

## **Solid State Drive (Ssd) Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)**

Market Report | 2023-01-23 | 120 pages | Mordor Intelligence

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### **Report description:**

The solid-state drive (SSD) market is expected to grow at a CAGR of 17.2% during the forecast period. The data storage demand has been on a massive rise over the past few years, and it is expected to witness an increasing trend over the forecast period. Increasing demand for data storage options is expected to drive the demand for SSD demand over the forecast period.

The demand for SSD has been rapidly increasing, along with the growing number of cloud platforms, from the traditional corporate private and new public clouds to personal cloud usage. The commonly used SSD interfaces include Serial ATA (SATA), PCI Express (PCIe), and Serial Attached SCSI (SAS). Enhanced features, such as high speed and quick data access, boost the adoption of PCIe SSDs for cloud computing. ?

Increasing digitalization and shifting lifestyles are the primary factors of the rise in consumer electronics consumption. The COVID-19 pandemic also compelled consumers to go digital for various reasons, including home-schooling and remote employment and has expedited digitalization in various industries. As a result, the use of SSDs in consumer technology solutions is rapidly rising. This need is projected to continue as technological developments, including IoT, VR/AR, 5G, online technologies, and machine learning, become more prevalent.

Furthermore, the rise in storage demand has led companies to invest in manufacturing advanced solutions. For instance, in May 2022, Samsung Electronics confirmed a comprehensive collaboration on next-generation storage software innovations. The collaboration will concentrate on creating and testing open-source applications for existing and new memory and storing technologies, such as NVMe SSDs, computational storage (Smart SSDs, HBM-PIM, Smart SSDs), CXL memory, and fabrics.

Post-COVID-19 pandemic, the effort towards automated technologies will rise, supporting the global expansion of solid-state

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drives. Furthermore, growing data volume as a result of the work-from-home situation increased demands for solid-state discs in data centers. These SSDs will assist data center providers in providing high-speed and robust intake output operation for massive clouds and workstations.

## Solid State Drive (SSD) Market Trends

### Rising Demand from Enterprise Segment to Augment the Market Growth

Enterprise SSDs lead over a client SSD due to the protection of DRAM-stored data in the event of a power loss, higher performance, stronger error correction code (ECC), consistent and persistent quality of service, and a lengthier warranty.?

The earliest SSDs for enterprises used SLC (single-level cell) NAND flash, which stores one bit per cell and offers the highest level of endurance and performance, with a typical lifecycle of 100,000 writes per cell. Furthermore, NAND-based flash storage solutions are in great demand from organizations due to their long durability, low cost, and quicker storage with a low mistake rate, which drives the need for SSD solutions in enterprises worldwide.

The growing use of SSD in data centers is due to various factors, including higher efficiency relative to conventional HDD memory, rising demand for storing capacity, and breakthroughs in corporate SSD durability and efficiency. Increasing demand for data centers is expected to propel SSDs demand. SSDs are preferred by businesses since they enable less sprawl, require less energy, and result in a reduced environmental imprint.

The improvements to NAND flash technology-enabled enterprise SSD manufacturers to use lower-endurance NAND flash options, such as a multi-level cell (MLC), triple-level cell (TLC), and 3D NAND. The advantages of the lower-endurance forms of NAND flash include lower cost and higher capacity, which have increased market growth.?

Increasing product development by market players to meet the rising demand for data centers is expected to contribute to segment growth. In August 2022, Phison Electronics Corp. introduced its X1 controller solid-stated state drive (SSD) platform for enterprise use. The X1 SSD system was conceived in collaboration with Seagate Technology Holdings PLC and built using Phison technology to suit the rising demands of faster and more intelligent worldwide data-center infrastructures. The X1 SSD configurable platform allows for more significant computation using less energy. Due to a cost-effective technology that removes bottlenecks and enhances service quality, the X1 delivers more than a 30% boost in data readings than established market rivals for the equivalent power utilized.

### North America Region Expected to Hold Significant Share

North America is expected to be a prominent market due to the growing adoption of advanced technologies, such as Cloud, IoT, Big Data, and High-end cloud computing. The increasing need for storage, owing to the high adoption of such technologies, drives the market's growth in the region.?

The region includes the world's two largest economically developed countries, the United States and Canada. Prominent North American companies provide various businesses with cutting-edge SSDs as innovative memory options. To gain a competitive edge and enhance corporate efficiency, firms in the United States are increasing expenditures in IT infrastructures which have boosted the demand for storage solutions, including SSD, to increase the speed of data transmission and achieve high levels of efficiency.

The region has a strong foothold of vendors, contributing to the market's growth. Some of them include Intel Corporation, Micron Technology Inc., and Western Digital Corporation, among others. Additionally, the regional manufacturers are focusing on innovation and product differentiation to increase the penetration of products, increase revenues, and quicken the demand for the product in the region. ?

For instance, in June 2022, Micron introduced the 5400 SATA SSD Advanced Memory System for Critical Infrastructure. The

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company offers 176-layer NAND innovation to its data center SATA SSD using the 5400 SSD. Micron's 5400 SSD is the 11th generation data centre SATA SSD.

The development of 5G technology in the United States and Canada is expected to contribute significantly to market growth. According to the CTIA, this rapid expansion of 5G will provide the groundwork for a 5G industry in the United States, generating USD 275 billion in investments, 3 million new employment, and USD 500 billion in economic growth.

## Solid State Drive (SSD) Market Competitor Analysis

The solid-state drive (SSD) market is competitive due to the presence of major vendors, such as Intel, Micron Technology, Samsung Electronics, Kingston Technology Corporation, and Western Digital Corporation. The existing vendors in the market are investing heavily in the R&D of new and innovative products.

October 2022 - CFD Gaming released a PCIe Gen5 NVMe 2.0 M.2 SSD with reading speeds of up to 10 GB/s and write speeds of up to 9.5 GB/s. The SSDs are built on PHISON ELECTRONICS' "PS5026-E26" and utilize Micron's 3D TLC NAND flash innovation.

October 2022 - WD Introduced the Fast SanDisk Pro SSD, which has a twin Thunderbolt/USB port. Western Digital's latest super-fast SSD is one of the company's San Disk Pro line of goods. The PRO-G40 SSD combines Thunderbolt 3 (40Gbps) with USB 3.2 Gen 2 (10Gbps) through a single interface.

October 2022 - Solidigm launched the P44 Pro SSD, a high-performance user SSD for most demanding applications. The P44 Pro has lightning-fast performance and great power efficiency.

August 2022 - Samsung released the 990 Pro Series SSDs. These are NVMe M.2 2280 SSDs with great performance "designed for gaming and artistic applications." The PCIe 4.0 interface is used by the latest Samsung 990 Pro Series SSDs.

Additional Benefits:

The market estimate (ME) sheet in Excel format  
3 months of analyst support

### **Table of Contents:**

#### 1 INTRODUCTION

1.1 Study Assumptions and Market Definition?

1.2 Scope of the Study

#### 2 RESEARCH METHODOLOGY

#### 3 EXECUTIVE SUMMARY

#### 4 MARKET INSIGHTS

4.1 Market Overview

4.2 Industry Attractiveness - Porter's Five Forces Analysis

4.2.1 Bargaining Power of Suppliers

4.2.2 Bargaining Power of Consumers

4.2.3 Threat of New Entrants

4.2.4 Threat of Substitute Products

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#### 4.2.5 Intensity of Competitive Rivalry

#### 4.3 Industry Value Chain Analysis

#### 4.4 Assessment of the impact of COVID-19 on the Industry

4.4.1 Supply chain disruptions to impact the enterprise SSD segment in the short & medium-term as several large-scale organizations continue to stockpile their inventory?

4.4.2 Marginal rise in prices of Client SSD's which currently offer smaller profit margins as compared to the enterprise segments?

4.4.3 Stable demand from emerging applications, such as gaming consoles?

4.4.4 Mapping of the effect of COVID-19 on the overall industry performance for 2021 and 2022 ?

#### 4.5 Market Dynamics

##### 4.5.1 Market Drivers

4.5.1.1 Growing Adoption in Data Center Applications?

4.5.1.2 High Demand from the High-end Cloud Segment

4.5.1.3 Greater Utility of SSD over HDD in Key Verticals?

##### 4.5.2 Market Challenges

4.5.2.1 Concerns over Cost and Total Lifespan of SSD's

#### 4.6 Market Opportunities?

### 5 SSD MARKET ANALYSIS?

#### 5.1 SSD Pricing Analysis

#### 5.2 Evolution of SSD Market (in comparison to the HDD)?

#### 5.3 Unit Shipment Analysis

#### 5.4 Analysis of the Storage capacity & Form Factor of SSD and their evolution ?

### 6 MARKET SEGMENTATION

#### 6.1 By SSD Interface (Overview, Trends, Forecasts & Market Outlook)?

##### 6.1.1 SATA

##### 6.1.2 SAS

##### 6.1.3 PCIE?

#### 6.2 By Application (Overview, Trends, Forecasts & Market Outlook)?

##### 6.2.1 Enterprise

##### 6.2.2 Client

#### 6.3 By Geography

##### 6.3.1 North America

###### 6.3.1.1 United States

###### 6.3.1.2 Canada

##### 6.3.2 Europe

###### 6.3.2.1 Germany

###### 6.3.2.2 United Kingdom

###### 6.3.2.3 France

###### 6.3.2.4 Rest of Europe

##### 6.3.3 Asia-Pacific

###### 6.3.3.1 China

###### 6.3.3.2 Taiwan

###### 6.3.3.3 South Korea

###### 6.3.3.4 Rest of Asia-Pacific

##### 6.3.4 Rest of the World

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## 7 COMPETITIVE LANDSCAPE ANALYSIS?

### 7.1 Vendor Market Share Analysis ?

### 7.2 Analysis of the Key Differentiators and Strategies of Major SSD Manufacturers (Enterprise and Client)

## 8 COMPETITIVE LANDSCAPE

### 8.1 Company Profiles\*

#### 8.1.1 Intel Corporation

#### 8.1.2 Samsung Group

#### 8.1.3 Micron Technology Inc.

#### 8.1.4 Western Digital Corporation

#### 8.1.5 Kingston Technology Corporation

#### 8.1.6 Seagate Technology LLC?

#### 8.1.7 SK Hynix Inc.

#### 8.1.8 ADATA Technology Co. Ltd

#### 8.1.9 Transcend Information Inc.

#### 8.1.10 Teclast Electronics Co. Limited?

## 9 INVESTMENT ANALYSIS?

## 10 FUTURE OF THE MARKET?

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