

## INDUSTRY OVERVIEW

*The information and statistics set out in this section and other sections of this document were extracted from different official government publications, available sources from public market research and other sources from independent suppliers, and from the independent industry report prepared by China Insights Industry Consultancy Limited (“CIC”). We engaged CIC to prepare an independent industry report in connection with the [REDACTED] (the “CIC Report”). The information from official government sources has not been independently verified by us and the Joint Sponsors, any of their respective directors and advisors, or any other persons or parties involved in the [REDACTED], and no representation is given as to its accuracy. Accordingly, the information from official government sources contained herein may not be accurate and should not be unduly relied upon.*

### OVERVIEW OF GLOBAL AND CHINA’S POWER ELECTRONICS INDUSTRY

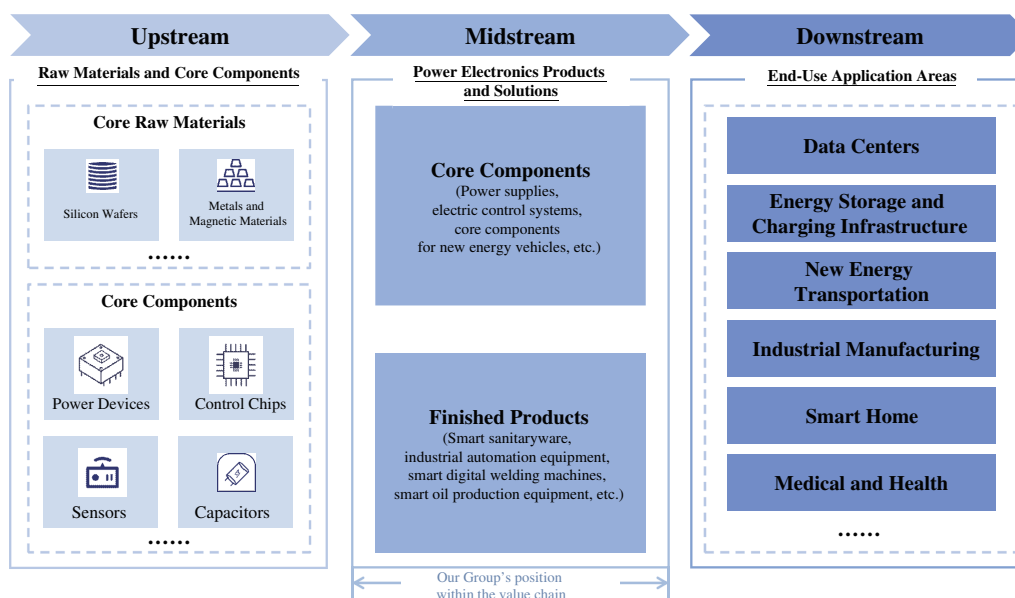
#### Definition of Power Electronics Industry

The power electronics industry is a strategic emerging sector that integrates electronic information technology with electrical engineering. It leverages power devices, integrated circuits, control systems, and related technologies to enable the conversion, control, distribution, and optimization of electrical energy, improving performance and quality of power supply and energy efficiency for end-use equipment.

#### Value Chain of Power Electronics Industry

The upstream segment primarily consists of key raw materials, including silicon wafers, metals and magnetic materials, as well as core components such as power devices, control chips, sensors, capacitors, and resistors. The midstream segment is responsible for processing, assembling, and integrating upstream raw materials and components to create various power electronics products and solutions, including power supplies, electronic control systems, and finished products. The downstream segment covers a wide range of applications, including data centers, energy storage and charging infrastructure, new energy transportation, industrial manufacturing, smart home, and medical and health.

#### Value chain of power electronics industry



Source: Literature research and CIC

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### Future Trends in Key Downstream Applications of Power Electronics Industry

As a key enabler of downstream industries, power electronics technology has evolved through three key application-driven stages: (i) since the 1960s, demand from industrial devices and home appliances drove the adoption of thyristor-based power conversion technologies; (ii) since 2010, the rapid growth of new energy vehicles, energy storage systems and charging infrastructure accelerated the adoption of high-performance power devices, such as insulated-gate bipolar transistors, as well as high-efficiency and bidirectional power conversion technologies; (iii) since 2020, the commercialization of AI industry has created strong demand for high-performance power solutions. The rise of AI computing clusters and data centers has driven the development of high-efficiency server power supplies, high-voltage direct current (HVDC) systems, and wide-bandgap semiconductor technologies.

### Competitive Landscape of Global Power Electronics Industry

Global power electronics industry covers a full spectrum of application scenarios spanning production and daily life, with its product portfolio encompassing various components and finished products. The competitive landscape of global power electronics industry is highly fragmented, and there are currently no universally accepted ranking standards and no single dominant market participant in this market. The market has a large number of participants with differentiated business layouts and product coverage. There are comprehensive manufacturers represented by our Group that operate across multiple downstream segments with diversified product matrices, as well as specialized enterprises focusing on single segments.

## ANALYSIS OF GLOBAL AND CHINA’S POWER SUPPLIES INDUSTRY

### Definition and Classification of Power Supplies

Power supplies are core components of end-use electrical equipment based on power electronics technologies that convert, distribute and control electrical energy. Their primary function is to deliver stable, efficient, and reliable power in the form required by end-use equipment. Among them, high-efficiency power supplies typically offer greater energy conversion efficiency and power density, making them suitable for high-load applications while helping reduce energy consumption and costs; conventional power supplies are generally used in applications with lower power requirements and less stringent energy-efficiency standards.

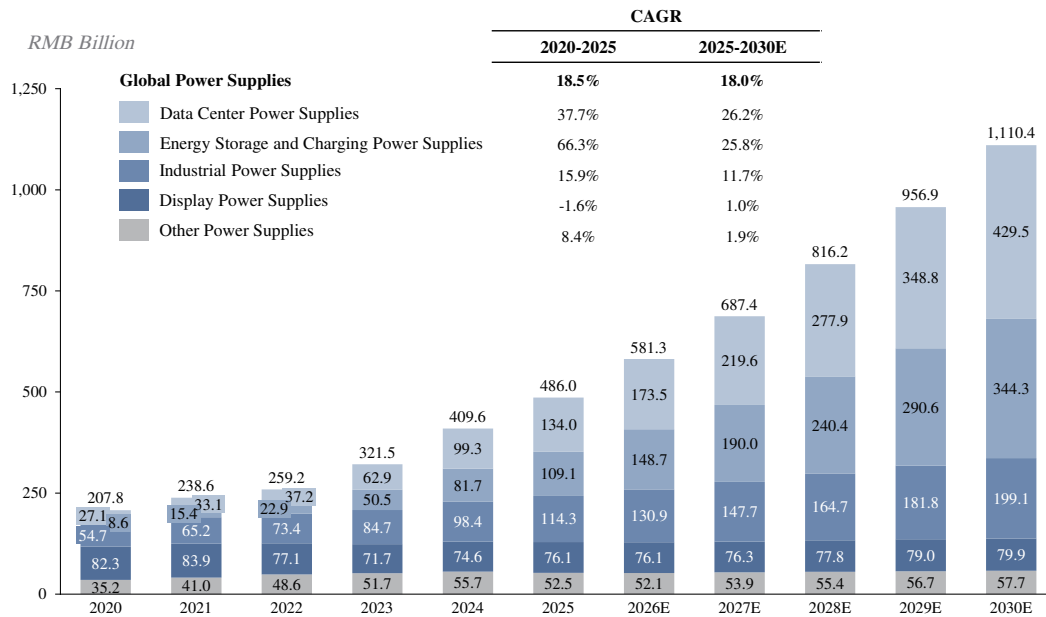
Based on end-use applications, power supplies can be categorized into data center power supplies, energy storage and charging power supplies, industrial power supplies (including medical power supplies), and display power supplies, etc. Among these segments, data centers, particularly AI data centers (AIDCs), and high-voltage energy storage and charging systems operate under high-power conditions and stringent energy management requirements, driving demand for high-efficiency power supply solutions.

### Market Size of Global and China’s Power Supplies Industry

Driven by the expansion of computing infrastructure, the global energy transition, and the increasing digitalization of downstream industries, the market size of global power supplies industry is expected to grow from RMB486.0 billion in 2025 to RMB1,110.4 billion in 2030, representing a CAGR of 18.0%. Among all segments, data center power supplies and energy storage and charging power supplies are expected to be the fastest-growing categories, with CAGRs of 26.2% and 25.8%, respectively, from 2025 to 2030.

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Market Size of Global Power Supplies Industry, by Product Type, 2020-2030E



Source: International Energy Agency, Bloomberg New Energy Finance, expert interviews, industry publications and CIC

China's power supplies industry has grown rapidly, supported by a well-established supply chain, strong demand from data centers, new energy and advanced manufacturing, and favorable government policies. The market size grew from RMB63.3 billion in 2020 to RMB152.2 billion in 2025, representing a CAGR of 19.2%, and is projected to reach RMB406.8 billion by 2030, with a CAGR of 21.7% from 2025 to 2030, which is higher than the CAGR of global market, and the share of China's market is expected to increase from 31.3% in 2025 to 36.6% in 2030.

### Competitive Landscape of Global Power Supplies Industry

The global power supplies industry boasts an extensive coverage of downstream applications, with differentiated demand across subsegments and substantial variances in product types and configurations. The competitive landscape of global power supplies industry is relatively fragmented, and market participants comprise comprehensive solution providers as well as specialized power supplies providers. Our Group ranked among the Tier-1 Chinese Mainland providers in the global power supplies market in terms of revenue in 2025, and is a global power supplies provider with one of the broadest product portfolios across application scenarios.

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### Analysis of Global and China’s Data Center Power Supplies Industry

#### *Definition and Classification of Data Center Power Supplies*

A data center power supply system is an integrated power infrastructure that ensures the stable operation of servers, storage systems, and networking equipment. Its primary function is to efficiently convert electricity into the power required by IT equipment while maintaining uninterrupted operation during grid fluctuations and power outages. Based on application scenarios, data center power supplies can be categorized into internet data center (IDC) power supplies and AIDC power supplies. IDC power supplies are designed for traditional data centers and primarily use alternating current uninterruptible power supply architectures, which are highly standardized and focused on reliability and cost-efficiency. AIDC power solutions are specifically designed for AI data centers. They convert alternating current power into the direct current power required by high-performance AI load such as computing tray and switch tray, providing power for AI training and inference workloads with high-reliability, efficiency and density. Given the higher rack power density and more dynamic load fluctuations of AI servers, the industry is increasingly adopting HVDC architectures in place of traditional UPS-based power systems.

Power conversion efficiency is one of the key metrics for evaluating data center power supply performance. It refers to the ratio of effective output power to input power and reflects the level of energy utilization during the power conversion process. Conventional IDC power supply solutions currently achieve an average power conversion efficiency of approximately 90% to 95%. With ongoing optimization of power supply architectures and the adoption of advanced materials, power conversion efficiency of AIDC power supply solutions has reached 95% and above, while power conversion efficiency of certain more advanced solutions can achieve 97% to 98.5%.

#### *Future Trends of Data Center Power Supplies Industry*

In recent years, exponential growth in large AI model parameters, training datasets, and inference workloads has driven a sharp increase in global AI computing demand, accelerating the transition from traditional data centers to AI data centers. To meet rising computing requirements, chip manufacturers are increasingly improving performance through increasing core computing units, improving parallelization, integrating high-bandwidth memory, and high-speed interconnect technologies rather than relying solely on process node advancements. As a large number of computing units operate at almost full capacity, both computing power and energy consumption continue to rise. Traditional data centers typically operate at approximately 10kW to 20 kW per rack, while AI computing clusters and other high-performance computing environments can surge to several hundred kilowatts per rack. The continued growth of AI computing demand and equipment power consumption is raising requirements for the efficiency and power delivery capacity of data center power systems. At the same time, global decarbonization initiatives are increasing pressure on data centers to improve energy efficiency and reduce power losses. Against this backdrop, the data center power supplies industry is exhibiting the following future trends:

- ***Continued evolution toward high-voltage power architectures:*** As computing demand continues to rise, power delivery voltages and system architectures are evolving to overcome the limitations of traditional low-voltage systems, including high transmission losses and limited power capacity. These advancements improve conversion efficiency, support higher computing density, and meet the requirements of hyperscale AI clusters and future high-performance computing environments. Compared with conventional 48V or UPS-based architectures, 800V HVDC solutions can reduce resistive losses by approximately 97%, lower infrastructure space requirements by around 30%, increase system efficiency from approximately 90% to over 95%.

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- ***Large-scale adoption of liquid cooling technologies:*** Liquid cooling is becoming a core thermal management solution for data center power systems. It supports the deployment of high-voltage architectures, alleviates thermal challenges in high-power-density environments, and improves the long-term reliability of power devices. As data centers pursue greater energy efficiency, lower operating costs, and higher computing density, liquid cooling is increasingly becoming the standard solution for AIDC.
- ***Multi-tech collaboration to ensure power stability:*** Data center servers, particularly AI servers, are primarily powered by GPUs and other ASICs, which feature abrupt workload fluctuations, frequent dynamic voltage adjustments, highly parallel computing, and intensive data transmission requirements. These characteristics require power systems with rapid response capabilities. Power redundancy designs enable millisecond-level or even microsecond-level failover in the event of a power supply failure. Combined with extremely dynamic pulse power (EDPP) and other power fluctuation mitigation technologies, power systems can compensate for sudden load changes, reduce grid disturbances, and maintain stable power input. The integration of advanced hardware and control technologies is critical to ensuring continuous operation and power reliability in AI computing clusters.
- ***Coordinated advancement of supporting technologies:*** Advances in supporting technologies continue to improve the efficiency and reliability of data center power systems. For example, digital power control technologies enable more precise parameter optimization, improving system adaptability while reducing energy consumption; modularization and miniaturization enhance scalability and space utilization for high-density computing deployments; material innovations are also reshaping power system design: conventional silicon-based devices are increasingly unable to meet the requirements of high-voltage, high-efficiency applications, while wide-bandgap semiconductors such as silicon carbide (SiC) significantly reduce power losses and improve conversion efficiency, making them a key enabler of next-generation power architectures.

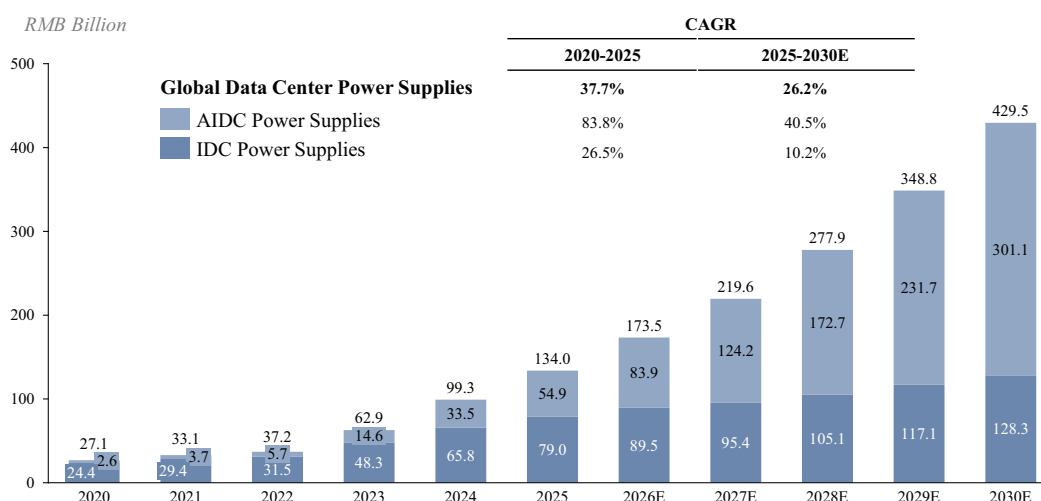
Against this backdrop, downstream customers in the data center industry are placing increasing demands on suppliers with rapid response capabilities, customized and reliable solutions. In particular, AI computing and other high-performance applications require suppliers that can support customized development, achieve timely mass production, and provide comprehensive technical support to ensure the efficient deployment and stable operation of critical infrastructure.

### Market Size of Global and China's Data Center Power Supplies Industry

The market size of global data center power supplies industry grew from RMB27.1 billion in 2020 to RMB134.0 billion in 2025, representing a CAGR of 37.7%. Driven by rising AI computing demand, continued AIDC construction, increasing rack power density, and the adoption of advanced technologies such as HVDC architectures, the market size is expected to reach RMB429.5 billion by 2030, with a CAGR of 26.2% from 2025 to 2030. IDC power supplies currently account for the majority of the market. Supported by data center upgrades and new facility construction, the market size of global IDC power supplies industry is expected to reach RMB128.3 billion by 2030, representing a CAGR of 10.2% from 2025 to 2030. Meanwhile, driven by the deployment of large AI models, sustained demand for AI computing capacity, and supportive government policies, AIDC power supplies are emerging as the industry's advanced and high-end development segment. The market size of global AIDC power supplies industry is expected to reach RMB301.1 billion by 2030, with a CAGR of 40.5% from 2025 to 2030.

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Market Size of Global Data Center Power Supplies Industry, by Data Center Type, 2020-2030E



Source: Expert interviews, industry publications and CIC

The market size of China’s data center power supplies industry grew from RMB6.2 billion in 2020 to RMB26.1 billion in 2025, representing a CAGR of 33.5%. Driven by supportive policies, rising investment in AIDC, and breakthroughs in core technologies, the market size is expected to reach RMB109.2 billion by 2030, with a CAGR of 33.1% from 2025 to 2030.

### Entry Barriers and Key Success Factors in the Data Center Power Supplies Industry

- R&D capabilities of core technology:** To support high-efficiency, high-power-density architectures, suppliers must overcome challenges related to wide-bandgap semiconductors, high-voltage power conversion efficiency, multi-module coordination, and system redundancy designs. In addition, data center power supplies, particularly AIDC products, typically require lengthy qualification cycles and close customer collaboration throughout R&D and product iteration. Suppliers with strong technological expertise and sustained R&D capabilities are better positioned to build competitive advantages and gain market share.
- Rapid response and customization capabilities:** As AI infrastructure deployment accelerates, customers place stringent timeline requirements on customized development, sample delivery, mass production, and after-sales support. Suppliers that can quickly respond to customer needs, efficiently deliver customized solutions, and accelerate product iterations are better positioned to strengthen customer relationships and competitiveness.
- Ecosystem integration and certification barriers:** Due to the stringent reliability requirements of data center power supplies, their qualification processes are often lengthy, and many customers maintain approved supplier lists. Leading power suppliers will establish deep customer relationships, their power supplies must complete comprehensive certifications and integrate into mainstream computing infrastructure supply chains, thereby strengthening customer stickiness and supporting market share growth.

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- **Mass production and quality control capabilities:** Data center power supplies require exceptionally high standards of reliability and consistency, with minimal tolerance for defects in installed products due to the critical nature of data center operations. Customers are placing greater emphasis on product performance, reliability, and stable mass production and delivery capabilities. Suppliers must establish scalable manufacturing capabilities and rigorous quality management systems to ensure stable mass production and delivery of high-power products, meeting the large-scale procurement needs of downstream customers.

### Analysis of Global and China’s Energy Storage and Charging Power Supplies Industry

Energy storage and charging power supplies are devices that provide efficient, high-power-density, and reliable power conversion, control, and management for energy storage systems (including portable, residential, industrial and commercial, and centralized energy storage systems) and charging infrastructure. Key products include power conversion systems (PCS) for energy storage, charging modules for direct current charging terminals, and related control units. The industry is increasingly shifting toward integrated energy storage and charging solutions, with equipment evolving from single-function devices to platforms that combine power generation, energy storage, and charging. These solutions have become critical hardware and control systems for new energy integration, grid balancing, and vehicle charging infrastructure.

The market size of global energy storage and charging power supplies industry reached RMB109.1 billion in 2025. By product type, PCS for energy storage and charging modules for direct current charging terminals accounted for RMB89.5 billion and RMB19.6 billion, respectively. Driven by global decarbonization initiatives, rising new energy penetration, integrated solar-storage-charging systems, growth in the NEV fleet, and increasing demand for high-power-density solutions, the market size is expected to reach RMB344.3 billion by 2030, representing a CAGR of 25.8% from 2025 to 2030.

As the world’s largest NEV and new energy market, China has cultivated a large and rapidly growing energy storage and charging power supplies market. The market size grew from RMB2.6 billion in 2020 to RMB48.3 billion in 2025, representing a CAGR of 80.0%, and is projected to reach RMB177.5 billion by 2030, with a CAGR of 29.7% from 2025 to 2030.

### Analysis of Global and China’s Industrial Power Supplies Industry

Industrial power supplies are critical components for industrial, medical, and other professional applications, providing power conversion, voltage regulation, power control, and safety protection to support reliable operation, improve efficiency, reduce energy consumption, and meet specific safety requirements for relevant devices. Key products include industrial control power supplies, laser power supplies, and specialized application-specific power supplies. Medical power supplies, in particular, provide highly reliable power conversion, isolation, voltage regulation, and power management for medical devices to ensure their stable operation, precise performance, and patient safety.

The market size of global industrial power supplies industry grew from RMB54.7 billion in 2020 to RMB114.3 billion in 2025, representing a CAGR of 15.9%. Driven by technology advancement, the increasing penetration of automated production lines and stricter equipment standards, and rising demand for high-performance customized solutions, the market size is expected to reach RMB199.1 billion by 2030, with a CAGR of 11.7% from 2025 to 2030.

China is a key market for industrial power supplies. The market size grew from RMB18.5 billion in 2020 to RMB37.5 billion in 2025, representing a CAGR of 15.2%, and is projected to reach RMB72.5 billion by 2030, with a CAGR of 14.1% from 2025 to 2030. Growth is supported by industrial upgrading, stricter energy-efficiency requirements, and rising demand from sectors such as manufacturing and healthcare.

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### Analysis of Global and China’s Display Power Supplies Industry

#### *Definition and Market Size of Global and China’s Display Power Supplies Industry*

Display power supplies are specialized power solutions for digital display devices, providing functions such as power rectification, voltage conversion, voltage regulation and filtering, electrical isolation, and energy management. They deliver stable, efficient, and low-interference power supply and are essential components for stable operation of digital display devices.

Display power supplies primarily include commercial display power supplies, television power supplies, personal computer power supplies, and office automation equipment power supplies. Commercial display power supplies are used in commercial TVs, video walls, interactive whiteboards, laser projectors, digital signage, and fine-pitch LED displays. TV power supplies serve smart TVs and other consumer display devices, while personal computer and office automation power supplies provide power support for personal computers, printers, copiers, multifunction devices, and other terminals.

The market size of global commercial display power supplies industry reached RMB1.4 billion in 2025. Driven by smart city development, advances in display technologies, stricter energy-efficiency regulations, and growing demand for high-power-density smart power solutions, the market size is expected to reach RMB1.7 billion by 2030, representing a CAGR of 3.7% from 2025 to 2030.

China is a major manufacturing hub for commercial display power supplies. The market size grew from RMB0.8 billion in 2020 to RMB1.0 billion in 2025, representing a CAGR of 4.3%, and is expected to reach RMB1.2 billion by 2030, with a CAGR of 3.9% from 2025 to 2030.

#### *Competitive Landscape of China’s Commercial Display Power Supplies Industry*

In terms of revenue in 2025, our Group ranked first among commercial display power supplies manufacturers accounting for approximately 62.3% of the total market.

#### **Ranking of Commercial Display Power Supplies Manufacturers in China, in Terms of Commercial Display Power Supplies Revenue, 2025**

| <b>Ranking</b>  | <b>Commercial Display<br/>Power Supplies Manufacturers</b> | <b>Revenue<br/>(RMB Million)</b> | <b>Market Share<br/>(%)</b> |
|-----------------|------------------------------------------------------------|----------------------------------|-----------------------------|
| <b>1</b>        | <b>Our Group</b>                                           | <b>623</b>                       | <b>62.3%</b>                |
| 2               | Company A <sup>(1)</sup>                                   | ~110                             | 11.0%                       |
| 3               | Company B <sup>(2)</sup>                                   | ~100                             | 10.0%                       |
| <b>Subtotal</b> |                                                            | <b>833</b>                       | <b>83.3%</b>                |

*Notes:*

- (1) Company A is a non-listed company founded in 2008, with businesses covering LED display power supplies and industrial power supplies, etc.
- (2) Company B is a non-listed company founded in 2015 and is also a subsidiary of a company listed in Shenzhen Stock Exchange, primarily engaged in commercial display control boards and smart hardware products.

*Source: Expert interviews, CIC*

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### ANALYSIS OF GLOBAL AND CHINA’S NEW ENERGY TRANSPORTATION PRODUCT INDUSTRY

#### Definition of New Energy Transportation Products

New energy transportation products leverage power electronics and smart control technologies to provide energy conversion, drive, control, and electrical components for NEVs and rail transit applications. Major products include motor controllers, integrated electric drive systems, thermal management products, power management products (such as on-board chargers and DC-DC converters), on-board oxygen generators, hydraulic suspension systems, and electrical components for rail transit air conditioning systems. These products are designed to meet the requirements of efficiency, reliability, and energy savings, serving as key components of the new energy transportation vehicles.

#### Market Size of Global and China’s Major New Energy Transportation Product Industry

Driven by vehicle electrification and the development of smart transportation systems, the market size of global major new energy transportation product industry is expected to grow from RMB658.3 billion in 2025 to RMB1,577.1 billion in 2030, representing a CAGR of 19.1%.

The market of China’s new energy transportation products has benefited from the rapid adoption of NEVs and the expansion of intercity rail transit networks and supported by favorable policies such as carbon neutrality goals, the market size reached RMB335.4 billion in 2025 and is expected to grow to RMB824.4 billion by 2030, representing a CAGR of 19.7%.

#### Key Drivers and Future Trends of New Energy Transportation Product Industry

- ***Rapid growth in end-market demand driving expansion of supporting components:*** Global NEV adoption continues to accelerate. In 2025, the sales volume of global NEV market reached 23.7 million units, with a penetration rate of 23.0%, and is expected to increase to 53.5 million units by 2030, corresponding to a penetration rate of 41.9%. The rapid adoption of 800V direct current platforms, vehicle manufacturing capacity expansion, and faster model iteration are driving demand for key electronic components such as power electronics units and motor control units, etc. Meanwhile, urban transportation development and rail transit upgrades continue to support demand for air-conditioning electrical components and related products for rail transit.
- ***Technological advancements driving product upgrades:*** Advances in power electronics, smart control, and wide-bandgap semiconductors technologies continue to drive the innovation of new energy transportation products. For example, wide-bandgap semiconductor technology improves the efficiency and reliability of NEV power systems. Combined with advanced control algorithms, integrated hardware and software platforms enable higher power density, reliability, efficiency, and protection performance, enhancing the operation efficiency and stability of electronic systems.
- ***Decarbonization policies supporting sustainable development:*** Carbon neutrality initiatives continue to raise requirements for energy efficiency and emissions reduction across the transportation sector. The industry is increasingly focused on improving efficiency, reducing power losses, and replacing legacy high-energy-consumption products, supporting the transition toward low-carbon solutions.

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- ***Integration trends reshaping product architectures:*** Growing demand for higher space utilization, system integration, and operational reliability is driving products toward integrated and modular designs. Products such as integrated electric control systems, integrated power supplies, and integrated air-conditioning control systems, and hydraulic suspension systems are increasingly becoming the development direction, offering advantages in space savings, cost efficiency, and operating performance.
- ***Advantages of one-stop solution providers becoming more prominent:*** As transportation systems become increasingly electrified and intelligent, particularly in the NEV sector, the number and value of power electronics components per vehicle continue to rise. Suppliers with diversified product portfolios and one-stop solution capabilities are gaining a competitive advantage by reducing supply chain complexity and multi-supplier coordination costs for customers.

## ANALYSIS OF GLOBAL AND CHINA’S INDUSTRIAL AUTOMATION AND INTELLIGENT EQUIPMENT INDUSTRY

Industrial automation and intelligent equipment products are built on power electronics and industrial control technologies, addressing demand for automation and intelligent operations in industrial applications. As key enablers of industrial upgrading and productivity improvement, they are driving the transformation of industrial production.

### Definition and Classification of Industrial Automation Products

Industrial automation products integrate data acquisition, real-time communication, data processing, and control capabilities to enable automated sensing, intelligent control, precise execution, and coordinated management throughout the production process. By reducing manual intervention and improving production efficiency, product quality, and operational reliability, they serve as key enablers of intelligent manufacturing. Industrial automation products can be categorized into the control, drive, execution, and sensing products. Among these, the control and drive products are the core of logical decision-making and power driving in industrial automation systems:

- ***The control product functions as the decision-making and control center of industrial automation systems.*** Key products include programmable logic controllers and distributed control systems, which receive instructions, execute logical operations, and issue control commands to coordinate production processes;
- ***The drive product serves as the connection “bridge” of control and execution products.*** Key products include variable frequency drives and servo drives, which provide stable and controllable power output to actuators while regulating speed and torque.

### Market Size of Global and China’s Major Industrial Automation Product Industry

Supported by advanced application of industrial Internet of Things (IoT), technological convergence, and rising demand from advanced manufacturing, the market size of global major industrial automation product industry, including only control and drive products, is expected to grow from RMB292.8 billion in 2025 to RMB393.2 billion in 2030, representing a CAGR of 6.1%.

China is a key growth market for industrial automation products. The market size grew from RMB65.2 billion in 2020 to RMB105.2 billion in 2025, representing a CAGR of 10.0%. Supported by favorable policies, rising demand from sectors such as NEVs and lithium batteries, and continued advances in technologies, such as power electronics, precision motion control and AI, the market size is expected to reach RMB153.6 billion by 2030, with a CAGR of 7.9% from 2025 to 2030.

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### Definition and Classification of Intelligent Equipment Products

Intelligent equipment is a type of industrial equipment which integrates industrial control systems, digital sensing technologies, intelligent algorithms, and application-specific process technologies. Designed for industrial manufacturing, energy resources extraction, and other professional applications, they feature autonomous sensing, intelligent control, efficient operation, and data communication capabilities. Products include intelligent digital welding machines and intelligent oil production equipment, enabling automated process control, precision operations, and productivity improvements in manufacturing and energy production:

- Intelligent digital welding machines are advanced welding systems integrating digital technologies, sensors and automatic control systems. With environmental sensing, autonomous decision-making, dynamic adjustment, and adaptive optimization capabilities, they improve production efficiency while ensuring consistent welding quality. Welding power supplies, as core components of welding machines, are equipment that provide power supply for welding process and possess required output characteristics for the specific welding method.
- Intelligent oil production equipment combines power transmission with intelligent monitoring technologies to achieve fluid lifting, real-time monitoring and automatic adjustment of parameter, and remote control of oil wells, with advantages in energy efficiency, reliability, and automation. These capabilities drive the realization of digital and intelligent oilfields and enhance overall production efficiency.

### Market Size of Global and China’s Intelligent Digital Welding Machines and Intelligent Oil Production Equipment Industry

The market size of global intelligent digital welding machines industry reached RMB48.7 billion in 2025 and is expected to grow to RMB66.8 billion by 2030, representing a CAGR of 6.5% from 2025 to 2030, driven by intelligent manufacturing adoption and increasing welding automation. In China, supported by intelligent manufacturing policies and demand for automated welding upgrades, the market size grew from RMB8.1 billion in 2020 to RMB14.1 billion in 2025, representing a CAGR of 11.8%, and is expected to reach RMB23.6 billion by 2030, with a CAGR of 10.8% from 2025 to 2030.

The market size of global intelligent oil production equipment industry reached RMB99.4 billion in 2025 and is expected to grow to RMB127.8 billion by 2030, representing a CAGR of 5.1% from 2025 to 2030, supported by the digital transformation of the oil and gas industry. In China, initiatives to increase oil and gas reserves and production are accelerating the shift toward energy-efficient, digitalized, and remotely managed oilfield operations. The market size grew from RMB6.1 billion in 2020 to RMB9.8 billion in 2025, representing a CAGR of 10.2%, and is projected to reach RMB13.8 billion by 2030, with a CAGR of 7.1% from 2025 to 2030.

## ANALYSIS OF GLOBAL AND CHINA’S SMART HOME APPLIANCES INDUSTRY

### Definition of Home Appliances Products and Its Electronic Control Products

Smart home appliances are devices enabled by the IoT, intelligent sensing, and embedded control technologies, designed to provide intelligent and convenient living experiences in household environments. These appliances include various types of variable frequency air conditioners, smart sanitaryware, smart kitchen appliances, and food refrigeration equipment, featuring functions such as automatic sensing, intelligent control, and user-friendly interaction.

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Smart home electronic control products are integrated electronic modules embedded within end products. Centered around microcontroller units, they combine power conversion, logic control, and variable-frequency control technologies to provide various functions, such as power management, load driving, and operational control. Through coordinated hardware and software control, these products enable energy-efficient operation, intelligent adjustment, and remote control, making them key components in the intelligent upgrade of household appliances.

### Market Size of Global and China’s Smart Air Conditioner Compressor Controller Industry

There is a broad range of smart home electronic control products, as for smart air conditioner compressor controllers, driven by demand for smart and premium home appliances, decarbonization initiatives, wider adoption of IoT and AI technologies, and the development of whole-home smart ecosystems, the market size of global smart air conditioner compressor controller industry is expected to grow from RMB64.2 billion in 2025 to RMB83.4 billion in 2030, representing a CAGR of approximately 5.4%. Rising living standards and economic growth in emerging markets such as India and Southeast Asia are also supporting smart home adoption and market expansion.

In China, the rapid deployment of smart home ecosystems, increasing penetration of smart air conditioners, and advances in control chips and algorithms are driving market growth. The size of China’s smart air conditioner compressor controller market grew from RMB27.6 billion in 2020 to RMB45.7 billion in 2025 and is expected to reach RMB58.6 billion by 2030, representing a CAGR of 5.1% from 2025 to 2030.

### Competitive Landscape of Global Smart Air Conditioner Compressor Controller Industry

The global smart air conditioner compressor controller market is primarily served by home appliance manufacturers with in-house development capabilities and third-party suppliers. In 2025, the size of third-party supplier segment reached RMB15.1 billion, accounting for approximately 23.5% of the market, in terms of revenue.

As developing compressor controller systems in-house requires significant investment, long development cycles, and expertise across multiple technologies, many appliance manufacturers prefer to work with third-party suppliers. Third-party integrated solution providers offer end-to-end solutions covering chip selection, algorithm development, and hardware design. With strengths in hardware-software co-development, rapid customization, and technology reuse, these suppliers help customers shorten development cycles, reduce R&D costs, and enhance product competitiveness through improvements in energy efficiency and operational reliability.

In terms of revenue in 2025, our Group ranked first among third-party smart air conditioner compressor controller suppliers globally, accounting for approximately 16.0% of the total market.

### Global Ranking of Third-party Smart Air Conditioner Compressor Controller Suppliers, in Terms of Smart Air Conditioner Compressor Controller Revenue, 2025

| Ranking         | Third-party Smart Air Conditioner Compressor Controller Suppliers | Revenue<br>(RMB Billion) | Market Share<br>(%) |
|-----------------|-------------------------------------------------------------------|--------------------------|---------------------|
| 1               | <b>Our Group</b>                                                  | <b>2.4</b>               | <b>16.0%</b>        |
| 2               | Company C <sup>(1)</sup>                                          | ~1.1                     | 7.3%                |
| 3               | Company D <sup>(2)</sup>                                          | ~1.0                     | 6.6%                |
| <b>Subtotal</b> |                                                                   | <b>4.5</b>               | <b>29.9%</b>        |

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### Notes:

- (1) Company C is a company founded in 1996 and listed on Shenzhen Stock Exchange, primarily engaged in smart control products and proprietary smart products.
- (2) Company D is a non-listed company founded in 2000 and is also a subsidiary of a company listed on Tokyo Stock Exchange, primarily engaged in manufacturing of electronic components for industries such as automobiles, office printers, household air conditioners, and medical devices.

Source: Public filings of listed companies, Expert interviews, CIC

### Service Models for Smart Home Appliances Industry

The smart home appliances industry primarily consists of branded manufacturers and specialized service providers. As product complexity increases and product categories expand, demand for specialized development services continues to grow. Based on service scope, the most common business models of product R&D and manufacturing include electronics manufacturing services (EMS) and original design manufacturing (ODM).

Compared with EMS providers, ODM companies offer end-to-end capabilities covering product design, mold development, and manufacturing. They provide both standardized and customized solutions, helping customers shorten time-to-market and reduce development costs through strong R&D capabilities, rapid product iteration, and effective cost control.

### Market Size of Global and China’s Smart Bidet Toilet ODM Industry

There is a broad range of smart home appliances, as for smart bidet toilets, driven by rising consumer demand and continued innovation in smart home technologies, the market size of global smart bidet toilet ODM industry is expected to grow from RMB7.7 billion in 2025 to RMB10.0 billion in 2030, representing a CAGR of 5.5%.

Supported by the world’s largest consumer market, a well-developed home appliance supply chain, and favorable government policies, the size of China’s smart bidet toilet ODM market grew from RMB2.6 billion in 2020 to RMB4.7 billion in 2025 and is expected to reach RMB6.9 billion by 2030, representing a CAGR of 7.8% from 2025 to 2030.

### Competitive Landscape of Global Smart Bidet Toilet ODM Industry

In terms of revenue in 2025, our Group ranked first among global smart bidet toilet ODM manufacturers, accounting for approximately 8.8% of the total market.

#### Ranking and Market Share of Global Smart Bidet Toilet ODM Manufacturers, 2025

| Ranking         | Smart Bidet Toilet ODM Manufacturers | Market Share<br>(%) <sup>(1)</sup> |
|-----------------|--------------------------------------|------------------------------------|
| 1               | <b>Our Group</b>                     | <b>8.8%</b>                        |
| 2               | Company E <sup>(2)</sup>             | 6.4%                               |
| 3               | Company F <sup>(3)</sup>             | 5.5%                               |
| <b>Subtotal</b> |                                      | <b>20.7%</b>                       |

## INDUSTRY OVERVIEW

### Notes:

- (1) Market share represents each company’s smart bidet toilet ODM-related revenue as a percentage of the total market size of the smart bidet toilet ODM industry in 2025.
- (2) Company E is a company founded in 1999 and listed on the Shenzhen Stock Exchange. Its businesses focus on bathroom solutions and residential water system solutions.
- (3) Company F is a non-listed company founded in 2009. Its businesses cover smart sanitary products, smart home solutions, and smart interaction technologies.

Source: Public filings of listed companies, Expert interviews, CIC

## COST ANALYSIS OF KEY COMPONENTS IN THE POWER ELECTRONICS INDUSTRY

In the power electronics industry, power semiconductor modules are core components for power conversion and control in products such as power supplies and electronic control systems, and represent a major cost item. Taking power supplies as an example, power semiconductor modules typically account for approximately 15% to 40% of total material cost, depending on the application and product type. From 2020 to 2023, power semiconductor module prices in China increased due to supply chain constraints, limited production capacity, and strong downstream demand. Since 2023, with the release of domestic capacity, supply-demand balance improved, leading to a steady decline in prices of power semiconductor modules.

## SOURCE OF INFORMATION

CIC was commissioned to conduct an analysis of, and to report global and China’s power electronics industry at a fee of approximately RMB450,000. The commissioned report has been prepared by CIC independent of the influence of the Company and other interested parties. CIC’s services include industry consulting, commercial due diligence, strategic consulting, etc. Its consulting team has been tracking the latest market trends across various industries, where it has relevant and insightful market intelligence.

CIC conducted both primary and secondary research using a variety of resources. Primary research involved interviewing key industry experts and leading industry participants. Secondary research involved analyzing data from various publicly available data sources, such as the National Bureau of Statistics and other Chinese governmental agencies’ releases. The market projections in the commissioned report are based on the following key assumptions: (i) the overall social, economic and political environments worldwide will remain stable during the forecast period; (ii) the economic and industry development worldwide is likely to maintain a steady growth trajectory during the forecast period, accompanied by continuing urbanization; and (iii) there will be no extreme force majeure event or unforeseen industry regulation that may significantly or fundamentally affect the relevant market and industry.

Unless otherwise specified, all data and forecasts contained in this section are derived from the CIC report. The Directors have confirmed that there has been no occurrence of adverse change in the overall market information that would subject the data to significant restrictions, contradiction or negative effects since the date of the consultancy report.