
INDUSTRY OVERVIEW

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OVERVIEW OF 3D PRINTING INTEGRATED SOLUTIONS INDUSTRY

Definition and Classification of 3D Printing Integrated Solutions Industry

The 3D printing integrated solutions market represents a comprehensive industrial ecosystem encompassing all elements of the value chain, with its core logic rooted in the deep integration of hardware, materials, and digitalization to provide users with full-stack manufacturing capabilities throughout the product lifecycle. This market extends beyond the fundamental research and development of 3D printing equipment to include the deep integration of compatible material development, the construction of specialized software systems, and the provision of printing services and technical support covering the entire product lifecycle. As a vital branch of advanced manufacturing, these solutions effectively break the boundaries of traditional manufacturing regarding structural complexity and production efficiency through the refined adjustment of process parameters and the flexible combination of technical systems.

The application logic of this market is systematically manifested across three key stages: initially in the design prototyping stage, where the rapid physical realization of samples supports high-frequency iterations and significantly shortens R&D cycles; subsequently in the engineering verification stage, where the swift delivery of functional prototypes and customized process tooling effectively reduces reliance on expensive traditional equipment and lowers development costs; and ultimately in the small-batch and end-part production stage, where these solutions are increasingly applied to the direct manufacturing of complex and highly customized components, thereby enabling the implementation of digitally-driven flexible production.

Depending on the application fields, technical specifications, and value chain distribution, the 3D printing integrated solutions market can be segmented into two categories: industrial and consumer. The industrial-grade 3D printing integrated solutions market refers to a comprehensive industrial system specifically oriented toward industrial production scenarios, providing integrated solutions that encompass high-performance equipment, compatible materials, specialized software, and supporting technical services. Within modern industrial workflows, the solutions provided by this market satisfy the rigorous requirements of industrial customers for system operational stability and production continuity through the refined adjustment of process parameters and the flexible combination of technical systems. Its application scenarios broadly encompass critical stages including prototyping during the research and development phase, process optimization within the manufacturing phase, and after-sales operations following product delivery. With the maturation of material systems and the continuous enhancement of process stability, industrial-grade 3D printing integrated solutions are accelerating their transition from experimental applications toward large-scale, high-reliability industrial production.

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The consumer-grade 3D printing integrated solutions market primarily refers to a 3D printing technical system oriented toward design agencies, small enterprises, and individual users, focusing on basic product design verification, educational training, and small-scale applications. At the technical specification level, solutions in this market generally maintain levels of system stability, printing accuracy, and build sizes that satisfy basic demonstration and creative realization requirements. Regarding the cost dimension, while consumer-grade 3D printing integrated solutions offer lower barriers to entry for procurement, they still exhibit clear limitations in supporting high-intensity, high-reliability industrial continuous production and quality traceability compared to their industrial counterparts.

Market Size of Global 3D Printing Integrated Solutions Industry

Breakdown by Industrial-grade and Consumer-grade

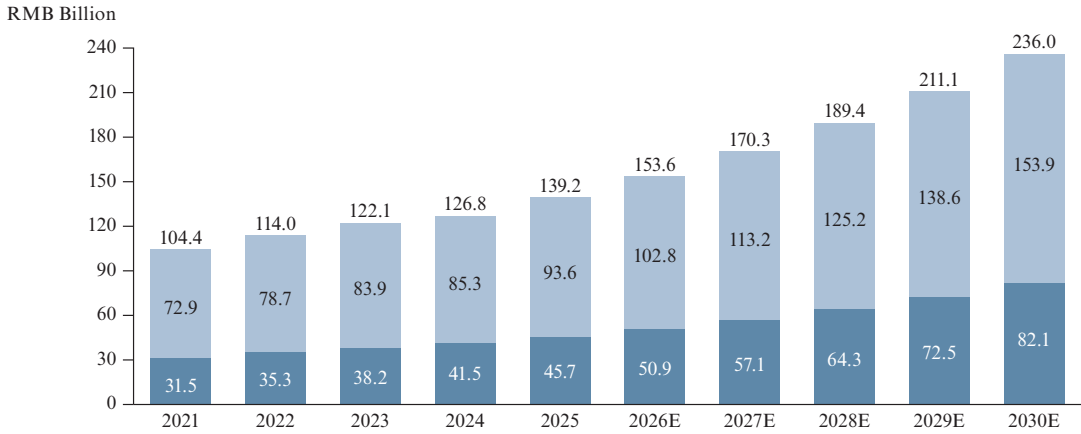
Within the global 3D printing integrated solutions industry, industrial-grade 3D printing integrated solutions consistently maintains a dominant position, with the market size expanding from RMB72.9 billion in 2021 to RMB93.6 billion in 2025, representing a CAGR of 6.4% from 2021 to 2025. Simultaneously, driven by demands such as product design verification as well as education and training, the market size of the consumer-grade 3D printing integrated solutions market steadily increased from RMB31.5 billion in 2021 to RMB45.7 billion in 2025, corresponding to a CAGR of 9.7% from 2021 to 2025. Overall, the global 3D printing integrated solutions industry achieved significant expansion over the past five years, with the total market size rising from RMB104.4 billion in 2021 to RMB139.2 billion in 2025, representing a CAGR of 7.5% from 2021 to 2025.

Looking ahead, the global 3D printing integrated solutions industry is projected to reach RMB236.0 billion by 2030, representing a CAGR of 11.1% from 2025 to 2030. From a structural perspective, industrial-grade 3D printing integrated solutions is expected to remain the most central revenue source for the overall industry due to its deep integration across the entire product lifecycle in strategic industrial sectors such as aerospace, healthcare, and high-end manufacturing; its market size is anticipated to reach RMB153.9 billion by 2030, with a CAGR of 10.5% from 2025 to 2030. Simultaneously, driven by the continuous expansion of application scenarios, the consumer-grade market is projected to reach RMB82.1 billion by 2030, representing a CAGR of 12.4% from 2025 to 2030. Overall, fueled by the penetration of industrial-grade applications into terminal production and the sustained popularization of consumer-grade scenarios, the global 3D printing integrated solutions industry will maintain a trend of collaborative growth, further expanding the total output value of the sector.

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Size of Global 3D Printing Integrated Solutions Industry, Breakdown by Application Area, in Terms of Revenue 2021–2030E

	CAGR	2021–2025	2025–2030E
Total		7.5%	11.1%
Industrial-grade 3D Printing Integrated Solutions		6.4%	10.5%
Consumer-grade 3D Printing Integrated Solutions		9.7%	12.4%



Note: The exchange rate used in the report is 1 USD = 7.14RMB, according to the China Foreign Exchange Trading System.

Source: Chinese Mechanical Engineering Society, Frost & Sullivan

OVERVIEW OF INDUSTRIAL-GRADE 3D PRINTING INTEGRATED SOLUTIONS INDUSTRY

Definition of Industrial-grade 3D Printing Integrated Solutions Industry

The industrial-grade 3D printing integrated solutions market refers to a comprehensive industrial ecosystem centered on 3D printing technologies, providing integrated solutions that encompass equipment, materials, software, printing services, and full-process technical support for industrial production scenarios. Based on differences in printing material systems and forming processes, this market is primarily segmented into the non-metal industrial-grade 3D printing integrated solutions market and the metal industrial-grade 3D printing integrated solutions market.

The non-metal industrial-grade 3D printing integrated solutions market refers to an integrated solution system based on non-metal 3D printing technologies tailored for industrial-grade application scenarios, providing customers with equipment, materials, software, printing services, and related technical services. This market centers on meeting customer demand for non-metal material typically including polymers, resins, ceramics, and composites during product R&D, prototyping, and manufacturing. These solutions integrate equipment, compatible material systems, and process services to support customers in achieving stable, continuous, and digitally-driven manufacturing workflows. Due to its extensive application and penetration across diverse scenarios such as prototyping, consumer goods, and general industry, this segment demonstrates exceptionally high market popularity and significant output value within the overall industrial-grade 3D printing sector.

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The metal industrial-grade 3D printing integrated solutions market refers to an integrated market based on metal 3D printing technologies, primarily utilizing high-energy light sources such as lasers to melt metal powders to provide high-strength, high-density, and high-temperature resistant components for sectors including aerospace, medical implants, and complex industrial molds. This market focuses on satisfying the rigorous requirements for mechanical performance and structural consistency of parts operating under extreme conditions.

Market Size of Global Industrial-grade 3D Printing Integrated Solutions Industry

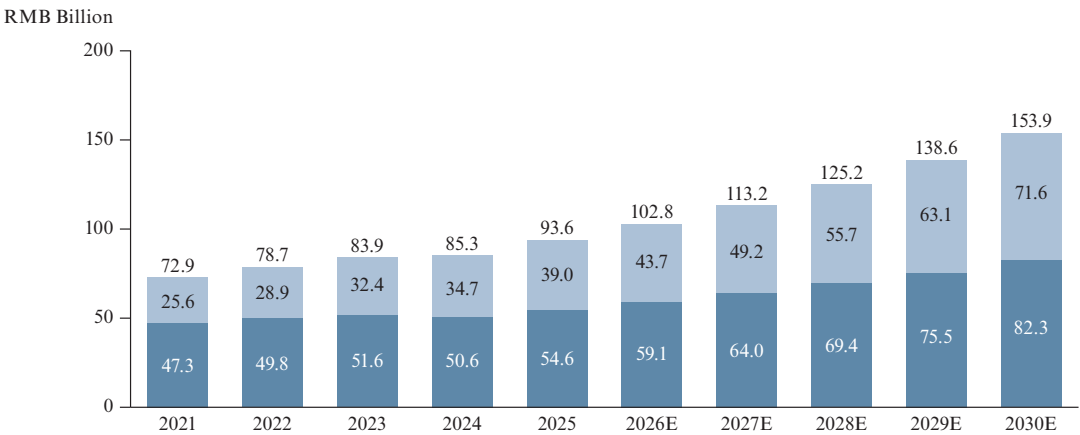
Breakdown by Material Type

Overall, the global industrial-grade 3D printing integrated solutions market achieved significant expansion over the past five years, with the total market size rising from RMB72.9 billion in 2021 to RMB93.6 billion in 2025, representing a CAGR of 6.4% from 2021 to 2025. Within the global industrial-grade 3D printing integrated solutions market, non-metal material currently represents the largest revenue source, primarily driven by their extensive application in prototyping, consumer goods, and general industrial scenarios. Its market size expanded from RMB47.3 billion in 2021 to RMB54.6 billion in 2025, representing a CAGR of 3.7% from 2021 to 2025. The market size of metal material expanded from RMB25.6 billion in 2021 to RMB39.0 billion in 2025, representing a CAGR of 11.0% from 2021 to 2025.

Looking ahead, the global industrial-grade 3D printing integrated solutions market size is projected to expand from RMB93.6 billion in 2025 to RMB153.9 billion by 2030, representing a CAGR of 10.5% from 2025 to 2030. Within this sector, the market size of metal material is expected to reach RMB71.6 billion by 2030, with a CAGR of 12.9% from 2025 to 2030. Meanwhile, the market size of non-metal material is anticipated to reach RMB82.3 billion by 2030, with a CAGR of 8.6% from 2025 to 2030. Non-metal material is expected to maintain its dominant market share due to its versatility and cost advantages.

Size of Global Industrial-grade 3D Printing Integrated Solutions Industry, Breakdown by Material Type, in Terms of Revenue 2021–2030E

CAGR	2021–2025	2025–2030E
Total	6.4%	10.5%
Metal Material	11.0%	12.9%
Non-metal Material	3.7%	8.6%



Note: The exchange rate used in the report is 1 USD = 7.14RMB, according to the China Foreign Exchange Trading System.

Source: Chinese Mechanical Engineering Society, Frost & Sullivan

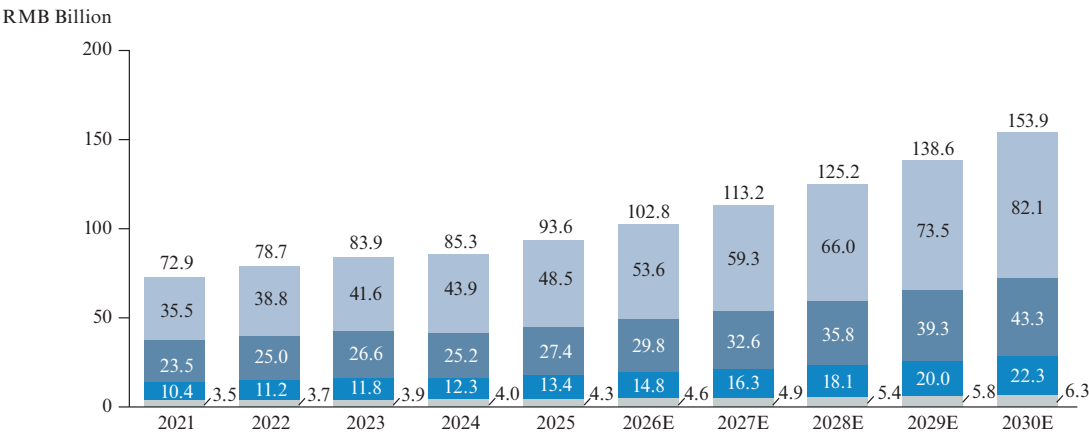
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Breakdown by Revenue Type

In the global industrial-grade 3D printing integrated solutions market, printing services represent the largest source of revenue and have historically driven overall market expansion, with total market size increasing from RMB72.9 billion in 2021 to RMB93.6 billion in 2025, reflecting a CAGR of 6.4% from 2021 to 2025. Printing services occupy a dominant position, primarily due to their broad application across multiple stages, including R&D validation, pilot production, and end-use part manufacturing, enabling customers to fulfill manufacturing needs without upfront investment in equipment. The shipment volume of industrial-grade 3D printing equipment in the PRC was approximately 6,150 units in 2025. In addition, printing services typically encompass process development, post-processing, and quality inspection, resulting in relatively high unit value and further supporting their revenue contribution. Looking ahead, the overall market size is expected to reach RMB153.9 billion by 2030, representing a CAGR of 10.5% from 2025 to 2030. From a structural perspective, while printing services continue to serve as the primary revenue contributor, printer sales, material sales, and software revenue are also expected to grow, supported by the expansion of installed capacity and increasing demand for digitalization. In particular, printing services benefit from the continued expansion of application scenarios and the presence of outsourced manufacturing demand; printer sales are driven by the increasing adoption of industrial-grade 3D printing integrated solutions; material sales are primarily supported by the growing installed base and higher utilization rates; and software revenue is driven by rising demand for workflow integration and design optimization. Overall, all segments are expected to grow in a coordinated manner on the existing structural foundation, collectively driving continued market expansion.

Size of Global Industrial-grade 3D Printing Integrated Solutions Industry, Breakdown by Revenue Type, in Terms of Revenue 2021–2030E

CAGR	2021–2025	2025–2030E
Total	6.4%	10.5%
Printing Services	8.1%	11.1%
Printer Sales	3.9%	9.6%
Material Sales	6.6%	10.7%
Software Sales	5.0%	8.2%



Note: The exchange rate used in the report is 1 USD = 7.14RMB, according to the China Foreign Exchange Trading System

Source: Chinese Mechanical Engineering Society, Frost & Sullivan

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Market Size of Industrial-grade 3D Printing Integrated Solutions Industry in the PRC

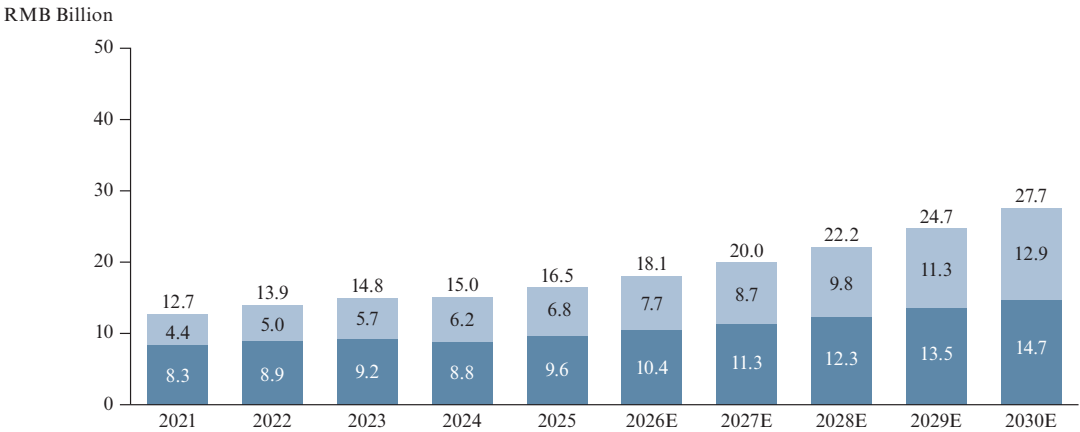
Breakdown by Material Type

The industrial-grade 3D printing integrated solutions market in the PRC is currently led by non-metal materials printing. The market size expanded from RMB12.7 billion in 2021 to RMB16.5 billion in 2025, representing a robust growth trajectory with a CAGR of 6.7% from 2021 to 2025. Compared with the global market’s CAGR of 6.4% during the same period, the PRC market demonstrated stronger growth momentum. Specifically, the non-metal material printing grew from RMB8.3 billion in 2021 to RMB9.6 billion in 2025, with a CAGR of 3.7%. During the same period, metal materials printing demonstrated stronger growth momentum, increasing from RMB4.4 billion in 2021 to RMB6.8 billion in 2025, achieving a CAGR of 11.7%.

Looking ahead, the market size of the industrial-grade 3D printing integrated solutions industry in the PRC is projected to expand from RMB16.5 billion in 2025 to RMB27.7 billion by 2030, representing an accelerated growth trajectory with a CAGR of 10.9% from 2025 to 2030. This growth rate consistently outpaces the projected global CAGR of 10.5% for the same period, signaling that the PRC’s position as a primary global growth engine for 3D printing will be further consolidated. The non-metal material printing is expected to reach RMB14.7 billion by 2030, with a CAGR of 8.9% from 2025 to 2030.

Size of Industrial-grade 3D Printing Integrated Solutions Industry in the PRC, Breakdown by Material Type, in Terms of Revenue 2021–2030E

	CAGR	2021–2025	2025–2030E
Total		6.7%	10.9%
Metal Material		11.7%	13.6%
Non-metal Material		3.7%	8.9%



Note: The exchange rate used in the report is 1 USD = 7.14RMB, according to the China Foreign Exchange Trading System

Source: Additive Manufacturing Alliance of China, Frost & Sullivan

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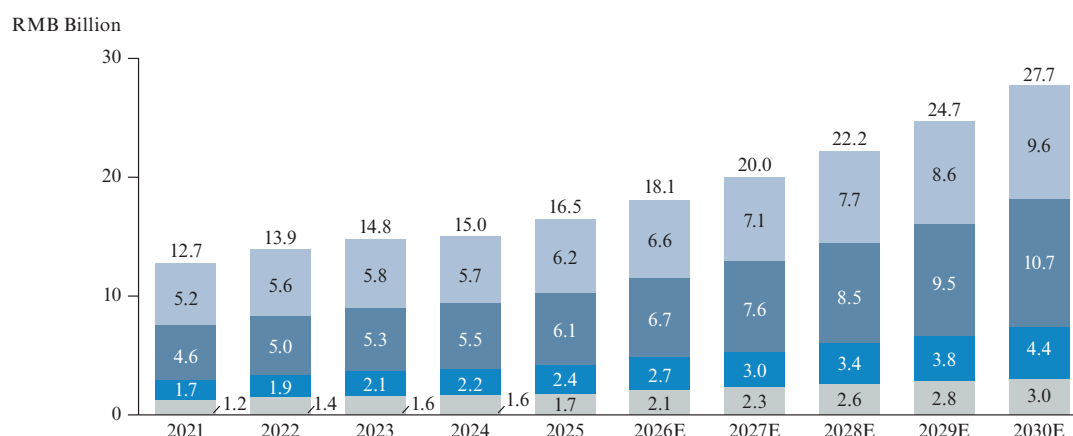
Breakdown by Revenue Type

In the industrial-grade 3D printing integrated solutions market in the PRC, material sales are projected to achieve a CAGR of 12.4% from 2025 to 2030, an increase from 8.8% recorded from 2021 to 2025, demonstrating strong growth potential. This trend reflects the expanding scale of consumable consumption as the installed base of equipment continues to rise and production frequency increases, signaling the industry’s transition toward large-scale manufacturing. Meanwhile, printing services, printer sales, and software sales also exhibit steady growth. Specifically, as a core segment, the CAGR for printing services is expected to rise from 7.3% to 11.9%; printer sales, driven by downstream capacity expansion, will see a CAGR increase from 4.7% to 9.1%; and software sales are projected to accelerate from 9.3% to 11.5%.

Overall, against the backdrop of continuously broadening industrial application scenarios, all segments, including equipment, materials and services are achieving synergistic growth. With accelerated CAGRs across all sub-sectors over the next five years, the total market size of the industrial-grade 3D printing integrated solutions industry in the PRC is expected to expand from RMB16.5 billion in 2025 to RMB27.7 billion by 2030.

**Size of Industrial-grade 3D Printing Integrated Solutions Industry in the PRC,
Breakdown by Revenue Type, in Terms of Revenue 2021–2030E**

CAGR	2021–2025	2025–2030E
Total	6.7%	10.9%
Printer Sales	4.7%	9.1%
Printing Services	7.3%	11.9%
Material Sales	8.8%	12.4%
Software Sales	9.3%	11.5%



Note: The exchange rate used in the report is 1 USD = 7.14RMB, according to the China Foreign Exchange Trading System

Source: Additive Manufacturing Alliance of China, Frost & Sullivan

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Market Drivers of Industrial-grade 3D Printing Integrated Solutions Industry

Continuous Growth in Downstream Industrial Demand: With the manufacturing industry evolving toward flexible, customized and small-batch production, the application of industrial-grade 3D printing continues to deepen in structural parts, functional components and complex system parts. Industrial-grade 3D printing integrated solutions demonstrate significant advantages in shortening product development cycles, reducing prototyping costs and enabling integrated manufacturing of complex structures, thereby driving sustained demand from downstream industries such as aerospace, healthcare, automotive and high-end equipment.

Manufacturing digitalization and intelligence: As industrial digitalization and intelligent manufacturing continue to advance, enterprises are placing increasing emphasis on production process visualization, data-driven management and process standardization. Industrial-grade 3D printing integrated solutions, through deep integration with CAD/CAE design software, MES systems and production execution processes, enable an integrated digital workflow from design to manufacturing, aligning with the broader trend of digital and intelligent transformation in manufacturing and forming a continuous market driving force.

Continuous Improvement in Material Systems: Material systems for both metal and non-metal continue to expand, with performance improvements in high-performance alloys, engineering plastics, photopolymer resins and composite materials, thereby broadening application boundaries. Meanwhile, ongoing improvements in printing accuracy, forming efficiency and process stability, together with advancements in post-processing, quality inspection and process validation, enhance the feasibility and economic viability of industrial-grade 3D printing integrated solutions in high-reliability and batch production scenarios.

Cost structure optimization drives market penetration: The cost structure of industrial-grade 3D printing integrated solutions comprises equipment, materials and software systems. As upstream material systems mature, the localization rate of key components and equipment increases, and economies of scale emerge, the overall cost of solutions is gradually reduced. At the same time, the development of supply chain systems improves delivery stability and reduces price volatility, thereby promoting the penetration of industrial applications.

Enhancement of Design Freedom: Compared to traditional manufacturing methods, industrial-grade 3D printing possesses significant advantages in manufacturing complex structures, integrated design, and lightweight optimization, enabling the direct manufacturing of complex internal structures and multifunctional integrated components without reliance on molds. With the development of design software, simulation technology, and topology optimization capabilities, design freedom continues to improve, further expanding the space for structural optimization and innovative design, thereby deepening the application of 3D printing in high-performance structural design and functional integration. Meanwhile, the systematic integration capabilities of solution providers across design, materials, processes, and applications are continuously improving, further supporting the expansion of relevant technologies in high-value-added industrial scenarios.

Policy Support: The Chinese government has consistently promoted the development of advanced manufacturing and the 3D printing integrated solutions industry. “Made in China 2025” and relevant industrial policies explicitly propose the development of 3D printing, intelligent manufacturing, and high-end equipment manufacturing, encouraging the application of advanced manufacturing technologies in industrial design, R&D prototyping, and large-scale production. Meanwhile, driven by the “Dual Carbon” goals, 3D printing possesses advantages in improving material utilization, optimizing production processes, and reducing carbon emissions, which helps promote the application of industrial-grade 3D printing integrated solutions within the green manufacturing system. Furthermore, the Ministry of Education has encouraged universities to

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strengthen talent cultivation in 3D printing and related interdisciplinary fields, with some institutions establishing relevant majors or research directions to support technological development and the industrial implementation of applications.

Future Trends of Industrial-grade 3D Printing Integrated Solutions Industry

Accelerating penetration into mass production and end-use manufacturing: In the future, industrial-grade 3D printing is expected to continue extending from prototyping and small-batch trial production to process optimization and the large-scale production of end-use functional components. Driven by increasing demand for high-complexity structures, small-batch multi-variety production and personalized customization, its application depth in aerospace, automotive, healthcare and consumer industries is expected to further increase. As production efficiency, process stability and quality consistency improve, industrial-grade 3D printing may gradually integrate into traditional manufacturing systems in certain scenarios, serving as a complementary or alternative production method.

Deepening of integrated service offerings: The market supply model is shifting from the traditional “equipment + materials” sales approach to the provision of comprehensive solutions. Enterprises are increasingly offering full-process services, including equipment, materials, software platforms, process parameter optimization, technical training, system integration and remote operation and maintenance, to enhance process controllability and production efficiency. By integrating capabilities across design, production and service, solution providers are able to support industrial customers’ requirements for digitalized, intelligent and standardized production.

AI-driven process intelligence and system-level capability enhancement: The application of artificial intelligence in industrial-grade 3D printing integrated solutions is expected to deepen, particularly in process monitoring, parameter optimization and quality stability improvement. By analyzing equipment operation data, build process data and historical production results, AI technologies help improve the efficiency and accuracy of parameter setting, reduce reliance on manual experience, and enhance consistency and repeatability in industrial applications. As these technologies mature, industrial-grade 3D printing integrated solutions are expected to evolve from being “equipment-driven” to “data- and algorithm-driven.”

Expansion of high-performance non-metal material applications: Future material systems are expected to evolve toward high performance, multifunctionality and application-specific customization, including high-strength lightweight materials, high-temperature-resistant materials and biocompatible materials. Improvements in material performance will further expand the application boundaries of 3D printing in high-end manufacturing. At the same time, the coordinated optimization of materials, equipment and processes will become a key factor in enabling industrial-scale adoption.

Platformization and globalization of the industry ecosystem: The industrial-grade 3D printing ecosystem is expected to evolve toward platformization and globalization. On the one hand, platform-based models facilitate the integration of distributed equipment and production capacity, enabling large-scale collaborative manufacturing and distributed production. On the other hand, as downstream manufacturers expand globally, 3D printing service networks are also expected to extend across regions to meet global production and delivery demands. In this process, enterprises with cross-regional service capabilities and networked operational models will participate in global industrial chain collaboration.

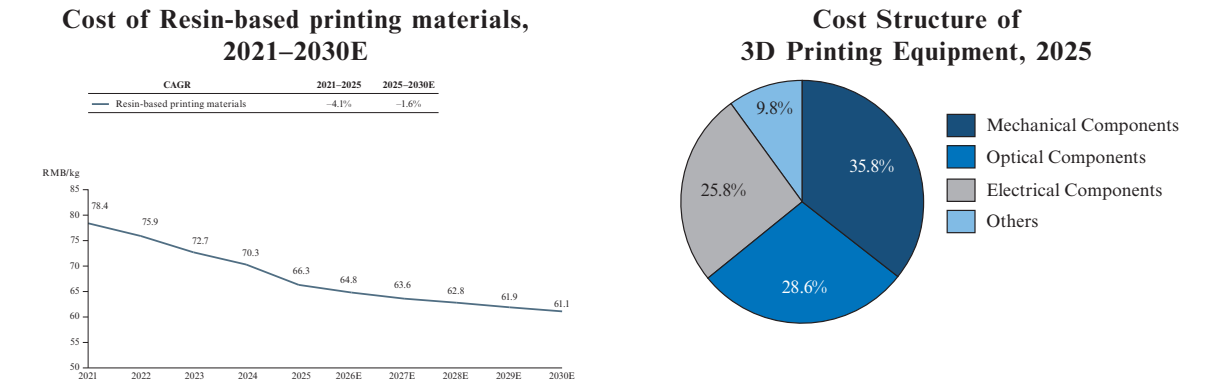
Cost Analysis

From the perspective of resin-based printing material costs, the unit cost showed a continued downward trend, decreasing from RMB78.4/kg in 2021 to RMB66.3/kg in 2025, and is expected to further decline to RMB61.1/kg in 2030. From 2021 to 2025, the decrease was mainly driven by the gradual maturation of the material supply chain, continuous optimization of resin formulations, enhanced economies of scale in procurement, and the improvement of domestic supply capabilities.

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From 2025 to 2030, as downstream application scenarios for 3D printing continue to expand, the production scale, supply stability and formulation standardization of resin-based printing materials are expected to further improve. As a result, unit costs are expected to continue declining, although at a more moderate pace compared with the previous period, indicating that resin-based printing materials still have room for cost reduction during scaled application.

In terms of equipment cost structure, it is difficult to derive a unified and precise cost benchmark for 3D printing equipment at the industry level, as equipment prices vary significantly depending on technology route, build size, precision level, configuration and degree of automation. However, different types of 3D printing equipment generally require mechanical structures, optical systems, electrical control systems and other auxiliary modules, making the cost proportion of core components and modules a more appropriate basis for analyzing equipment cost structure. In 2025, mechanical components accounted for the largest share at 35.8%, mainly including frames, base plates, guide rails, build platforms and other mechanical structural parts. Optical components accounted for 28.6%, mainly including lasers, galvanometers, lenses and related optical path modules. Electrical components accounted for 25.8%, mainly including control systems, motors, drivers, power supplies, sensors and industrial control systems. Others accounted for 9.8%, mainly including software, auxiliary systems, supporting equipment and other components.



COMPETITIVE LANDSCAPE

Market Ranking of Industrial-grade 3D Printing Integrated Solutions Industry

Ranking of Global Industrial-grade 3D Printing Integrated Solutions Companies, Measured by Industrial-grade 3D Printing Integrated Solutions Revenue in the PRC (2025)

Ranking	Company	Listing Status	Market Share
1	Company A ¹	Listed	10.3%
2	Company B ²	Listed	3.5%
3	Company C ³	Unlisted	3.2%
4	The Company	Unlisted	3.0%
5	Company D ⁴	Unlisted	2.4%
Top 5 subtotal			22.4%

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Notes:

- (1) Founded in 2011 and headquartered in China, it is a leading domestic company specializing in the research, development, production, and sale of metal 3D printing integrated solutions. Its comprehensive product portfolio includes metal 3D printing equipment, printing materials, and related technical services, primarily serving aerospace, automotive, energy, and high-end manufacturing industries.
- (2) Founded in 2009 and headquartered in China, it is a leading domestic company specializing in the research, development, production, and sale of industrial 3D printing systems. Its comprehensive product portfolio includes both metal and polymer additive manufacturing equipment, materials, and related technical services, primarily serving aerospace, automotive, industrial manufacturing, and high-end equipment industries.
- (3) Founded in 2008 and headquartered in China, it is a domestic company specializing in industrial-grade non-metal 3D printing integrated solutions. Its product portfolio includes SLA 3D printing equipment, materials, and printing services, primarily serving automotive, consumer electronics, medical, and industrial design applications.
- (4) Founded in 2014 and headquartered in China, it is a domestic company specializing in the research, development, production, and sale of metal 3D printing systems. Its product portfolio mainly includes large-format metal 3D printing equipment and related materials and services, primarily serving aerospace, automotive, energy, and industrial manufacturing sectors.

Source: Annual Reports, Frost & Sullivan

Ranking of PRC-based Industrial-grade 3D Printing Integrated Solutions Companies Measured by Industrial-grade 3D Printing Integrated Solutions Equipment Shipments in the PRC (2025)

<u>Ranking</u>	<u>Company</u>	<u>Listing Status</u>	<u>Market Share</u>
1	The Company	Unlisted	25.0%
2	Company C	Unlisted	20.9%
3	Company E ⁵	Unlisted	15.8%
4	Company F ⁶	Unlisted	10.8%
5	Company A	Listed	3.4%
Top 5 subtotal			75.9%

Notes:

- (5) Founded in 2007 and headquartered in China, it is a domestic company specializing in the research, development, production, and sale of metal 3D printing equipment. Its product portfolio includes metal 3D printing systems and related materials and services, primarily serving aerospace, automotive, and industrial manufacturing sectors.
- (6) Founded in 2011 and headquartered in China, it is a domestic company specializing in industrial-grade 3D printing integrated solutions. Its product portfolio includes both metal and polymer 3D printing equipment, materials, and technical services, primarily serving automotive, consumer electronics, medical, and industrial manufacturing industries.

Source: Annual Reports, Frost & Sullivan

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Market Ranking of Non-metal Industrial-grade 3D Printing Integrated Solutions Industry

Ranking of Global Industrial-grade 3D Printing Integrated Solutions Companies Measured by Global Non-metal Industrial-grade 3D Printing Integrated Solutions Revenue (2025)

<u>Ranking</u>	<u>Company</u>	<u>Listing Status</u>	<u>Market Share</u>
1	Company G ⁷	Listed	6.8%
2	Company H ⁸	Unlisted	6.7%
3	Company I ⁹	Listed	4.8%
4	Company J ¹⁰	Unlisted	3.8%
5	Company K ¹¹	Listed	3.5%
		Top 5 Subtotal	25.6%
7	The Company	Unlisted	0.9%

Notes:

- (7) Founded in 1989 and headquartered in the United States and Israel, it is a global company specializing in polymer-based 3D printing integrated solutions. Its product portfolio includes FDM and PolyJet 3D printing systems, materials, and software solutions, primarily serving aerospace, automotive, healthcare, and industrial manufacturing sectors.
- (8) Founded in 2013 and is headquartered in the United States. It is a company specializing in polymer-based 3D printing integrated solutions. Its product portfolio includes Digital Light Synthesis (DLS) 3D printing systems, resin materials, and software solutions, primarily serving the footwear, automotive, healthcare, consumer products, and industrial manufacturing sectors.
- (9) Founded in 1986 and headquartered in the United States, it is a global company specializing in 3D printing technologies and solutions. Its comprehensive product portfolio includes both metal and polymer 3D printing equipment, materials, software, and on-demand manufacturing services, primarily serving healthcare, aerospace, automotive, and industrial applications.
- (10) Founded in 1989 and headquartered in Germany, it is a global company specializing in industrial 3D printing technologies. Its product portfolio includes metal and polymer 3D printing systems, materials, and related services, primarily serving aerospace, automotive, medical, and industrial manufacturing industries.
- (11) Founded in 1939 and headquartered in the United States, it is a global technology company with a strong presence in industrial 3D printing integrated solutions. Its product portfolio includes polymer-based 3D printing systems, particularly Multi Jet Fusion technology, along with materials and software solutions, primarily serving industrial manufacturing, healthcare, and consumer goods sectors.

Source: Annual Reports, Frost & Sullivan

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Ranking of PRC-based Industrial-grade 3D Printing Integrated Solutions Companies Measured by Global Non-metal Industrial-grade 3D Printing Integrated Solutions Revenue (2025)

Ranking	Company	Listing Status	Market Share
1	The Company	Unlisted	0.9%
2	Company C	Unlisted	0.8%
3	Company L ¹²	Unlisted	0.7%
4	Company B	Listed	0.5%
5	Company F	Unlisted	0.4%
Top 5 Subtotal			3.3%

Notes:

- (12) Founded in 2015 and is headquartered in China. It is a company specializing in digital manufacturing and polymer-based 3D printing integrated solutions. Its product portfolio includes resin 3D printing systems, printing materials, software solutions and digital production platforms, primarily serving the dental, consumer products, healthcare and industrial manufacturing sectors.

Source: Annual Reports, Frost & Sullivan

Entry Barriers of Industrial-grade 3D Printing Integrated Solutions Industry

Technological Barriers: Industrial-grade 3D printing involves multiple core technological components, including equipment structural design, control system development, energy control algorithms, toolpath planning, and parameter optimization. Such capabilities rely not only on continuous R&D investment but also on long-term technological accumulation and process expertise developed through practical experience. Key aspects of the printing process, including parameter setting, toolpath optimization, environmental control, and anomaly handling, involve substantial know-how that is typically difficult to replicate through publicly available information or short-term development efforts. With the gradual integration of artificial intelligence into areas such as toolpath optimization, parameter adjustment, and process monitoring, enterprises are further required to accumulate process data over extended periods and conduct algorithm training, thereby increasing the technological development threshold. The ability to consistently achieve high precision, high repeatability, and industrial-grade continuous operation is generally built upon long-term testing data and application validation.

Material Innovation Barriers: In the field of industrial-grade 3D printing, the performance level of materials directly determines the breadth and depth of application scenarios. Optimizing formulations, modifying performance, and enhancing functionality for metal powders, engineering plastics, photosensitive resins, and composite materials require robust R&D capabilities and continuous resource investment. Material innovation is reflected not only in fundamental formula development but also in systematic research into rheological properties, curing behavior, thermal deformation characteristics, and post-processing adaptability. Establishing a stable, mass-producible material system that is highly compatible with equipment typically requires long cycles of testing, validation, and technical accumulation. Enterprises possessing independent material R&D capabilities and a comprehensive material portfolio hold significant advantages in terms of product performance enhancement and differentiated competition.

Capital Investment and Scalability Barriers: The development, testing, demonstration, and large-scale delivery of industrial-grade 3D printing integrated solutions require continuous and substantial capital investment. Such investments cover equipment development, material testing and validation, process optimization, and the establishment of after-sales service systems. Enterprises with scalable production and delivery capabilities typically possess advantages in cost control and service provision, thereby raising industry entry barriers.

INDUSTRY OVERVIEW

Market Channel and After-sales Service Barriers: industrial-grade 3D printing integrated solutions typically involve long-term continuous equipment operation and the sustained supply of materials, placing high demands on after-sales responsiveness and in-depth technical support. Established enterprises, by building stable distribution systems and professional after-sales service networks on a global or regional scale, are able to provide industrial customers with comprehensive safeguards, including installation and commissioning, process optimization, and equipment operation and maintenance, thereby creating strong customer stickiness. New entrants not only face a lack of basic sales channels but also find it difficult to assemble a service team with profound process experience in the short term to satisfy industrial customers’ high level of reliance on system operational stability and production continuity.

Brand Barriers: In the industrial-grade 3D printing integrated solutions market, industrial customers tend to adopt a cautious approach in procurement decisions, with relatively long decision-making cycles. Customers typically require multiple rounds of testing, process evaluation, and stability verification to ensure that equipment and integrated solutions can meet their long-term production or R&D requirements. In this context, a supplier’s track record of industry applications, historical cooperation experience, and market reputation serve as key reference factors. Enterprises with an established customer base and proven application cases are generally better positioned to gain customer trust and enter customer supply systems.

SOURCE OF INFORMATION

In connection with the [REDACTED], we have engaged Frost & Sullivan to conduct a detailed analysis and prepare a market research report on the industrial-grade 3D printing integrated solutions industry. Frost & Sullivan is an independent global market research and consulting company founded in 1961 and headquartered in the U.S. Services provided by Frost & Sullivan include market assessments, competitive benchmarking, and strategic and market planning for a variety of industries. The agreed fee paid to Frost & Sullivan for the preparation and use of the Frost & Sullivan Report is RMB530,000. The payment of such amount was not contingent upon our successful [REDACTED] or on the results of the Frost & Sullivan Report. Except for the Frost & Sullivan Report, we did not commission any other market research report in connection with the [REDACTED]. We have included certain information from the Frost & Sullivan Report in this document because we believe such information facilitates an understanding of the industrial-grade 3D printing integrated solutions industry for potential investors. Unless otherwise indicated, market estimates or forecasts in this section represent Frost & Sullivan’s view on the future development of the industrial-grade 3D printing integrated solutions industry.

In preparing the Frost & Sullivan Report, Frost & Sullivan has relied on its in-house database, independent third-party reports, and publicly available data from reputable industry organizations. Where necessary, Frost & Sullivan contacts companies operating in the industry to gather and synthesize information in relation to the market, prices, and other relevant information. Frost & Sullivan has exercised due care in collecting and reviewing the information so collected and believes that the basic assumptions used in preparing the Frost & Sullivan Report, including those used to make future projections, are factual, correct, and not misleading. Frost & Sullivan has independently analyzed the information, but the accuracy of the conclusions of its review largely relies on the accuracy of the information collected. In compiling and preparing the research, Frost & Sullivan assumed that the social, economic, and political environments in the relevant markets are likely to remain stable during the forecast period, which ensures the stable and healthy development of the industrial-grade 3D printing integrated solutions industry. In addition, Frost & Sullivan has developed its forecast on the following bases and assumptions: (i) the global economy is likely to maintain stable growth in the next decade, and (ii) the industrial-grade 3D printing integrated solutions industry is expected to grow based on the macroeconomic assumptions of the economy. Frost & Sullivan’s research may be affected by the accuracy of these assumptions and the choice of these primary and secondary sources. Except as otherwise noted, all data and forecasts in this section come from the Frost & Sullivan Report.