



**Performance  
Multiplied**

Data Center Products and Solutions

# **Your Cooling Strategy Just Became Your Growth Strategy**



# Unlock Potential in Your Thermal Management Strategy

Trane's data center solutions help hyperscale and colocation operators keep critical systems running, control costs and get more from every investment. We combine modular system design, integrated controls and deep data center expertise to deliver thermal management solutions that perform the way you need them to — today and as demands evolve.

From traditional water-cooling strategies to advanced liquid cooling and AI-cooling approaches designed for high-density environments, Trane supports a wide range of cooling needs across modern data centers. For colocation providers, that means reliable, efficient performance with the flexibility to scale as customer demand grows. For hyperscale operators, it means cooling systems built to support increasing loads, higher rack densities and the fast-changing requirements of AI-driven computing.

Across both environments, Trane helps improve energy efficiency so more power can go to compute, not cooling overhead. The result is simpler operations, better protection for your infrastructure investments and a data center strategy built to adapt as demand accelerates.



## Transforming Vision Into Impactful Strategy



### **PROVEN THERMAL MANAGEMENT SOLUTIONS**

Backed by over a century of engineering expertise, we design thermal management systems built to perform consistently under real operating conditions.



### **SPECIALISTS IN INTEGRATED SYSTEMS**

From co-design to system-level modeling, we work across your team and the broader AI ecosystem to engineer systems that deliver coordinated performance. Expert services and maintenance help keep your system performing at day one levels over its full lifecycle.



### **TAILORED SERVICE AT SCALE**

With 6,000+ technicians, we deliver responsive, scalable support across the lifecycle, local to operations so performance keeps pace with growth and uptime is protected.



### **SUSTAINABILITY-FORWARD**

From smart planning and adjustments to ecosystem collaborations, we use system-led insight to help improve efficiency, reduce emissions and remain resilient.



### **BUILDING AHEAD OF THE MOMENT**

We invest in training and position our teams close to your operations to support performance where it matters most, backed by in-region manufacturing and deep experience.

# Where Data Center Challenges Meet Engineered Solutions

From AI-driven heat loads to grid constraints, workforce gaps and pressure to get capacity online faster, today's data centers are facing a new level of complexity. We bring these challenges into focus — connecting thermal strategy, system design and service expertise to help you scale efficiently and operate with certainty.



GPU-as-a-Service is projected to grow 22.9% (CAGR) 2025-2030<sup>1</sup>.

**We design scalable cooling systems for AI's increasing heat loads.**



Workforce shortages are causing an expertise gap, leaving operations vulnerable<sup>2</sup>.

**Our data-center-trained technicians provide reliable, trusted local service to keep your operations running.**



Liquid cooling can cut energy use by up to 30% but can present infrastructure and safety concerns if improperly implemented<sup>3</sup>.

**We deliver fully integrated liquid cooling solutions with expert guidance and safer deployment.**



Some countries are halting new grid connections until 2028<sup>4</sup>.

**Our thermal energy storage solutions offset grid constraints by separating cooling loads from real-time energy use.**



Power access continues to be a primary challenge<sup>5</sup>.

**We reduce grid strain with energy-efficient systems that minimize waste and enable energy reallocation.**



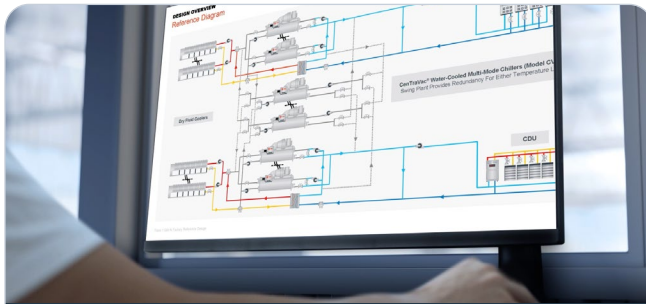
Supply chain constraints and tariffs are impacting access and cost of components<sup>6</sup>.

**Our in-region manufacturing and global network help reduce delays and mitigate costs.**

**We help you enhance efficiency by prioritizing thermal management, enabling smarter scaling and more reliable uptime.**

# Multiply Performance With Industry-Leading Cooling Solutions From Trane

Think of your thermal management system as a stack comprised of equipment, controls, data and supporting services. Trane pulls all this together as one system, delivering more consistent, efficient and reliable performance.



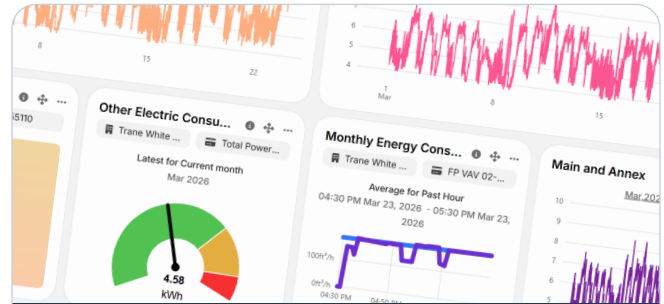
## Integrated Systems

### Turning complexity into performance

Data center environments are complex, with multiple systems and control layers all interacting under changing conditions. When those pieces don't line up, inefficiencies creep in and performance becomes harder to manage.

Trane brings equipment, controls, data and services together into one coordinated system. Your thermal management system is co-designed, modeled and tested to perform as intended from the start.

- Reduce inefficiencies by aligning every part of the system
- Improve results with a solution optimized as a whole
- Respond more confidently as conditions change
- Spend less time managing complexity and more time running your operation



## The Insight Layer

### Translating data into actionable guidance

Your thermal management system generates a constant stream of data. But data alone doesn't tell you what to do next, leaving your team to interpret conditions, prioritize actions and keep systems aligned.

Trane connects system data with advanced analytics to create an insight layer that helps you understand what's happening and what to do next. Real-time visibility and predictive diagnostics are powered by embedded Trane expertise to support better decisions across your operation.

- Make better decisions with clear, prioritized insights
- Identify issues earlier and act before they escalate
- Maintain system alignment with continuous monitoring and expert guidance
- Improve efficiency and consistency over time

# Fueling Your Performance Through Collaboration

We collaborate with you from concept to completion and leverage key ecosystem relationships to deliver on your requirements. From new innovations to meet your design, performance improvements and retrofits at every stage, our trusted specialists help you move faster and scale smarter.

## Our Approach

1

### Collaborative Solutioning

This is where clarity begins. No matter your data center type or scale, we collaborate with your team to define goals, analyze needs and set parameters for a more efficient thermal management strategy.

2

### Simulation, Analysis and Modeling

We test your unique system specifications before going live with advanced digital modeling, giving your team data-backed insight into how each choice impacts energy use, capacity and ultimately ROI.

3

### Performance Validation

Before your system goes live, we invite you to witness it in action. From flow rates to heat transfer and control responsiveness, we test it all — confirming your system meets the exact specs and performance standards that matter most to you.

4

### Commissioning

Trane works with your team to ensure your facility meets requirements from the start, reducing risks in support of on-time, on-budget completion. Our seven step, flawless commissioning process includes early planning and strict verification across every step to deliver optimal performance for your high-stakes environment.

5

### Operational Optimization

As your data center grows, Trane supports you with advanced systems and local service teams. We enhance performance through real-time diagnostics, remote monitoring and predictive servicing, ensuring maximum efficiency and reliability.



## Build Faster With Proven Designs



Trane's Continuum Reference Designs give you a proven starting point for modern data centers, with the engineered flexibility to adapt to site, capacity and performance requirements. Built by specialists, each design brings together cooling, energy use and reliability in a coordinated system so teams can move faster from planning to compute-ready capacity while helping to make more power available for compute.

Teams use these designs to:

- Decrease risk and accelerate deployment
- Reduce rework with proven configurations
- Compare validated options early
- Define cooling strategies for high-density workloads
- Align around clear performance targets
- Enable repeatable system design with flexibility built in from the start

The impact is measurable. In one recent application, a 1 GW AI factory design freed up 22 MW of power for compute.

# Enhance Your Operations With Tailored Solutions

Our thermal management solutions are built for a new era of data center complexity, where standard designs alone can't meet every operational demand. As rack densities rise, AI workloads accelerate and site requirements become more specialized, operators need cooling strategies that combine proven platforms with more tailored system design. Powered by expertise, Trane solutions are purposefully engineered to support mixed densities, improve energy performance, adapt to site-specific constraints and scale quickly as your needs evolve.

## CONTROLS



### Integrated System Management

Configurable controls efficiently manage multiple units, improving performance, increasing energy efficiency and reducing equipment strain to help optimize thermal management system performance over time.

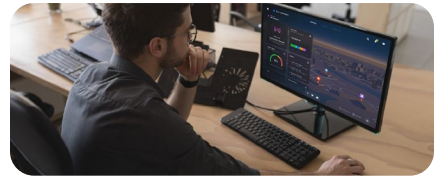
## CHILLER PLANT MANAGER



### Intelligent Optimization, Built-In Resilience

Orchestrates load balancing and equipment sequencing in real time — maximizing system performance with redundant architecture that ensures continuous, reliable operation.

## DIGITAL SOLUTIONS



### Connected Intelligence Across Your System

From AI-driven controls to cloud-based visibility and expert analytics, our digital solutions turn data into coordinated action — optimizing performance, anticipating issues and continuously improving operations across the lifecycle.

## WATER-COOLED CENTRIFUGAL CHILLERS



### Efficient Cooling at Scale

Designed for high-capacity cooling, these chillers tackle tough applications, reduce operational costs and minimize environmental impact, making them a smart, sustainable choice.

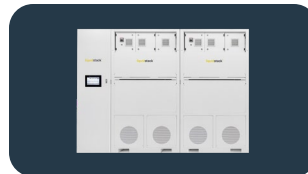
## AIR-COOLED CHILLERS



### Scalable Cooling, Ready When You Are

Built for rapid deployment and expansion, these chillers deliver consistent, high-performance cooling across a wide range of conditions — handling the demands of modern GPU and AI workloads while maintaining reliability and control.

## LIQUID COOLING SOLUTIONS



### Precision Cooling for High-Density Compute

Engineered for next-generation workloads, our liquid cooling solutions deliver targeted, high-efficiency heat removal at the chip level — integrated into your broader thermal system to support extreme densities without compromising reliability.

## AIR HANDLING SOLUTIONS

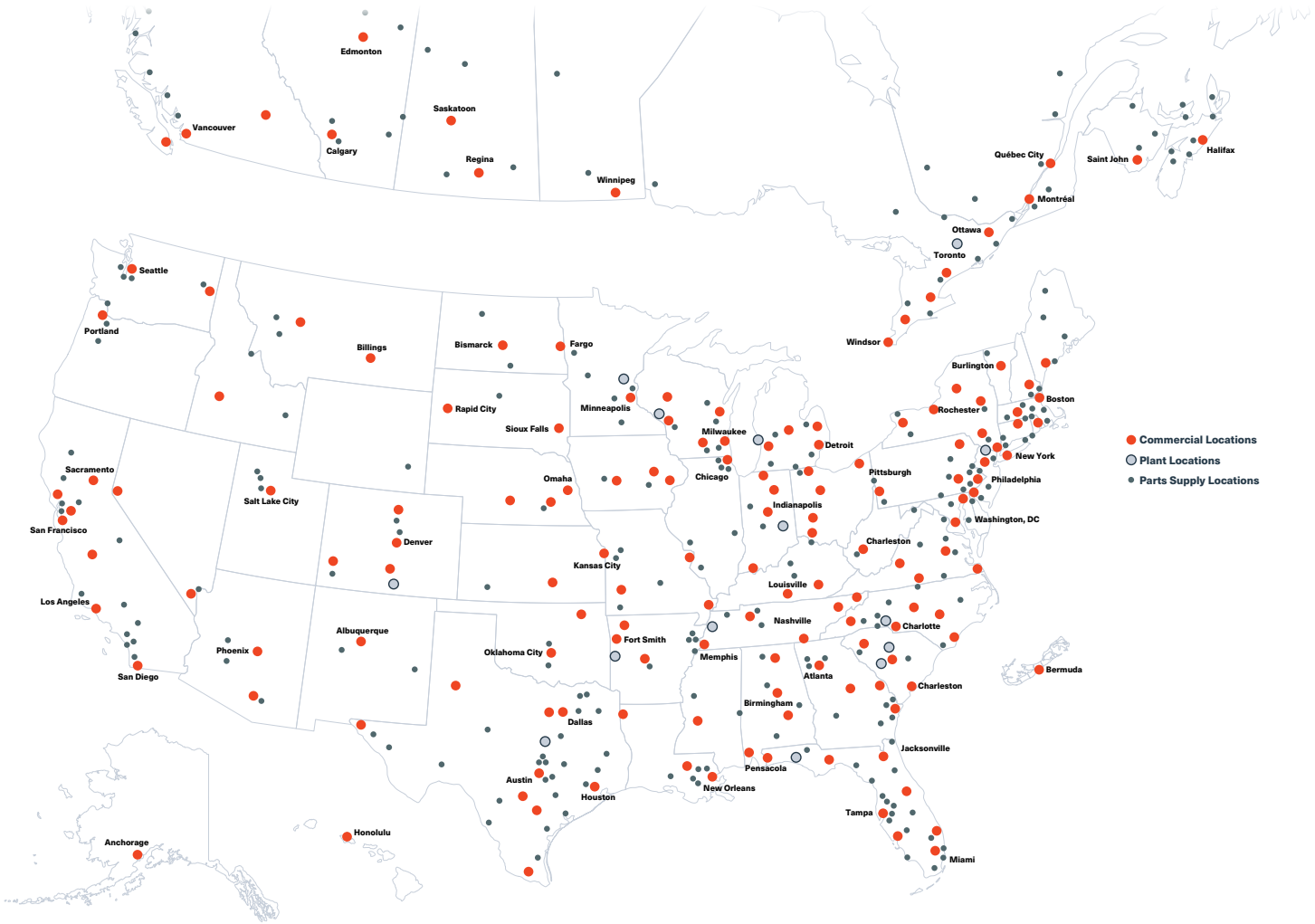


### Reliable Airflow, Smarter Space Usage

Designed for the demands of computing, our air handlers offer exceptional airflow and precise temperature control, enhancing your space and easing system load for optimal performance.

# Expert Services to Help Your Equipment and Controls Perform at the Highest Level

Our tailored data center services are built to meet requirements from the start, maintain uptime and multiply performance. These services help ensure seamless integration during start-up and commissioning, smoother transitions during growth and a service plan built for long-term critical performance.



## COMMISSIONING, MAINTENANCE AND OPTIMIZATION SERVICES

### Ensuring Performance

#### End-to-End Data Center Services

- Commissioning aligns requirements from the start
- Timelines stay on track — no start-up surprises
- Lifecycle support scales with your needs
- Performance keeps pace with growth

#### Responsive, Skilled Technicians When and Where Needed

- Largest service footprint in the industry with 6,000+ technicians
- Specialized data center training at Advanced Technology Training Center
- Fast, dependable service and support

#### Proactive Monitoring With Rapid Response

- Designed for critical environments where uptime is essential
- Remote diagnostics to assess issues quickly
- Predictive maintenance to prevent disruption
- Faster issue resolution for smooth operations

#### Parts When and Where You Need Them

- Quick access to components
- Tailored to local needs
- Faster service

# You're Building For Tomorrow. So Are We.

As the demand for data processing and storage grows, so does the need for sustainable practices. Trane helps data centers meet that challenge — delivering solutions that maintain and improve operational efficiency while supporting sustainability goals and community relations.

We translate sustainability and operational priorities into actionable strategies to lower carbon emissions, conserve resources and reallocate energy. That includes everything from noise reduction to scalable system design that helps customers grow as they go, helping to balance CapEx and OpEx.

With the right people, insights, services, systems and support, you can move forward with confidence — ensuring energy efficiency, regulatory compliance and cost savings as your data center evolves.

## Let's Multiply Your Performance, Together.

With Trane, you don't just get cooling equipment. You get a thermal management partner with the expertise, insights, services and system-level support to help your data center operate efficiently, adapt with confidence and stay ready for evolving regulatory and cost pressures.

Visit [Trane Data Center Solutions](#) to learn more.



<sup>1</sup> GPU As A Service Market (2025 - 2030), [Grand View Research](#)

<sup>2</sup> Operators struggle to overcome ongoing staff and skills shortage, [Uptime Institute Intelligence](#)

<sup>3</sup> Exploring Immersion Cooling – Part 2: The Challenges, [Upsite Technologies](#)

<sup>4</sup> 8 Trends That Will Shape the Data Center Industry In 2025, [Data Center Frontier](#)

<sup>5</sup> EirGrid pulls plug on 30 Irish data center projects, [Data Centre Dynamics](#)

<sup>6</sup> Addressing Data Center Growth Constraints Key to U.S. Innovation, Leadership in AI, [POWER/Access Intelligence](#)



Trane – by Trane Technologies (NYSE: TT), a global climate innovator – creates comfortable, energy efficient indoor environments through a broad portfolio of heating, ventilating and air conditioning systems and controls, services, parts and supply. For more information, please visit [trane.com](#) or [tranetechnologies.com](#).

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