Quotation for Modular Data Center with 1000mm Depth



Overview

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

Key Takeaways

A modular data center with 1000mm depth typically costs between $7,000 and $12,000 per kW, with deployment taking 4–6 months depending on configuration and vendor.

Cost Estimate

The average cost per kW for a modular data center ranges from $7,000 to $12,000, influenced by factors such as capacity, redundancy, cooling technology, and power density (Schneider Electric, 2023; Data Center Frontier, 2023). For example, a 250 kW modular data center can cost $2–3 million, including infrastructure and deployment. Key cost components include: Cooling systems: 30–45% of total cost, with air-cooled systems being lower cost and liquid cooling enabling higher density and efficiency.

Power distribution: 25–35% of total cost, including UPS, switchgear, and integrated management platforms. Structural elements: 15–20% of total cost. Monitoring and controls: 5–10% of total cost.

High-density applications, such as AI workloads exceeding 30 kW per rack, may require liquid cooling, adding 25–40% to cooling infrastructure costs but allowing higher compute density per square foot.

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Vendor Options

Huawei FusionDC1000B: Prefabricated modular solution offering flexible design, fast deployment, and cost-efficient performance for small to medium data centers. It is factory-tested and can be deployed rapidly on-site. Schneider Electric Prefabricated Modular Pods: Supports 40+ high-density racks per pod with hybrid liquid-air cooling.

Preconfigured and factory-tested, these modules provide predictable performance, rapid deployment, and reduced CapEx. Options include all-in-one power modules and prefabricated IT pods, delivered near plug-and-play.

Deployment Timeline

Modular data centers typically take 4–6 months from order to operation, which is 30–50% faster than traditional brick-and-mortar builds. This compressed timeline allows organizations to begin generating revenue sooner, especially for edge computing or AI-driven workloads. Operational EfficiencyWell-designed modular data centers achieve PUE ratings of 1.

1–1. 3, outperforming older facilities. Operational expenses are typically 10–20% lower due to optimized cooling, integrated monitoring, and reduced maintenance requirements.

Modular designs also allow phased capacity expansion, reducing upfront capital risk.

Recommendation

For a 1000mm depth modular data center, it is advisable to: Confirm power density and cooling requirements to select the appropriate module type. Evaluate vendor options like Huawei FusionDC1000B or Schneider Electric prefabricated pods for factory-tested, rapid deployment solutions. Consider phased deployment to optimize CapEx and operational efficiency.

Request a custom quotation from vendors, specifying rack depth, redundancy, and cooling preferences, to obtain precise pricing tailored to your site and workload requirements. This approach ensures a cost-effective, scalable, and energy-efficient modular data center deployment.

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Article Content

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

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

For workloads above roughly 1 MW, the right answer is almost always a prefabricated room or a hybrid campus, not a stack of containers. For workloads under 100 kW that need to live

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 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

Prefabricated Modular Data Center | Huawei Digital Power

Huawei delivers prefabricated modular data center solutions with One Module One DC and container data center designs, enabling fast deployment and scalable data center delivery.

Data Center Buildout Cost: Complete Pricing Guide

Planning a facility? Get a clear picture of data center buildout costs to plan smarter and spend with confidence.

FusionDC1000B Prefabricated Modular Data Center

Huawei FusionDC1000B is a prefabricated modular data center solution offering flexible design, fast deployment, and cost-efficient performance for small to medium data centers.

Modular Data Centers: Prefabricated Containers and Modules

The types of modular data centers include container data centers, prefabricated data halls, and prefabricated power & cooling modules. Dgtl Infra provides an in-depth overview of modular data

The Modular Data Center Ultimate Guide

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Using prefabricated modules, these centers are operational in weeks rather than months, unlike traditional ones. This article covers the key elements, benefits, and applications of modular

Prefabricated Data Center Modules | Schneider Electric USA

Schneider Electric Prefabricated Modular Pod Data Center is engineered for speed, scalability, and flexibility. It supports up to 40+ high-density racks per pod with hybrid liquid-air cooling.

Modular Data Centers: Prefabricated Containers and

Modular data centers are prefabricated buildings such as a container that house servers, data hall, or data center module for power and cooling.

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The global Modular Data Center Market industry growth is projected to be USD 79.49 billion by 2030, growing from USD 29.93 billion in 2024, at a Compound Annual Growth Rate

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Delve into detailed insights on the Prefabricated Modular Data Center Market, forecasted to expand from 22.45 billion USD in 2024 to 45.78 billion USD by 2033 at a CAGR of 8.5%. The report identifies key

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