Modular Data Center Pricing

Article Overview

Modular data centers typically cost between $7,000 and $12,000 per kW, with total project costs influenced by power density, redundancy, cooling systems, and site preparation.

Cost Overview

The average cost per kW for a modular data center ranges from $7,000 to $12,000, depending on capacity, redundancy level, and specific features (Schneider Electric, 2023) . For example, a 250 kW modular facility generally costs $2-3 million, including infrastructure and deployment . On a larger scale, 1 MW of critical load can cost $9.3-15 million, with an average near $11.7-11.3 million per MW in the U.S., excluding tenant-specific equipment and owner-furnished items .

Cost Breakdown

Key components of modular data center costs include:

o Power distribution: 25-35% of total cost
o Cooling systems: 30-45%, with liquid cooling for high-density AI workloads adding 25-40% more
o Structural elements: 15-20%
o Monitoring and controls: 5-10% Cooling infrastructure is often the primary cost driver, especially for high-density racks exceeding 30 kW per rack, where liquid cooling is required to maintain efficiency and Power Usage Effectiveness (PUE) ratings of 1.1-1.3 .

Deployment and Operational Costs

Modular data centers offer faster deployment, typically 4-6 months from order to operation, which is 30-50% faster than traditional builds . Operational expenses are generally 10-20% lower than traditional facilities due to optimized cooling, integrated monitoring, and reduced maintenance . Modular designs also allow for scalable expansion, reducing upfront CAPEX by avoiding large building shells and leveraging prefabricated modules .

Factors Affecting Cost

Several variables significantly impact modular data center pricing:

o Power density requirements: Higher kW per rack increases cooling and power infrastructure costs
o Redundancy level: Tier III or IV designs require additional infrastructure, raising CAPEX
o Cooling technology: Air-cooled systems are cheaper but less dense; liquid cooling is costlier but supports

high-density workloads
o Site preparation: Land grading, foundations, utility connections, and environmental remediation can add substantial costs

Comparison with Traditional Builds

Modular data centers are frequently cost-competitive with traditional builds. While on-site labor and building shell costs are reduced, factory-integrated materials and housings can offset savings. In some cases, modular builds can cut initial CAPEX by 2-25% and reduce construction timelines by several months . The main advantage lies in shifting cost and risk while maintaining critical power and cooling capacity.

Summary

o Cost per kW: $7,000-$12,000
o Total 250 kW system: $2-3 million
o 1 MW facility: $9.3-15 million (average ~$11.3-11.7M)
o Deployment time: 4-6 months
o Operational savings: 10-20% lower OPEX
o Primary cost drivers: Cooling, power density, redundancy, site prep Modular data centers provide flexibility, faster deployment, and energy efficiency, making them a viable alternative to traditional builds, especially for projects requiring rapid scalability or high-density computing.

Modular data center costs range from $7,000 to $12,000 per kW depending on capacity, redundancy requirements,

Data Center Pricing Calculator This Data Center Pricing Calculator will help reduce the many factors that go into the decision of

Hier sollte eine Beschreibung angezeigt werden, diese Seite lässt dies jedoch nicht zu.

Complete breakdown of data centre costs including power, colocation, construction, and operating expenses. Real pricing data

Data center buildout costs depend heavily on factors like facility size, geographic location,

This piece breaks down the cost drivers that actually move the needle - on CAPEX, on OPEX, and on timeline. By

The modular data center market was valued at $18.5 billion in 2025 and is projected to reach $42.3 billion by

2034, growing at 10.2%

We covered the procurement-side distinctions in detail in our modular vs prefabricated vs containerized data centers

Modular data centers offer fresh opportunities for the industry, but that doesn"t mean they are right for every occasion.

Overview With a complicated data center project that has short delivery timelines, prefabricated modular solutions and pre

Prefabricated and Modular Data Centers Market Size is valued at USD 4.4 billion in 2024 and is predicted to reach

The modular data center container pricing structure differs significantly from traditional construction. While the upfront

May 3, 2026 Modular Data Center: Definitive Guide (Types, What"s Included, When It Wins) A practical guide to modular data

This TierPoint Data Center pricing calculator will help you compare costs of building your own data center and moving your

Modular Data Center Market Summary The global modular data center market size was estimated at USD 29.04 billion in 2024 and

Transforming data center design and construction, modular data centers conquer space challenges and

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