

INDUSTRY OVERVIEW

Information and statistics contained in this section and other sections of this Document are extracted from the Frost & Sullivan Report prepared by Frost & Sullivan, which was commissioned by us. We engaged Frost & Sullivan to prepare an independent industry report, namely the Frost & Sullivan Report, for the [REDACTED]. None of us, the Sole Sponsor, the [REDACTED], any of their respective directors and advisors, or any other persons or parties involved in the [REDACTED] has independently verified the information from official government sources, nor have they given any representation as to its accuracy.

SOURCES OF INFORMATION

We engaged Frost & Sullivan, an independent market research and consulting firm, to conduct an analysis of and prepare a report on the global and Chinese mainland consumer technology markets. The report prepared by Frost & Sullivan for us is referred to herein as the Frost & Sullivan Report. We paid Frost & Sullivan a total fee of RMB700,000 for the preparation of the report, and we believe that such fee reflects the market rates for reports of this type.

Frost & Sullivan is a global consulting firm founded in New York in 1961. It has over 40 offices worldwide and employs more than 2,000 industry consultants, market research analysts, technical analysts, and economists.

Our Directors confirmed that, after taking reasonable care, as of the Latest Practicable Date, there had been no adverse change in the market information set forth herein since the date on which the Frost & Sullivan Report was issued.

RESEARCH METHODOLOGY

The Frost & Sullivan Report was prepared using intelligence gathering methods based on primary and secondary research from various sources. Primary research involves discussions on the current status of the industry with certain leading industry participants across the industry value chain, as well as conducting interviews with relevant parties to obtain objective factual data and forward-looking forecasts. Secondary research involves the integration of data and publications obtained from public sources, including official data and announcements from government departments, company reports, independent research reports, and data from Frost & Sullivan’s proprietary database.

BASIS AND ASSUMPTIONS

In compiling and preparing the Frost & Sullivan Report, Frost & Sullivan has adopted the following assumptions: (i) the social, economic, and political environments in the world and Chinese mainland are likely to remain stable during the forecast period; and (ii) key industry drivers are likely to fuel the growth of the global consumer technology industry during the forecast period. All statistics are based on information available as of the date of the Frost & Sullivan Report.

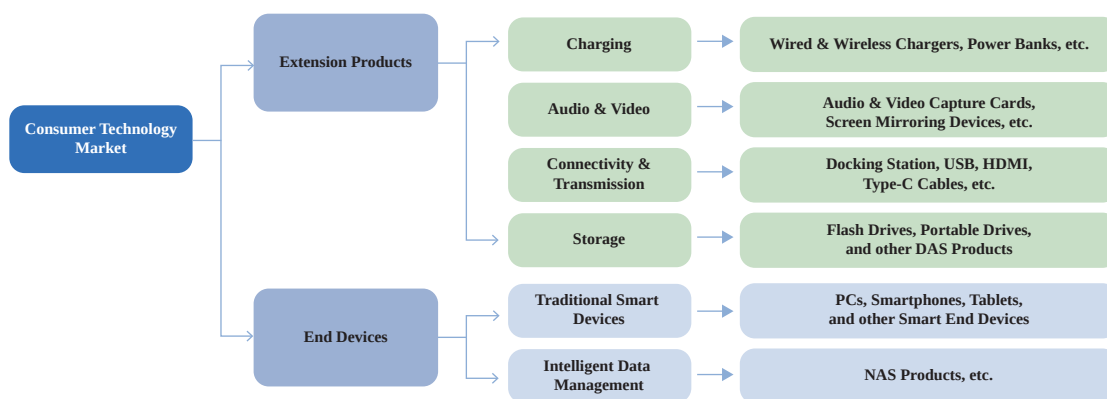
INDUSTRY OVERVIEW

Analysis of the Global and Chinese Mainland Consumer Technology Market

Definition and Classification of the Consumer Technology Market

Consumer technology refers to an industrial field that reshapes traditional consumer electronic products and services in an intelligent and ecological way, driven by technologies such as artificial intelligence, 5G communication, and advanced manufacturing. The core of this industry lies in the deep integration of hardware, software, and services to build a human-centric smart ecosystem, ultimately providing consumers with a more convenient, personalized, and seamlessly connected experience. Based on product forms, the consumer technology market can be divided into end devices and extension products. Among them, end devices market centers around personal and smart home devices, with representative products including smartphones, computers, and more. These products provide professional, in-depth, and powerful core functions to meet users’ digital needs.

Product Classification of the Consumer Technology Market



Source: Frost & Sullivan, Annual Report and Prospectus of Industry Peers

Note: The Company’s charging products and accessories, office products, and audio and visual products are primarily extension products. The Company’s NAS products within its storage products are end devices.

Analysis of Key Success Factors for Industry Providers amid the Development Waves of the Global and Chinese Mainland Consumer Technology Markets

Brand recognition reflects a company’s competitive positioning and the extent to which its brand occupies users’ mindshare. As industrial competition shifts toward ecosystem synergy, the connotation of brand recognition has evolved from simple product trust to an endorsement of the values of an entire technology ecosystem and lifestyle, effectively enhancing user loyalty and consolidating mindshare and serving as an important safeguard for industry providers to mitigate risks and achieve long-term healthy development.

Product design capability emphasizes the transformation of users’ needs into more accessible and resonant user experiences. This constitutes the starting point for achieving product differentiation and core competitiveness, directly influencing initial market acceptance, user satisfaction, and long-term brand perception.

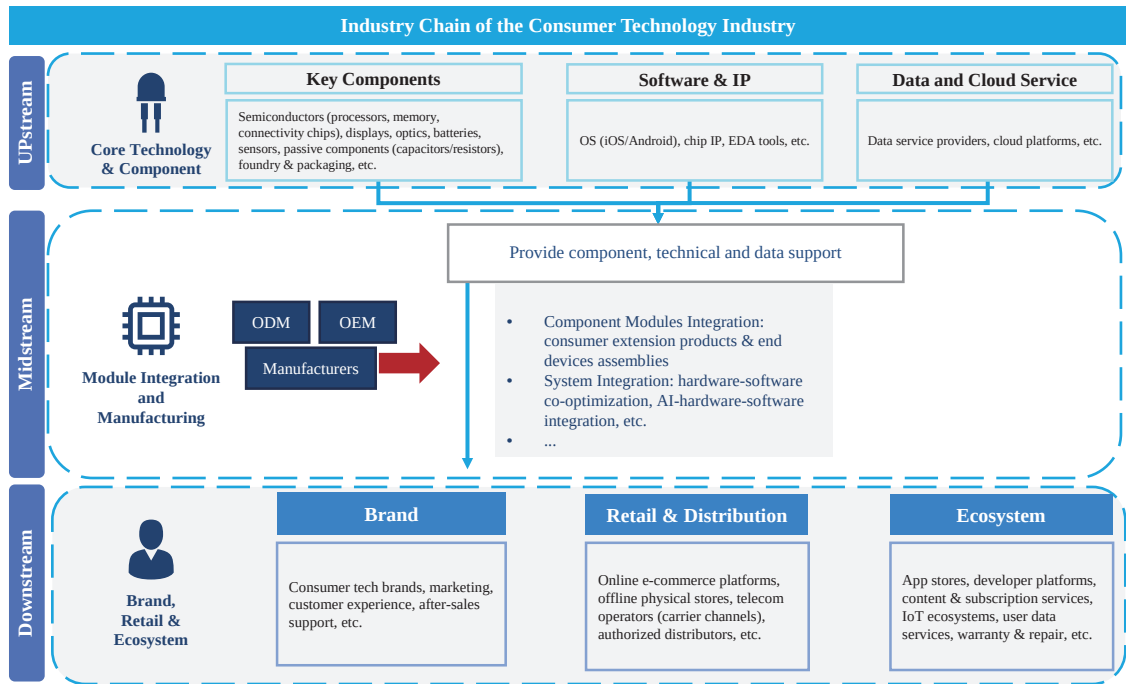
Product SKU lifecycle management capability is the foundation for industry providers to achieve sustained product success. Through rigorous review of new product introductions and performance evaluation to achieve the dynamic optimization of the product portfolio, these two capabilities collaborate closely to ensure that the product lines possess solid competitiveness and market adaptability.

INDUSTRY OVERVIEW

Resilience of supply chain capability focuses on stable supply and rapid response within a complex and volatile external environment. This requires industry providers to construct an end-to-end collaborative network and risk mitigation buffers, ensuring delivery, optimizing operating costs, and enhancing customer satisfaction. It has also become a core competitive advantage for enterprises in dealing with uncertainties.

A positive flywheel of consumers, investors and talents’ recognition emphasizes winning market trust with excellent products and services, which translates into solid financial performance and growth prospects, thereby gaining investor recognition and capital injection. Sufficient capital enables enterprises to continuously invest in innovation and attract the recognition from top-tier talent. This drives the continuous iterative upgrade of products and services, ultimately forming a virtuous closed loop that integrates accelerated growth with the construction of competitive barriers.

Analysis of the Value Chain in the Consumer Technology Market



Source: Frost & Sullivan, Annual Report of Listed Companies

INDUSTRY OVERVIEW

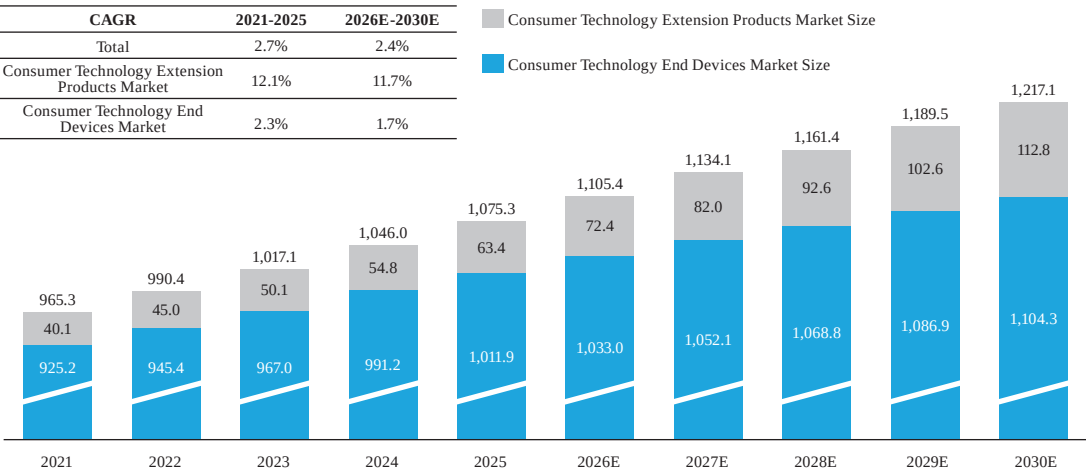
Analysis of the Market Size in the Global Consumer Technology Market

The global consumer technology market grew from USD965.3 billion in 2021 to USD1,075.3 billion in 2025, representing a CAGR of 2.7%. End devices remained dominant, reaching USD1,011.9 billion in 2025 with a CAGR of 2.3% from 2021 to 2025 and accounting for 94.1% of the total market in 2025. In contrast, extension products demonstrated faster growth with a CAGR of 12.1%. Looking ahead, the market is expected to reach USD1,217.1 billion by 2030 with a CAGR of 2.4%. Driven by AI adoption and device upgrades, extension products are projected to grow at a CAGR of 11.7% to USD112.8 billion, while end devices are expected to grow steadily to USD1,104.3 billion with a CAGR of 1.7%.

Global Consumer Technology Market Size

Global Consumer Technology Market Size, by Revenue

USD Billion, 2021-2030E



Source: Frost & Sullivan, IDC

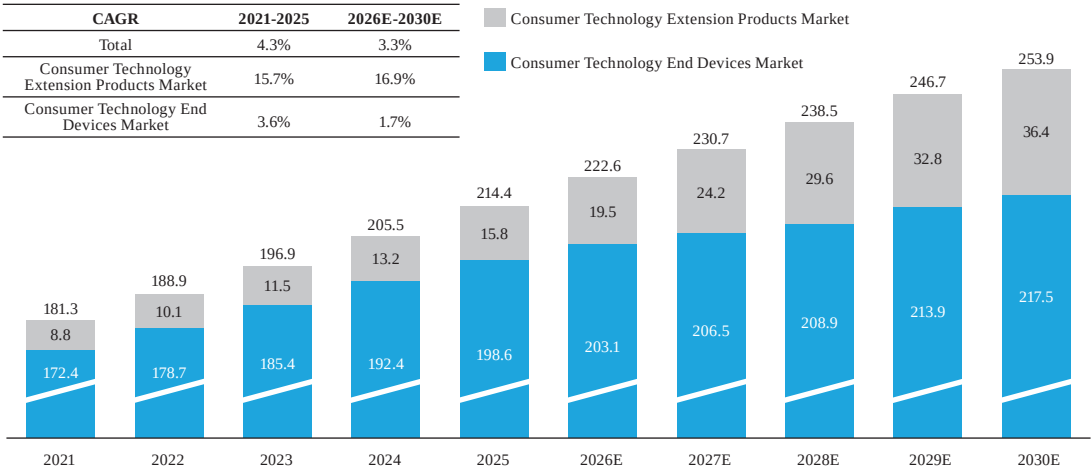
Chinese mainland consumer technology market expands at a faster pace than the global average, driven by strong domestic demand, rapid digital adoption, and a complete industrial ecosystem. Its large and increasingly affluent consumer base, coupled with high penetration of smartphones, AI devices, and smart home products, creates sustained volume growth. Meanwhile, continuous technological iteration and frequent product upgrades further accelerate market expansion. In particular, the consumer technology extension products segment in Chinese mainland grows significantly faster than the global level. This is fueled by the rapid popularization of AI terminals, high-speed charging, portable energy storage, and connected devices, which generate strong incremental demand for supporting accessories. Vertically integrated supply chain in Chinese mainland enables quick product iteration and cost efficiency, while leading local brands strengthen global and domestic market penetration. Additionally, rising consumer willingness to upgrade peripherals and the rapid development of online and offline retail channels jointly drive the high growth of extension products.

INDUSTRY OVERVIEW

Chinese Mainland Consumer Technology Market Size

Chinese mainland Consumer Technology Market Size, by Revenue

USD Billion, 2021-2030E



Source: Frost & Sullivan, IDC

Analysis of Core Development Drivers and Trends in the Global Consumer Technology Market

The demand for interconnectivity and functional extension among multiple devices and products remains a vital force driving business growth in the consumer technology industry: Supported by a large installed base and continuous product iteration, extension products enable enhanced functionality and multi-scenario applications, facilitating data flow and device synergy. At the same time, AI is accelerating product innovation and experience upgrades, driving increased intelligence and personalization. As interconnectivity becomes essential across scenarios such as smart homes and mobile offices, the industry is evolving from single-device solutions toward integrated ecosystems, supporting consumption upgrades and further market expansion.

Consumer technology products are rapidly expanding from traditional 3C digital categories to all-scenario products, adapting to scenarios such as home, office, and travel, with a significant incremental effect in the commercial market: Consumer technology product functions are no longer limited to single-functional support but achieve cross-scenario coverage through protocol interconnection, which not only promotes upgrade in experience but also creates significant market premium space through ecosystem integration. Such dynamic shift continues to inject growth vitality into the market, serving as the core momentum for the large-scale expansion of the industry and driving the industry toward higher levels of the value chain.

Chinese enterprises, leveraging technology innovation and mature supply chains, are accelerating the process of global commercialization and consolidating market share: They deepen their research and development in fields such as AI, IoT and 5G, converting the technological advantages into added value of brand through scenario-based, intelligent products. Relying on the domestic supply chains, they have constructed an efficient industrial ecosystem. This model enables Chinese brands to increase penetration in both developed and emerging markets by virtue of their advantages in product performance and iteration. By deeply integrating into and reshaping the global value chain, they are breaking the monopoly of traditional international brands. The transformation from the export of production capacity to the export of technical standards and brand value establishes the influence and core competitiveness of technology brands.

INDUSTRY OVERVIEW

Comprehensive service capabilities and reliability based on brand endorsement will be the key to competition in the future global consumer technology market: The focus of future consumers’ decision-making is shifting from hardware specifications toward the full-lifecycle services, continuous functional empowerment, and deep experiential value that a brand can provide. Brands must build their reputation through product quality, stringent privacy protection, and reliable service fulfillment, which directly determines brand premium, core credibility, and market competitiveness. In the data-driven intelligent era, the sustained stability of services, the security of data links, and the reliability of brand promises have become essential requirements for gaining long-term consumer trust. Brand endorsement is being transformed into a comprehensive service premium that encompasses after-sales guarantees and continuous systemic optimization.

Analysis of the Global and Chinese Mainland Consumer Technology Extension Products Market

Definition and Classification

As an important component of consumer technology, consumer technology extension products refers to products and supporting application services that provide function expansion and extension for consumer technology end devices. It aims to meet consumers’ needs for device performance improvement, function expansion, convenient interaction, and personalization in various scenarios through diversified peripheral products and value-added services. In terms of product form, consumer technology extension products mainly cover the following areas:

Charging products mainly address the battery life and power supply issues of consumer technology devices, including power banks, wired chargers, wireless chargers, etc. With the development of fast charging and wireless charging technologies, and users’ demand to alleviate device battery life anxiety, this category of products is constantly innovating in terms of charging power, charging efficiency, compatibility, etc., for example, gallium nitride (GaN) chargers have become popular among consumers in the market. **Audio & video products** are core tools for breaking the audio and video barriers of devices and realizing content circulation and creation, mainly including audio and video casting and collection categories. Collection function is achieved through core components such as video capture cards, which accurately captures and processes video and audio signals; while for casting function, it is represented by screen mirroring devices, which realizes the wireless display of content across mobile devices, meeting the sharing and collaborative needs in multiple scenarios. **Connection & transmission products** serve as the key link for data interaction and signal transmission between consumer technology devices, including docking stations, data cables, and other categories. Their technology updates closely follow the changes in interface standards of devices, evolving from traditional USB2.0 to the current USB4.0 and Thunderbolt4, and continuously pursuing higher data transmission rates, better compatibility, and more stable signal transmission effects. This is to meet users’ growing demand for video transmission, high-speed file backup, and other applications. **Storage products** focus on providing data storage solutions for individual and home users, including portable or extension products such as external hard drives, USB flash drives, SSD enclosure and disk array cabinets. In addition to continuously increasing storage capacity, these products are also optimized in terms of data read/write speed, data security protection, portability and usability. This is to address the storage challenges brought by the explosive growth of users’ digital content.

INDUSTRY OVERVIEW

Analysis of the Current Development Status of the Consumer Technology Extension Products Market

The Consumer Technology Extension Products Market Enters a Phase of Full Release of Business Opportunities

The consumer technology extension products market is entering a golden development period, mainly driven by the maturity of two key market conditions: first, the general improvement of user awareness, with existing users forming a substantial consumer base; second, driven by the wave of AI technology, the continuous extension of terminal functions and the growing demand for scenario-based extension.

In the past 10 years, smart end devices have evolved as the infrastructure of digital life. By the end of 2025, the global smartphone penetration rate has exceeded 60%, and user market education in major countries and regions has basically been completed. Users' acceptance of digital and intelligent products and services has significantly improved. The demand for accessories consumption around smart end devices continues to grow. With the integration of consumer technology extension products into the end devices ecosystem, exploration of value per user, and improvements in the smart end devices ecosystem, relevant demand has entered a new stage of development.

With the improvement of large language model capabilities, the enhancement of on-device computing power, and the continuous reduction of algorithm costs, the commercialization of consumer-grade artificial intelligence applications have triggered a replacement wave of consumer technology and hence, a new round of replacement cycle of consumer electronics. Under this trend, product functions have continuous iteration and extension. As an extension carrier of AI capabilities, consumer technology extension products are expected to undertake the demand release, becoming a key growth driver in the smart end devices upgrade cycle.

In a Fully Competitive Market Environment, Leading Players Fully Benefit from Market Growth and Market Dividends Brought by the Exit of Niche Players

The key success factors of consumer technology extension products focus on the functional design of innovative product categories, the ability to implement scenario-based experiences, and control of cost-effectiveness across the entire product range. These products aim to meet consumers' scenario-based needs through diversified peripherals and value-added services, and are important supplements to consumer technology end devices. Currently, products of different brands have significant differences in underlying technology, design, quality craftsmanship, etc, which directly determine the market competitiveness of products. Leading brands, relying on advantages including established supply chain systems and technology, can quickly respond to market demands and achieve a balance between cost and quality. In contrast, niche white-label players often lack brand accumulation, stable customer groups, and R&D capabilities, making it difficult to form effective competition in product quality upgrades and innovation, and ultimately being integrated by the market. Leading players can gain a larger commercial share by virtue of their existing business share and brand advantages, intensifying the winner-takes-all phenomenon.

Analysis of the Market Size of the Consumer Technology Extension Products Market

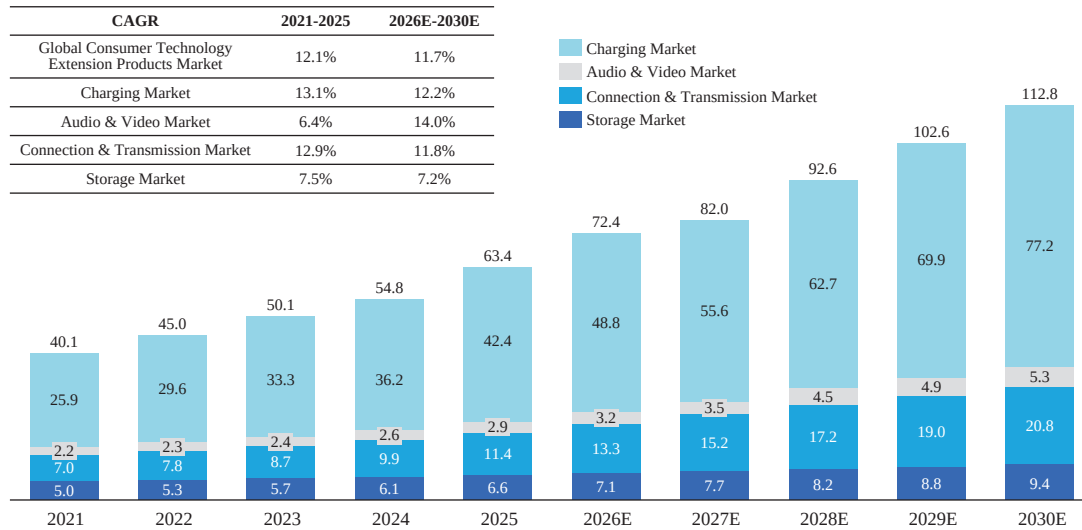
By segment, charging products grew from USD25.9 billion to USD42.4 billion (CAGR 13.1%) and are expected to reach USD77.2 billion by 2030 (CAGR 12.2%). Audio & video products are expected to grow at a CAGR of 14.0% to USD5.3 billion by 2030. Connection & transmission products are expected to grow at a CAGR of 11.8% to USD20.8 billion by 2030. Storage products are expected to grow at a CAGR of 7.2% to USD9.4 billion by 2030.

INDUSTRY OVERVIEW

Global Consumer Technology Extension Products Market Size, by Product Category

Global Consumer Technology Extension Products Market Size, by Revenue

USD Billion, 2021-2030E



Source: Frost & Sullivan, Annual Report of Listed Companies

Analysis of the Development Trends of the Global Consumer Technology Extension Products Market

In the future, market share will increasingly concentrate among industry leaders: Leading brands with mature supply chains and R&D strengths are leveraging scale effects and brand moats to continuously squeeze the survival space of long-tail white-label manufacturers and capture their market shares. The long-tail manufacturers, constrained by weak brand strength, low customer loyalty and insufficient R&D investment, will struggle to establish a foothold in core segments that emphasize innovation and quality.

Chinese players will drive the integration and innovation of global extension products and services: Chinese mainland has a world-leading complete industrial chain system, and is capable of rapidly responding to market demands and achieving efficient mass production. It also demonstrates significant advantages in cost control and quality management, supported by a mature and efficient logistics network for global fulfillment. In the wave of consumer technology innovation powered by artificial intelligence, supply chain in Chinese mainland has positioned itself as a global hub of innovation and lead functional innovation and ecosystem development in extension products.

Connection and transmission technology upgrades towards high-speed, integration, and scenario-based, becoming the core foundation for device collaboration and experience optimization: In terms of wired transmission, interfaces such as Type-C and Thunderbolt have become mainstream, realizing the one-line integration, simplifying connection experience. In the field of wireless transmission, it adapts to multi-device collaboration scenarios with low latency and strong anti-interference capabilities. At the same time, connection and transmission products pay more attention to in-depth adaptation to specific usage scenarios, and continuously optimize in terms of stability, compatibility, and convenient interaction to meet the demand for high performance, supporting the seamless connection in daily life and becoming an indispensable core link in the consumer technology extension products ecosystem.

INDUSTRY OVERVIEW

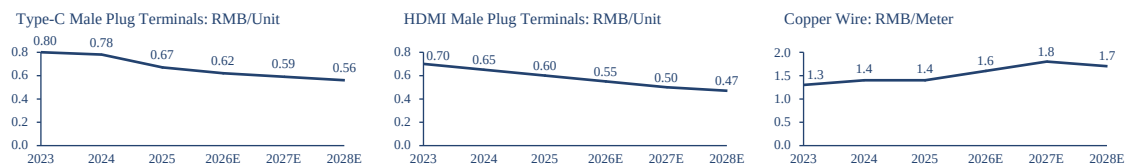
The demand for charging products continues to rise: On one hand, the growing popularity of portable devices, wearable products and new energy vehicles has turned the battery life into a key consideration when purchasing, stimulating the demand for efficient charging products. On the other hand, AI and rich-media content have significantly increased computing power consumption, posing challenges to charging management. To balance device battery life and performance, the market’s reliance on advanced charging technologies is deepening, directly driving demand growth for such products.

Continuous innovation in the functions of storage products, breaking the boundary between traditional consumer technology extension products and consumer technology end devices, and innovative data management consumer technology products will lead the new wave of the industry: As data volumes grow exponentially in the digital economy era, massive office and home data are challenging traditional management models, driving demand for efficient and intelligent data management solutions. Against this backdrop, storage products have evolved beyond simple capacity extension, giving rise to new hardware forms such as hard drive array cabinets and SSD enclosures. These products achieve functional integration through technological innovation, blurring the boundaries between traditional categories.

Analysis of the Price of Major Cost Components

For Consumer Technology Extension Products, the primary raw materials consist of various plug terminals, with Type-C and HDMI male plug terminals serving as typical examples. Driven by technological maturity and continuous advancements in manufacturing processes, the unit prices of these components have exhibited a steady year-on-year decline. Copper wire is another core raw material for extension products. In recent years, the proliferation of AI applications has significantly expanded the demand scenarios for copper, spanning data center infrastructure, high-performance computing, power transmission for AI clusters, and advanced electronic connectivity. This surge in demand has created a supply-demand imbalance, and copper prices are projected to maintain an upward trajectory through 2027 before moderating in 2028 as supply chains adjust and new production capacity comes online.

Price Chart of Major Components for Consumer Technology Extension Products



Source: Frost & Sullivan, Shanghai Metals Market

INDUSTRY OVERVIEW

Competitive Landscape of the Consumer Technology Extension Products Market

Shipment and Revenue Ranking of Global Consumer Technology Extension Product Brands for the Year Ended December 31, 2025

Company Name	Shipment Volume (Hundred Million Units)	Shipment Ranking	Revenue (RMB Billion)	Market Share (%, by Revenue)	Revenue Ranking
The Company	1.5	1	6.9	1.5%	2
Company A	1.35	2	14.0	3.1%	1
Company B	1.0	3	~3.5	0.8%	5
Company C	0.8-1.0	4	~4.5	1.0%	3
Company D	<0.8	5	~4.0	0.9%	4
Top 5 Total	~5.12		~32.9	7.3%	

Source: Frost & Sullivan, Annual Report of Listed Companies

Note: This ranking only reflects the independent performance of individual brands and does not include the sales contribution of brand matrices or sister brands under the same enterprise. Company A, established in Changsha, is a globally leading brand in consumer electronics and smart charging listed on the Shenzhen Stock Exchange. Its total asset was RMB20.07 billion as of December 2025; total revenue was RMB30.51 billion for 2025. The company is primarily engaged in the R&D, design, and sales of smart charging, power banks, data connectivity, and related consumer electronic products. Company B, established in California, USA, is an international provider of consumer electronic accessories and connectivity solutions and is not publicly listed. The company focuses on the R&D and sales of charging devices, connectivity and transmission products, networking and smart home products, offering stable, reliable, and highly compatible electronic accessories and digital connectivity. Company C, established in Beijing, is a globally leading enterprise in consumer electronics and smart hardware listed on the Hong Kong Stock Exchange. With smartphones, smart hardware, and IoT platforms at its core, the company's business covers mobile terminals, smart home devices, and related ecosystem products. Its total asset was RMB508.1 billion as of December 2025; total revenue was RMB457.3 billion for 2025. Company D, established in Shenzhen, is a leading domestic provider of consumer electronic accessories and smart digital peripheral solutions and is not publicly listed. The company is mainly engaged in the R&D, design, and sales of smart charging products, data cables, docking stations, audio and video accessories, and in-vehicle electronic products.

As of December 31, 2025, the total annual shipments of consumer technology extension products of the top five global brands reached approximately 512 million units, and the total annual revenue of consumer technology extension products of the top five global brands reached approximately RMB32.9 billion. In terms of annual shipments, the Company ranked first globally. In terms of annual revenue, the Company ranked second globally.

Revenue Ranking of Consumer Technology Extension Product Brands for the Year Ended December 31, 2025 in Chinese Mainland

Rankings	Company Name	Revenue (RMB Billion)	Market Share (%)
1	The Company	2.9	2.6%
2	Company D	~2.4	2.2%
3	Company E	1.6	1.4%
4	Company A	~1.2	1.1%
5	Company C	~0.9	0.8%
	CR5 Total	9.0	8.1%

Note: Company E, established in Shenzhen, is a leading global provider of consumer technology extension products and is not publicly listed. The company is primarily engaged in the R&D, design, and sale of telecommunications equipment, consumer electronics, and related digital and connectivity solutions. Its total asset was RMB1.33 trillion as of December 2025; total revenue was RMB880.9 billion for 2025.

As of December 31, 2025, the total revenue of consumer technology extension products of the top five brands reached approximately RMB9.0 billion in Chinese mainland. In terms of revenue, the Company ranked first in Chinese mainland.

INDUSTRY OVERVIEW

Entry Barriers: Entry barriers include mature and scaled supply chain management capabilities, consistent product quality control, compliance with multiple international safety and certification standards, and the ability to follow fast-evolving interface and transmission protocols such as Type-C, Thunderbolt and fast-charging specifications. Established brands also benefit from customer recognition and economies of scale, raising thresholds for new entrants.

Challenges & Threats: The market faces challenges including homogeneous competition, pressure on gross margins from price-based competition, and dependency on upstream chip and component supply. Rapid changes in end-device design and connectivity standards also require continuous product adaptation. In addition, the market includes a large number of small and unbranded manufacturers, leading to market fragmentation and increased competitive pressure.

Analysis of the Global and Chinese Consumer Technology End Devices Market

Definition and Current Status of the Consumer Technology End Devices Market

The consumer technology end devices market centered on smart end devices used by individuals and households, with representative products including smartphones and computers, which directly deliver powerful vertical functionalities to fulfil users’ digital needs and serve as the pivotal conduit within the consumer technology sphere, bridging technology innovation with user experience. As the traditional mobile phone and tablet market reaches a state of saturated competition, the growth engines within the sector are accelerating their shift toward the intelligent data management and smart home segments, which represent the key sources of incremental growth as well as the primary new competitive arenas for the future development of the market.

Intelligent Data Management Products: The maturity of intelligent data management products is driven by AI-fueled data growth and rising data security and regulatory compliance demands. Traditional approaches fail to meet AI-amplified data needs, as AI lifts security and management costs. These products evolve from basic tools into AI-integrated, security-cost balanced solutions toward large-scale adoption.

Smart Home Products: The maturity of smart home products reflects AI-driven transformation of traditional home furnishing, upgrading appliances, creating new forms, lowering barriers to drive consumption upgrades. Its core is a data closed loop enabling continuous optimization, personalized experiences, ecosystem maturity and value realization via full-cycle data collection, storage, analysis and intelligent decision-making.

Chinese Mainland and Global Intelligent Data Management Market Analysis

Major Forms of Intelligent Data Management Products

Intelligent data management products are mainly divided into two categories: Network-Attached Storage (NAS) and cloud storage.

NAS is a dedicated data storage server connected to user devices via TCP/IP protocols over local or wide area networks. Equipped with an independent proprietary operating system, it delivers centralized, reliable data storage, cross-platform file sharing and access services for household and enterprise users, with customizable storage capacity and an application ecosystem. It is ideal for scenarios with strict requirements for data privacy, security and access speed, and will further integrate AI capabilities to evolve toward intelligent data centers in the future.

INDUSTRY OVERVIEW

In contrast, cloud storage is an online data storage service based on cloud computing, provided by third-party service providers via the internet. Users do not need to build or maintain on-premise storage hardware, and can upload data to remote servers operated by providers through the internet, enjoying flexible storage scaling, multi-device synchronization, and robust disaster recovery and backup capabilities.

Future Outlook for Intelligent Data Management Products: Increase of NAS Products Market Share Expected to Continue

Although cloud storage dominates the consumer and small- to medium-sized enterprise (SME) markets, NAS products will continue to enhance their strategic position in intelligent data management. The core advantages of NAS products are reflected in the following aspects:

Data Sovereignty and Privacy Protection Advantages: NAS grants users full control over local/private network data, mitigates cloud risks, meets regulatory compliance, enables local AI inference to eliminate privacy leaks, enhances security via flexible backup, and will strengthen its privacy-compliant storage position amid rising data sovereignty awareness.

Customizable Intelligence and Closed-Loop Ecosystem Advantages: Traditional cloud storage AI functionalities rely on standardized interfaces, making it difficult for users to achieve deep customization. In contrast, as the foundation for AI Agents, NAS is equipped with open systems that support users in independently deploying and fine-tuning proprietary AI models, as well as integrating with IoT devices. This enables AI Agents to learn from users’ local data, forming a fully localized intelligent closed-loop ecosystem that delivers personalized services tailored to individual needs, rather than passively accepting generic algorithms from the cloud.

The Collaborative Advantages of Edge Intelligence in Hybrid Architectures: NAS is becoming a core node in the cloud-edge collaborative ecosystem. Future data management will evolve toward cloud elasticity + edge real-time. As an edge node, NAS addresses the issues of cloud storage of network lag and disconnection through low-latency, high-speed local area networks, while undertaking local high-frequency data storage to ensure instant response. Simultaneously, by integrating AI, NAS enables intelligent data tiering, archiving low-frequency data to the cloud. This architecture fully leverages NAS advantages in privacy protection and performance, establishing it as a critical hub connecting the physical and digital worlds.

Cost Controllability and Long-term Economic Efficiency Advantages: Compared with the pay-as-you-go pricing model of cloud storage, NAS demonstrates stronger long-term economic efficiency. While cloud service offers lower initial costs, cumulative expenses increase significantly as data volume grows. NAS requires a one-time hardware investment with relatively low ongoing costs and supports flexible capacity expansion, making it suitable for long-term data accumulation scenarios.

Global NAS Market Size Analysis

The global NAS market grew from USD4.0 billion in 2021 to USD5.8 billion in 2025, representing a CAGR of 9.9%, and is expected to reach USD12.56 billion by 2030, driven by increasing data storage demand and improving product accessibility.

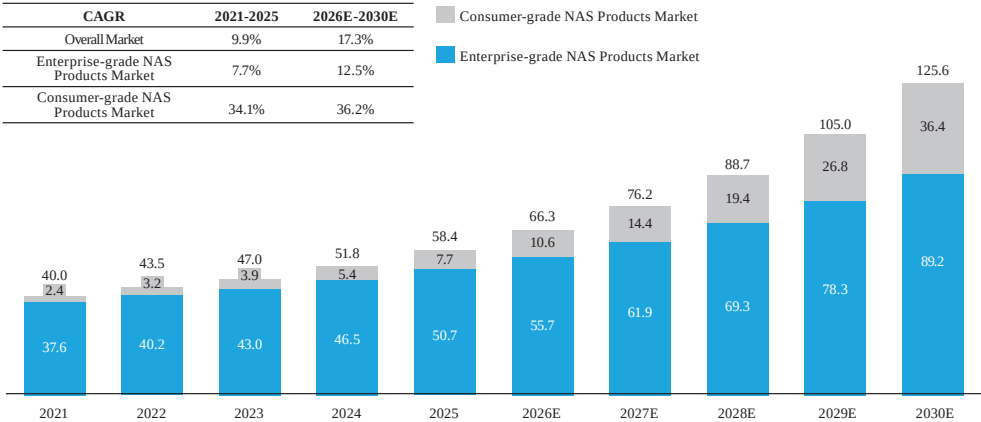
INDUSTRY OVERVIEW

By segment, the consumer-grade NAS market expanded from USD0.24 billion to USD0.77 billion in 2025 (21-25 CAGR 34.1%) and is projected to reach USD3.6 billion by 2030 (26-30E CAGR 36.2%), supported by growing demand for data security and home data management. The enterprise-grade NAS market grew from USD3.76 billion to USD5.07 billion (21-25 CAGR 7.7%) and is expected to reach USD8.92 billion by 2030 (26-30E CAGR 12.5%).

Global NAS Products Market Size, by Sales Revenue

Global NAS Products Market Size, by Revenue

USD Hundred Million, 2021-2030E



Source: Frost & Sullivan, Expert Interview

Note*: Enterprise-grade NAS products mainly refer to rack-mounted NAS systems, which serve large-scale data storage systems for medium to large enterprises, government bodies, financial institutions, healthcare organisations, research facilities, or data centers. These systems emphasize high reliability and data security. Consumer NAS products, including desktop NAS units, cater to individual users, households, or light business storage needs as data storage and sharing devices. They emphasize ease of use, value for money, and multimedia capabilities.

In the future, consumer-grade NAS devices, serving as home data centers, will become the foundational infrastructure for entire smart home ecosystems. With explosive growth in domestic demand for 8K/16K video content, live streaming creation, and home security storage, an increasing number of households are adopting NAS systems to establish personal data management hubs. These enable centralized storage and multi-device access for photos, videos, and files. Simultaneously, consumer-grade NAS vendors targeting household users have introduced simplified interfaces and intelligent features, including automatic backups, multi-user permission management, and cross-platform file synchronization. These enhancements lower the usage threshold and propel the home data center concept toward widespread adoption.

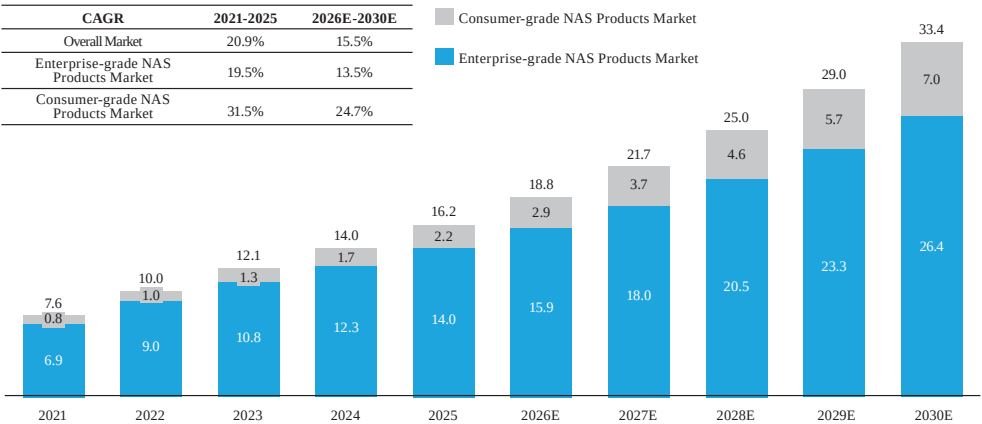
INDUSTRY OVERVIEW

Overall, the Chinese mainland NAS market has demonstrated a favorable growth trajectory; nevertheless, its aggregate expansion pace remains comparatively modest relative to global markets. From an enterprise perspective, demand for comparable on premise storage infrastructure and data governance solutions is likewise less pronounced in Chinese mainland relative to overseas markets. Within the consumer segment, the widespread availability of cost-efficient domestic public cloud services has significantly dampened the imperative for local NAS adoption.

Chinese Mainland NAS Product Market Size, by Sales Revenue

Chinese Mainland NAS Products Market Size, by Sales Revenue

USD Hundred Million, 2021-2030E



Source: Frost & Sullivan, IDC

Smart Home Market Growth Further Stimulates the Commercial Development of Home Data Management Products

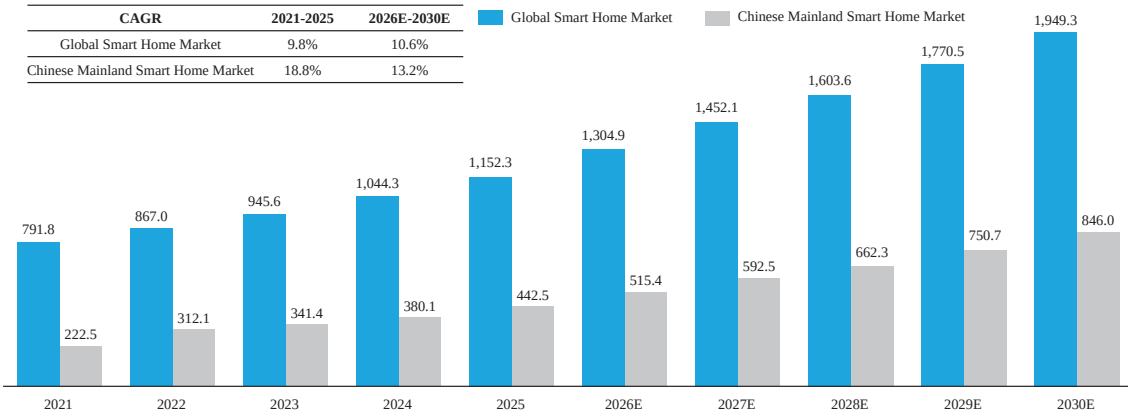
From 2021 to 2025, the global smart home market expanded at a CAGR of 9.8%. This growth was primarily driven by both demand and supply-side factors. On the demand side, rising awareness of home security accelerated the adoption of smart security devices. On the supply side, increasingly mature cross-platform interconnection protocols significantly lowered integration barriers while enhancing system compatibility and ecosystem openness. Looking ahead, the global smart home market is projected to grow at a CAGR of 10.6% between 2026 and 2030. This growth is mainly driven by steadily declining hardware costs and the deep integration of AI with scenario-based user experiences. Meanwhile, Chinese mainland market will enter a new phase of structural optimization and robust growth, projected to grow at a CAGR of 13.2%, with the share of Chinese mainland in the global market increasing to 43.4% in 2030. Within this trajectory, consumer-grade NAS products are evolving from single-purpose centralized storage towards platforms supporting data aggregation, intelligent management, and edge computing capabilities. This evolution thereby provides critical underlying support for coordinated operations and real-time responsiveness within whole-home smart systems.

INDUSTRY OVERVIEW

Global Smart Home Market Size

Global Smart Home Market Size, by Revenue

USD billion, 2021-2030E



Source: Frost & Sullivan, Statista, Annual Report of Listed Companies

Analysis of the Market Drivers of Global and Chinese Mainland NAS Products

Sustained Rapid Data Growth and Rising Demand for Distributed Storage: With the accelerated development of the digital economy and informatization, the global data volume is experiencing explosive growth. By 2025, the total global data volume reaches approximately 181 zettabytes (ZB), encompassing both enterprise-level data and multimedia content generated by individual users. Compared to traditional Direct-Attached Storage (DAS), NAS offers superior data manageability and sharing capabilities, making it a core choice for storage upgrade among both enterprise and household users. It simultaneously provides reliable data support for data centers and smart home ecosystems.

Emergence of the Home Data Center Concept in the Consumer Market: Users leverage NAS to centrally manage data, enabling seamless cross-device access. Its core value lies in local AI decision-making and analytics. It serves not only as the cornerstone for smart security and home integration, but also deeply mines various lifestyle data to proactively deliver personalized content recommendations, optimize storage strategies and coordinate devices to provide services aligned with user habits. Combined with streamlined interaction design, NAS is becoming the pivotal entrance to enhancing the quality of digital home life.

Enhanced Awareness of Data Security and Privacy Protection: In response to frequent data breaches and increasingly stringent regulations, both enterprises and individuals are placing greater emphasis on data sovereignty. As a localized storage device, NAS allows core data to be stored in a self-controlled environment, avoiding privacy risks associated with the cloud.

Global and Chinese Mainland NAS Market Development Trends Analysis

Deep Integration with AI Agent and Edge Computing: With the accelerated penetration of generative AI technologies, NAS is transforming from a traditional data storage center into the operational and decision-making foundation for local AI Agents. The next generation of NAS integrates dedicated NPU and powerful computing capabilities, enabling not only centralized management of massive data but also empowering AI Agents to perform model inference, real-time analysis, and automated decision-making directly at the edge. This allows them to proactively deliver low-latency, high-privacy, and continuously evolving personalized intelligent services without relying on the cloud. Looking ahead, as model lightweighting breakthroughs occur, NAS will become the core platform for deploying multimodal large models and supporting complex AI applications, deeply embedded into personal and enterprise intelligent ecosystems, evolving from a simple storage device into an intelligent data hub with true autonomous awareness.

INDUSTRY OVERVIEW

Product Form Factors Showing Polarization toward Lightweight + High Performance: In the consumer market, NAS products are showing a distinct polarization trend. At one end lies the lightweight, low-power mini NAS, while at the other end stands the professional NAS targeting enterprise and high-end users. In the household and individual user segment, mini NAS products have gained broad acceptance due to their compact size, ease of deployment, and simplified maintenance. These devices support home entertainment and light office use, enabling the storage, management, and sharing of multimedia files and supporting the storage of office documents and sharing of files.

Software-Defined Storage (SDS) Emerging as a Core Competitive Advantage: Leading manufacturers are accelerating the transition from hardware sales to integrated hardware-software services to align with digitalization trends. By utilizing open APIs and containerized deployment (Docker/Kubernetes), these solutions achieve efficient and flexible system scalability, lowering the barrier for third-party integration. This strategy aims to build an open ecosystem platform, attracting partners to jointly develop the SDS technology ecosystem and enhance the adaptability and competitiveness of holistic solutions.

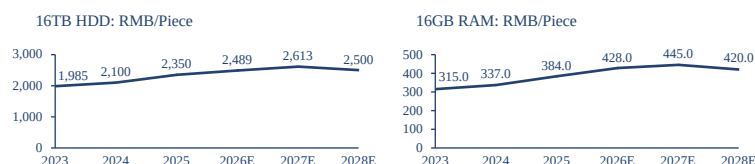
Business Models Shifting towards “Hardware + Software Subscriptions”: Faced with hardware homogenization and price competition, the profit margin from hardware alone is shrinking. Manufacturers are shifting focus toward monetization through software and services. By adopting models where basic features are free while value-added functions like cloud synchronization require payment, manufacturers can establish a stable recurring revenue stream, supporting ecosystem development and long-term R&D investment.

Overseas Expansion and Intensified International Competition: Chinese Domestic NAS brands are actively entering Southeast Asia, Europe, America and other markets through cross-border e-commerce platforms like Amazon and Shopee. They are competing with established international brands leveraging competitive system performance, multi-language support, and comprehensive after-sales service. As the competitive focus shifts towards software ecosystems, cloud collaboration, and localized services, the ability to operate globally and cross-cultural service capabilities will determine the winners in overseas markets.

Analysis of the Price of Major Cost Components

For NAS products, the primary raw materials consist of storage components, including 16TB HDDs and 16GB RAM modules. The substantial growth in data demand driven by AI has stimulated robust expansion in the storage sector. Supply-side constraints at upstream wafer fabrication facilities have resulted in a persistent supply shortage in the storage market, impeding the timely shipment of various midstream modules. Affected by both supply-side limitations and surging demand, storage prices are expected to maintain an upward trend. Using 16TB HDDs and 16GB RAM as benchmarks, their prices will continue to rise through 2027 and begin a gradual decline as production capacity at upstream wafer fabs gradually recovers.

Price Chart of Major Components for Consumer-Grade NAS Products



Source: Frost & Sullivan, Expert Interview

INDUSTRY OVERVIEW

Analysis of Competitive Landscape of the Global NAS Product Industry

Shipment Volume and Revenue Ranking of Global Consumer-Grade NAS Providers for the Year Ended December 31, 2025

Ranking	Company Name	Shipment Volume (Units)	Market Share by Shipment Volume (%)	Revenue (RMB Hundred Million)	Market Share by Revenue (%)
1	The Company	401,135	20.6%	9.7	17.5%
2	Company F	247,500	12.7%	9.2	16.7%
3	Company G	215,800	11.1%	6.5	11.8%
4	Company H	79,500	4.1%	2.2	4.0%
5	Company I	64,000	3.3%	1.4	2.6%
	Top 5 Total	1,007,935	51.7%	28.9	52.6%

Source: Frost & Sullivan, Annual Report of Listed Companies

Company F, established in Taipei, is a globally leading provider of NAS products and is not publicly listed. The company focuses on the R&D, production, and sales of network storage devices and related software and hardware. Its core products encompass consumer-grade and enterprise-grade NAS systems and network video surveillance systems. Company G, established in Taipei, is a globally leading provider of NAS products listed on the Taipei Exchange. The company specializes in the R&D and sales of network storage devices and intelligent solutions. Its core business covers enterprise-grade storage, high-speed networking equipment, and AI edge computing. Its total asset was RMB20.7 billion as of December 2025; total revenue was RMB13.1 billion for 2025. Company H, established in Nagoya, Japan, is a globally renowned provider of computer peripherals and network solutions. The company is listed on the Tokyo Stock Exchange and Nagoya Stock Exchanges. It is primarily engaged in the R&D, manufacturing, and sales of computer peripherals such as wireless network products, storage devices, and memory modules. Its total asset was RMB3.0 billion as of March 2026; total revenue was RMB4.9 billion for the fiscal year of 2026. Company I, established in Beijing, is a technology company dedicated to private cloud and NAS products and is not publicly listed. The company primarily provides integrated NAS products and intelligent data management services combining hardware and software for individual, household, and enterprise users.

As of December 31, 2025, top five global consumer-grade NAS companies recorded total annual shipments of approximately 1,007,935 units and total annual revenue of approximately RMB2.89 billion. The Company ranked first globally in terms of both shipment volume and revenue.

Entry Barriers: NAS products present relatively high technical barriers due to requirements in data storage stability, system security, multi-device compatibility, and data processing efficiency. Product development involves integrated hardware and software design, intelligent algorithm capabilities, and reliable data protection mechanisms. As consumer-grade NAS increasingly evolves toward edge AI and smart home integration, entrants must also possess cross-disciplinary capabilities in hardware, software, cloud interaction and local intelligence, further increasing entry barriers.

Challenges & Threats: The NAS market is still at a relatively early adoption stage among general consumers, leading to relatively limited market scale and user awareness. It faces competition from public cloud storage services with different usage scenarios and cost structures. Meanwhile, as AI and smart home ecosystems develop rapidly, NAS products require continuous functional innovation to avoid obsolescence. Upstream component costs and the need for long-term software iteration and after-sales support also present operational challenges.