

Modular Data Center Room Costs



AI Overview

Modular data center costs typically range from \$9M to \$15M per MW of critical load, with per-rack and per-square-foot costs varying based on density, cooling, and deployment type.

Cost Overview

Construction Costs: Modular data centers in the U.S. generally cost \$9.3M–\$15M per MW of critical load, with an average around \$11.7M/MW for standard facilities. For smaller deployments, such as a 440 kW Tier III modular build, costs can be roughly \$5.39M, equating to about \$12.3M/MW. These costs include structural housing, factory integration, embedded safety systems, and sometimes monitoring software, but exclude owner-furnished items and tenant-specific equipment.

Per-Square-Foot Costs: Standard data center construction costs range from \$600 to \$1,100 per square foot, with AI-ready or high-density facilities exceeding this range due to advanced cooling and power requirements. Modular designs can reduce the building shell and on-site labor, potentially lowering costs compared to traditional builds.

Per-Rack Costs: Rack-level costs vary significantly depending on power density and cooling method. High-density racks (200 kW+) require advanced liquid cooling, which increases CAPEX, while lower-density modular setups may use skids or containerized enclosures to reduce structural costs.

Cost Drivers

Site Preparation: Grading, foundations, drainage, fencing, and crane access are fixed costs that scale with project size.

Module Costs: Factory-integrated modules bundle housing, safety systems, and testing, reducing field labor but increasing material costs.

Electrical Distribution: Costs depend on rack count and density; higher density can improve efficiency but requires more robust infrastructure.

Shipping and Logistics: Containerized modules benefit from standard ISO dimensions, but transport can dominate costs for remote or large deployments.

Scalability and Flexibility: Modular designs allow incremental expansion, reducing upfront CAPEX and enabling future-proofing without costly overhauls.

Operational Considerations

Modular data c...

Article Content

Modular Data Centers: System Architecture and Benefits

Modular Data Centers: System Architecture and Benefits The modular data center indicated here is built with a number of racks, UPSs, power distribution cabinets, power distribution units, air conditioners

Data Center Buildout Cost: Complete Pricing Guide

Data center buildout costs depend heavily on factors like facility size, geographic location, tier classification, and the workload type. Every project is different, but the industry has

Data Center Pricing Calculator | TierPoint

This TierPoint Data Center pricing calculator will help you compare costs of building your own data center and moving your equipment to a data center provider.

Costs of a Data Center

To reduce costs you can opt for the construction of a Modular Data Center, which is a portable method to deploy capabilities of a Data Processing Center. These can be implemented quickly and

Modular Data Center Cost: CAPEX, OPEX & Timeline Drivers

This piece breaks down the cost drivers that actually move the needle - on CAPEX, on OPEX, and on timeline. By the end, you'll know what questions to ask before engaging any modular

Know The Requirements For Modular Data Centers

Flexible computer room size: The size of the computer room can be scaled appropriately with additional modules to meet the data center owner's needs. The computer room should support

Micro Data Centers: A Practical Guide for Small IT Teams

Micro Data Centers: A Practical Guide for Small IT Teams Learn what a micro data center is, why it may suit your business, and how to build one without the cost and complexity of a

What are Modular Data Centers and How Can They Help?

Given these barriers to data center construction, it's no surprise that some companies are redirecting their resources to install modular data centers.

How Modular Designs Make Data Centers Smarter and Stronger

Upgrading power distribution? Modular electrical rooms keep changes isolated. By designing for change, modular data centers stay ahead of shifting technology and market demands.

Qualcomm inks deal for AI startup Modular to bolster software ...

Qualcomm on Wednesday said it's buying infrastructure startup Modular to boost its artificial intelligence software capabilities amid the data center build-out.

Modular Data Center Construction

The Road Ahead Modular construction is no longer a niche strategy—it's quickly becoming a standard in modern data center development. Whether supporting a hyperscale provider

Modular Data Centers: What They Are and What They Aren't

So, you need a data center, and using the cloud or a co-location facility just isn't an option. What are your choices? You can build one from the ground up, at a cost of between \$7

Modular Data Center Cost: A Realistic 2026 Breakdown

Modular data center costs range from \$7,000 to \$12,000 per kW depending on capacity, redundancy requirements, and cooling technology. A complete 250 kW system typically costs \$2-3

How Much Does a Data Center Cost? The Complete Guide To 2026

See what a data center really costs in 2026, from build price per megawatt to monthly operating costs. A clear breakdown of every line item, with real numbers.

Modular Data Centers: An Executives Guide

What Is A Modular Data Center? A modular data center is a self-contained facility that houses computer servers, cooling systems, power supplies, and other equipment. They're essentially the modern

Modular Data Centres: Prefab Construction, Cost, and

How modular and prefabricated data centres work. Covers construction speed, cost per MW, deployment models, leading vendors, and when modular makes sense.

Modular Data Center Guide: Types & When It Wins | ModulEdge

How much does a modular data center cost? At like-for-like final capacity, modular CAPEX runs roughly cost-parity with traditional construction (industry analyses show prefabrication

The Modular Data Center Ultimate Guide

A modular data center is a quick, flexible, and cost-effective way to boost your data storage. Using prefabricated modules, these centers are operational in weeks rather than months,

Unlocking Efficiency and Agility: The Guide to Modular Data Centers

Find out how modular data centers can ensure scalability for future expansions, embody repeatable designs, and exhibit superior quality via factory control.

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://www.umele-pestovani.eu>

Email: info@umele-pestovani.eu

Phone: +49 152 287 6349

Address: Neue Mainzer Straße 66-68, 60311 Frankfurt am Main, Germany

This document is for informational purposes only. Specifications subject to change without notice.

