventory outst, sales	14.4	9.5	12.1	12.0	11.2	11.8
Receivable days	13.1	46.6	65.7	41.8	13.5	13.0
Days payable outstanding	-	-	-	0.0	0.0	0.0
Turnover (X)	2.2	0.65	0.35	0.5	0.7	0.8
Leverage (X)	(4.9)	1.0	1.1	1.1	1.1	1.1
BVPS (USD)	(0.03)	0.89	0.70	6.637	6.455	7.697

Growth & Margins (%)	2021	2022	2023	2024E	2025E	2026E
Total revenue growth	NA	(37.6)	(36.3)	(19.62)	95.0	165.0
EBITDA growth	NA	(69.0)	19.6	(22.1)	(96.0)	(1,079.8)
EPS growth	NA	60.1	(11.0)	19.6	77.7	167.3
Gross Margin	7.4	10.7	6.7	1.00	20.0	33.0
SG&A % of revenue	86.7	10.3	16.7	11.20	9.8	8.4
R&D % of revenue	2.46	4.47	12.59	11.61	10.4	10.0
G&A & of revenue	13.99	57.15	84.16	85.00	12.00	11.50
EBIT margin	(95.8)	(61.2)	(106.7)	(106.8)	(12.2)	3.1
EBITDA margin	(94.9)	(47.1)	(88.4)	(85.7)	(1.8)	6.6
Net income margin	(98.0)	(83.2)	(90.3)	(106.8)	(12.2)	2.7

Source: Capital IQ, uSMART Estimate, uSmart Global Research

Exhibit 23: SAIHEAT P&L

Income Statement (USD 000)	2021	2022	2023	2024E	2025E	2026E
Total revenue	17,038.0	10,638.0	6,776.0	5,446.8	10,621.3	28,146.3
Cost of goods sold	(15,774.0)	(9,498.0)	(6,319.0)	(5,392.3)	(8,497.0)	(18,858.0)
SG&A	(14,779.0)	(1,098.0)	(1,134.0)	(610.0)	(1,040.9)	(2,364.3)
R&D	(419.0)	(476.0)	(853.0)	(632.4)	(1,104.6)	(2,814.6)
Other operating inc./(exp.)	(2,383.0)	(6,080.0)	(5,703.0)	(4,629.8)	(1,274.6)	(3,236.8)
EBITDA	(16,165.0)	(5,008.0)	(5,992.0)	(4,574.7)	(166.1)	1,873.0
Depreciation & amortization	152.0	1,506.0	1,241.0	1,243.0	1,129.6	1,000.4
EBIT	(16,317.0)	(6,514.0)	(7,233.0)	(5,817.7)	(1,295.8)	872.5
Net interest inc./(exp.)	-	-	-	-	-	-
Income/(loss) from associates	-	-	-	-	-	-
Pre-tax profit	(16,317.0)	(6,514.0)	(7,233.0)	(5,817.7)	(1,295.8)	872.5
Provision for taxes	24.0	-	-	-	-	102.5
Preferred dividends	1,064	-	-	-	-	-
Net inc. (pre-exceptionals)	(17,405.0)	(6,514.0)	(7,233.0)	(5,817.7)	(1,295.8)	770.0
Post-tax exceptionals	725.0	(2,331.0)	1,113.0	-		
Net inc. (post-exceptionals)	(16,680.0)	(8,845.0)	(6,120.0)	(5,817.7)	(1,295.8)	770.0
EPS (basic, pre-except) (USD)	(1.43)	(0.46)	(0.26)	(0.236)	(0.789)	0.469
EPS (diluted, pre-except) (USD)	(1.43)	(0.46)	(0.26)	(0.236)	(0.789)	0.469
EPS (basic, post-except) (Rmb)	(1.43)	(0.46)	(0.26)	(0.236)	(0.789)	0.469
EPS (diluted, post-except) (Rmb)	(1.43)	(0.46)	(0.26)	(0.236)	(0.789)	0.469

Source: Capital IQ, uSMART Estimate, uSmart Global Research

Exhibit 24: SAIHEAT B/S

Balance Sheet (USD '000)	2021	2022	2023	2024E	2025E	2026E
Cash & cash equivalents	4,477.0	11,215.0	3,176.0	1,078.7	1,109.6	3,426.8
Short Term Investment	83.0	4,650.0	6,709.0	6,900.0	6,900.0	6,900.0
Accounts receivable	1,174.0	1,541.0	900.0	623.8	392.8	1,002.5
Inventory	345.0	152.0	267.0	179.1	325.9	907.4
Other current assets	801.0	1,133.0	1,199.0	1,799.0	1,799.0	1,799.0
Total current assets	6,880.0	18,691.0	12,251.0	10,580.6	10,527.3	14,035.7
Net PP&E	4,388.0	2,315.0	5,824.0	5,715.7	5,471.2	4,001.7
Net intangibles	265.0	94.0	-	2,000	2,000	2,000
Total assets	11,533.0	21,100.0	18,075.0	18,296.3	17,998.5	20,037.3
Accounts payable	1,261.0	165.0	45.0	440	455	455
Short-term debt	-	-	-	2,000	2,000	2,000
Accrued exp	25	159	359	431	517	620
Short-term lease liabilities	17.0	188.0	241.0	241.0	241.0	241.0
Other current liabilities	93.0	43.0	42.0	42.0	42.0	42.0
Total current liabilities	1,396.0	555.0	687.0	3,153.8	3,255.0	3,358.4
Long-term debt	-	-	-	-	-	-
Long-term lease liabilities	27.0	231.0	569.0	569.0	569.0	569.0
Other long-term liabilities	-	-	(1.0)	(1.0)	(1.0)	(1.0)
Total long-term liabilities	27.0	231.0	568.0	568.0	568.0	568.0
Total liabilities	1,423.0	786.0	1,255.0	3,721.8	3,823.0	3,926.4
Preferred shares	12,473.0	-	-	-	-	-
Total common equity	(2,363.0)	20,314.0	16,820.0	14,574.5	14,175.5	16,111.0
Minority interest	-	-	-	-	-	-
Total liabilities & equity	11,533.0	21,100.0	18,075.0	18,296.3	17,998.5	20,037.3
Net debt, adjusted	(4,516.0)	(15,446.0)	(9,075.0)	(7,169.7)	(7,200.6)	(9,517.8)

Source: Capital IQ, uSMART Estimate, uSmart Global Research

Exhibit 25: SAIHEAT Cash flow Statement

Cash Flow (USD '000)	2021	2022	2023	2024E	2025E	2026E
Net income	(16,704.0)	(8,845.0)	(6,120.0)	(5,817.7)	(1,295.8)	770.0
D&A add-back	309.0	1,644.0	1,329.0	1,243.0	1,129.6	1,000.4
Other non-cash adj	363.0	1,669.0	(293.0)	(2,000.0)	-	-
Change in net (inc)/dec working capital	(614.0)	1,518.0	(539.0)	(364.2)	(84.1)	1,191.1
Other operating cash flow	20.0	159.0	221.0	175.0	175.0	175.0
SBC	14,457.0	1,060.0	2,641.0	2,500.0	1,000.0	1,000.0
Change in other net operating assets/liab	42.0	(898.0)	1,442.0	3,100	-	-
Cash flow from operations	**(983.0)**	**(4,933.0)**	**(3,125.0)**	**(6,635.6)**	**1,092.9**	**1,754.3**
Capital expenditures	(3,970.0)	(1,872.0)	(5,049.0)	(1,361.7)	(1,062.1)	562.9
Sales of PPE	-	60	115	2,000	-	-
Invest. in marketable & equity securt.	-	(4,600.0)	106.0	1,900.0	-	-
Others	-	(12.0)	(69.0)	-	-	-
Cash flow from investing	**(3,970.0)**	**(6,424.0)**	**(4,897.0)**	**2,538.3**	**(1,062.1)**	**562.9**
Issuance of Pref. Stock	8,191.0	-	-	-	-	-
Other financing cash flows	-	18,533	9	2,000	-	-
Cash flow from financing	**8,191.0**	**18,533.0**	**9.0**	**2,000**	**-**	**-**
Foreign Exchange Rate Adj.	(61.0)	(438.0)	(26.0)	-	-	-
Total cash flow	**3,177.0**	**6,738.0**	**(8,039.0)**	**(2,097.3)**	**30.8**	**2,317.3**

Source: Capital IQ, uSMART Estimate, uSmart Global Research

Risk Factors

☐ Competitive pressure from established liquid cooling manufacturers with stronger capital positions and broader product portfolios may impact pricing and market share.

☐ Slower-than-expected global data center construction and IT spending could adversely affect market demand and penetration rates for the company's innovative solutions.

☐ Given the company's current scale and rapid expansion phase, delays in key client acquisition or major contract execution may result in cash flow constraints and revenue growth underperformance.

☐ Lower-than-anticipated adoption of ACCE ecosystem's liquid cooling technology and waste heat recovery commercialization, or insufficient end-user acceptance, may affect business model validation.

☐ Substantial R&D investments may not yield expected product iterations or SMR technological breakthroughs; potential loss of key technical personnel could impact competitive positioning.

☐ Regulatory and policy changes, including enhanced environmental standards and energy policy adjustments, may affect business development and cost structure.

Ratings and related definitions

Company short-term ratings

Stock ratings of Buy, Hold and Sell have a time horizon of 6 months from the publishing date of the initiation or subsequent rating/price target change report issued for the subject company's stock.

Buy - The subject company's stock price should outperform the typical benchmark market index (eg. HSI) by 20% or above.

Hold - The subject company's stock price should outperform the typical benchmark market index by 5-20%.

Neutral - The subject company's stock price change is within ±5% compared to the benchmark index.

Rating Suspended - No judgment is made on the company's stock performance in the next 12 months.

Company long-term ratings

A - The company's long-term growth potential is above the industry comparable average level.

B - The company's long-term growth potential is in line with the industry comparable average level.

C - The company's long-term growth potential is below the industry comparable average level.

Sector ratings and definitions

Over the 6-month period from the publishing date of the initiation or subsequent rating/price target change, the performance of the industry index relative to the concurrent market benchmark (HSI) is used as the standard:

Overweight - The industry fundamentals are favorable, and the industry index outperforms the benchmark by more than 10%.

Neutral - The industry fundamentals are stable, and the industry index moves within ±5% of the benchmark.

Underweight - The industry fundamentals are weak, and the industry index is expected to underperform the benchmark by more than -10%.

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