Telecom Data Center



Overview

A data center is a facility used to house and associated components, such as and. Data centers are for the storage and processing of information, and they support the global financial system,, machine learning, and. Since are crucial for, a data center generally includes.

Key Takeaways

Telecom data centers are specialized facilities that support high-connectivity network operations, cloud services, and mobile infrastructure, often integrating advanced technologies like 5G and edge computing.

Overview of Telecom Data Centers

A telecommunications data center is a facility owned and operated by a telecom provider to manage network resources, content delivery, and mobile/cloud services. Unlike standard IT data centers, telecom data centers focus on network functions, including virtualized Radio Access Networks (vRAN), 5G packet core, and mobile network monitoring. They are highly connected to other data centers, cloud providers, and telecom operators through outside plant (OSP) cables and cross-connects to ensure efficient operations and low-latency service delivery.

Key Services and Applications

Telecom data centers typically provide: IP Multimedia Subsystem (IMS) for voice, video, and messaging services.

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N and Serving Gateways for mobile data routing. Gi-LAN and CDN/OTT caching to optimize content delivery. Mobile network monitoring for performance and reliability.

Colocation services for businesses seeking scalable, high-availability hosting.

Infrastructure and Connectivity

Telecom data centers are designed for high availability, scalability, security, and performance. They often include: Fiber optic backbones connecting multiple cities and international networks. Cable landing stations linking national networks to global submarine cables.

Fiber optic rings within cities connecting points-of-presence (POPs). Wireless last-mile connectivity using WiMax and WiFi technologies. Tier 4 infrastructure, which dominates the Saudi market, ensuring maximum uptime and redundancy.

Saudi Arabia Telecom Data Center Market

The Saudi data center market is rapidly expanding, with the market size projected to grow from USD 2. 11 billion in 2025 to USD 2. 38 billion in 2026, reaching USD 4.

35 billion by 2031 at a CAGR of 12. 84%.

I

T load capacity is expected to increase from 0. 41 thousand MW in 2025 to 1. 03 thousand MW by 2030, driven by Vision 2030 smart-city initiatives, 5G rollouts, and hyperscaler investments.

Large and massive facilities dominate the market, with Tier 4 data centers accounting for over 82% of the market in 2025.

Examples of Telecom Data Centers in Saudi Arabia

Riaydh T2 Data Center: Part of a national fiber optic backbone covering 19 cities, integrating OSS/BSS systems, NOC, call centers, and WiMax/WiFi last-mile connectivity.

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O Telecom Colocation Facilities: Offers scalable colocation hosting for businesses, ensuring high availability and continuity of operations. Center3 Data Centers: Provides secure, high-speed connectivity and scalable solutions for enterprise and telecom clients.

Emerging Trends

Edge computing to support latency-sensitive 5G and IoT applications. Cloud region commitments from AWS, Microsoft, and Google, attracting ecosystem partners.

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I initiatives like HUMAIN, driving demand for exascale computing. Energy-efficient cooling solutions to address desert-specific operational challenges. Telecom data centers are thus critical for enabling high-performance network services, cloud integration, and digital transformation, particularly in regions like Saudi Arabia where infrastructure expansion and smart-city initiatives are accelerating.

Article Content

Data center

OverviewClassification and TypesHistoryData center designEnergy useSocial and environmental impactsNetwork infrastructureModular data center

A data center is a facility used to house computer systems and associated components, such as telecommunications and storage systems. Data centers are critical infrastructure for the storage and processing of information, and they support the global financial system, cloud services, machine learning, and artificial intelligence. Since IT operations are crucial for business continuity, a data center generally includes

The role of data centres in telecommunications

As global data and voice traffic continue to surge, the importance of data centres in telecommunications has never been clearer. These facilities embody the principles of centralisation,

The Evolution Of Data Centers In The Telecom Sector

Discover the five key drivers behind evolving data centers in telecom. Learn five of the major challenges created by telecom data center trends and how they can be addressed.

What is a Data Center

A data center is a secure, redundant facility for storing and sharing applications and data. Learn how they are changing to keep up with our computing needs.

Improve business agility with a Telco data center

Learn how telco data centers can deliver cloud-native services with high performance, low latency, and agility. Explore the challenges, requirements, and solutions for telco data center design and

New York Data Centers

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Below you will find locations of 69 data centers in New York, New York. To find other data center locations and colocation, cloud or connectivity providers in New York, please click here.

Global Data Centers | NTT DATA

With full-stack services, leading technologies and one of the largest connected platforms globally, we provide comprehensive data center solutions to meet your unique IT infrastructure requirements,

Data Centers And Telecom Network Integration

Learn the main benefits of data center and telecom network integration. Find out the 5 most important considerations for successful telecom data center integration.

Telecom Data Centre Solutions | TCTS

TCTS leverages open-source and integrated platforms to simplify data centre infrastructure management. Our feature-rich solutions help you to scale quickly, enhance reliability and optimize

NVIDIA Corporation

The AI Cloud will support sovereign, physical and agentic AI services for enterprises and industries across Korea, building on SK Telecom''s network, data center and enterprise infrastructure

SK Telecom Pursues 15GW AI Data Center Buildout, Aiming to

Ulsan AI Data Center to expand to GW scale; 5GW to be activated in stages from 2029, reaching 15GW in totalSK Group brings together full-stack AI infrastructure capabilities; SKT to

SK Telecom Pursues 15GW AI Data Center Buildout, Aiming to

The construction of a 15GW-scale AI data center is expected to serve as a springboard for Korea to become an AI infrastructure hub.

SKM Press Release: SK Telecom Pursues 15GW AI Data Center

Read Press Release for SK Telecom Co. Ltd. (SKM) published on Jul. 4, 2026 - SK Telecom Pursues 15GW AI Data Center Buildout, Aiming to Become Asia''s AI Infrastructure Hub

Nokia in major pivot from traditional telecom to AI, cloud ...

Nokia in major pivot from traditional telecom to AI, cloud infrastructure, data center networking and 6G Posted on November 19, 2025 by Alan Weissberger

SK Telecom Targets Asia AI Hub with 15-GW Data Center Cluster

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SK Telecom plans a 15 GW AI data center cluster to strengthen Korea''s AI infrastructure, meet rising computing demand, and establish Asia''s leading AI hub.

MENA Existing & Upcoming Data Center Database 2025

Khazna Data Centers, Saudi Telecom Company (center3) and SDS Data Center rank among the leading data center operators by capacity across MENA. The existing data center

Middle East Existing & Upcoming Colocation Data Center Portfolio ...

The "Middle East Existing & Upcoming Data Center Portfolio" database has been added to ResearchAndMarkets ''s offering. Khazna Data Centers, Saudi Telecom ...

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