

# Data Center Specifications



## Article Overview

Data center specifications define the design, power, cooling, security, and operational standards required to ensure reliability, efficiency, and scalability.

### Core Components and Design Criteria

A data center is a facility that houses computer systems, storage, and telecommunications equipment, typically including redundant power supplies, environmental controls, and security systems to ensure continuous operation and protection of critical data . Key design considerations include:

- Site Selection: Factors like geographic stability, accessibility, and risk of natural disasters.
- Structural Layout: Raised floors, modular racks, and optimized airflow for cooling efficiency.
- Power Infrastructure: Redundant power feeds, backup generators, uninterruptible power supplies (UPS), and energy storage systems.
- Cooling Systems: HVAC, liquid immersion cooling, and thermal management to maintain optimal operating temperatures .
- Network Cabling: Fiber-optic and twisted-pair cabling with automated infrastructure management for scalability and monitoring .

### Standards and Compliance

Data centers follow industry standards to ensure reliability, security, and energy efficiency:...

## Article Content

### TIA-942-C DATA CENTER INFRASTRUCTURE STANDARD

Program that enables data center facilities to be independently reviewed and certified for conformity to the standard, providing

TIA's ANSI/TIA-942 Standard | TIA Online

The ANSI/TIA-942 Telecommunications Infrastructure Standard for Data Centers specifies the minimum requirements for data

Data Centre Specifications

ThinkOn Minimum Data Center Specifications v1.9 – August, 2025 The table below specifies the minimum capabilities available at all

### DATA CENTER DESIGN

EN 50600 provides specifications for data center planning, construction, and operation. It covers all data center operational criteria

Data Center Design and Construction: A Complete Guide

Learn how to design and build a data center with this 8-step guide. Explore key components, best practices & requirements for a

Project Deschutes: Data Center Facilities

Google is contributing the fifth-generation cooling distribution unit “Project Deschutes” specification to help accelerate

Data Center Sizing Essentials: Your Guide to Efficient Infrastructure ...

Dive into data center sizing, crucial for balancing capacity, scalability, and cost-efficiency in meeting current and future

Breaking Down the Core Data Center Design Criteria for 2025

This guide of gbc engineers delves into the essential data center design criteria, providing insights to help you build a

ASHRAE Data Center Resources | Data Centers

Guiding Principles for Building & Operating Energy-efficient AI Data Centers With sections covering all stages of planning, design,

Tier 3 data center specifications checklist

Getting a data center tier 3 certified translates to high uptimes. An accredited tier designer shares insights to meet tier

Data Center Technical Specifications

Find out about Digital Realty's typical data center technical specifications, including electrical, fire prevention, mechanical, and security.

ISO/IEC TS 22237-1:2018

ISO/IEC TS 22237-1:2018: a) details the issues to be addressed in a business risk and operating cost analysis enabling application

R& M Data Center Handbook

R& M Data Center Handbook The present Data Center Handbook serves as a current guide for planning an. designing data centers.

Standalone 90KW Modular Data Center Specification

Overview This prefabricated modular data center specification is an all-in-one design, optimized for deploying Open Compute

## Contact Us

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