

2024年

Electronic Components Sales Market Analysis and Forecast

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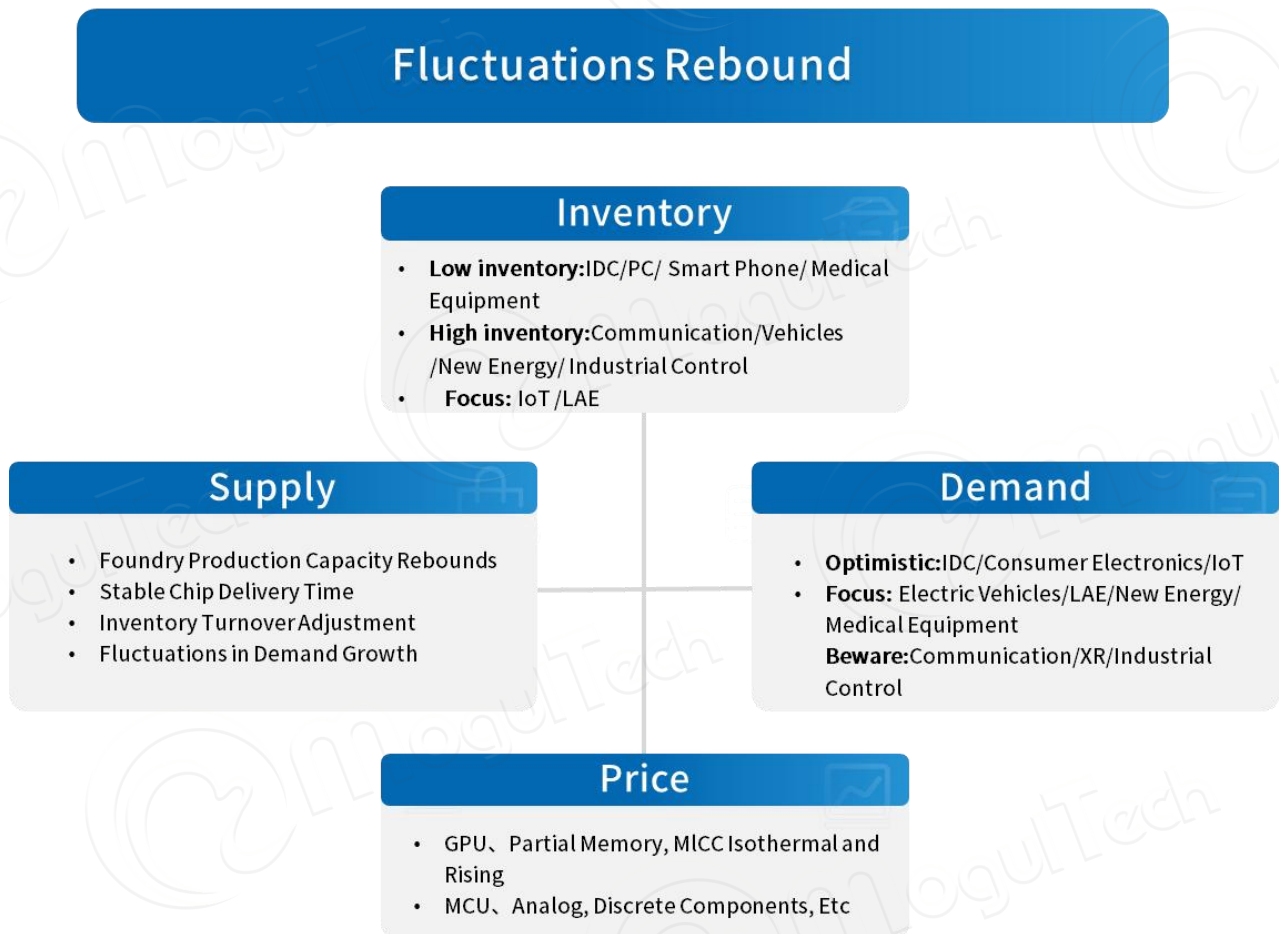
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Prologue



1 Review of the Electronic Components Industry in 2024

Looking back on 2024, problems such as the weak downward trend of the macroeconomy, frequent trade conflict games, and intensified industrial differentiation and fragmentation have worsened. However, driven by the demands of consumer electronics, AI, electric vehicles, and new energy, the global semiconductor sales have rebounded strongly. From the perspective of the electronic component supply chain, the delivery time of chips in various categories has returned to normal, prices have been significantly repaired, and s

ome have rebounded significantly. The delivery rhythm of customers is stable. However, the inventory digestion is not as expected, resulting in the continuous oscillation of the supply chain. Looking forward to the new year, although the structural differentiation in the global semiconductor market still exists, and the recovery of the automotive and industrial sectors is weaker than expected, the overall growth trend is stable, and the industry is gradually entering an upward cycle.

1.1 Major Events and Impacts in the Annual Supply Chain

In 2024, policy and tariff changes had a significant impact on the global electronic component supply chain. The US further tightened its controls on China, and the EU actively promoted the adjustment of tariffs on electric vehicles imported from China. The aftereffects of Trump's re-election victory have intensified global conflicts in fields such as semiconductors, electric vehicles, artificial intelligence, new energy, and consumer electronics. Notably, Intel is facing difficulties, and WT has surpassed Arrow to rank first in revenue, indicating continuous changes in the semiconductor industry pattern. More than 14,600 Chinese chip manufacturers have been cancelled or closed down, and the semiconductor industry will still face challenges in the coming year.

Chart 1: Analysis of Major Events and Impacts Worthy of Attention in the Semiconductor Supply Chain in 2024

No.	Event	Impact Analysis	Involved Industries/Products	Affected Manufacturers
1	Trump's re-election victory	Possible upgrade of restrictions on China	Semiconductors, AI, automobiles, new energy, etc.	NVIDIA, Intel, Tesla, etc.

No.	Event	Impact Analysis	Involved Industries/Products	Affected Manufacturers
2	The Federal Reserve starts to cut interest rates	Stimulate consumption and the recovery of semiconductor and related investments	Semiconductors, electric vehicles, AI, consumer electronics, etc.	Manufacturers with large semiconductor financing needs
3	The US further tightens its controls on China	Intensified restrictions on China's AI-related products	AI chips, HBM, and upstream equipment, etc.	NVIDIA, Samsung, LAM, etc.
4	Ministry of Finance: Giving a 20% relative preference to domestic products in government procurement	Beneficial for the substitution and development of Chinese manufacturers	Industrial manufacturing products such as consumer electronics and electric vehicles	Huawei, ZTE, and Hygon, etc.
5	Four major associations in China express cautiousness in purchasing US chips		Semiconductors, AI, automobiles, communication, etc.	NVIDIA, Intel, Qualcomm, Broadcom, etc.
6	The Ministry of Commerce of China strengthens the export control of gallium, germanium, antimony, etc.	Counterattack against US export restrictions	Semiconductors, electric vehicles, national defense military, aerospace, etc.	Intel, Raytheon, Boeing, etc.
7	The EU's tariff on Chinese electric vehicles takes effect	Restricted exports to Europe and the possible start of the reverse joint venture era	Electric vehicles and supporting supply chains	SAIC, Geely, BYD, etc.
8	The US restores solar tariffs on four Southeast Asian countries	Increased risk of photovoltaic exports	Core chip products such as IGBT	Trina Solar, Sungrow Power, Ginlong, etc.
9	Intensive introduction of policies for the	Rapid growth of low-altitude	Drones, short-haul	DJI, Parrot,

No.	Event	Impact Analysis	Involved Industries/Products	Affected Manufacturers
	low-altitude economy	economy-related industries	aviation, etc.	EHang, MMC, etc.
10	Intel's severe losses lead to layoffs, salary cuts, and possible business splitting	The global semiconductor industry ushers in a reshuffle	CPU, FPGA, PC, Server, etc.	Intel, AMD, NVIDIA, etc.
11	TSMC/Samsung cuts off the supply of 7nm to China	Impacting domestic chip manufacturers related to advanced manufacturing processes	AI, Mobile phones, Automobiles, etc.	Huawei, Cambricon, Geely, Hygon, Alibaba, etc.
12	Bosch, ZF, and other automotive Tier1 companies start layoff tides	The global automotive demand is not as expected	Automobiles and core chips	Infineon, NXP, ST, etc.
13	The prices of all links in the photovoltaic industry have fallen below the cost line	High risks in the photovoltaic supply chain	Photovoltaic and core chips	Infineon, Fuji Electric, Silan Micro, etc.
14	WT 's revenue exceeds Arrow's in the first three quarters and ranks first	The global distribution pattern changes	Distribution of electronic components	Arrow, Avnet, WT, etc.
15	More than 14,600 Chinese chip manufacturers were cancelled/closed down in 2024	Intensified competition in the semiconductor market	Semiconductors	Manufacturers in the semiconductor industry

Source: Chip Insights

1.2 Delivery Time and Trend Analysis of Key Brands

Among the key brands, AI chips represented by NVIDIA have seen both an increase in volume and price, and the situation of short supply has continued, making it the fastest - growing category throughout the year. The prices of DRAM and NAND chips of SK Hynix and others have continued to recover, and HBM is in short supply. The price of analog chips represented by TI has dropped significantly, with a serious price inversion. The prices of automotive - grade MCUs, MOSFETs, and IGBTs represented by Infineon and ST have dropped significantly, and the demand has decreased. The consumer electronics categories represented by Intel and Qualcomm have shown stable growth. The demand for mid - to - high - end MLCCs of Murata has increased, and the delivery time has a tendency to extend.

Chart 2: Overview of Annual Market Hot Product Categories and Manufacturers

Company	Typical Part Number	Application Field	Remarks
TI	TPS series, etc.	Industry, Automotive	Extremely high inventory, price inversion
ST	STM32F103/F4 series, etc.	Consumer Electronics, Automotive	Declining market share in China, sluggish demand
ADI	LTM series, etc.	Communication, Automotive	Sluggish demand, low price
NXP	I.MX series, etc.	Automotive, Industry	Weak demand, below expectations
onsemi	MBRS series, etc.	Automotive	Divergent demand, price reduction
Infineon	FS series, etc.	Automotive	Declining demand, downward adjustment of expectations
NVIDIA	H200/GB200, etc.	Server	In short supply, optimistic

Company	Typical Part Number	Application Field	Remarks
			growth
Intel	Ultra series, etc.	Consumer Electronics	Recovering demand, stable growth
SK Hynix	HBM3/3E, etc.	Server, Consumer Electronics	In short supply, both volume and price rising
Renesas	ISLxx/HD64xx, etc.	Automotive	Rising inventory, price fluctuation
Microchip	DSPIC33 series, etc.	Industry, Automotive	Declining demand, stable delivery time
Xilinx	XCKU series, etc.	Communication, Data Center	Declining demand, price fluctuation
Qualcomm	SM8750, etc.	Consumer Electronics	Stable demand, slightly rising price
Broadcom	BCM89 series, etc.	Server, Automotive	Growing demand, optimistic expectations
Murata	GRM series, etc.	Consumer Electronics, Server	Recovering demand, capacity expansion

Source: Chip Insights

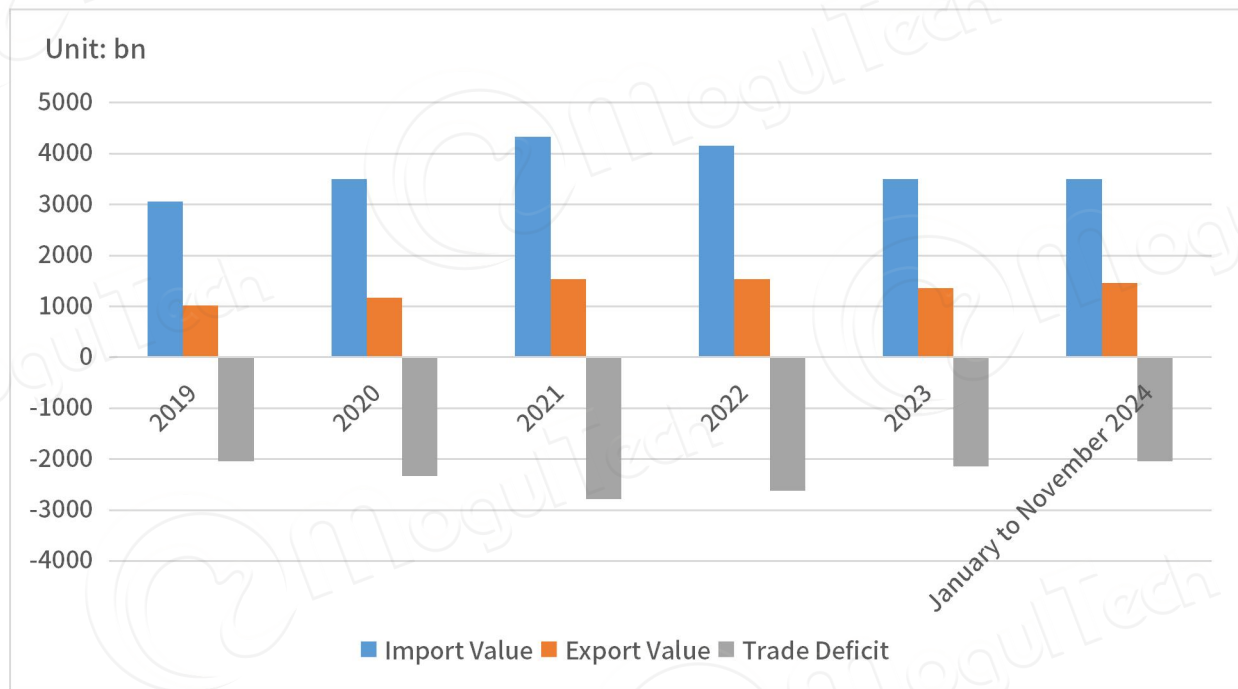
1.3 Import and Export and Going Global of Electronic Components

(1) China's Semiconductor Import and Export Remain Positive

From January to November 2024, China's integrated circuit import and export maintained a stable growth trend. The export value exceeded one trillion yuan (US\$145.5 billion), and the trade deficit in import and export amount narrowed to US\$184.1 billion, showing a significant downward trend since reaching a peak of

US\$278.8 billion in 2021. Among them, the average year - on - year growth rates of import and export were 11.0% and 20.0% respectively, with strong export growth, indicating a good trend of domestic chip substitution.

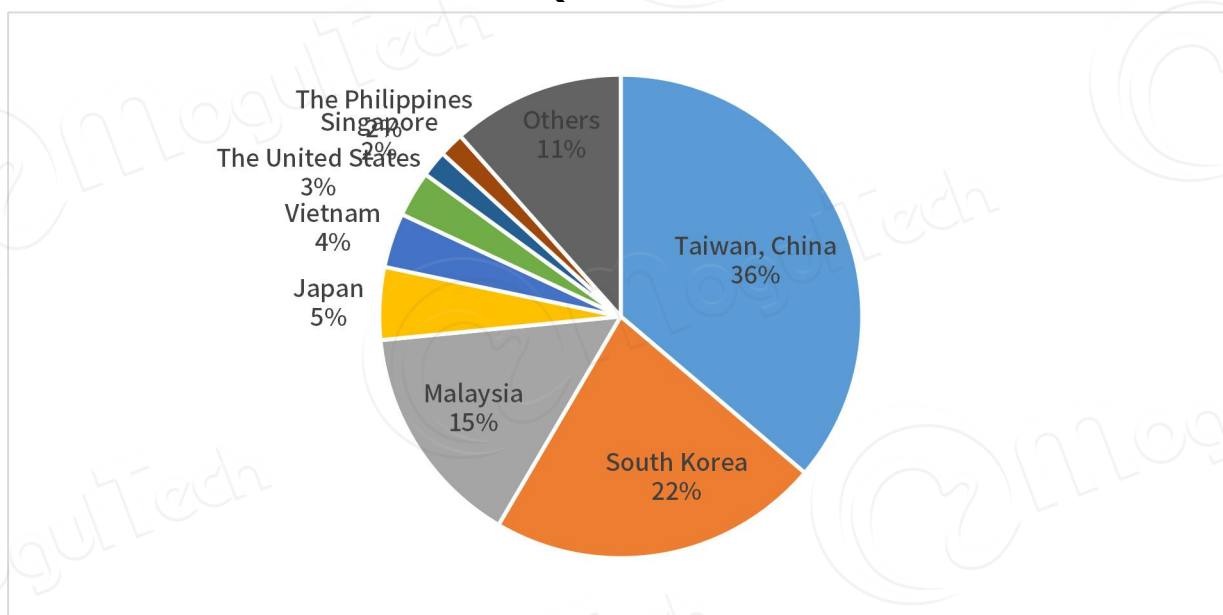
Chart 3: China's Integrated Circuit Import, Export and Trade Deficit in 2024



Source: CCD, Chip Insights

In terms of the main import markets, Taiwan, South Korea, and Malaysia are the main sources of China's integrated circuit imports. South Korea has a relatively large import volume of memory chips, and Taiwan and Malaysia have more foundry and packaging and testing products.

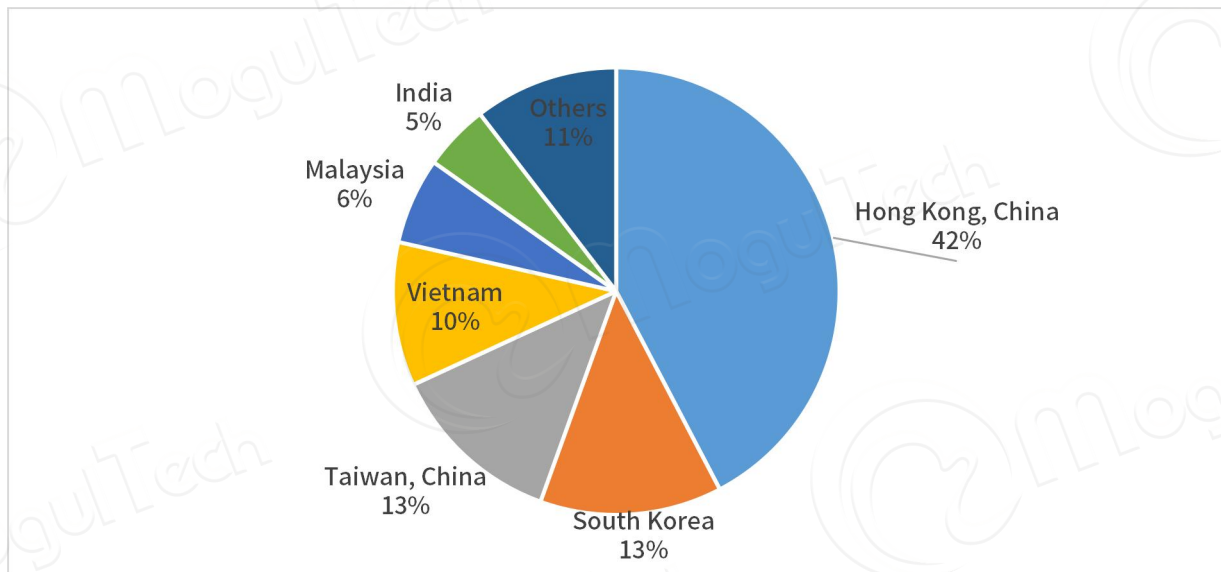
Chart 4: The Proportion of China's Integrated Circuit Import Regions in the First Three Quarters of 2024



Source: CCD, Chip Insights

In terms of the export market, Hong Kong, South Korea, Taiwan, and Vietnam rank among the top. Hong Kong is the main transit point for exports, and the exports to Southeast Asian countries such as Vietnam and Malaysia have grown rapidly. China's integrated circuit industry is growing rapidly in Asia.

Chart 5: The proportion of China's integrated circuit export regions in the first three quarters of 2024



Source: CCD, Chip Insights

(2) The Overseas Expansion of Electronic Components Has Become a New Highlight

In recent years, with the increasing overseas production layout of China's consumer electronics, new energy products such as photovoltaics, and electric vehicles, a number of upstream raw material and component manufacturers have been actively accelerating their overseas market layout. The new forces represented by electronic components have also been vigorously carrying out international trade in recent years, and have actively transformed from mainly focusing on the layout of sales channels to the construction of production bases. Through sorting out the leading domestic electronic component manufacturers, Chip Insights divides the manufacturers going global into the following three categories:

The first category mainly focuses on setting up business entities and pro

duction bases. Represented by Yangjie Technology and Wingtech Technology, their main production bases are distributed in Europe and the Americas, and they are actively expanding their production layouts in the Americas and Southeast Asia. For example, Wingtech Technology has relatively mature internationalization by acquiring Nexperia and utilizing its chip production bases in Hamburg, Germany and Manchester, England. Yangjie Technology relies on a dual-brand strategy. Products under the YJ brand are mainly supplied to the domestic and Asia-Pacific markets, while products under the MCC brand are mainly supplied to the European and American markets. It has also established sales and technical service centers in the United States, Singapore, Germany and other places. While actively exploring local and surrounding markets, it also provides timely localized services for European and American end customers.

Chart 6: Overview of Overseas Production Layouts of Some Chinese Electronic

Component Company

Company	Overseas Production Layout	Remarks
Halo	Acquired Zinitix, a listed chip company in South Korea	Strengthen the supply chain layout in South Korea
Longsys	Acquired Zilia, a packaging and testing manufacturer in Brazil, and established a memory production base in Brazil	Layout the American market
SMEI	Acquired Silex in Sweden to expand MEMS process development and wafer manufacturing business	Mainly layout in Sweden and the European market
Wingtech	Has production bases in India and Indonesia, mainly engaged in electronics contract manufacturing; has chip production bases in Hamburg, Germany and Manchester, England	Acquired Nexperia to expand semiconductor business

Company	Overseas Production Layout	Remarks
ASR	Set up three overseas business entities in Hong Kong, the United States and Italy, respectively undertaking research and development and sales tasks	The overseas market mainly relies on traditional agents
Yangjie	Has started the construction of a factory in Vietnam to build overseas supply capabilities; established sales and technical service centers under the MCC brand in the United States, Singapore and Germany; three branches in Vietnam, Singapore and Japan were established in 2023	Dual-brand strategy, promoting MCC mainly in Europe and the United States
StarPower	Established research and development centers in Switzerland and Germany to layout European Tier1 manufacturers	Focus on research and development overseas
CCTC	Has manufacturing bases in Thailand, Germany and other places	Export growth is relatively fast
Jianghai Capacitor	Utilizes its subsidiary, Japan AIC Company, as a new export base	Overseas revenue accounted for 25.56% in the first half of 2024
Faratronic	Plans to use its own funds of no more than 100 million yuan to establish a wholly-owned subsidiary in Hungary to accelerate overseas layout	-

Source: Chip Insights

The second category mainly focuses on the layout of diversified channels. Represented by Huawei HiSilicon and 3PEAK, they mainly target the European and American markets as well as countries in East Asia like Japan and South Korea. Through actively carrying out global layout, they mainly concentrate on the construction of overseas sales channels, strive to improve market coverage, respond to the needs of overseas customers more quickly, and provide local support.

Chart 7: Overview of Overseas Channel Layouts of Some Chinese Electronic

Component Manufacturers

Company	Overseas Channel Layout Situation
HiSilicon	Has 12 offices and research and development centers in Singapore, South Korea, Japan, Europe and other places.
GigaDevice	Focuses mainly on the expansion of overseas sales channels.
Will	Actively utilizes the original OmniVision sales channels overseas.
Ingenic	Actively strengthens the ISSI channels acquired through mergers and acquisitions overseas.
3PEAK	Has newly established sales support centers in the United States, Japan, South Korea and Germany.
NOVOSENSE	Has set up branches in the United States, Japan, South Korea and Germany.
ETEK	Has established a wholly-owned subsidiary named KETEK in South Korea, mainly serving the South Korea market and key customer Samsung Electronics.
JJW	Achieves the goal of going global by adding overseas GSM sales organizations and sales personnel.
MACMIC	Mainly cooperates with overseas customers.
FH	Actively explores overseas markets such as Europe, South Korea and India and adds overseas sales outlets.
AISHI	Strengthens the construction of diversified overseas marketing networks.

Source: Chip Insights

The third category mainly relies on Hong Kong to conduct foreign trade and achieve the goal of "going global", and most domestic manufacturers adopt this approach. As an important distribution center for global electronic information products, Hong Kong has obvious advantages in foreign exchange settlement, logistics and other aspects. Maxscend Technology, a wholly-owned subsidiary of Maxscend Microelectronics, the leading domestic RF manufacturer, conducts foreign trade business as an overseas trade entity. Meanwhile, SG Microcorp uses

its wholly-owned subsidiary SG Hong Kong as a major international trade platform.

Chart 8: The Situation of Some Chinese Manufacturers That Rely on Hong Kong for Overseas Layout

Company	Layout Situation
CR Micro	Has 13 overseas affiliated enterprises in Hong Kong and the British Virgin Islands, which serve as trade platforms and investment platforms.
Maxscend	Its wholly-owned subsidiary, Maxscend Technology (Zhuosheng Hong Kong), serves as the main source of overseas income.
SG	Uses its wholly-owned subsidiary SG Hong Kong as the main international trade platform and has established wholly-owned companies in Japan and Germany.
Sino Wealth	The company's overseas sales are mainly conducted through distributors in Hong Kong.
NCE	Has established NCE Power Hong Kong to lay out the overseas market.
JoulWatt	Has set up a trading company in Hong Kong for external sales.
VANCHIP	Has established a branch in Hong Kong as a sales channel.
Chipsea	Uses Chipsea Hong Kong as an overseas operating subsidiary.
Awinic	Its external sales channels mainly go through its wholly-owned subsidiary Awinic Technology Hong Kong, and it has a wholly-owned operating entity in South Korea.
Dioo	Its main sales channel is through Dioo Microelectronics in Hong Kong.
Southchip	The main source of its overseas income comes from trading entities in the Hong Kong region, and it has established sales subsidiaries in Singapore and South Korea.

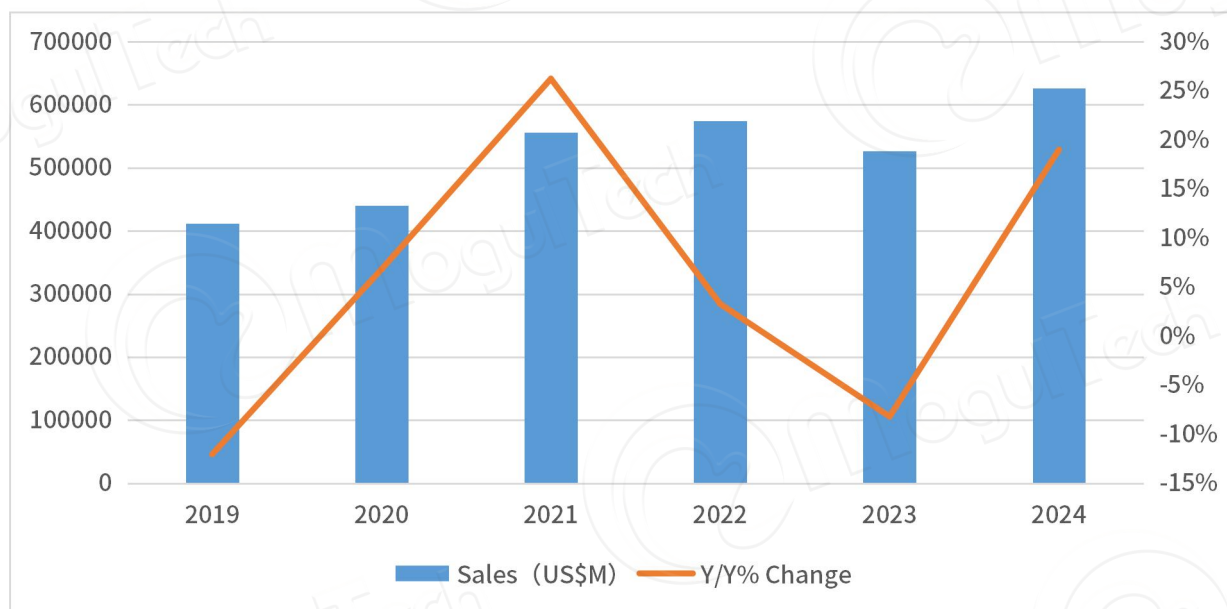
Source: Chip Insights

1.4 Summary of the Electronic Component Supply Chain in 2024

(1) Growth Forecast for Each Link in the Upstream of Electronic Components

According to the data from WSTS (World Semiconductor Trade Statistics), global semiconductor sales in 2024 were approximately \$626.87 billion, with a year-on-year growth of 19%. WSTS stated that the global semiconductor market has officially bid farewell to the downward cycle and entered the track of recovery.

Chart 9: Global Semiconductor Sales from 2019 to 2024



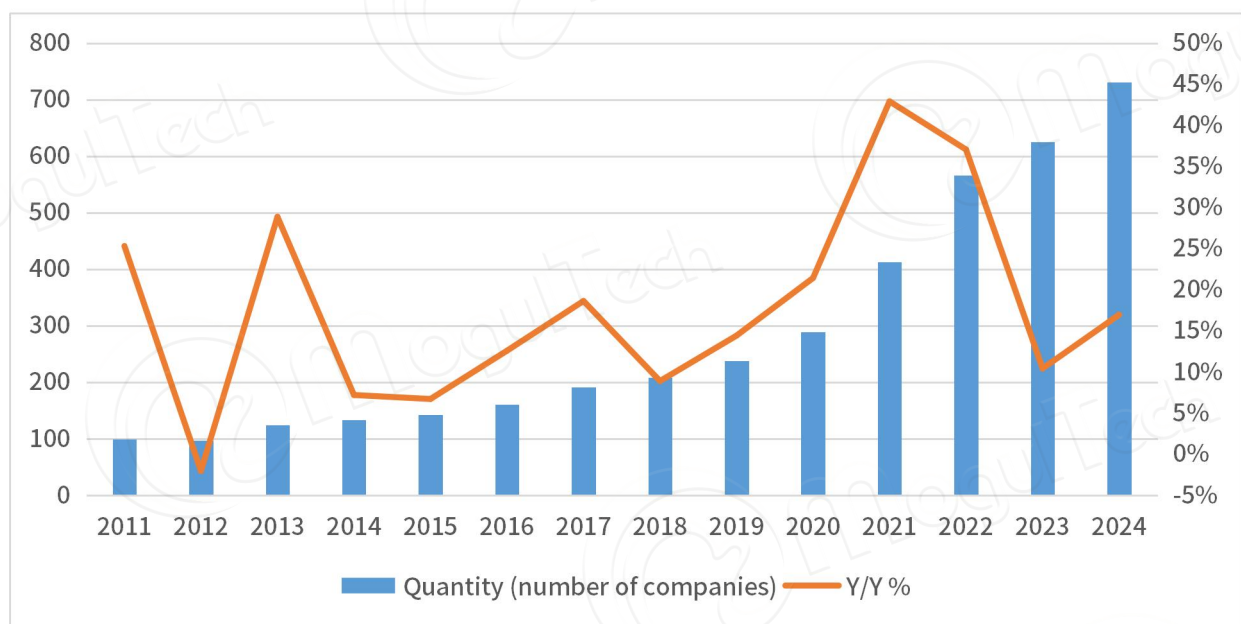
Source: WSTS, Chip Insights

From the perspective of the Chinese market, the SIA predicts that China's semiconductor sales will exceed \$170 billion in 2024. Data from the Integrated Circuit Design Branch of the CSAID shows that China's chip design sales in 2024 were 646.04 billion yuan (approximately \$90.99 billion). The Yangtze River Delta region accounted for more than 50%, and Shanghai ranked first in China with an output value of 179.5 billion yuan. In terms of manufacturers with an output value of over 100 million yuan in sales, there were 731 in 2024, an increase of 106 compared with the previous year, a growth rate of 17%. Looking at specific product

categories, communication chips and consumer electronics chips accounted for 68.48% of the total sales, more than two-thirds. Overall, China's chip growth remains stable, but the situation that its products are at the middle and low end of the market has not changed yet.

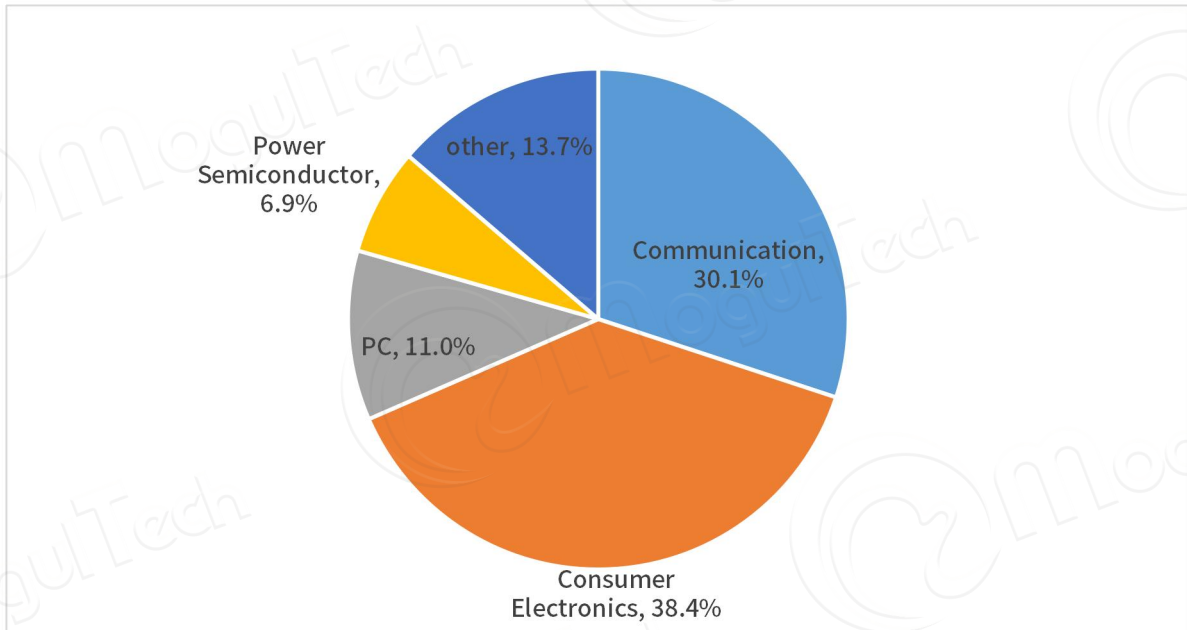
Chart 10: Growth Situation of Chinese Semiconductor Manufacturers with Sales

Exceeding 100 Million Yuan



Source: CSAID, Chip Insights

Chart 11: Proportion of Main Products of Chinese Chip Manufacturers in 2024



Source: CSAID, Chip Insights

(2) The Impact of Inventory Reduction in the Supply Chain

Continues

In 2024, inventory depletion in the global electronic components industry continues, with automotive and industrial sectors falling short of expectations. From the perspective of various links in the supply chain, the demand for upstream core equipment is stable, material orders have improved, and the production capacity of Foundry and packaging and testing links is differentiated. The growth of Fabless/IDM and distribution orders has been weaker than expected, and the overall demand at the end has steadily rebounded.

Chart 12: Review of the Semiconductor Supply Chain in 2024

Segmentation		CU	Orders	Inventory
Support	Equipment	High	Stable	Low

Segmentation		CU	Orders	Inventory
Links	Materials	Average	Decline	Higher
Manufacturing	Foundry	Average	Rise	-
	OSAT	Average	Rise	-
Upstream	Fabless/IDM	Stable	Differentiated	High
Midstream	Distributors	-	Rise	Low
Downstream	Consumer Electronics	High	Rise	Low
	Automotive	Average	Decline	Higher
	Industry	Low	Decline	Higher
	Home Appliances	Average	Stable	Low
	Photovoltaic	Average	Rise	High
	Energy Storage	High	Rise	Higher
	Communication	Average	Decline	Average
	Servers	High	Rise	Low
	Medical Equipment	High	Stable	Low

Source: Chip Insights

Judging from the orders and inventories of enterprises in 2024, chip orders for data centers, consumer electronics, new energy, and Medical Equipment continued to grow, while the orders of automotive and industrial manufacturers were weaker than expected, and there was no significant improvement in communication orders.

Chart 13: Orders and Inventory Situation of Leading Enterprises in 2024

Company	Orders	Inventory	Remarks
Intel	Decline	Average	The loss expanded.

Company	Orders	Inventory	Remarks
AMD	Rise	Low	The growth of AI orders exceeded expectations.
NVIDIA	Rise	None	AI orders were in short supply.
Samsung	Rise	Low	Both the volume and price of storage products increased.
TI	Decline	High	The inventory reached a new high.
ST	Decline	Higher	The share in the Chinese market declined significantly.
ADI	Decline	Higher	The growth in the automotive and industrial sectors was lower than expected.
Qualcomm	Rise	Low	Mobile phone sales grew steadily, and there was strong demand for automobiles.
Broadcom	Stable	Average	Except for orders related to AI, other businesses declined.
NXP	Decline	Higher	The digestion cycle of automotive inventory was longer than the company's expectation.
Infineon	Decline	Higher	The demand for automobiles was sluggish.
Renesas	Decline	Higher	Automotive orders decreased.
onsemi	Decline	Average	Orders in the automotive and industrial sectors declined.
Microchip	Decline	Higher	The market recovery was not as expected.
Micron	Rise	Low	HBM orders grew strongly.
SK Hynix	Rise	Low	HBM orders were in short supply.
Murata	Rise	Low	Expanded the production of MLCCs related to AI and automobiles.

Source: Chip Insights

(3) Both the Volume and Price of AI-Related Chip Categories

Rose

In terms of annual price fluctuations, AI related categories are the focus. In 2024, the delivery time of most categories will return to normal, prices will improve significantly, and structural differentiation will be severe. Among them, AI related GPUs, HBMs and other products are in short supply, with significant price increases; The prices of automotive related MOSFETs, IGBTs, and PMICs have all dropped significantly; The MCU market is experiencing price differentiation, with general MCU prices continuing to remain low.

Chart 14: Overview of Key Categories with Price Reductions and Increases in the
Year

Segmentation	Product	Application	Range	Specific	Company
Price Reduction	PMIC	Consumer Electronics, Automotive, etc.	10% - 35%	Price inversion	TI, ADI, ST, etc.
	General-purpose MCU	Consumer Electronics, Industry, etc.	5% - 15%	Price bottomed out	ST, GD, Holtek, etc.
	IGBT	Automotive, Industry, etc.	5% - 10%	Demand declined	Infineon, ST, onsemi, etc.
	MOSFET	Automotive, New Energy, etc.	5% - 15%	Intense competition	Infineon, ST, NXP, etc.
Price Increase	GPU	Data Centers, etc.	10% - 36%	In short supply	NVIDIA, AMD, Huawei HiSilicon, etc.
	HBM	Data Centers, etc.	12% - 25%	Production capacity sold	SK Hynix, Samsung,

Segmentation	Product	Application	Range	Specific	Company
				out	Micron, etc.
	DRAM	Consumer Electronics, etc.	5% - 20%	Consumer demand rebounded	Samsung, SK Hynix, Kioxia, etc.
	NAND Flash	Consumer Electronics, etc.	5% - 15%		Samsung, SK Hynix, Micron, etc.

Source: Chip Insights

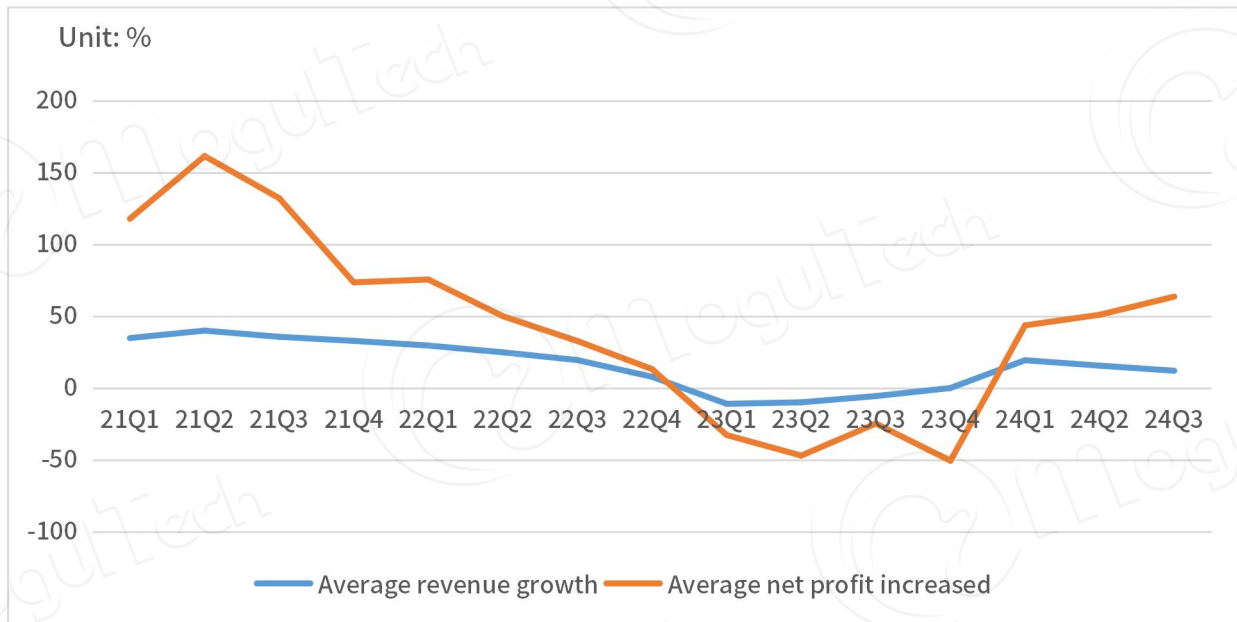
2 Outlook on Opportunities for Electronic Components in 2025

2.1 Growth Forecast for Each Link in the Upstream of Electronic Components

(1) Fabless/IDM: Stable Growth in Orders

Judging from the trends in the growth rates of the average revenue and net profit of Fabless/IDM, their revenues have rebounded significantly since the beginning of 2024, their net profits have been greatly improved, and the growth expectations are optimistic.

Chart 15: Trends in the Average Revenue and Net Profit of Leading Fabless/IDM



Source: Wind, Chip Insights

Based on the expected growth of Fabless/IDM in 2025, overall orders and prices remain stable, with significant inventory fluctuations. Among them, AI related servers and PC orders maintain a high level of momentum, while automotive and industrial order inventory may be reduced or extended until 2025H1.

Chart 16: Forecast of Leading Fabless/IDM Development in 2025

Company	Orders	Inventory	Price	Forecast
Intel	Stable	Low	Stable	AI PCs will grow relatively fast.
AMD	Rise	Low	Stable	AI orders are in short supply.
NVIDIA	Rise	None	Rise	AI orders are strong, but the growth rate is slowing down.
Samsung	Rise	Low	Stable	The demand for AI and traditional servers remains strong.
TI	Stable	High	Stable	The market is expected to rise in 2025.

Company	Orders	Inventory	Price	Forecast
ST	Stable	High	Stable	The sluggish demand in the industrial and automotive sectors will continue until the first half of 2025.
ADI	Stable	Average	Stable	The automotive sector will still face inventory digestion problems in early 2025.
Qualcomm	Rise	Low	Stable	There is strong demand for automotive orders.
Broadcom	Stable	Average	Stable	AI revenue remains strong.
NXP	Stable	High	Stable	The capacity utilization rate will remain at 70% until the first half of 2025.
Infineon	Declining	Higher	Stable	The adjustment of automotive inventories may continue until Q3 2025.
Renesas	Declining	Higher	Stable	The market demand still faces pressure, and the forecast is relatively cautious.
onsemi	Declining	Average	Stable	The growth of automotive SiC in the Chinese market remains strong.
Microchip	Declining	Higher	Stable	Inventory adjustments may continue until Q2 2025.
Micron	Rise	Low	Stable	Investment in HBM will increase in 2025.
SK Hynix	Rise	Low	Stable	Focus on high-profit HBM products.
Murata	Rise	Low	Stable	The demand for MLCCs in AI servers is increasing.

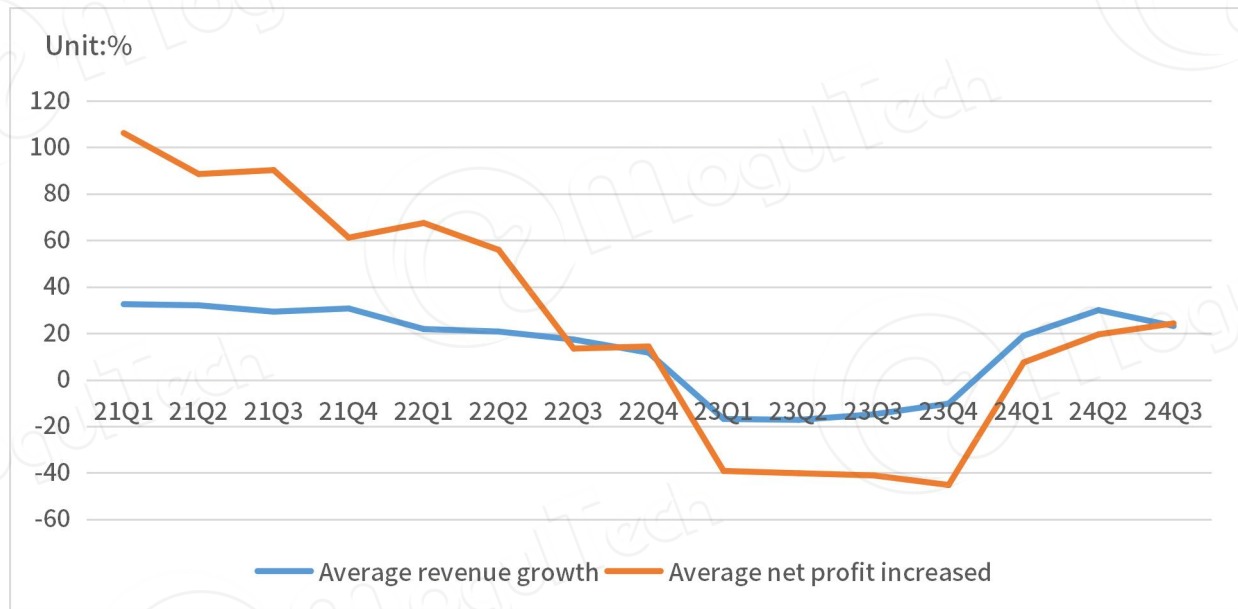
Source: Wind, Chip Insights

(2) Distributors: Optimistic About Recovery

Based on the average revenue and net profit growth trend of top electronic

component distributors, Chip Insights has seen a significant rebound in profits and revenue since the beginning of 2024.

Chart 17: Average Revenue and Net Profit Trends of Leading Distributors



Source: Wind, Chip Insights

Looking at the growth expectations of distributors in 2025, orders related to AI will grow strongly, and there are relatively large uncertain risks in the European and American markets, especially in the automotive and industrial fields.

Chart 18: Development Forecast for Leading Distributors in 2025

Company	Orders	Inventory	Price	Forecast
Arrow	Stable	Average	Stable	Demand is rebounding, but there are uncertainties.
Avnet	Stable	Higher	Stable	Cautiously evaluate the growth in the European and American markets.
WPG	Rise	Low	Stable	Optimistically view the growth in orders for servers and AI PCs.
WT	Rise	Low	Stable	The growth in the data center maintains a high level of prosperity.

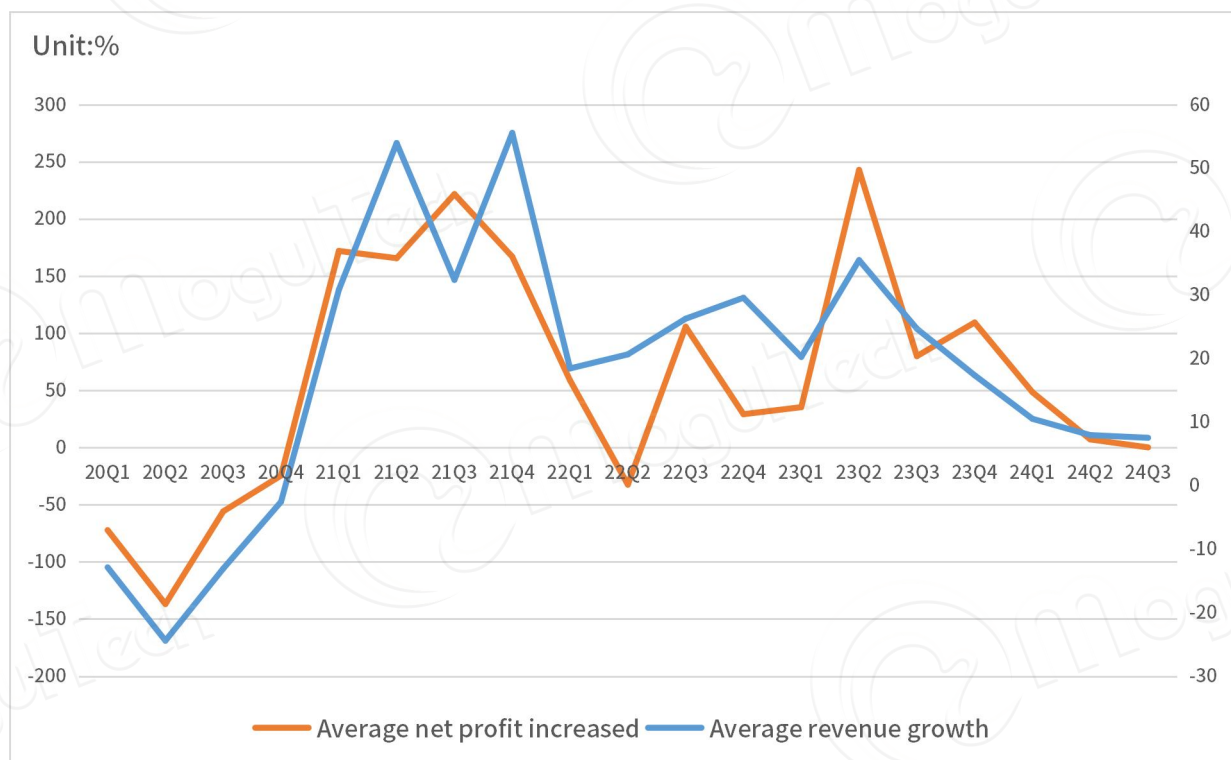
Company	Orders	Inventory	Price	Forecast
CECport	Rise	Low	Stable	There is relatively large growth potential for AI and automotive sectors in the future.
SHENZHEN HUAQIANG	Rise	Low	Stable	The industry prosperity continues to recover, and prices are stabilizing.

Source: Chip Insights

(3) Tier1: Double Decrease in Revenue and Profit

Since the automotive Tier1 industry reached its peak in revenue and profit in the second half of 2021, affected by the destocking of terminal automotive inventories and the sluggish overseas demand, the industry's revenue and profit have been continuously declining until now. It is expected that the growth will remain sluggish until the first half of 2025.

Chart 19: Leading Tier 1 Average Revenue and Net Profit Trends



Source: Wind, Chip Insights

Looking ahead to 2025, the order and revenue expectations of companies such as Bosch, ZF, and Denso are still not optimistic, and the global automotive parts market is facing relatively large challenges and pressures.

Chart 20: Development Forecast for Leading Tier1 in 2025

Company	Orders	Inventory	Price	Forecast
Bosch	Decline	Low	Decline	The order growth is not optimistic, and salary cuts and layoffs may continue.
ZF	Decline	Low	Stable	Still cautious about the industry prospects.
Denso	Decline	Low	Stable	Revenue expectations are being lowered.
Hyundai Mobis	Decline	Low	Stable	Some electrification projects may be postponed.
CATL	Decline	Low	Stable	Competition is intensifying, and the company is still in the expansion stage.
Magna	Decline	Low	Stable	Weak recovery.
Aisin	Decline	Low	Stable	Revenue is Decline.
Valeo	Decline	Low	Stable	Revenue expectations are being lowered.
Intelligent	Rise	Low	Stable	Revenue and order growth are strong.
Joyson	Rise	Low	Stable	Orders for automotive electronics and safety businesses are growing optimistically.
Desay SV	Rise	Low	Stable	Orders for intelligent applications are growing well.

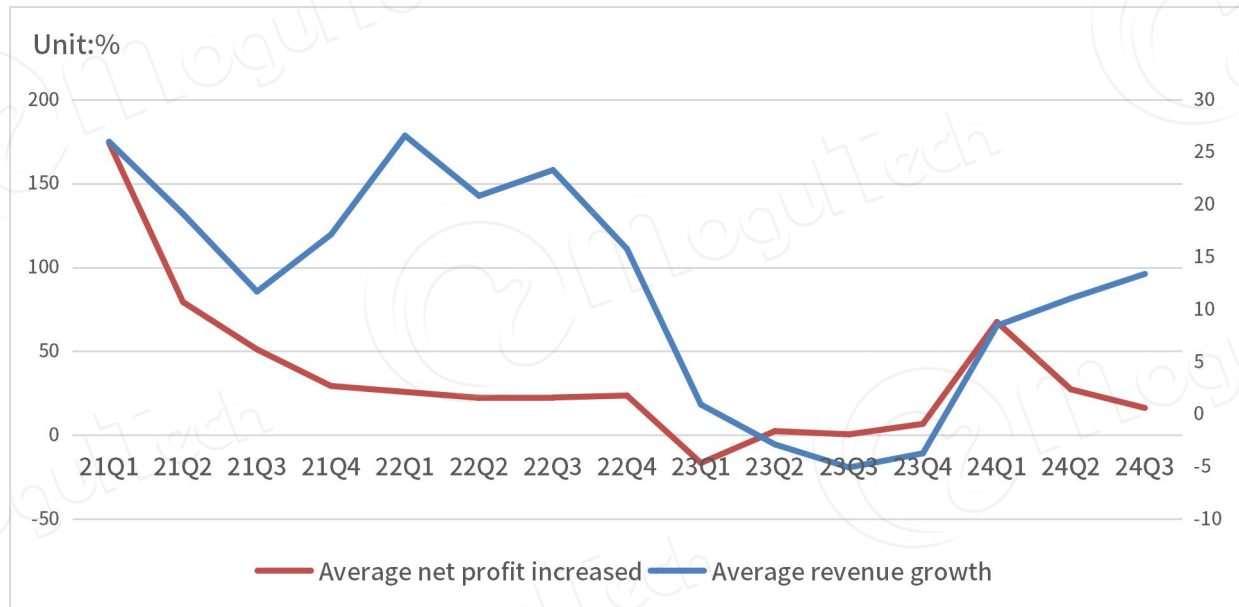
Source: Chip Insights

(4) EMS/ODM/OEM: Optimistic About AI Growth

Starting from Q3 2024, electronic manufacturing service providers

(EMS/ODM/OEM) have continued to benefit from the growth in consumer electronics, AI servers, IoT, and automotive electronics businesses. Orders and revenues have continued to rebound, while profits have maintained weak growth due to industry influences.

Chart 21: Average Revenue and Net Profit Trends of Top Electronic Contract Manufacturers



Source: Chip Insights

From the perspective of the development expectations of specific manufacturers, the demand for consumer electronics will continue to grow at a low rate, while the growth prosperity of AI servers and automobiles is relatively high, with huge development potential.

Chart 22: Development Forecast for EMS/ODM/OEM in 2025

Classification	Company	Orders	Inventory	Capacity/Output	Forecast
Consumer Electronics	Hon Hai	Rise	Low	Stable	Mobile phone orders will grow stably.
	Wingtech	Rise	Low	Stable	Consumer orders such as for mobile phones are expected to continue growing.
	Longcheer	Rise	Low	Stable	AI mobile phones will grow relatively fast.

Classification	Company	Orders	Inventory	Capacity/Output	Forecast
	Quanta	Decline	Low	Stable	AI PCs will have a larger growth.
	Goertek	Rise	Low	Stable	The intelligent hardware business is performing well.
	Luxshare	Rise	Low	Stable	The growth of consumer electronics orders is very significant.
AI Servers	Hon Hai	Rise	Low	High	AI servers will become the most important growth driver.
	Quanta	Rise	Low	High	The shipment volume of AI servers will continue to increase.
	Wistron	Rise	Low	High	The AI and server businesses will double.
	Compal	Rise	Low	High	Orders for AI servers will increase significantly.
Automobiles	Luxshare	Rise	Low	Rise	The growth in the automotive business is better than that in consumer electronics.
	Hon Hai	Rise	Low	Rise	Investment in the automotive business will continue to increase.
	BYD Electronics	Rise	Low	Rise	Automotive electronics are expected to continue the growth momentum.
Communication Equipment	Luxshare	Rise	Low	Stable	The growth rate of the communication business will exceed that of consumer electronics.
	Hon Hai	Rise	Low	Stable	Orders for NVIDIA's switch business will grow relatively fast.

Classification	Company	Orders	Inventory	Capacity/Output	Forecast
	FLINES	Stable	Low	Stable	The ICT industry is highly competitive; expand the data center switch business.
	GONJ	Stable	Low	Stable	The domestic network communication market, including PON, AP, and FTTR, still has continuous growth resilience.
New Energy	Sungrow	Rise	Average	Rise	The growth rate of inverter orders is expected to be in line with the industry.
	Ginlong	Rise	Average	Rise	Inverter orders are growing well.
	APsystems	Rise	Average	Rise	Photovoltaic shipments will increase by more than 20%, and there is uncertainty in energy storage.
	Deye	Rise	Average	Rise	Orders in emerging markets such as Asia, Africa, and Latin America are growing relatively fast.
	DBG	Rise	Average	Rise	Orders for new energy manufacturing are growing well.

Source: Chip Insights

2.2 Outlook for Main Application Market Opportunities

(1) AI and New Energy Are at the Forefront of Growth

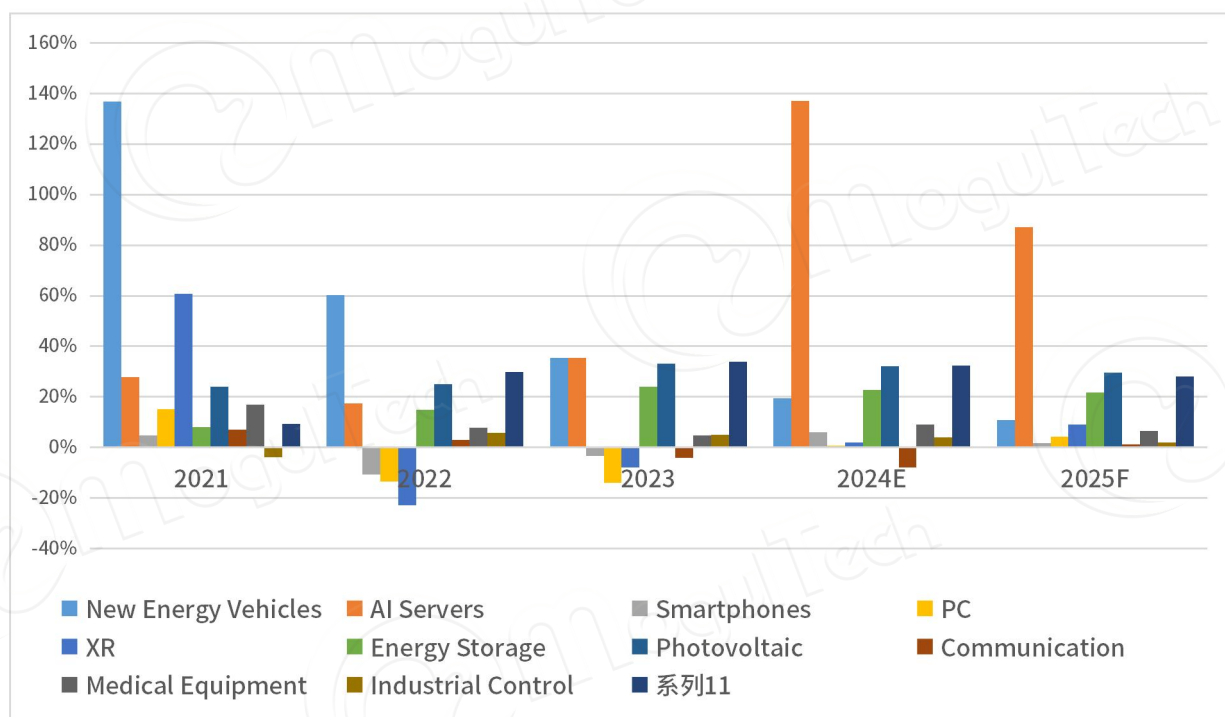
According to incomplete statistics compiled by Chip Insights, judging from the average growth rate trends in the main downstream application markets of electronic components in the past five years, AI servers, new energy vehicles,

photovoltaic, low-altitude economy, and energy storage are among the top.

Looking ahead to 2025, AI servers, energy storage, photovoltaic, low-altitude economy, and new energy vehicles will maintain a medium-to-high growth trend. Among them, AI servers will continue to grow strongly at 87.1%, and energy storage, photovoltaic, and low-altitude economy will all exceed 20%. The growth rate of new energy vehicles is expected to be 10.9% due to the sluggish European and American markets. Smartphones, PCs, and other consumer electronics and the industrial sector, as the main stock markets, will maintain weak growth in 2025.

Chart 23: Growth and Forecast of Main Application Markets of Electronic

Components from 2021 to 2025



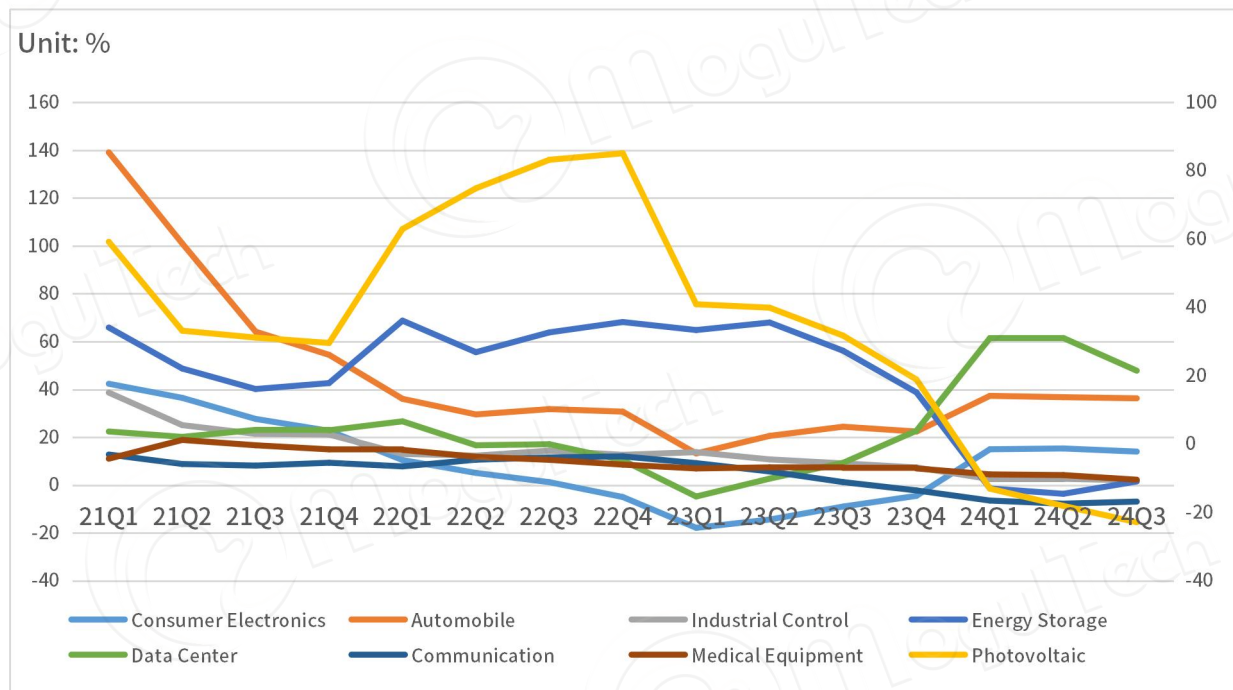
Source: Chip Insights, IDC, EVTank, IEA, CIAPS, CESA

Judging from the average revenue growth of leading manufacturers in popular app markets, AI servers, automobiles and consumer electronics have maintained growth. The declines in photovoltaics and communications are significant.

Industrial control has bottomed out and rebounded. The demand for energy storage and medical devices remains stable.

Chart 24: Trend of the Average Revenue Growth Rate of Various Popular Terminal

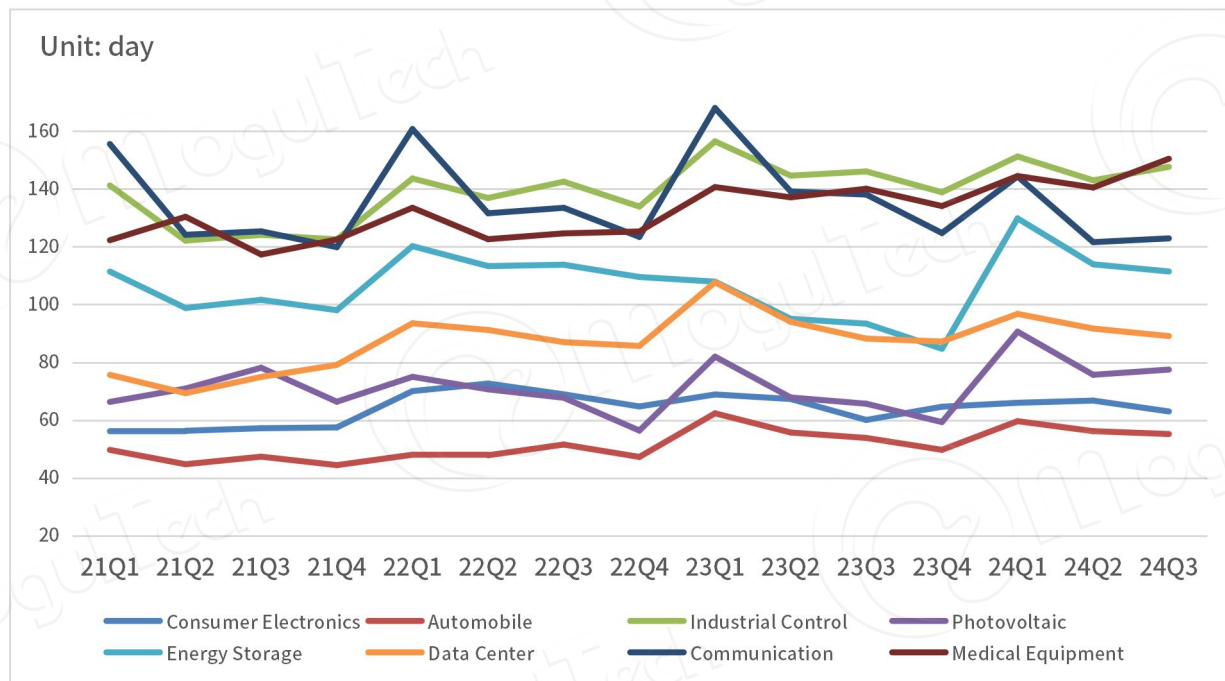
Application Manufacturers



Source: Chip Insights

Considering the inventory trend, since 2024, the inventories in various terminal markets have been continuously optimized. The inventories in the industrial and communications sectors remain relatively high, while significant improvements have been witnessed in markets such as photovoltaics and energy storage.

Chart 25: Average Inventory of Major Application Manufacturers



Source: Chip Insights

(2) Growth Forecast of Electronic Components in Key

Markets

Based on the orders and inventory of upstream manufacturers, combined with the growth trend of the main incremental markets at the terminal, and referring to the influence of relevant policy factors, looking forward to 2025, Chip Insights predicts that AI-related core chips and supporting products will still continue the trend of both volume and price rising. The demand for automobiles is expected to stabilize and recover. New energy orders are relatively stable. The growth of related categories represented by the low-altitude economy is promising.

Chart 26: Forecast of the Development of Electronic Components in Key Incremental Markets in 2025

Category	Product	Order	Inventory	Price	Benchmark Manufacturer	Domestic Manufacturer
AI	GPU	Rise	None	Rise	NVIDIA	HiSilicon
	CPU	Rise	Low	Stable	Intel, AMD	HiSilicon, Hygon
	HBM	Rise	None	Rise	SK Hynix	CXMT
	SSD	Rise	Low	Stable	Samsung	YMTC
	HDD	Rise	Low	Stable	WD	None
	Ethernet Chip	Rise	Low	Stable	Broadcom	Centec
	Optical Chip	Rise	Low	Stable	Oclaro	Accelink
	Power Device	Rise	General	Stable	Infineon	Silan
	PMIC	Rise	General	Stable	TI, MPS	JoulWatt, Montage
	BMC	Rise	General	Stable	Aspeed	Eazytec
	Passive Component	Rise	Low	Stable	Murata, Vishay	CCTC
Automotive	Autonomous Driving Chip	Rise	Low	Stable	Tesla, NVIDIA	HiSilicon
	Smart Cockpit Chip	Rise	Low	Stable	Qualcomm	HiSilicon
	MCU	Stable	General	Stable	Infineon	C*Core

Category	Product	Order	Inventory	Price	Benchmark Manufacturer	Domestic Manufacturer
	Analog	Stable	Relatively High	Stable	TI, ADI	NOVOSENSE
	Power Device	Stable	General	Stable	Infineon, onsemi	StarPower, Silan
	Sensor	Stable	General	Stable	Bosch, ST	CR Micro
	CIS	Rise	Low	Stable	Onsemi, Will	Will
New Energy	IGBT	Stable	General	Stable	Infineon	Silan, NCE
	MOSFET	Stable	General	Stable	Infineon	CR Micro, Silan
	MCU	Stable	General	Stable	Infineon, ST	GD
	PMIC	Stable	General	Stable	TI	Silergy, SGMICRO
LAE	Main Control Chip	Rise	Low	Stable	Qualcomm	HiSilicon
	MCU	Stable	Higher	Stable	ST, NXP	GD
	RF Chip	Stable	General	Stable	Qualcomm	HiSilicon Maxscend
	Storage	Stable	General	Stable	Samsung	CXMT, YMTC
	CIS	Rise	Low	Stable	Sony	Will, GalaxyCore
	ISP	Rise	Low	Stable	Ambarella	HiSilicon

Source: Wind, IDC, CICC, TechInsight, Chip Insights

2.3 AI Analysis of Supply Chain Opportunities

Looking ahead to 2025, as generative AI is gradually implemented on the edge side, the data center infrastructure such as AI servers, switches and optical modules will witness robust growth. AI applications in mobile phones, PCs, automobiles and smart wearables will become one of the focuses of innovation,

which will significantly increase the demand for and value of upstream electronic components.

(1) AI Drives Both the Volume and Price of Data Center Infrastructure to Rise

Judging from the latest financial reports and forecasts of cloud computing companies like Microsoft, Google, Amazon and Meta, capital expenditures in 2025 will exceed those in 2024 and maintain a growth trend, which is obviously beneficial to the growth of data center infrastructure such as AI servers, switches and optical modules.

The order volume and price of AI servers continue to rise simultaneously. Judging from the disassembly and analysis of the NVIDIA DGX A/H100 series servers, which currently have the largest inventory, their core components, ranked in descending order of value, are GPU, DRAM, SSD/HDD, CPU, network card, PCB, on-board interconnection/interface chips and heat dissipation modules, etc. Compared with traditional general-purpose servers, the value has increased by more than 500%. The price of the latest H200 series server system has increased by more than 45% compared with the H100 series.

Chart 27: NVIDIA AI Servers Show a Relatively Large Increase in Value Compared with General-purpose Servers

Function	Type	General Server	AI Server	Increment of Unit ASP
		BOM		

Function	Type	General Server	AI Server	Increment of Unit ASP
		BOM		
Computation	GPU	10%	48%	2400%
	CPU	36%	7%	96%
Memory	HBM	-	9%	-
	DRAM	17%	9%	258%
	HDD/SSD+RAID	31%	10%	153%
Communication	Network Card and Ethernet Chip	2%	1%	217%
Other Chips	PMIC	0.20%	0.09%	300%
	BMC	0.10%	0.02%	118%
	PCI/PCIE	0.75%	1%	467%
Supporting Modules	Power Module	1.00%	0.30%	150%
	Heat Dissipation	0.50%	0.30%	300%
	PCB	1.30%	0.60%	240%
	Passive Components/Cables	0.40%	0.10%	107%
Total	-	-	-	500%
ODM/OEM	-	10%	15%	750%

Source: IDC, CICC, Chip Insights

Based on incomplete data collation, it is estimated that the shipment volume of NVIDIA's AI chips such as H100/A100, H200 and GB200 will reach 6.5 to 7 million pieces in 2025. The scale of the supply chain for its related core AI servers will exceed 180 billion US dollars, and the market will continue to enjoy high prosperity in the coming year.

As one of the core communication network devices, the proportion of Ethernet

in the AIDC (Artificial Intelligence Data Center) is expected to increase. Looking ahead to 2025, core chips (such as Ethernet chips) and hardware suppliers in the ecological chain are expected to accelerate their benefits from the changes in AI demands. The global market scale of Ethernet switches will exceed 50 billion US dollars, and the growth rate of data center-related applications will exceed 40%.

Optical modules are also one of the communication network devices, and the demand for high-speed data communication optical modules continues to grow at a high speed. Looking ahead to 2025, the global demand for 800G data communication optical modules may reach more than 17 million pieces, and the demand for 1.6T ones may reach more than 4 million pieces. Regionally, the demand for optical modules above 800G is still mainly concentrated among North American cloud service providers (CSPs). Meanwhile, the iteration of new optical module technologies such as silicon photonics and LPO/CPO is accelerating.

Chart 28: Growth Forecast for the Supply Chains of AI-related Switches and Optical

Modules

Product	Segmentation		Forecast	Manufacturers
Switch	Chips	Ethernet Switching Chips	37%	Broadcom, Marvell, etc.
		CPU	11%	Intel, etc.
		PHY	22%	Broadcom, Marvell, etc.
	Others	PMIC	12%	TI, ADI, etc.
		Power Devices	8%	Infineon, ST, etc.
		Memory	7%	Samsung, SK Hynix, etc.
	Equipment	High-speed Switches	52.50%	Cisco, Arista, Foxconn, etc.
Optical Module	Chips	Optoelectronic Chips	22.7%	Coherent, etc.
	Equipment	Data Center Optical Modules	30%+	Cisco, Innolight, HiSilicon, etc.

Source: LightCounting, CICC, Chip Insights

(2) AI Accelerates Consumer Electronics to Enter a Replacement Cycle

The implementation of edge-side AI technology across multiple terminals will become an important driving force for the development of the consumer electronics industry. Looking ahead to 2025, the fields of AI mobile phones and AI PCs will embrace new replacement cycles and opportunities brought by related hardware upgrades. Among them, IDC predicts that the global shipment volume of AI mobile phones will increase by 73.1% year-on-year to 405 million units in 2025,

and the shipment volume of AI wearable devices such as smart watches, TWS earphones and smart glasses will approach 800 million units. Gartner forecasts that the global shipment volume of AIPC is expected to exceed 100 million units in 2025, with a high year-on-year growth rate of 165.5% compared to 2024.

The core hardware upgrades of AI mobile phones, AI PCs and AI wearable products mainly focus on processors/SoCs and storage. In terms of other supporting aspects of mobile phones and PCs, upgrades mainly occur in components such as inductors, batteries, acoustics, optics (camera sensors), communication transmission and heat dissipation parts.

Chart 29: Increment Situation of Consumer Electronic Products under AI Upgrades

Category	Product	Increment of Unit ASP	Representative Manufacturers
AI Mobile Phones	SoC	15% - 20%	Qualcomm, Apple, HiSilicon, etc.
	Memory	30% - 50%	Samsung, SK Hynix, etc.
	Inductor	30% - 60%	Murata, Yageo, etc.
	Acoustic Components	8% - 20%	AAC, Goertek, etc.
	CIS	20% - 50%	Sony, Samsung, Will, etc.
	RF IC	15% - 40%	Broadcom, Skyworks, Qorvo, etc.
AI PC	CPU/SoC	10% - 30%	Intel, AMD, Qualcomm, etc.
	Memory	30% - 70%	Samsung, SK Hynix, etc.
	Heat Dissipation Module	50% - 150%	AAC, JONES, etc.
	Power Devices	8% - 25%	Infineon, ST, onsemi, etc.
	Communication Module	10% - 25%	Realtek, Intel, Qualcomm, etc.
AI	SoC	10% - 30%	Qualcomm, HiSilicon, Apple, etc.

Category	Product	Increment of Unit ASP	Representative Manufacturers
Wearable Products	Memory	20% - 40%	Samsung, SK Hynix, etc.
	Sensor	10% - 40%	Bosch, ST, Qualcomm, etc.
	CIS	20% - 70%	Samsung, Will, GalaxyCore, etc.
	Acoustic Components	8% - 40%	AAC, Goertek, etc.
	Communication Module	10% - 40%	Qualcomm, HiSilicon, NXP, etc.

Source: IDC, Gartner, Wind, Chip Insights

(3) AI Drives the Automotive Industry to Evolve towards Intelligence

In 2024, the global application of AI in fields such as autonomous driving, intelligent cockpits, and the Internet of Vehicles further accelerated, and the penetration rate of L2+ autonomous driving increased significantly. Looking ahead to 2025, driven by AI, the global automotive industry will evolve towards high-level intelligent driving, which may further increase the usage of chips per vehicle. There will be significant growth in automotive sensors such as cockpit SoCs, autonomous driving chips, lidars and cameras, large-capacity memory chips, core MCUs for domain controllers, radio frequency ICs related to in-vehicle communications, and PMICs for battery management, etc.

Chart 30: Increment Situation of Automotive Chips Driven by AI

Product	Ordinary Vehicles	Intelligent Vehicles	Increment	Growth Rate Forecast
SoC	Few	Standard Configuration	-	9%
Autonomous	None	1 - 2 chips per vehicle	-	30%

Product	Ordinary Vehicles	Intelligent Vehicles	Increment	Growth Rate Forecast
Driving Chips				
Memory	\$30.2 per vehicle	Over \$80 per vehicle	Over 265%	18%
MCU	Over 70 chips per vehicle	Over 300 chips per vehicle	Over 430%	8%
Lidar	None	1 - 3 units per vehicle	Over 100%	31%
CIS	1 - 5 units per vehicle	8 - 20 units per vehicle	Over 400%	14%
RF IC	\$15 - \$30 per vehicle	Over \$50 per vehicle	Over 160%	18%
PMIC	Over 10 chips per vehicle	Over 30 chips per vehicle	Over 300%	10%

Source: IDC, Yole, Wind, Chip Insights

2.4 Analysis on the Import and Export Markets and Trends of

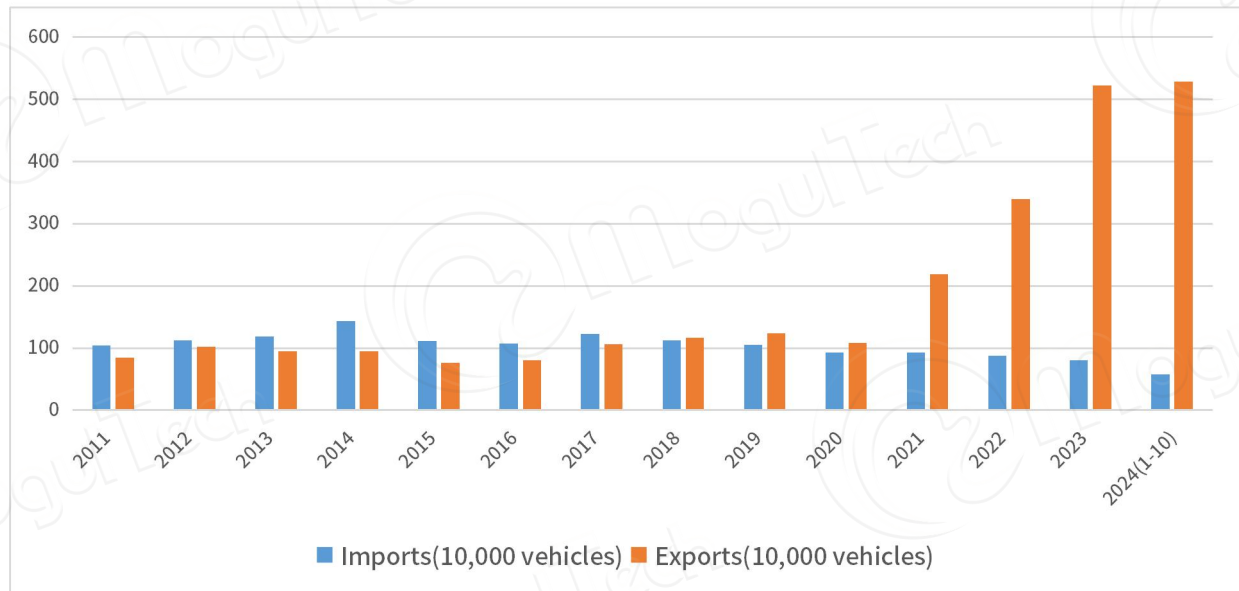
Key Applications

Looking ahead to 2025, China's exports of new energy vehicles will continue to witness high growth, with relatively rapid growth in markets such as Latin America, Southeast Asia, and the Middle East. The exports of new energy products like photovoltaic and energy storage will still focus on the European and American markets, and the overseas production layout will accelerate. Exports of major consumer electronics categories such as PCs and mobile phones will continue to decline due to sluggish demand, and attention should be paid to the impact of policies on the relocation of supply chains.

(1) Automobiles: Exports of new energy vehicles maintain high growth

Automobile imports have dropped significantly, while exports represented by new energy vehicles maintain high-speed growth. With the rise of domestic automobiles and the acceleration of the localization of international brands, automobile imports have remained sluggish in recent years. China's automobile import volume has continuously declined at an average annual rate of around 8% from 1.24 million units in 2017 to only 0.8 million units in 2023. From January to October 2024, 0.58 million automobiles were imported, a year-on-year decrease of 9%. It is expected that China's automobile import volume will continue to decline in 2025. In terms of the export market, due to the impact of the global pandemic, the rise of domestic new energy vehicles and the localization of Tesla in China, China's automobile exports achieved significant breakthroughs in both sales volume and unit price from 2021 to 2023. In 2023, China exported 5.22 million automobiles, with a continuous strong growth in the export growth rate of 57%. From January to October 2024, China exported 5.28 million automobiles, a year-on-year increase of 25%. It is expected that automobile exports will continue the strong growth momentum of last year in 2025, and the export volume is expected to rise further.

Chart 31: Situation of China's Automobile Import and Export Volumes from January to October 2011 - 2024

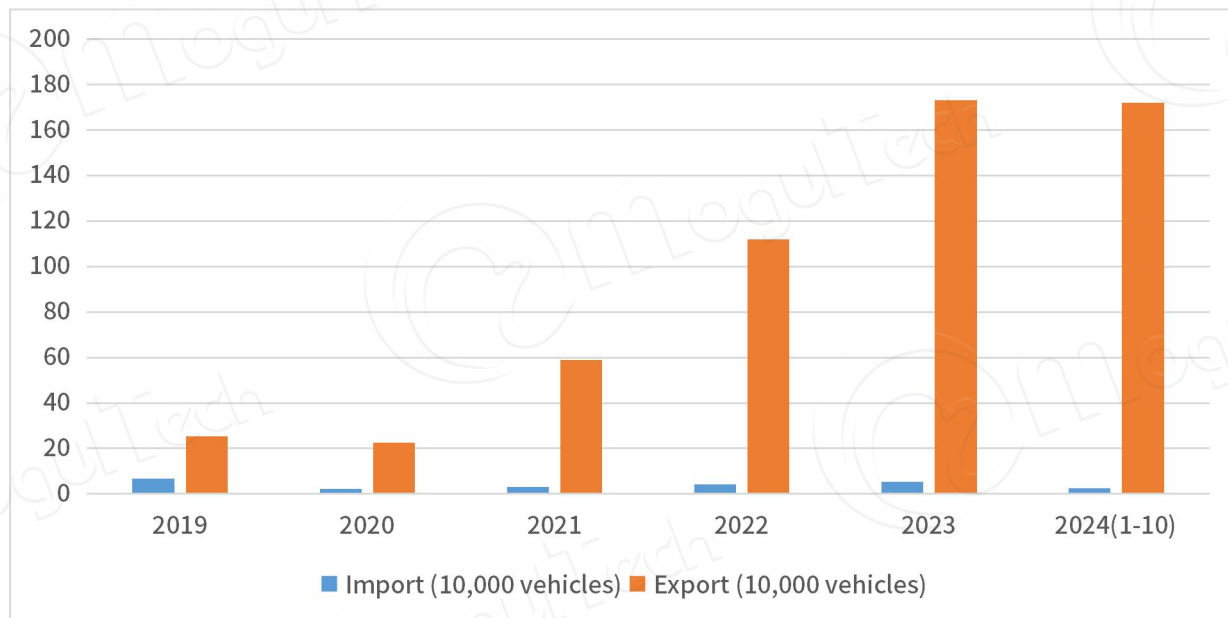


Source: CPCA, Chip Insights

In terms of the import and export situation of new energy vehicles, as of October 2024, the cumulative export volume of China's new energy vehicles had reached 1.72 million units, with a year-on-year growth rate of 15%, basically reaching the level of the whole of last year. There has been a sharp decline in imports, and new energy passenger vehicles have shown relatively weak performance. Looking ahead to 2025, the fluctuations in China's new energy vehicle imports will continue, while the export outlook remains optimistic.

Chart 32: Situation of China's New Energy Vehicle Import and Export Volumes from

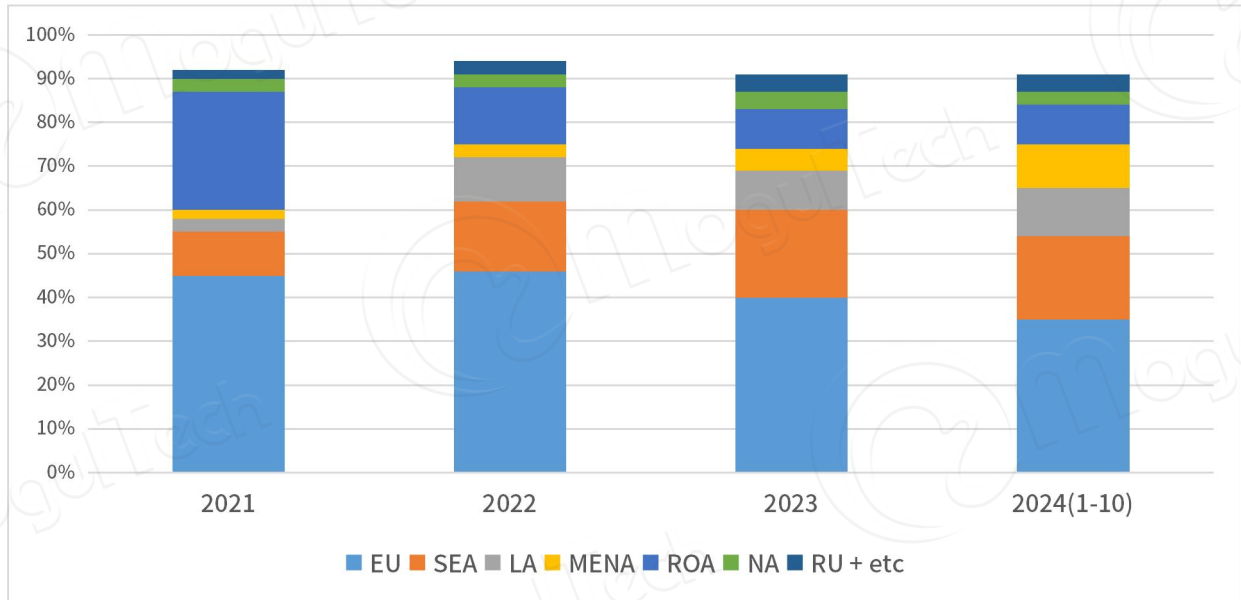
January to October 2020 - 2024



Source: CPCA, Chip Insights

In terms of the distribution of the import and export markets, developing countries are the main export growth markets for China. Domestic automobile exports are mainly composed of pure electric vehicles, and the markets are mainly concentrated in the European Union, Southeast Asia, Latin America, the Middle East and so on. By October 2024, the export share reached 75%. Among them, the share of exports to the European Union reached a peak of 46% in 2022, but dropped to 35% from January to October 2024. Latin America, Southeast Asia and the Middle East are regional markets that have shown relatively good performance in China's automobile export growth in recent years. Looking ahead to 2025, with the changes in regional trade and tariff policies in Europe and the United States, Latin America, Southeast Asia and the Middle East will be the main regional markets for the growth of domestic electric vehicle exports.

Chart 33: Proportion of China's Pure Electric Vehicle Export Markets from 2021 to January - October 2024

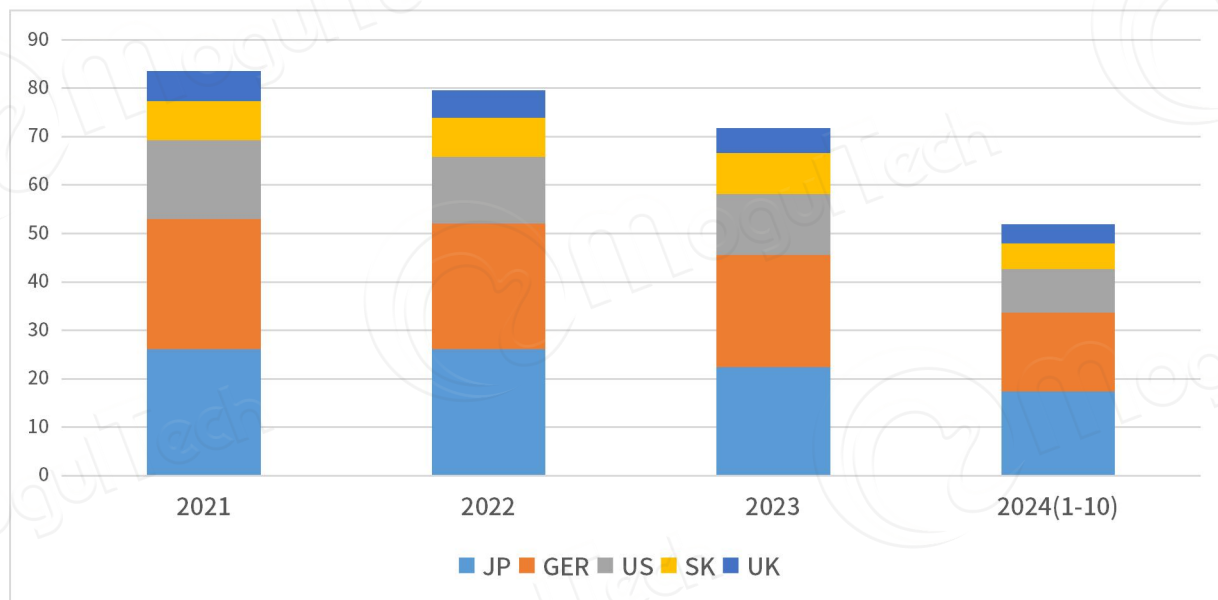


Source: CPCA, Chip Insights

In terms of the import market, it is mainly dominated by fuel vehicles, and the import volume of new energy vehicles accounts for a relatively small proportion, with Japan, Germany and the United States as the core. Looking ahead to 2025, with the rapid rise of domestic new energy vehicles represented by BYD, China's automobile imports will continue to decline.

Chart 34: Proportion of China's Automobile Import Market from 2021 to January -

October 2024



Source: CPCA, Chip Insights

Overall, in 2025, China's exports represented by new energy vehicles will continue to grow. Developing countries such as those in Southeast Asia, the Middle East and Latin America will be the main growth markets, while imports will remain weak.

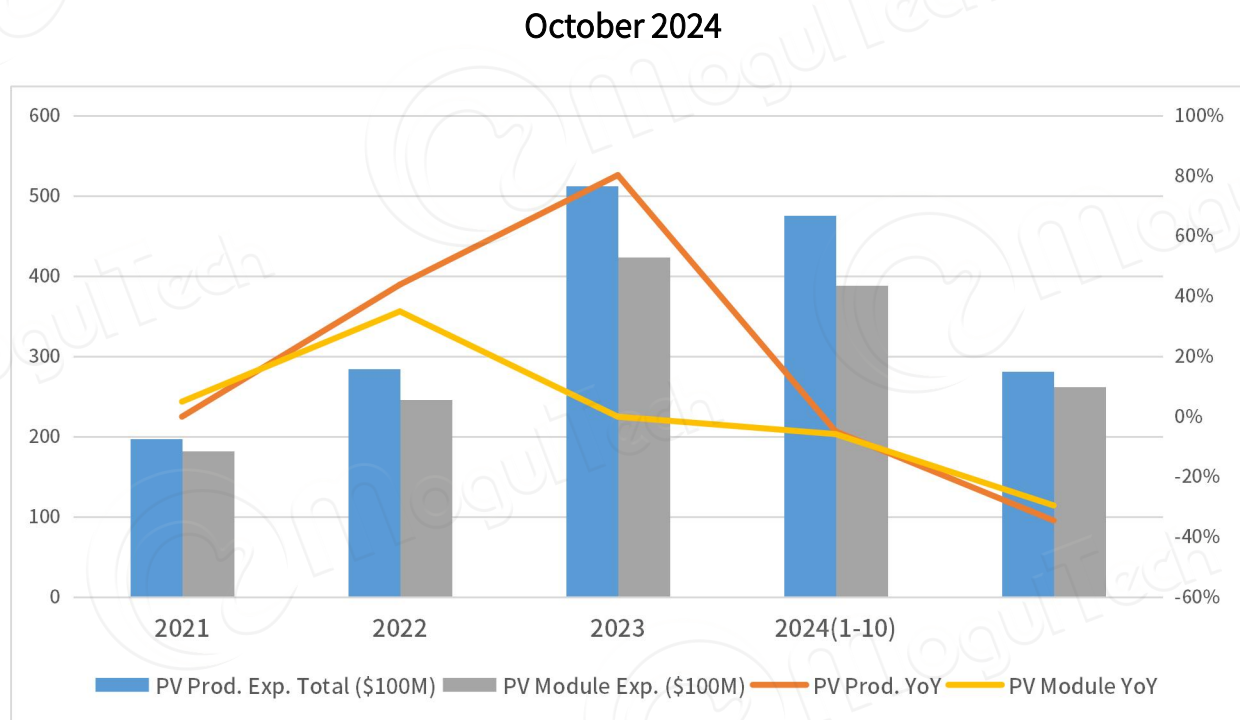
(2) Photovoltaic: Europe is the Core Export Market

China has formed the world's largest and most competitive photovoltaic industry, with each link in the overall industrial chain accounting for more than 80% of the global market share.

China's exports of photovoltaic products have been growing continuously. Against the backdrop of the global energy transition, the green and low-carbon transition is an irresistible trend, and the demand for overseas photovoltaic application markets is constantly increasing. As of October 2024, the total export

value of China's photovoltaic products (wafers, cells, modules) reached \$28.14 billion, and the export value of modules was approximately \$26.20 billion, accounting for 93% of the total export value of photovoltaic products.

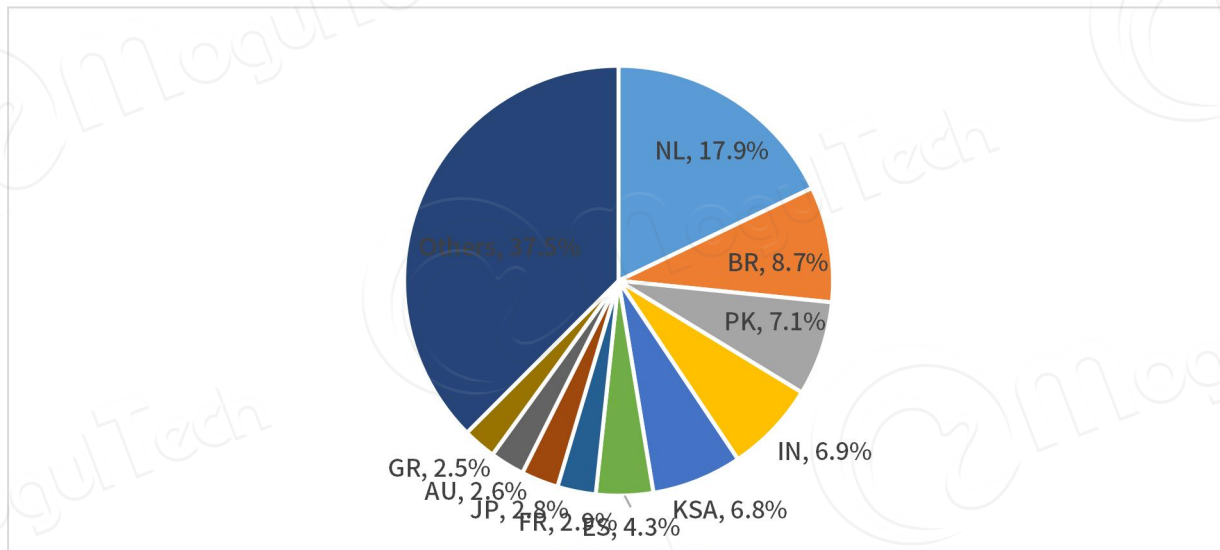
Chart 35: Export Value of China's Photovoltaic Products from 2020 to January -



Source: CPCA, Chip Insights

Europe is the most important export market for China, but its share has declined. In terms of the distribution of export markets, Europe has been the most important export market for China's photovoltaic products since 2021. During the peak period, it accounted for nearly half of the total export volume. As of October 2024, Europe remains the largest export market for China's photovoltaic products and components, but its share has declined significantly, while the market shares of South Asia, Latin America, and the Middle East have increased relatively fast. Looking ahead to 2025, the trend of diversification in China's photovoltaic product export markets will be more obvious.

Chart 36: Market share of China's photovoltaic module exports from January to October 2024



Source: CPCA, Chip Insights

From the trend of top manufacturers' overseas layout, the United States has become the main market for overseas layout, while the European market is relatively stable. Considering the factors of tariff and trade policy changes, the production capacity layout in the Middle East and Southeast Asia (mainly Laos and Indonesia) is accelerating.

Chart 37: Key overseas production capacity layout of China's photovoltaic industry since 2024

Region/Country	Manufacturer	Capacity Layout
US	LONGi	5GW component integrated production line
	JinkoSolar	2GW component production equipment
	Trina Solar	5GW component production line
	JA Solar	2GW component production setup
	CSIQ	5GW battery and component production facilities

Region/Country	Manufacturer	Capacity Layout
	BOWAY	2GW battery and component production equipment
	RUNERGY	2GW cell production line
ME	TZE	20GW silicon wafer integrated production line in Saudi Arabia
	HJNE	10GW battery integrated production line in Oman
	Trina Solar	50,000 tons of silicon feedstock production, 30GW silicon wafer, 5GW cell and component production facilities in the United Arab Emirates
	JinkoSolar	10GW battery and component integrated production capacity in Saudi Arabia
	JA Solar	2GW battery and 2GW component production capacities in Egypt
SEA	Trina Solar	1GW battery and module production capacity in Indonesia.
	DMEGC	3GW battery production capacity in Indonesia.
	SolarSpace	9GW battery and 3GW module production capacities in Laos.

Source: CPCA, Chip Insights

Overall, the European market is the most important export market for domestic photovoltaics. With the continuous changes in trade policies, China's photovoltaic supply chain has been impacted to some extent. The production capacity layout in the Middle East and the United States has accelerated, and global photovoltaic manufacturing capacity is developing towards decentralization and globalization.

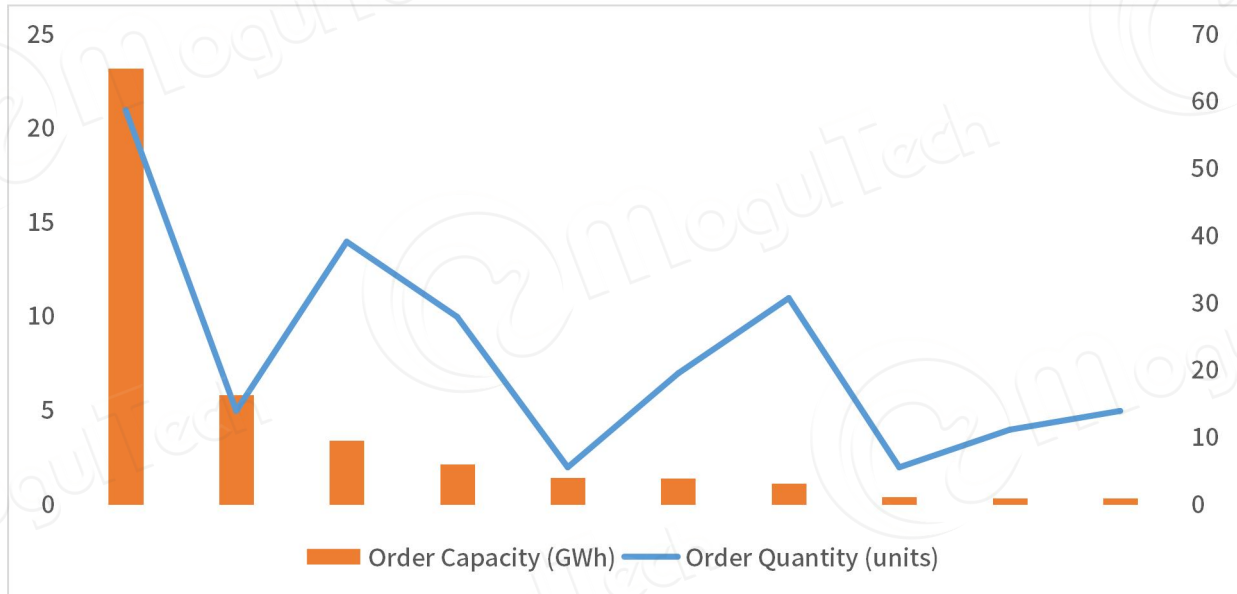
(3) Energy Storage: The United States Has Become the Core Market for New Orders

In 2024, against the backdrop of continuous decline in energy storage cell prices and intensified domestic competition, higher profit overseas markets have become the breakthrough strategy for Chinese energy storage companies. Looking ahead to 2025, overseas markets represented by the United States and Europe will maintain a high level of demand, and we continue to be optimistic about the opportunities for Chinese companies to go global.

The United States is a major growth market for China's energy storage orders. As of October 2024, Chinese companies have won the most energy storage orders from the United States, with the largest scale reaching 21 and a total scale of over 65GWh, accounting for 56.5%. Saudi Arabia has 5 orders, totaling 16.36GWh, accounting for 14.15%. 14 orders from Australia, totaling 9.573 GWh, accounting for 8.28%. In other markets, Japan, Spain, Chile, and the United Kingdom respectively obtained 6.1 GWh, 4.1 GWh, 3.976 GWh, and 3.226 GWh.

Chart 38: Orders from Major Overseas Markets of Chinese Energy Storage

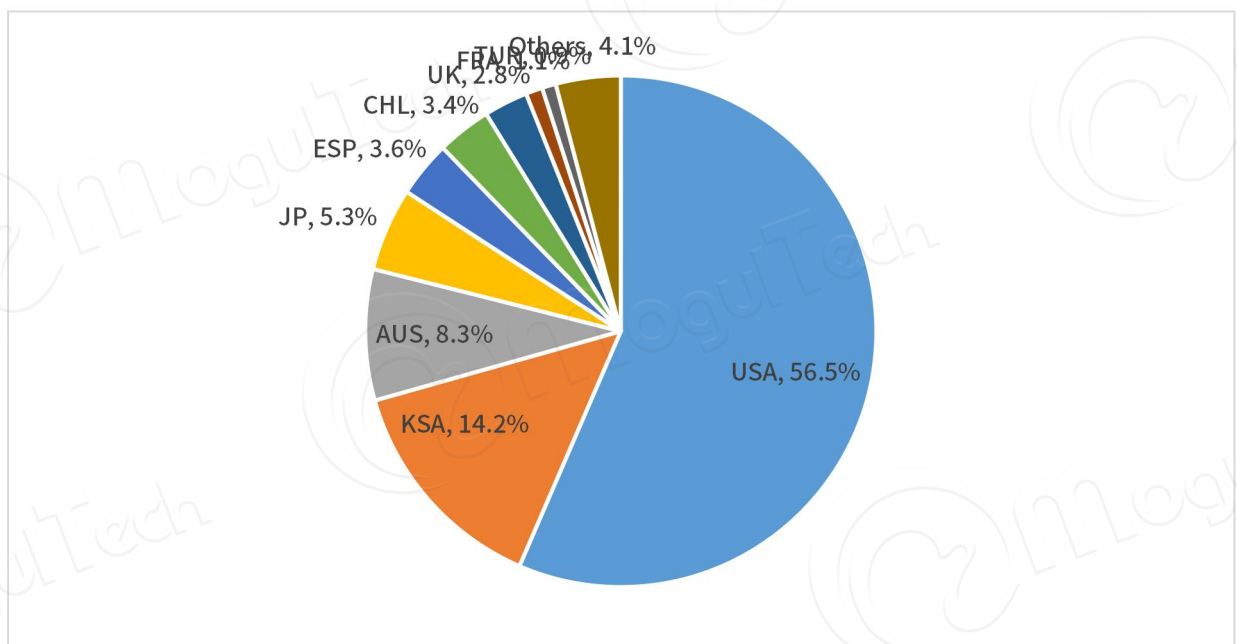
Manufacturers from January to October 2024



Source: CESA, Chip Insights

Chart 39: Proportion of Major Overseas Market Orders of Chinese Energy Storage

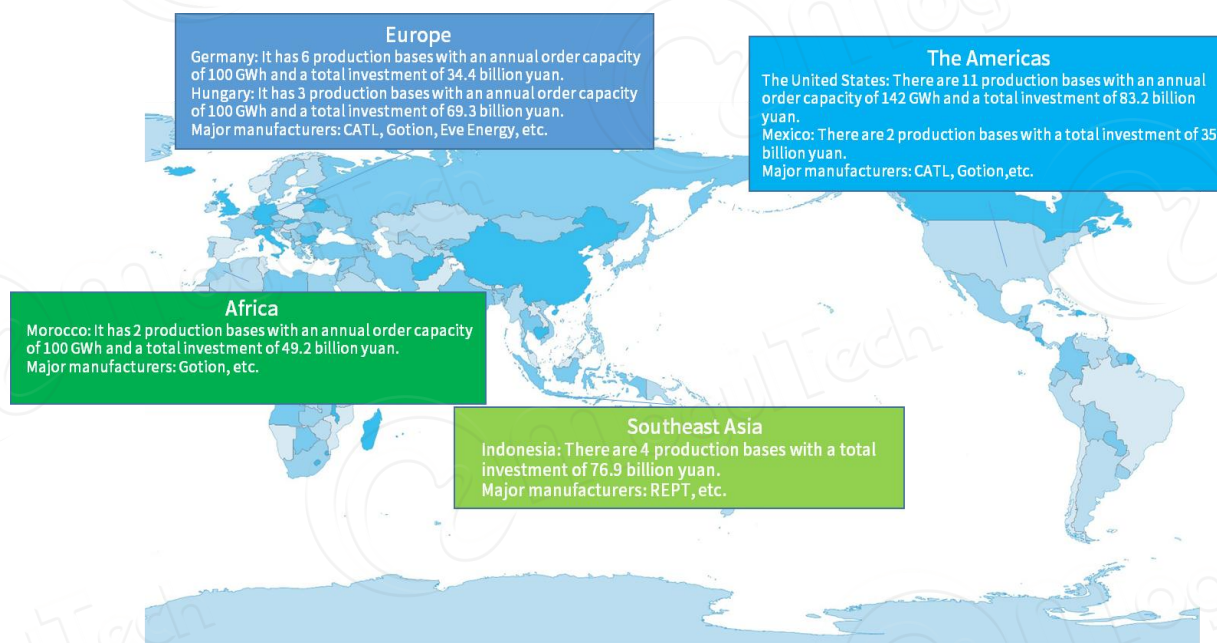
Manufacturers from January to October 2024



Source: CESA, Chip Insights

Chinese energy storage manufacturers invest the most in their production bases in Europe and America. From the perspective of overseas production layout, according to incomplete statistics from CESA, as of now, 22 Chinese companies including CATL, EVE Energy, REPT, Hithium, CALB, Gotion, SUNWODA, etc. have invested in and built a total of 61 integrated production and manufacturing projects for lithium batteries and energy storage systems overseas, with a production capacity of 726GWh in operation/under construction/planned, and a total planned investment of over 400 billion yuan, mainly concentrated in countries such as the United States, Germany, Morocco, Mexico, Hungary, Indonesia, Vietnam, and Malaysia.

Chart 40: Some overseas production bases of Chinese energy storage manufacturers



Source: CESA, Chip Insights

In 2025, with the growth of market demand, the advantages of energy storage

batteries in terms of cost and performance make them the main force in overseas orders. Europe and North America are key markets for Chinese manufacturers in terms of export and production layout. Leading manufacturers such as CATL, Guoxuan High-Tech, Envision Energy, EVE Energy, and Farasis Energy have accelerated their pace of global layout.

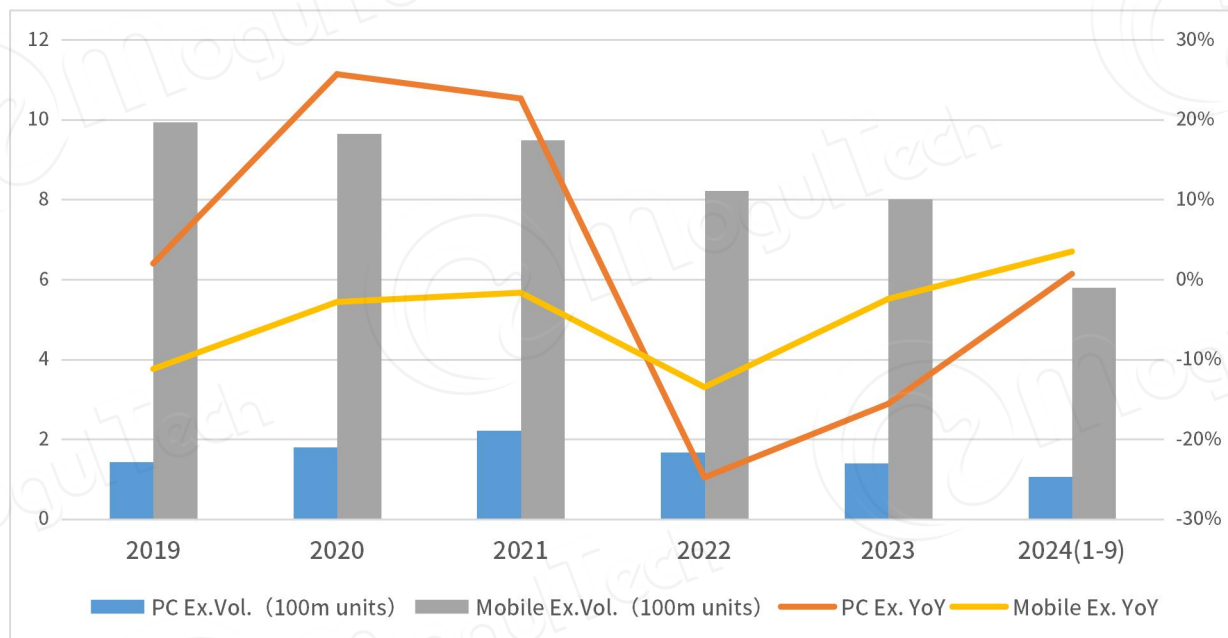
(4) Consumer Electronics: Supply Chain Migration Impact to be Monitored

In 2024, China remains the world's largest producer and exporter of consumer electronics such as smartphones and PCs, with production capacity exceeding 85% of the global total.

Affected by the sluggish global demand for consumer electronics, China's exports of PCs and mobile phones continue to decline. 2015 was the peak year for China's mobile phone exports, with a volume of 1.343 billion units, followed by a year-on-year decline, dropping to 580 million units in the first three quarters of 2024. The same applies to PCs, with exports dropping to 107 million units in the first three quarters of 2024.

Chart 41: Export situation of China's PCs and mobile phones from January to

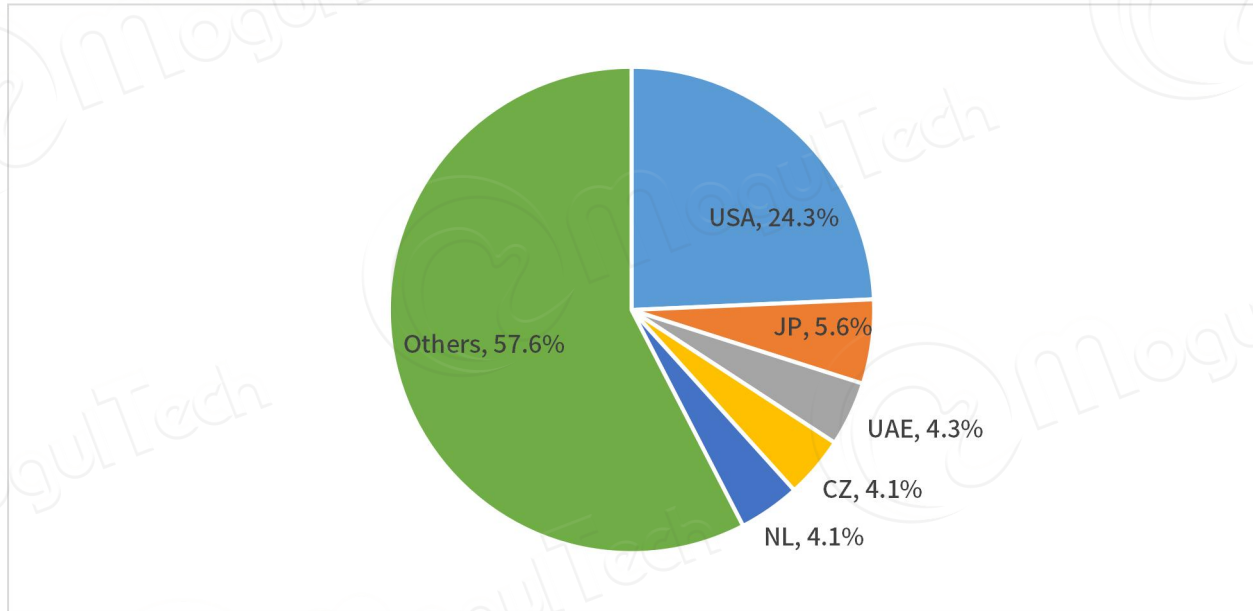
September 2019-2024



Source: GACC, Chip Insights

From the perspective of export destinations, the United States remains the largest export market. As of Q3 2024, the share of mobile phone exports exceeded 24%, with brands such as Apple and Samsung being the main contributors. The share of PCs exceeded 20%, with brands like Lenovo, HP, and Dell accounting for a significant portion of exports.

Chart 42: Distribution of China's Mobile Phone Export Markets from January to September 2024



Source: GACC, Chip Insights

Looking ahead to 2025, influenced by trade and tariff adjustments, the supply chain orders for PCs and mobile phones are gradually shifting to countries like India and Vietnam, which will continue to put pressure on China's export volumes and values for PCs and mobile phones. Observing the dynamics of leading industry manufacturers, representative companies such as Dell (PC), HP (PC), and Apple (mobile phones, PCs, and wearables) are actively accelerating their production layout in overseas markets.

Chart 43: Partial Consumer Electronics Manufacturers' Capacity Migration Plans

Category	Company	Capacity Transfer Plan
Mobile Phones	Apple	Part of the production capacity of iPhones and AirPods will be relocated to India.

PC	HP	Part of the PC production will be transferred to Thailand and other Southeast Asian countries to strengthen the supply chain layout.
	Dell	In response to tariff changes, it plans to reduce the production and procurement of PCs and their components in China.
	Microsoft	It has required suppliers to produce as many PC products as possible outside China by the end of next year.

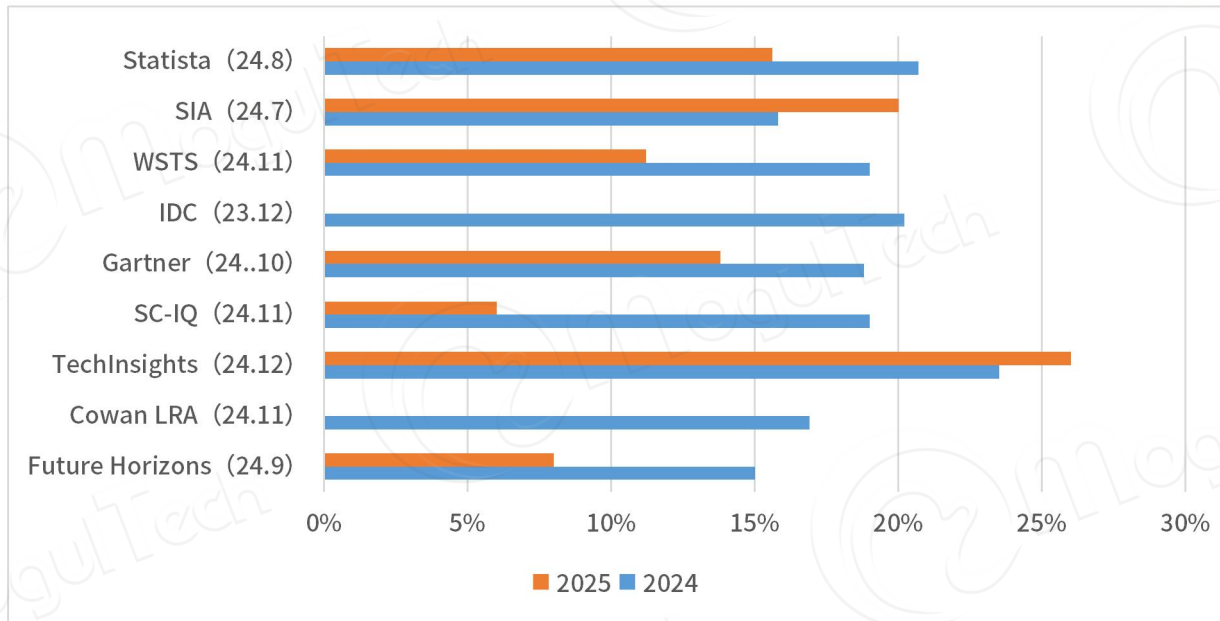
Source: Chip Insights

3 Analysis of Global Electronic Component Industry Trends in 2025

3.1 Semiconductor Growth May Slow Down

Looking at global semiconductor sales, the industry recovery was robust in 2024, driven by the core markets of China and the US. The latest data from WSTS revised the growth rate from 12.5% to 19.0%. For 2025, mainstream institutions predict a slowdown, with forecasts ranging between 6% and 15.6%, a significant deceleration compared to 2024.

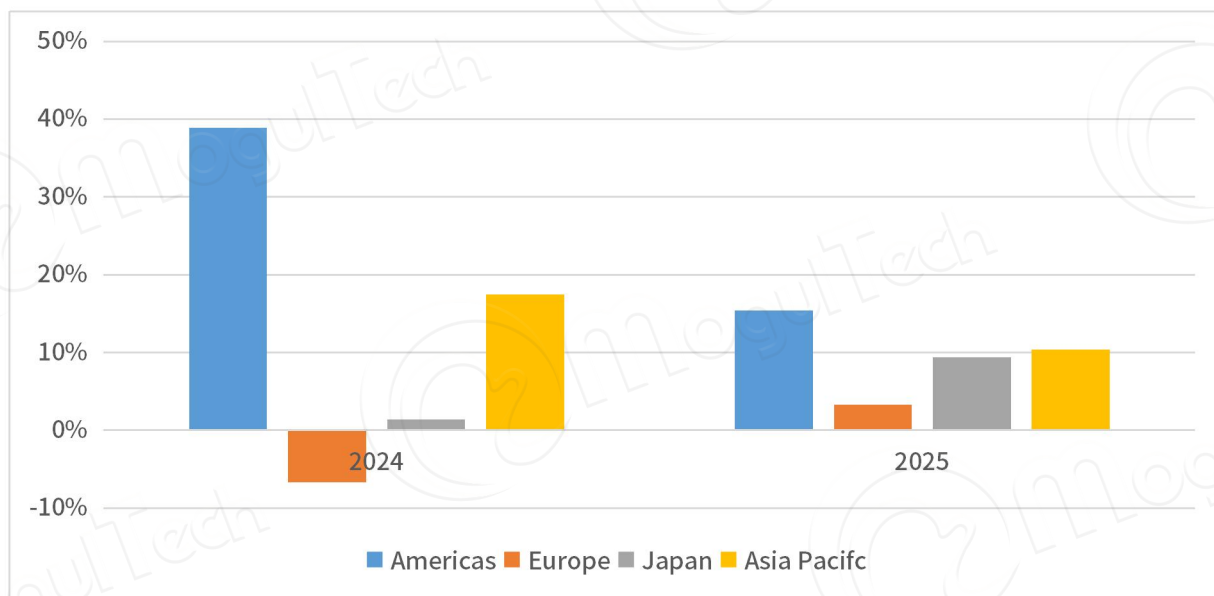
Chart 44: Forecast of Global Semiconductor Sales Growth in 2025



Source: Chip Insights

From a regional market perspective, WSTS data shows that in 2024, the European market, represented by Germany, saw a significant contraction, with a year-on-year decline of 6.7%. In contrast, the North American and Asia-Pacific markets (excluding Japan) experienced strong growth, with year-on-year increases of 38.9% and 17.5%, respectively. For 2025, WSTS predicts that the North American and Asia-Pacific markets will continue to be the primary sources of growth, with optimistic growth expectations for China and the United States.

Chart 45: Forecast of Global Semiconductor Regional Market Sales Growth in 2025

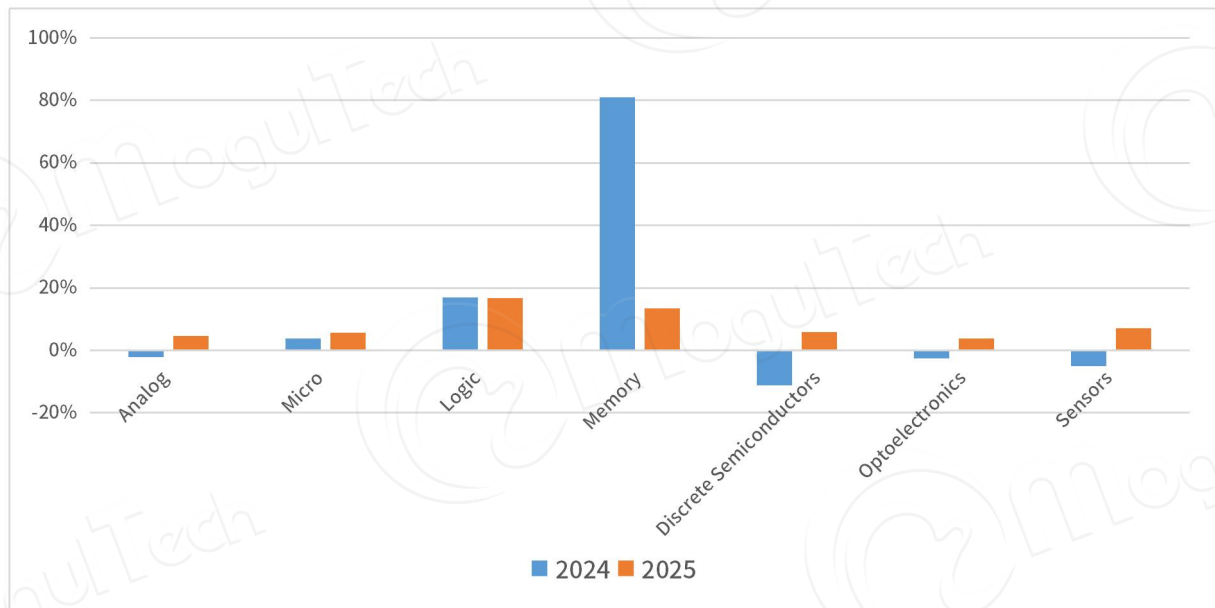


Source: WSTS, Chip Insights

3.2 AI-Driven Growth is Prominent

In terms of subcategories, WSTS forecasts that the top three fastest-growing segments in 2025 will be logic, memory, and sensors, with respective growth rates of 16.8%, 13.4%, and 7.0%. Compared to 2024, the growth rate of memory products is expected to significantly, while the growth rate of logic chips is rapidly increasing due to AI growth drivers. Affected by automotive and industrial demand, microprocessors/controllers and discrete devices are expected to grow by 5.6% and 5.8%, respectively. Analog chips are expected to show a significant rebound, with a year-on-year increase of 4.7%.

Chart 46: Forecast of Global Semiconductor Sub-Category Growth in 2025



Source: WSTS, Chip Insights

From the perspective of terminal application markets, consumer electronics and medical devices are expected to stabilize, while industrial and communication sectors are anticipated to rebound. AI, new energy, and electric vehicles remain the main drivers of market growth, with a focus on the potential development of the low-altitude economy represented by drones.

Chart 47: Forecast of Growth in Major Application Areas in 2025

Subdivision	Global Growth Forecast	China's Growth Forecast	China's Market Share
Energy storage	21.8%	49%	35.2%
Electric vehicles	10.9%	19.3%	73.8%
Photovoltaics	29.7%	29.2%	40.9%
Industrial control	2.1%	10.9%	>25.0%
AI servers	87.1%	27.1%	14.0%

Subdivision	Global Growth Forecast	China's Growth Forecast	China's Market Share
Communication	1.1%	2.5%	>30%
Smartphones	1.6%	1.4%	22.9%
PC	4.3%	5.9%	19.4%
LAE	19.5%	28.2%	>60%
AR/VR	9.1%	15.8%	14.5%
Medical Equipment	6.4%	8.1%	25.4%

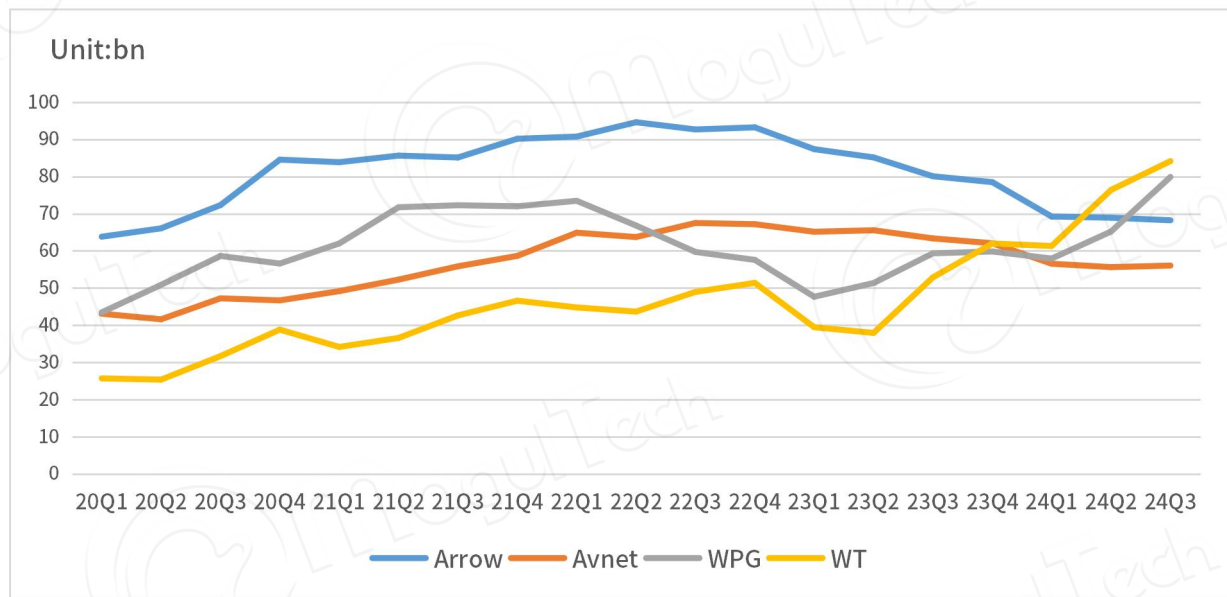
Source: IDC, WSTS, Chip Insights

3.3 Component Distribution Market Landscape to be Remodeled

As of 2024Q3, driven by the strong growth in data centers and servers and the recovery of market demand in China, WT has surpassed Avnet in single-quarter revenue for two consecutive quarters. For the first time, its cumulative revenue for the first three quarters has also surpassed Avnet, positioning WT as the number one global electronic component distributor. Concurrently, WPG, previously the industry's third-largest, has also set a new historical record in a single quarter, surpassing Avnet to become the second-largest global electronic component distributor. Avnet and Arrow Electronics have been impacted by the demand in the European and American markets this year, not only making it difficult to maintain the "top" position but also putting the "second" position at risk. In the domestic market, Shannon Core Creation has also made significant strides, leaping to the second place in revenue among Chinese market distributors in 2024Q3 due to AI-related storage categories. Overall, the global electronic component distribution

market landscape is undergoing a significant transformation, indicating a new phase of reshuffling.

Chart 48: In 2024Q3, both WT and WPG's single-quarter revenues surpassed those of Avnet



Source: Chip Insights

3.4 2025 China Electronic Component Trade and Overseas Layout Trends

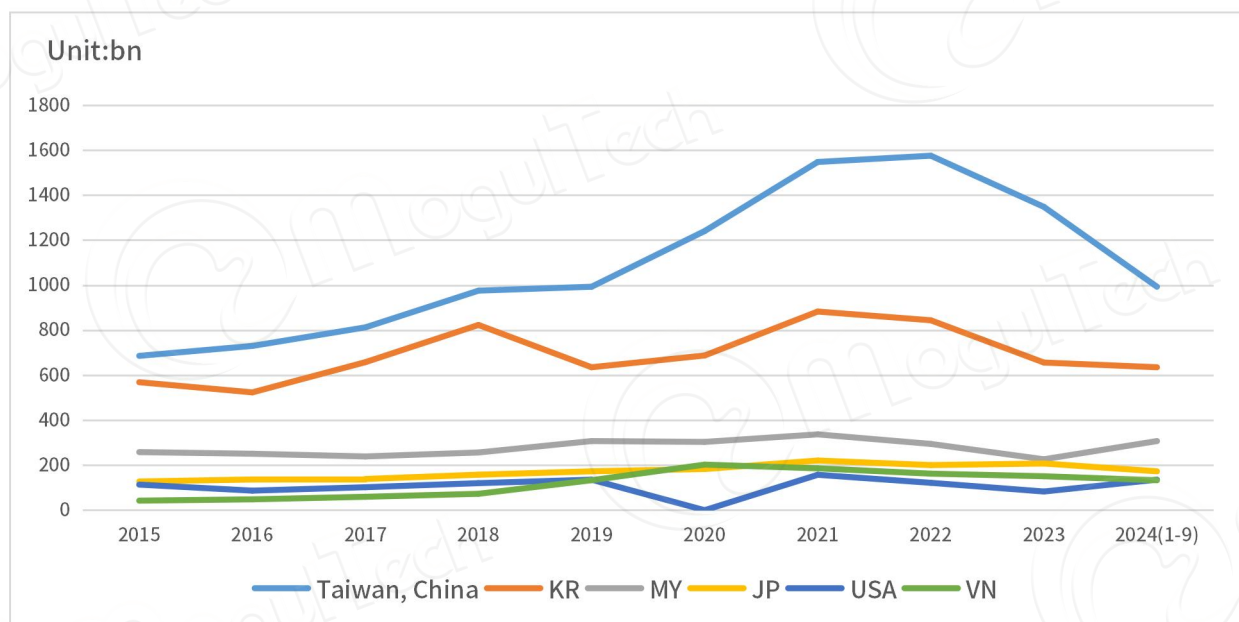
(1) China's Integrated Circuit Trade Deficit Continues to Narrow

With the recovery and rise of market demand represented by China, it is projected that in 2025, China's integrated circuit import and export values will exceed 370 billion and 170 billion US dollars, respectively.

From the import market perspective, due to China's substantial demand in consumer electronics, electric vehicles, new energy, and industrial automation,

Taiwan, South Korea, Malaysia, and Japan will continue to be the main sources of China's imports in 2025. Taiwan has been the primary source of imports for mainland China since 2015, with trade volume consistently increasing from 2015 to 2022. In 2023, despite trade restrictions leading to a decline, it maintained its leading position. It is noteworthy that with the recent escalation of export policy restrictions against China, there may be fluctuations in Taiwan and South Korea.

Chart 49: The trend of China's main integrated circuit import markets from 2015 to 2024

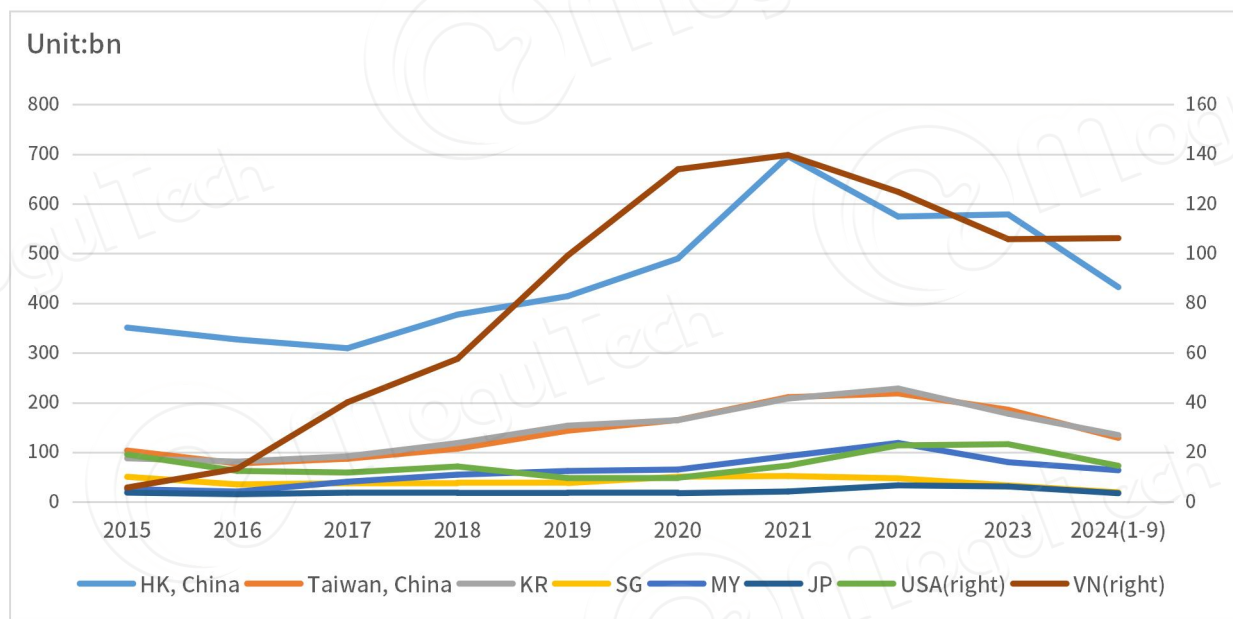


Source: Chip Insights

Looking at the export market, it is anticipated that in 2025, China Hong Kong will continue to be a primary export transit hub for domestic shipments, with Taiwan, South Korea, Vietnam, and Malaysia ranking at the forefront. The Southeast Asian market is set to become one of the most significant sources of future export growth for China. Among these, the U.S. market has shown a certain growth trend in recent years, but the export value has remained around 2 billion

U.S. dollars; Southeast Asian countries such as Vietnam, Malaysia, and Singapore have experienced fluctuations due to tariff impacts, with Malaysia and Vietnam seeing relatively noticeable declines.

Chart 50: The trend of China's integrated circuit main export market value from 2015 to 2024



Source: Chip Insights

After enduring the painful period of the Sino-American trade war from 2018 to 2020, the competitiveness of China's integrated circuit industry has gradually increased, and it has successively strengthened its industrial chain cooperation with various countries in East Asia and Southeast Asia. Concurrently, the trade deficit in domestic integrated circuits has been narrowing year by year, and the competitiveness of domestic chip manufacturers has been continuously enhancing.

(2) Southeast Asia and South America Will Become Key Focuses for Electronic Component Manufacturers Going Global

As domestic OEM factories and terminal enterprises increasingly internationalize and accelerate their overseas market layout, their demand for establishing a flexible component supply chain system becomes more urgent. This gradually drives upstream component supply chain supporting manufacturers to establish overseas warehouses, offices, logistics, and production bases. The development demand of terminal industries significantly drives the trend of component supply chain relocation overseas.

Looking at the distribution of electronic component export markets, Southeast Asia and South America will become key markets. Currently, China's consumer electronics, photovoltaic and other new energy products, and electric vehicles have been deployed earlier in regions such as Vietnam, Malaysia, and Thailand. The deployment in countries like Brazil and Mexico in the Americas is accelerating, gradually becoming one of the key target markets for domestic component manufacturers going global.

Chart 51: Global production layout of terminal manufacturers or key focus of component manufacturers going global

Subdivision	Regions	Major Countries	Company
Electric vehicles	EU	Germany, France, the UK, etc.	Automobiles: BYD, Geely, SAIC Motor, Chery, Great Wall Motors, Leapmotor, etc.
	LA	Brazil, Chile, Mexico, etc.	
	SEA	Thailand, Indonesia, the Philippines and Malaysia, etc.	Components: CATL, Gotion, Joyson, Desay SV, Baolong, HiRain, KEBODA, etc. Components and Devices: BYD

Subdivision	Regions	Major Countries	Company
	ME	Saudi Arabia, the United Arab Emirates, Israel, etc.	Semiconductor, AutoChips, GigaDevice, Silergy, Will, Wingtech, CCTC, etc.
New Energy	NA	The United States.	New Energy Manufacturers: Trina Solar, LONGi, JinkoSolar, JA Solar, CSIQ, CATL, EVE, REPT, Hithium, CALB, etc.
	EU	Germany, France, the UK, Italy, Spain, etc.	
	ME	Saudi Arabia, Oman, etc.	Components Manufacturers: Sungrow, Ginlong, GoodWe, Deye, APsystems, etc.
	SEA	Indonesia, Laos, etc.	Components and Devices: Silan Micro, CR Micro, NCE Power, JJW, STARPOWER, GigaDevice, SinoWealth, etc.
Consumer Electronics	AM	The United States, Brazil, Mexico, etc.	Consumer Electronics: Transsion, Lenovo, Xiaomi, OPPO, vivo, etc.
	EA	Japan, South Korea, etc.	
	ME	Saudi Arabia, the United Arab Emirates, etc.	Components: HonHai, Luxshare, Goertek, BYD Electronics, DBG, etc.
	AF	Nigeria, South Africa, etc.	Components and Devices: GigaDevice, YMTC, CXMT, FH, Silergy, SOUTHCHIP, Maxscend, Longsys, ASR, etc.
	SEA	Vietnam, Thailand and Malaysia, etc.	

Source: Chip Insights

3.5 Policy and Tariff Changes Are Frequent, Increasing Uncertainties in the Supply Chain

Currently, the trend of deglobalization in the semiconductor industry is evident. China, being one of the world's largest semiconductor import and export markets and leading in the production and consumption of electric vehicles, photovoltaics, energy storage, communications, consumer electronics, and servers, is likely to continue to be affected by policy and tariff changes in the coming year.

Among them, the European Union, as one of the main export regions for China's new energy vehicles, has been actively promoting adjustments to tariffs on electric vehicles from China since last year. The policy changes in the fields of photovoltaics in Europe and the United States are frequent, and the production of consumer electronics and AI-related industries are also key areas for policy and tariff focus. The United States, Europe, China, India, and Japan and South Korea will become one of the regional markets most affected by global semiconductor policies and tariffs in the future, and the impact on the electronic component supply chain will continue in the coming year.

Chart 52: Analysis of the impact on the global semiconductor supply chain at each link in 2025

Type	Link	Subdivision	Affect enterprises
Equipment/Material Trade Control	Semiconductor Equipment	Lithography machines, etc	ASML, Nikon, Canon, AMAT, LAM , etc.
	Semiconductor Materials	Silicon wafers, electronic chemicals and target materials, etc	Shin-Etsu Chemical, GlobalWafers, Honeywell, Air Products, etc.
Manufacturing Restrictions	Foundry	Advanced process foundry	TSMC , Samsung, and Intel, etc.
	OSAT	Advanced packaging and testing	TSMC, ASE, and Intel, etc.
Chip Trade Restrictions	Data Center/AI Chips	CPU	Intel, AMD , and NVIDIA, etc.
		GPU	NVIDIA, AMD, and Intel, etc.
		FPGA	Intel, AMD, etc.
		HBM	SK Hynix, Samsung, and Micron, etc.
		HDD/SSD	SK Hynix, Samsung, Micron,

Type	Link	Subdivision	Affect enterprises
			Seagate, and WD, etc.
		Ethernet chips	Broadcom, Marvell, and NVIDIA, etc.
		Optical chips	Coherent, TI and Coherent, etc.
		Analog	TI, ADI, AsteraLabs, and MPS , etc.
	Automotive Chips	Automotive chips for autonomous driving	NVIDIA, Qualcomm, and Intel, etc.
		CIS	onsemi , Sony, etc.
		Smart cockpit chips	Qualcomm, AMD, and Intel, etc.
		Memory	GSI , onsemi, Microchip, etc.
Impacts of Policies and Tariffs	Applications	Electric vehicles	BYD, Tesla, and Geely, etc.
		AI servers	NVIDIA, Dell, and Foxconn, etc.
		Consumer electronics	Apple, HP, Dell, and Huawei, etc.
		Photovoltaic	LONGi, Trina Solar, and JinkoSolar, etc.

Source: Chip Insights

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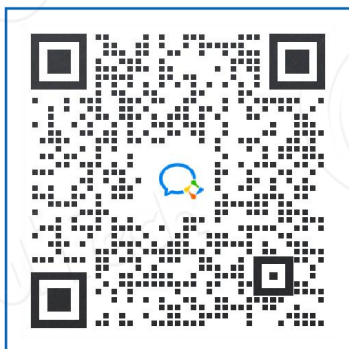
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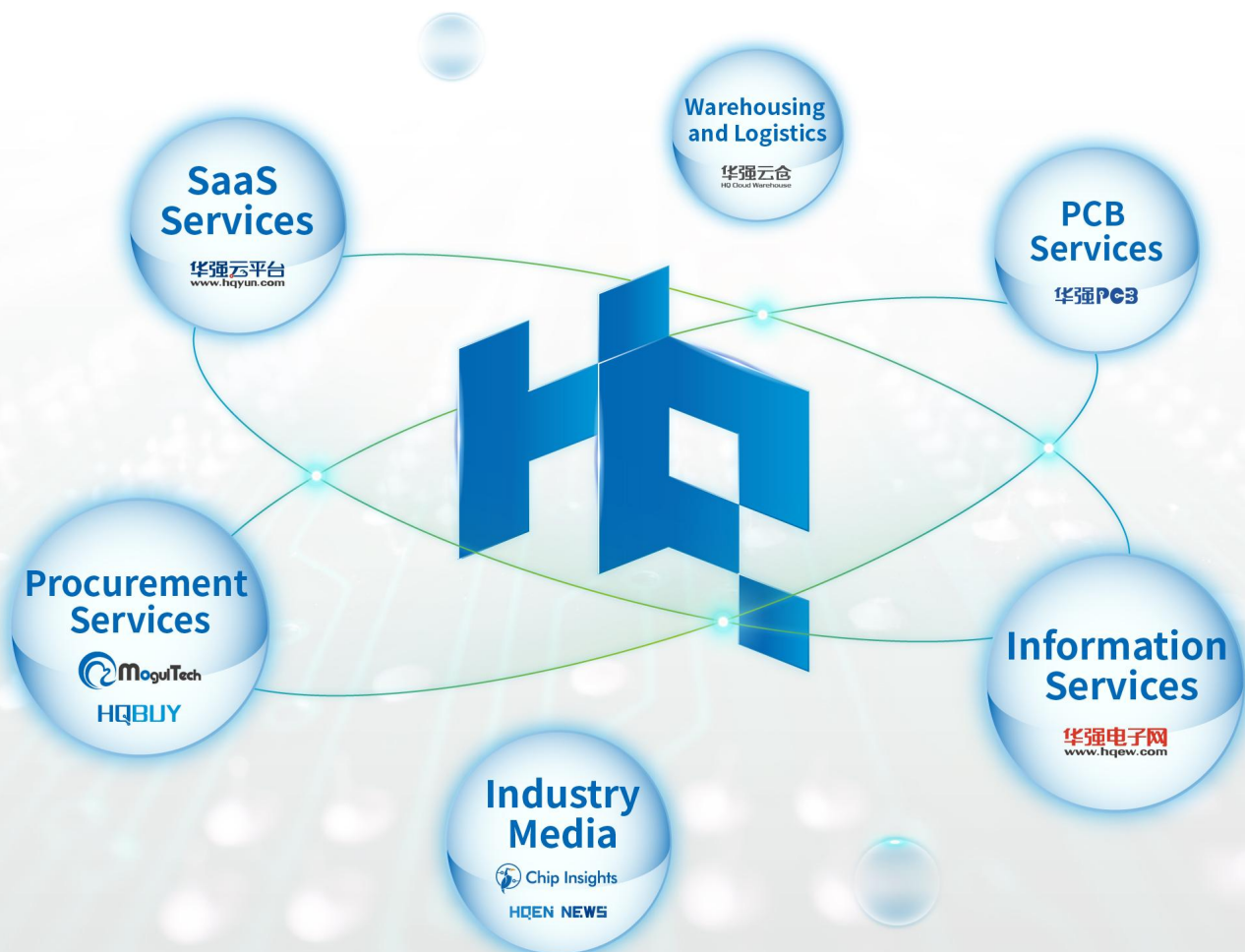
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