Geekplus (2590 HK)

A rising star in global AMR for warehouse automation; a unique play in HK market

On the back of technological innovation in autonomous mobile robots (AMR) with >800 end customers across 40 countries, Geekplus (72% revenue from overseas in 2024) is set to ride on the structural increase in the penetration rate of warehouse fulfilment AMRs over the coming years. Our results from product comparison and selected customers' payback analysis enhance our confidence in Geekplus's competitive edges. We forecast Geekplus to deliver 34% revenue CAGR in 2024-2027E, and potentially achieve meaningful profit starting from 2026E. Being the first warehouse AMR company listed on HKEX, we see good scarcity value in the stock. Initiate with **BUY** with TP of HK$26.7 (7.7x 2026E P/S).

■ **Huge potential of AMR solutions.** AMRs are playing an indispensable role in warehouse automation. They have transformed from simple material movers to solutions for far more complex scenarios. According to CIC, the global AMR solution market is expected to increase to RMB162bn in 2029 from RMB39bn in 2024 (CAGR: 33%), driven by an increase in penetration rate (as % of overall warehouse automation solutions revenue) from 8% in 2024 to 20% in 2029.

■ **Modular development capabilities to boost penetration.** Geekplus had a global market share of 9% in terms of warehouse fulfilment revenue in 2024 (ranked 1st worldwide). We believe the success is attributable to the Company's solutions that comprise a series of modular components that can be easily integrated into the existing systems of customers without significant disruptions. This has enabled Geekplus to penetrate into different downstream industries much more easily.

■ **Our analysis quantifies how Geekplus boosts operating efficiency for customers.** As one of Geekplus's customers, YesAsia (2209 HK, NR) has applied Geekplus AMR solutions since Oct 2022, which helped save ~US$10mn within 2 years (reduction of labour cost ratio by ~1.8ppt) and achieve payback in just 17 months. Moreover, the daily throughput capacity was boosted by 150%, and order accuracy rate was also elevated to 99.99%. The outstanding results prompted YesAsia to offer another AMR contract to Geekplus in 2024 (project commencement in May 2025).

■ **A unique HK-listed play.** Our TP of HK$26.7 is based on 7.7x 2026E P/S, equivalent to the mid-point between Symbotic (SYM US, NR) and AutoStore (AUTO NO, NR), the two major listed pure plays. We believe this is justified given Geekplus's fast penetration in the global warehouse automation market. We think Geekplus should deserve a valuation premium over AutoStore given Geekplus's much higher growth potential.

Earnings Summary

(YE 31 Dec)	FY23A	FY24A	FY25E	FY26E	FY27E
Revenue (RMB mn)	2,143	2,409	3,176	4,316	5,788
YoY growth (%)	47.6	12.4	31.9	35.9	34.1
Adjusted net profit (RMB mn)	(457.6)	(92.2)	112.0	401.6	673.5
EPS (Reported) (RMB cents)	0.00	0.00	5.02	27.85	47.83
YoY growth (%)	na	na	na	455.1	71.7
Consensus EPS (RMB cents)	na	na	5.79	22.50	44.55
P/S (x)	10.8	9.6	7.3	5.4	4.0
P/E (x)	ns	ns	341.2	61.5	35.8
Yield (%)	0.0	0.0	0.0	0.0	0.0
ROE (%)	na	na	na	10.8	16.2
Net gearing (%)	na	na	(60.9)	(57.6)	(45.0)

Source: Company data, Bloomberg, CMBIGM estimates

BUY (Initiate)

Target Price	**HK$26.70**
Up/Downside	**42.9%**
Current Price	**HK$18.69**

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Stock Data

Mkt Cap (HK$ mn)	25,339.9
Avg 3 mths t/o (HK$ mn)	149.1
52w High/Low (HK$)	NA/NA
Total Issued Shares (mn)	1355.8

Source: FactSet

Shareholding Structure

Zheng Yong (Class A, WVR)	6.1%
Zheng Yong (Class B)	4.1%

Source: HKEx, SSE

Share Performance

	Absolute	Relative
1-mth	1.0%	-2.3%
3-mth	NM	NM
6-mth	NM	NM

Source: FactSet

12-mth Price Performance

Source: FactSet

Contents

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Initiate at BUY with TP of HK$26.7

There is a relatively wide range of valuations among the global listed players of warehouse automation. We believe this is due to different factors such as (1) different solutions these players offer, and (2) the revenue mix of warehouse automation in each company. For example, Symbotic (SYM US) is a pure play of warehouse automation with comprehensive solutions. KION (KGX GR) also offers comprehensive solutions but warehouse automation only accounts for part of its total revenue.

Given that Geekplus is at the stage of turning from loss to profit making, we value Geekplus based on price/sales ratio instead of earnings-based ratio.

Our TP of HK$26.7 is based on 7.7x 2026E P/S, equivalent to the mid-point between Symbotic and AutoStore (AUTO NO), the two major listed pure plays. We believe this is justified given Geekplus's fast penetration in the global warehouse automation market. We think Geekplus should deserve a valuation premium over AutoStore given Geekplus's much higher growth. Besides, we expect Geekplus will enjoy some scarcity value as it will be the first warehouse automation (AMR) play in the Hong Kong market.

Figure 1: Peers valuation table

Ticker	Company	Rating	Price (local currency)	Market cap (US$ mn)	PE (x) FY25E	PE (x) FY26E	PB (x) FY25E	PB (x) FY26E	EV/EBITDA (x) FY25E	EV/EBITDA (x) FY26E	PS (x) FY25E	PS (x) FY26E
Hong Kong listed warehouse automation												
2590 HK Equity	BEIJING GEEKPLUS	BUY	18.76	3,196	343.0	61.8	7.1	6.4	221.2	52.5	7.3	5.4
A-share listed warehouse automation												
603082 CH Equity	RIAMB BEIJING-A	-	40.75	919	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
688557 CH Equity	BLUESWORD INTE-A	-	35.70	507	19.9	15.6	2.8	2.6	n/a	n/a	2.3	1.8
301311 CH Equity	KSEC INTELLIGE-A	-	22.87	763	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
688251 CH Equity	HEFEI JINGSONG-A	-	23.82	334	43.3	38.4	2.7	2.6	n/a	n/a	2.3	1.9
Global warehouse automation (pure play)												
SYM US Equity	SYMBOTIC INC	-	51.73	30,546	1,175.7	158.7	8.5	7.0	214.5	106.3	13.8	11.0
AUTO NO Equity	AUTOSTORE	-	6.93	2,321	37.7	20.6	1.7	1.6	17.4	11.8	5.5	4.4
Global warehouse automation (conglomerate)												
KGX GR Equity	KION GROUP AG	-	58.15	8,840	20.4	13.9	1.2	1.1	9.0	7.6	0.7	0.7
6201 JP Equity	TOYOTA INDUSTRIES	-	16,295.00	36,022	19.9	18.0	1.0	0.9	17.6	15.8	1.3	1.2
6383 JP Equity	DAIFUKU CO	-	4,545.00	11,712	25.3	23.6	3.8	3.4	16.2	14.9	2.6	2.5
HON US Equity	HONEYWELL	-	217.01	137,779	20.6	19.0	8.0	7.1	15.6	14.6	3.4	3.2

Source: Bloomberg, company data, CMBIGM
Note: As at 13 Aug 2025

Figure 2: Revenue growth for major global players
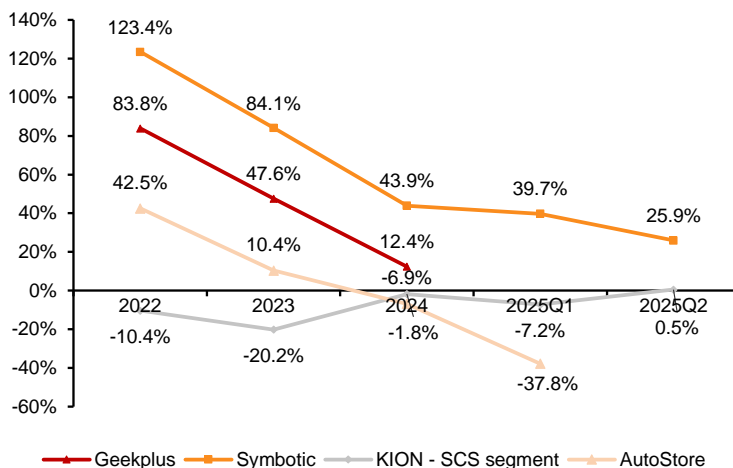
Source: Company data, CMBIGM
Note: Adjusted for calendar year

Case studies on Geekplus's customers

YesAsia Holdings (2209 HK)

Founded in Hong Kong in 1998 and listed on the HKEX in 2021, YesAsia is a leading e-commerce platform operator specializing in procuring and distributing quality Asian beauty and lifestyle products.

YesAsia has leveraged Geekplus intralogistics services to upgrade its two warehouses: Goodman Warehouse and Mapletree Warehouse. This partnership has empirically demonstrated significant improvements in operational efficiency and cost reductions

- **Goodman Warehouse project**

In response to rising fulfilment labor costs as well as surging online orders, partnering with Geekplus, YesAsia launched its first AMR warehouse at Goodman Warehouse located in Tsing Yi, Hong Kong in Oct 2022. The AMR warehouse was equipped with 161 AMRs and its total establishment cost amounted to US$ 5.9mn.

The AMR warehouse project significantly enhanced cost-effectiveness, warehouse efficiency, and picking accuracy.
- In 2023/24, YesAsia's labor cost ratio (% of revenue) reduced to 3.5%/ 3.2% from 5.2% in 2022, achieving labor cost saving of approximately US$ 3.37mn/ US$ 6.59mn, respectively. We calculate that **the payback period was merely ~17 months**.
- In 2024, it managed over 10,000 shipments daily, representing daily throughput capacity increase by 1.5x compared to the pre-AMR year of 2022
- The order accuracy rate improved to 99.99%

Figure 3: Labor cost saving for Goodman Warehouse

in million USD	2021	2022	2023	2024
Revenue	162.02	128.59	201.34	345.78
Warehouse wages	4.68	4.27	3.96	4.48
Outsourced warehouse labor charges	4.28	2.36	3.06	6.77
Labor cost subtotal	**8.96**	**6.64**	**7.02**	**11.26**
Labor cost as a % of total revenue	*5.5%*	*5.2%*	*3.5%*	*3.3%*
Labor cost saving compared with 2022			**3.37**	**6.59**
Total establishment cost of AMR Goodman Warehouse (fully paid by the end of 2022)				5.91
Total labor cost saving since Oct 2022				9.97
Payback period (month)				*17*

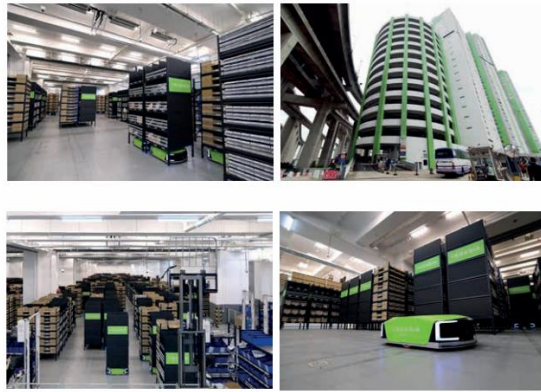Source: Financial reports of YesAsia, CMBIGM
Note: Labor cost saving in 2023/24= labor cost percentage in 2022 (i.e., 5.2%) * revenue in 2023/24 minus actual labor cost for 2023/24

Figure 4: Goodman warehouse project details

Factors	Descriptions
Time	▪ Oct 2022
Size	▪ 137,525 ft^2
Solution	▪ Goods-to-person solution with 161 AMRs
Average coverage area of each robot	▪ 854 ft^2 / AMR (95 m^2 / AMR)
Deployment timeline	▪ Approximately 16 weeks
Average utilization	▪ Approximately 35%
Expenses	▪ Total non-recurring establishment cost[1]: US$5,907,000

Source: Official website and annual reports of YesAsia, CMBIGM
Note: Total non-recurring establishment cost includes the cost of AMR equipment, renovation for the Smart Robotics Warehouse, and the expenses incurred before the operation commencement

Figure 5: Geekplus's AMRs in YesAsia's smart warehouse

Source: Annual reports of YesAsia, CMBIGM

- **Mapletree Warehouse project**

In May 2025, YesAsia deployed its second AMR warehouse at Mapletree Logistics Hub located in Tsing Yi, Hong Kong. This facility featured 240 AMRs collaborating with 930 intelligent shelving units, marking the largest deployment of AMR technology in Hong Kong's e-commerce sector.

Figure 6: The robotic agreement and renovation agreement for Mapletree Warehouse between YesAsia and Geekplus

Terms	Robotic agreement	Renovation agreement
Scope of work	▪ Geekplus shall deliver: 　▪ 240 robots 　▪ 22 working stations 　▪ 930 racks 　▪ related systems	▪ YesAsia appoints Geekplus as contractor to provide the renovation work
Contract price	▪ Robotic agreement: HK$ 30.83mn ▪ Full coverage maintenance service fee for the second year: HK$ 1,85mn	▪ Renovation agreement: HK$ 11.41mn

Source: Official Website of YesAsia, HKEX, CMBIGM

Industry Overview

Global warehouse automation solution industry

Over the past decade, the number of global warehouses has increased by 50% to 180k in 2024, along with a 30% increase in average size. The efficiency of warehousing has also become an important metric for assessing a company's service performance and operational cost efficiency. However, given the aging population and rising labor costs, traditional warehousing faces multiple challenges, including (i) risks brought by human error; (ii) increasing operational expenses due to rising labor costs; (iii) slower processing during peak periods; (iv) limited space utilization due to wider aisles and larger workspaces needed; (v) difficulties in handling complex inventories as the variety of goods increases; and (vi) real-time inventory management and flexible logistics driven by customers' growing needs for personalized products and shorter product lifecycles. Therefore, traditional warehousing is unable to satisfy the needs of modern logistics. Warehouse automation has therefore emerged as a global trend in the warehousing industry and has played a vital role in enhancing the efficiency of the global warehousing industry.

Warehouse automation combines hardware and software, as well as employs a series of technologies including AMRs, automated storage and retrieval system (AS/RS), conveyors, and sorting belts to automate logistics operations such as storage, handling, sorting, and picking, effectively enhancing operational efficiency and space utilization while decreasing labor costs and inventory backlogs. In addition, automation leverages functions of real-time information sharing, collaborative operations across the supply chain, and data-driven decision-making to further optimize efficiency, supporting automated warehousing to satisfy the needs of modern supply chains.

The global warehouse automation solution market size has been growing for years. From 2020 to 2024, the market size increased from RMB301bn to RMB471bn (CAGR: 11.9%), and is expected to reach RMB804bn in 2029 (2024-29 CAGR: 11.3%), according to CIC. Due to high initial investment and technology barriers, the global penetration rate of warehouse automation solutions remained low at ~22.5% in 2024. That said, the improvement of warehouse automation technologies, wider acceptance, growing market demand, and supportive government policies should help the penetration rate to further increase.

Figure 7: Global warehouse automation solution market size
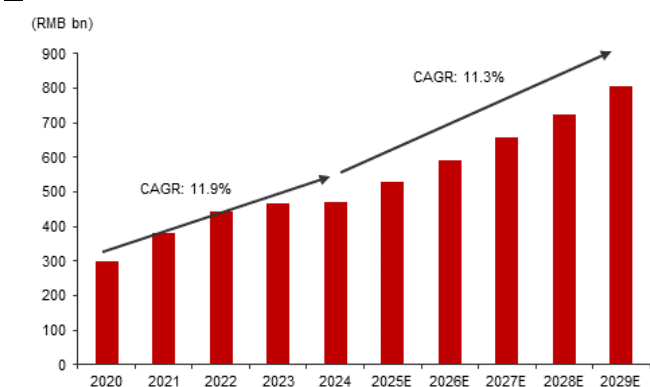
Source: *Modern Materials Handling*, CIC, CMBIGM

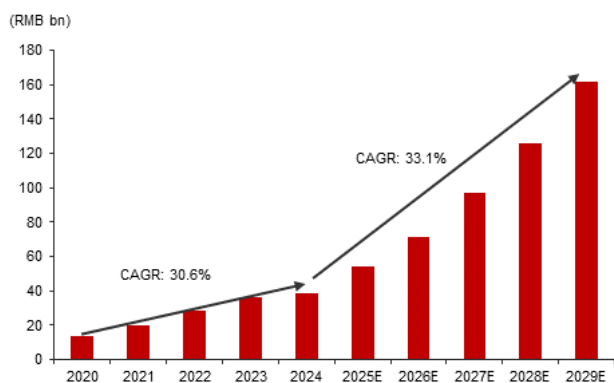**Figure 8: Penetration rate of warehouse automation solutions**
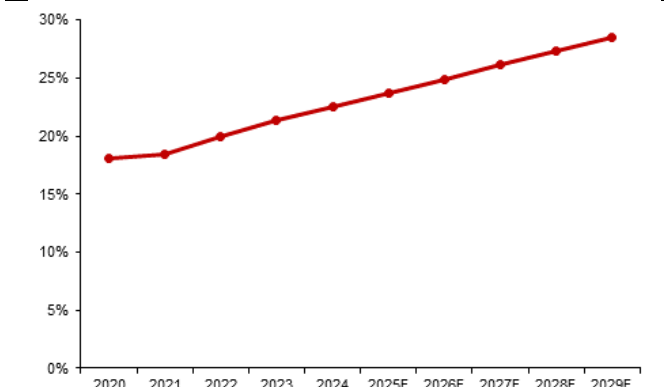
Source: *Modern Materials Handling*, CIC, CMBIGM

Huge potential of global AMR solutions

■ **Global AMR solution industry to see a rapid increase in penetration rate**

With capability of managing orders of different sizes, quickly adapting to operational changes, offering of greater customization and scalability, as well as allowing for a faster return on investment, autonomous mobile robots (AMRs) are playing an increasingly significant role not only as simple material movers but also as solutions for more complex scenarios. According to CIC, the global AMR solution market expanded from RMB13bn from 2020 to RMB39bn in 2024 (CAGR: 31%), and is expected to further increase to RMB162bn in 2029 (2024-29 CAGR: 33%). The penetration rate of AMR solutions relative to the global warehouse automation sector increased from 4.4% in 2020 to 8.2% in 2024 and is expected to reach 20.2% in 2029.

Figure 9: Global AMR solution market size	Figure 10: Penetration rate of global AMR solutions

Source: Mobile Robot and AGV/AMR Industry Alliance, CIC, CMBIGM
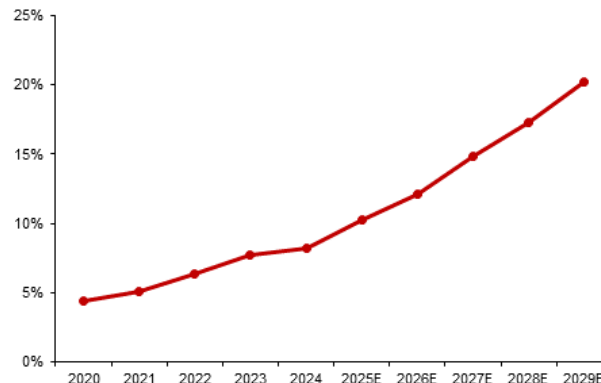
Source: Mobile Robot and AGV/AMR Industry Alliance, CIC, CMBIGM

■ **Growth drivers of global AMR solution market**

1) **Strong demand from downstream industries and rapid digitalization:** The need for fast and accurate logistics, especially cross-border logistics, from both consumers and industries has been growing rapidly in recent years, driven by the global expansion of e-commerce and new retail models. This growth has enhanced the demand for automated and efficient warehousing and distribution provided by AMR solutions. In addition, AMR solutions play important roles in automating material handling and managing intelligent warehouses to improve overall efficiency and reduce costs.

2) **Global labor shortage and rising labor costs:** The shrinking workforce, partially caused by an aging population, has resulted in an acceleration of labor cost hikes. AMR solutions offer effectiveness and efficiency in repetitive and labor-intensive tasks, contributing to safer and more reliable operations while reducing the share of labor costs in warehouse operations.

3) **Technology upgrades:** Driven by advanced technologies such as robotics, IoT, and big data, AMRs are constantly upgrading toward greater automation and higher efficiency, allowing the performance of warehouse automation systems to become increasingly intelligent.

4) **Green and sustainable development:** Under the global trend of green and sustainable development, AMR solutions play important roles in achieving energy efficiency, cost reduction, and operational effectiveness while minimizing the environmental impact caused by logistics operations and optimizing the overall quality of life of the workforce. Leading AMR solution providers also emphasize sustainability by focusing on energy conservation, emissions reduction, and resource recycling

throughout the entire production process, which aligns with global sustainability goals, enhances corporate social responsibility, and offers long-term cost advantages for businesses.

Warehouse fulfillment AMR is key part of AMR solutions

■ **Global warehouse fulfilment AMR solution industry**

AMR solutions are generally divided into two categories: **(1) warehouse fulfillment AMR solutions** and **(2) industrial material transport AMR solutions**. Among these, the demand for warehouse fulfillment AMR solutions accounted for around 60% of the total demand for AMR solutions in 2024, per CIC data. By focusing on automating internal warehouse processes, including picking, sorting, and transporting goods, warehouse fulfillment AMR solutions can improve fulfillment efficiency and enhance warehouse management capabilities while reducing operational costs.

With downstream end customers (in particular e-commerce and retail operators) actively seeking automated and intelligent solutions to improve operational efficiency and reduce costs, the global warehouse fulfillment AMR solution market size increased significantly from RMB8bn in 2020 to RMB24bn in 2024, with a CAGR of 32.4%, and it is expected to surge to RMB105bn in 2029, representing a CAGR of 34% between 2024 and 2029, according to CIC.

Figure 11: Global warehouse fulfilment AMR solution market size
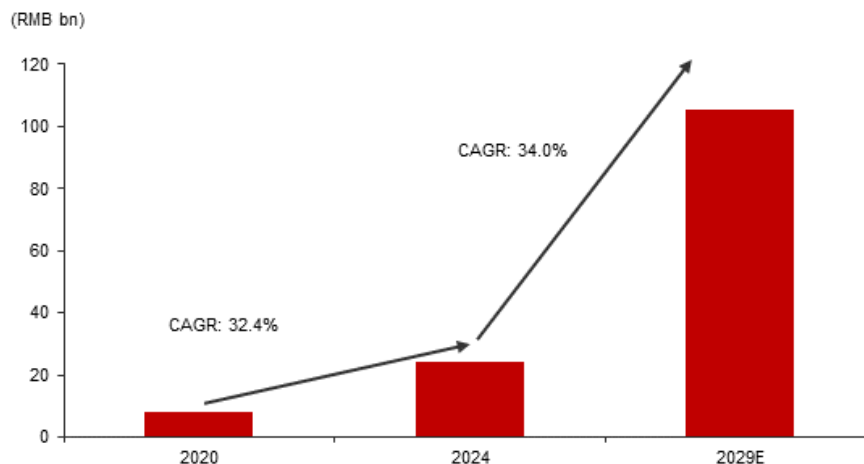
Source: CIC, CMBIGM

■ **Main categories of warehouse fulfilment AMR solutions**

Fuelled by various warehousing environment needs, including storage density, handling speed, picking efficiency, and operational flexibility, leading AMR manufacturers have developed multiple solutions, with (i) shelf-to-person solutions, (ii) tote-to-person solutions, (iii) pallet-to-person solutions, and (iv) smart sorting solutions being the mainstream solutions on the market.

Figure 12: Comparison of key categories of warehouse fulfilment AMR solutions

	Shelf-to-Person	Tote-to-Person	Pallet-to-Person	Smart Sorting
Typical Workflow	• Transport entire shelves to the workstation, where staff assist with picking and packing.	• Transport the totes on shelves to the workstation, where staff assist with picking and packing.	• Transport entire pallets to the workstation, where staff assist with picking and packing.	• Automatically sorts goods according to orders by AMRs.
Value Creation	• Optimize the efficiency of tasks like shelving, picking, sorting, and inventory management • Boost picking efficiency by up to more than three times	• Optimize the efficiency of box-based picking operations • Significantly optimize storage space utilization, enabling higher single-level storage density	• Ideal for scenarios with high pallet storage demands • Efficiently handle cross-docking, full pallet dispatch, and order execution, ensuring smooth and streamlined operations	• Without installing any fixed equipment, maximize warehouse space utilization and increasing sorting throughput • Boost sorting efficiency by up to more than ten times

Source: Expert interviews, CIC, CMBIGM

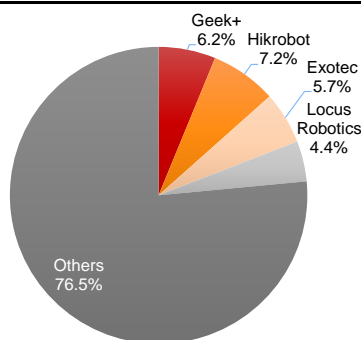■ **Drivers of global warehouse fulfilment AMR solution market**

1) **Industry opportunities supported by the rise of e-commerce:** In 2024, global e-commerce transaction value surged to over RMB30tn. Warehouse fulfilment AMRs have been proven to help reduce human errors and improve overall efficiency, in particular under peak demand situations. With rapid expansion and fierce competition in the e-commerce industry, customers are increasingly asking for fast and accurate delivery, which requires companies to leverage technology solutions such as warehouse fulfilment AMR systems to upgrade the level of automation and intelligence in the warehouse to meet customer requirements.

2) **Product upgrades driven by leading companies:** The robust AMR industry is driven by continuous innovation from leading companies, which provide smarter products that adapt to diverse market needs and accelerate the adoption of warehouse fulfilment AMR solutions. Leveraging the strong foundation in artificial intelligence and technology, AMR providers in China excel in navigation, positioning, obstacle avoidance, and material handling, making them global leaders in the AMR industry. These leading companies utilize their extensive industry experience, advanced innovation capabilities, and strong resources to respond to market needs and expand their scale advantages, further enhancing their leadership and encouraging growth within the AMR industry.

Leading Chinese companies have become industry frontrunners, setting the pace for development and innovation in this rapidly evolving industry. According to CIC, in 2024, Chinese AMR solution providers accounted for ~50% of the global AMR solution market.

3) **Transformation led by flagship customers:** Flagship customers who have implemented warehouse fulfilment AMR technologies not only showcase the capabilities of AMR solutions to improve efficiency and reduce costs but also provide practical examples for other companies to follow. Under the influence of leading players, more businesses are recognizing the benefits and necessity of the transformation toward warehouse fulfilment automation, creating a cycle of innovation and adoption and facilitating the sustainable growth of the industry.

# Competitive Landscape of Global AMR Solution Market

The global AMR solution industry is relatively fragmented due to the various application requirements across industries, with the top four players accounting for only 23.5% in 2024 (according to CIC), which suggests potential for consolidation. Geekplus is one of the largest AMR solution providers globally (in terms of revenue in 2024), accounting for 6.2% of the total market (Geekplus's AMR solution revenue: RMB2.4bn). In terms of the global warehouse fulfillment AMR solution industry revenue, Geekplus has maintained the largest market share in 2020-24 (Geekplus's warehouse fulfillment AMR solutions revenue: RMB2.2bn in 2024, 9% market share).

Figure 13: Market share of major players in global AMR solution market in 2024

Source: Experts interview, CIC, CMBIGM

Figure 14: Market share of major players in global warehouse fulfilment AMR solution market in 2024
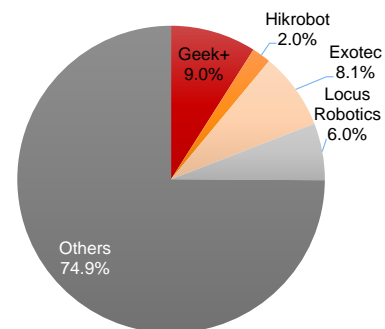
Source: Experts interview, CIC, CMBIGM

Geekplus provides four categories of warehouse fulfillment AMR solutions, namely shelf-to-person, tote-to-person, pallet-to-person, and smart sorting. Geekplus maintains its competitive strengths in terms of operating efficiency, accuracy, and scalable scheduling capability.

- **Operating efficiency:** Geekplus's AMRs have industry leading performance in moving speed and endurance, with a 4.5 m/s maximum no-load speed, which is higher than industry average speed 2 m/s (according to CIC)

- **Accuracy:** Geekplus's AMRs achieve a 99.99% picking accuracy, while the industry average is of below 99.9% (according to CIC)

- **Scalable scheduling capability:** Geekplus's algorithm can coordinate more than 5,000 AMRs simultaneously in warehouse scenario. The industry average is below 300 (according to CIC).

Figure 15: Comparison of key players in the global AMR solution industry

	Geekplus	Hikrobot	Exotec	Locus Robotics
Solutions				
Shelf-to-person	Y	Y	N	Y
Tote-to-person	Y	Y	Y	Y
Pallet-to-person	Y	Y	N	N
Smart sorting	Y	Y	N	N
Scalable scheduling capability (AMR unit)	5,000+	~2,000	Not disclosed	>1,000

Source: Company data, CIC, CMBIGM

Figure 16: Comparison of major global warehouse automation solution providers

	Geekplus	Exotec	Locus Robotics	AutoStore	Symbotic
Market	▪ Global AMR Warehouse Solution Market			▪ Global Cubic Storage Market	▪ AMR Warehouse System Integrator
Main Differences	▪ Complete AMR Warehouse Solution	▪ Mainly tote-to-person robots	▪ Focus on the traditional "people to goods" model	▪ Focusing on cubic storage market	▪ Mainly focus on retail and food industry
Company's Solution	▪ Shelf/Pallet-to-person ▪ Tote-to-person ▪ Smart Sorting ▪ Smart Moving	▪ Tote-to-person	▪ Person-to-Shelf/Small size Shelf-to-Person	▪ Tote-to-person/Smart Sorting	▪ Complete AMR Warehouse Solution
Business Model	▪ Direct sales ▪ Channel sales ▪ RaaS	▪ Closely cooperate with system integrators to develop the market	▪ Mainly RaaS, expand the market through direct sales and channel dealers	▪ 100% channel sales	▪ Most business comes from related party
Geographical coverage	▪ Global Market	▪ Mainly Europe	▪ Mainly North America	▪ Mainly North America & Europe	▪ Mainly US
Product Comparison (Tote-to-person)	▪ Payload: 40KG ▪ Compatible Warehouse: 12m ▪ Working Temperature: -10-40°C ▪ Speed: 4.5m/s	▪ Payload: 30KG ▪ Compatible Warehouse: 14m ▪ Working Temperature: 0-40°C ▪ Speed: 4m/s	-	▪ Payload: 35KG ▪ Compatible Warehouse: 6m ▪ Working Temperature: 1-35°C Speed: 1.6m/s	▪ Speed: 9m/s
Product Comparison (Pallet/Shelf to Person)	▪ Payload: 1200KG ▪ Speed: 2.2m/s	-	▪ Payload: 272KG	-	-
Product Comparison (Smart Sorting)	▪ Floor-based sorting: Manual labor is required to place the goods on the sorting robot. ▪ Multi-layer sorting: Manual labor is required to place the goods on the conveyor. ▪ Payload: 8-100KG	-	-	▪ Workstation sorting: No manual labor is required ▪ Payload: 3.5KG	▪ Part of its end-to-end solution ▪ Provides BreakPack solution allowing sending less than full case quantities to the downstream
Competitive strength	▪ High adaptability and scalability, product functions can be realized without the coordination of all products, and can be applied to most warehouses ▪ Complete product categories, strong synergy effect ▪ Leading cluster scheduling scale, can simultaneously dispatch 5000+AMR.	▪ Low adaptability and scalability, The shelf design needs to meet the robot climbing conditions or purchase Exotec shelves ▪ Limited robot types and application functions, and lower automation capabilities than Geekplus	▪ Low level of automation capability, relies on manual labor to pick goods from shelves ▪ Low shelf-to-person capability, payload is only 272KG. ▪ Mainly based on the RaaS model, with low single customer value	▪ High degree of automation, low scalability and compatibility ▪ Tote-to-person Solution requires company's grid products to achieve automation ▪ Smart Sorting solution requires matching absorbent packaging	▪ Strong automation capabilities, basically covering the processes required by supermarkets' Warehouse. ▪ Mainly relying on high-precision robotic arms and conveyor for product sorting, packaging and transportation ▪ High PPE Investment

Source: Company data, CMBIGM

Compared with players such as Exotec, Locus Robotics and AutoStore, Geekplus provides not only more extensive solutions but also more compatible and scalable products.

Exotec is based in Europe, which mainly competes with Geekplus in the tote-to-person market. Its tote-to-person solution applies a different technology compared with Geekplus. Exotec's robots require specific shelf design to meet the robot climbing conditions, which means clients have to purchase Exotec shelves at the same time. On the contrary, Geekplus's tote-to-person solution can fit into different types of shelves.

Figure 17: Exotec tote-to-person solution

Source: Exotec, CMBIGM

Locus Robotics is mainly focused on person-to-shelves solution. Locus Robotics's products come with low automation ability, requiring manual assistance to sort the cargo. The robots then move the cargo to the designated location. It also has a shelves-to-person solution, but the payload for Locus Robotics's robot is 272kg while Geekplus robot's payload can reach 1,200kg.

Figure 18: Locus Robotics solutions

Source: Locus Robotics, CMBIGM

AutoStore primarily operates in the cubic storage market with tote-to-person and smart sorting solutions. AutoStore's solution is similar to that of Exotec, which requires cooperation with in-house shelf products. The robots grab the required objects from the top of the shelf. The compatible warehouse and payload are 6m and 35kg respectively, while Geekplus's solution can reach a height of 12m and a payload of 40kg with better adaptability and scalability.

Figure 19: AutoStore tote-to-person solution
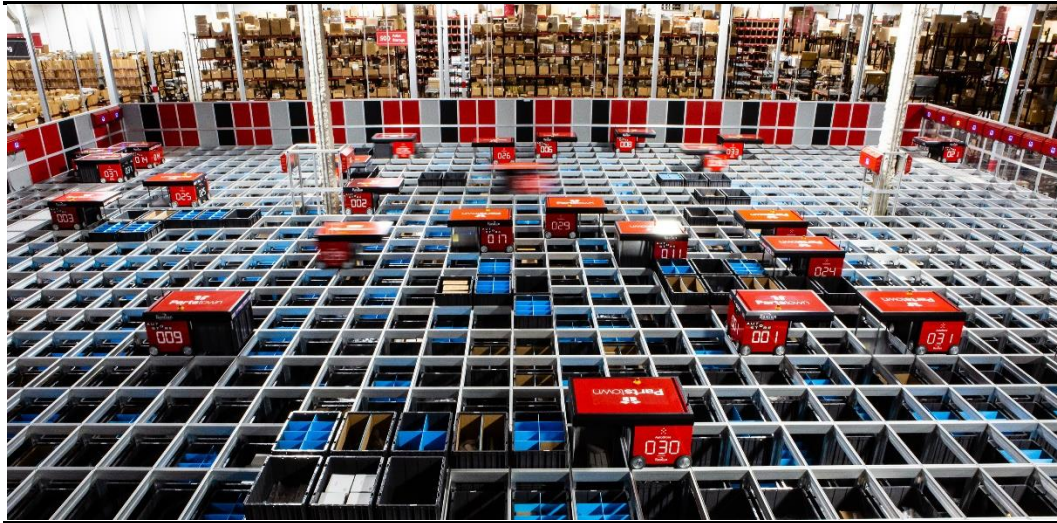
Source: AutoStore, CMBIGM

Symbotic mainly provides services to Walmart, which is a major shareholder of Symbotic. Symbotic's solution relies on high-precision robotic arms and conveyors for product sorting, packaging, and transportation, basically covering all the demand for retail and food wholesale warehouse automation. This solution comes with low adaptability and high capex since the whole production line needs to be rebuilt.

Figure 20: Symbotic's system architecture
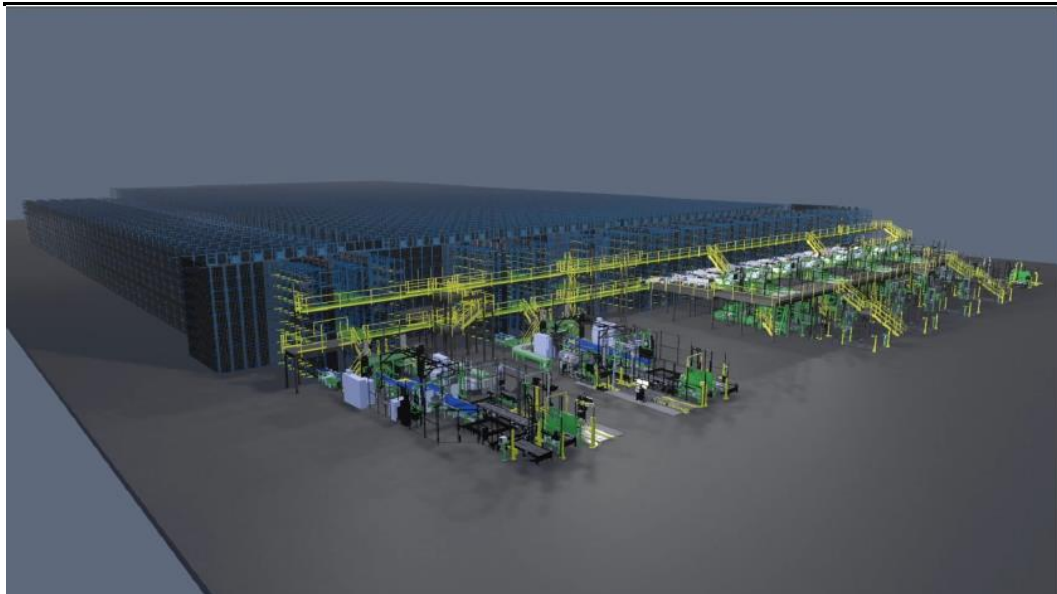
Source: Symbotic, CMBIGM

Key entry barriers of AMR solution market

1) **Brand recognition and scale barriers:** As one of the first movers in the industry, Geekplus has built strong brand recognition and solid customer partnerships, which enable the Company to scale production and manage costs while establishing a leadership position. It is challenging for new entrants to achieve similar effects in a limited time, given the continuous technological advances and product innovation being made in this space.

2) **Industry experience and customer bases:** Benefiting from a deep understanding of the market and adequate industry experience, leading operators have generally built extensive customer bases and are equipped with the capabilities to offer tailor-made solutions, reliable products, and long-term support for customers across industries and scenarios.

3) **Product portfolio and performance:** Leading companies in the industry usually employ advanced hardware and software to provide one-stop solutions for customers, featuring a comprehensive product portfolio with advantageous performance characteristics such as higher operational speed, greater payload capacity, and longer battery life. Achieving this requires significant time and investment in facilities and personnel.

4) **Technology and modular development capabilities:** As the core of the industry, continuous developments in technology and innovation in key components help AMR solution providers meet fast-changing market demands with efficient and optimal solutions. Additionally, modular development driven by deep industry insights enables higher product maintainability, lower production costs, and shorter development cycles. With high standardization in hardware and modularization in software, leading solution providers can reduce production complexity while improving product flexibility and customization.

5) **Service quality and supply chain management efficiency:** High-quality services, including timely after-sales service, technical support, and training, are crucial for AMR solution providers to establish customer satisfaction and brand loyalty. Furthermore, solid partnerships with suppliers and distributors, as well as an efficient supply chain management system, are essential for companies to ensure stable product quality and timely delivery.

Business Overview

Established in 2015 in China, Geekplus is a global AMR solution provider with a solid leading position both in China and overseas. The Company has a focus on warehouse fulfillment and industrial material transport. Leveraging its technological innovations as well as reliable product quality and service, Geekplus has shipped ~56k AMRs to >40 countries and regions worldwide as of end-2024. The Company has deployed >1,500 projects to ~806 customers across various industries, including ~60 Fortune 500 customers, as of end-2024.

Geekplus is one of the earliest Chinese AMR companies to expand overseas. In 2022 / 23 / 24, sales of AMR solutions in non-domestic markets (which refers to markets outside the Chinese mainland) accounted for 70.3% / 76.8% / 72.1% of its total revenue, respectively. As of Dec 31, 2024, Geekplus has over 48 service stations and partner sites, 13 spare parts centers, and more than 305 engineers globally.

Geekplus provides a suite of integrated smart warehouse and smart moving solutions, including the Geek+ shelf-to-person picking solution, Geek+ tote-to-person picking solution, Geek+ pallet-to-person picking solution, smart sorting solution, and smart moving solution, all supported by its proprietary Robot Matrix platform, Geek+ Software Suite, and Hyper+ Core Algorithms. Equipped with these innovative solutions, Geekplus effectively addresses the pain points of inefficiency, unreliability, high operational costs, and inflexibility in traditional warehouse solutions by providing significant value through optimal operating efficiency, high reliability and accuracy, a fast payback period, as well as flexibility and scalability for customers, advancing revolution in the industry.

In addition, Geekplus's AMR solutions comprise a series of modular components that can be easily integrated into the existing systems of customers without significant disruptions and can be customized for different operational environments, fueling a smooth user experience for clients across industries.

Figure 21: Geekplus's technology architecture
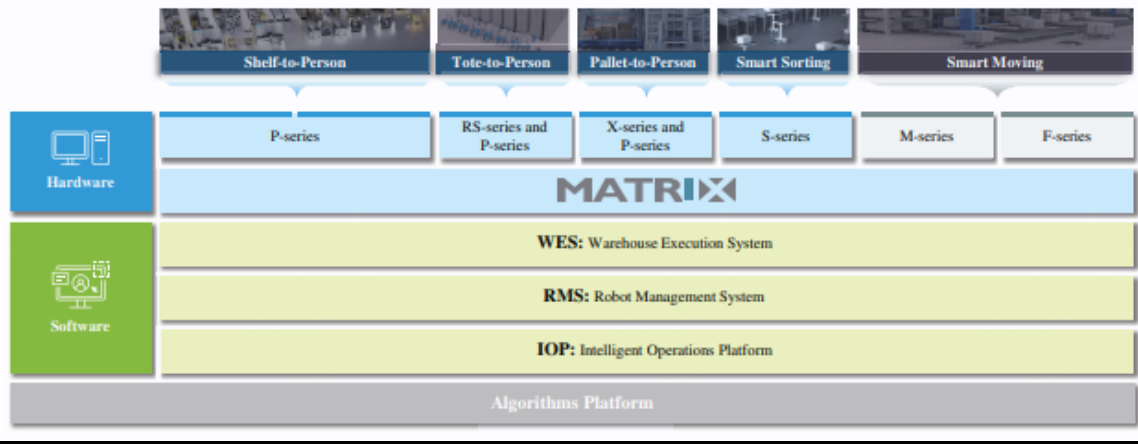
Source: Company data, CMBIGM

Figure 22: Geekplus's modular design
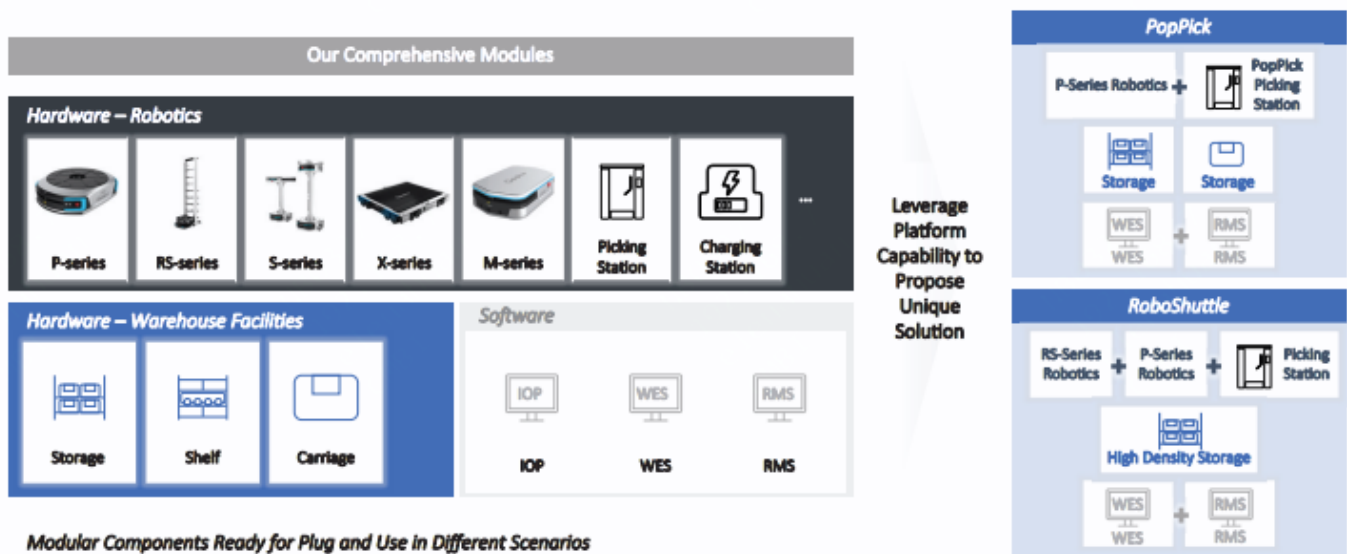
Source: Company data, CMBIGM

Figure 23: Revenue breakdown by solution type
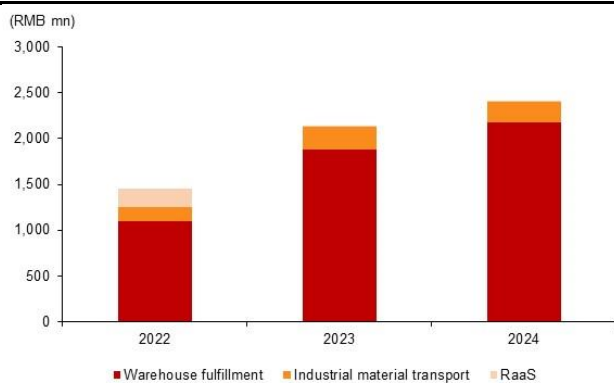
Source: Company data, CMBIGM

Figure 24: Revenue breakdown by region
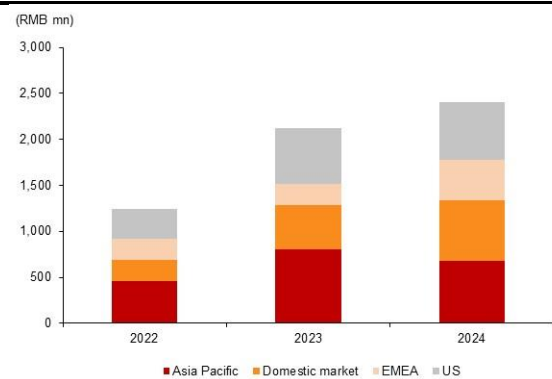
Source: Company data, CMBIGM
Note: Domestic market refers to the market in Chinese mainland

Geekplus's AMR solutions

Geekplus provides various AMR solutions, consisting of (i) Geek+ shelf-to-person picking solution, (ii) Geek+ tote-to-person picking solution, (iii) Geek+ pallet-to-person picking solution, (iv) FleetSort solution, and (v) Smart moving solution, to empower warehouse fulfillment and industrial material transport in industries including (i) apparel, (ii) e-commerce, (iii) retail, (iv) 3PL, (v) pharmaceuticals, (vi) manufacturing, and (vii) automotive.

Figure 25: Geekplus's integrated AMR solutions

Source: Company data, CMBIGM

Figure 26: Applications of Geekplus's solutions in different industries

Industries	Typical solutions	Case study	
		Companies	Solutions
Apparel	1) Store order: Shelf-to-person standard solution; Shelf-to-person PopPick solution; Tote-to-person solution; Combined picking+sorting solution; Four-way shuttle solution 2) E-commerce order: Shelf-to-person standard solution; Shelf-to-person PopPick solution; Tote-to-person solution 3) Return order: Shelf-to-person standard solution; Sorting solution	S&S Activewar	Shelf-to-person PopPick solution
E-commerce	1) Large SKUs, high peaks and low inventory: Shelf-to-person 2) Massive SKUs and fast delivery demand: Tote-to-person 3) Massive number of packages and high fluctuation: Sorting	Banggood	Fleetsort solution
Retail	1) Build merchandise and high labor-intensiveness: Shelf-to-person standard system, Four-way shuttle solution 2) Original carton box needs manual handling: Tote-to-person solution 3) Large number of SKUs and frequent wave changes: Shelf-to-person PopPick system, Shelf-to-person standard system, Tote-to-person solution 4) Irregular shapes and separate storage areas: Shelf-to-person PopPick system, Tote-to-person RoboShuttle Plus system, Four-way shuttle solution 5) Labor intensity and high error rate: Sorting solution	Walmart	Picking system and 6 picking robots
3PL	1) Low picking efficiency and large SKUs: Shelf-to-person solution 2) Low space utilization: Tote-to-person solution 3) High fluctuation in package quantity: Sorting solution	UPS	Shelf-to-person PopPick solution
Pharmaceutical	1) Large SKUs, small products and time-sensitive efficiency: Shelf-to-person solution 2) Long put-away time: Shelf-to-person solution 3) Time-sensitive efficiency: Sorting solution	Sinopharm Logistics	Picking system
Manufacturing	1) Multiple SKUs and lack of space: Smart warehouse 2) Insufficient warehouse space near production line: Smart moving 3) Inflexible production capacity: Smart factory	Siemens	Tote-to-person solution
Automotive	1) Low accuracy on inventory data and high risk of production line shutdown: Shelf-to-person 2) High labor-intensiveness and potential safety hazards: Smart moving 3) Inflexible manufacturing line: Smart factory	Yanfeng	18 P800 for picking and handling

Source: Company data, CMBIGM

■ **Geek+ shelf-to-person picking solution**

Primarily used in the e-commerce sector, with a special focus on high-traffic environments, Geek+ shelf-to-person picking solutions are suitable for B2B and B2C applications and are designed for piece, tote, carton, and pallet picking. The solutions consist of (i) a standard solution facilitated by P-series robots and (ii) the PopPick solution, empowered by P-series robots and PopPick workstations. This is the world's first all-in-one solution that optimizes warehouse operations through the smooth movement of goods to the human pickers.

The PopPick solution comprises the PopPick workstation, P-series mobile robots, and a mixed storage system. The solution employs P-series mobile robots to transport shelves to the designated PopPick workstations, efficiently executing shelving, picking, sorting, and inventory management.

The Geek+ Shelf-to-Person Picking Solution achieves a picking efficiency of up to 400 units per hour per workstation (with one operator), significantly higher than the industry average of less than 180 units, and delivers a picking accuracy of 99.99%, compared to the industry average of below 99.90%.

Figure 27: Key factors of PopPick solution that outperform

Factors	Descriptions
Compatibility	▪ Suitable for small, medium, large and irregularly shaped inventories ▪ Work with bin, shelf, and pallet storage systems
Throughput efficiency	▪ Increase warehouse picking efficiency to up to 580 totes per hour ▪ Double throughput capacity
Storage capacity	▪ Minimize bin spacing to 2cm ▪ Achieve a delivery speed of ~6.2 seconds per bin
Operational effectiveness	▪ Support all scenarios and product categories ▪ A maximum throughput capacity more than 3 times of industry standard

Source: Company data, CMBIGM

Figure 28: Characteristics of P-series robots

	P500	P800	P1200
Payload	600kg	1000kg	1200kg
Shelf dimensions L*W	880*880 mm~ 1020*1020 mm	1020*1020 mm ~ 1250*1250 mm	1250*1250 mm ~ 1600*1600 mm
Dimensions L*W*H	950*702*275mm	1095*830*195mm	1325*1020*275mm
Weight	144kg	162kg	288kg
Maximum Speed	Unload2m/s, Full load1.6m/s	Unload2.3m/s, Full load2m/s	Unload2.6m/s, Full load2.0m/s
Certification		CE/ETL	

Source: Company data, CMBIGM

Figure 29: Key advantages of P-series robots

Key advantages	Descriptions
Slimmer profile	▪ Thinner robots ▪ Optimize the vertical space usage
Smaller turning diameter	▪ Smaller turning diameter ▪ Reduce aisle space requirements
Higher speed	▪ Enhance warehouse operation efficiency
Faster charging and longer endurance	▪ Quicker charging times ▪ Improve battery life to operate longer

Source: Company data, CMBIGM

■ **Geek+ tote-to-person picking solution**

Designed for box-based operations, the Geek+ tote-to-person picking solution fits well with industries that demand high storage density with moderate throughput, such as retail, footwear, grocery, pharmaceutical, and manufacturing sectors. It optimizes storage density within existing lofts and shelving units by maximizing vertical storage, allowing dual-column retrieval from a single side of the shelf without requiring major modifications, effectively reducing the space needed and lowering warehouse rental costs.

Two types of robots are engaged in this solution: RS robots, which retrieve totes from storage, and P40 robots, which transport totes to operators at picking stations. The RS-series robots have several advantages, including (i) the ability to operate with higher shelving units, (ii) maximizing vertical space, and (iii) featuring higher battery efficiency, all of which optimize overall operational productivity. Combined with P40 robots, customers can adjust RS robots to accommodate various shelf heights and tote types with a high degree of personalization, fully utilizing three-dimensional space.

Geek+ Tote-to-Person Picking Solution features a storage height of up to 12 meters, exceeding the industry average of less than 10 meters, and supports a minimum aisle width of 1000 mm, compared to the industry average of over 1100 mm.

Figure 30: Key advantages of Geek+ tote-to-person picking solution

Key advantages	Descriptions
Storage volume	▪ Capable of reaching heights of up to 12m ▪ Maximize storage capacity by up to 5 times
Picking efficiency	▪ Achieve picking efficiency of over 800 totes per hour per station ▪ Surpass the performance of peers
Adaptability	▪ One-stop solution for items of various sizes ▪ Meet the needs of difference businesses ▪ Accommodate a wide range of operational requirements

Source: Company data, CMBIGM

Figure 31: Characteristics of RS-series robots and P40 robots

	RS11	RS8	P40
Dimensions (L*W*H)	1800*1000*6400mm	1800*1000*4700mm	650*450*386mm
Maximum Storage Height	10765mm	7935mm	1100mm
Container Dimension (L*W*H)	(200-650)*(200-450)*(150-500)mm	Based on the pick-up mechanism, it is compatible with multiple types of containers.	
Compatible Warehouse	12m	9m	Compatible
Maximum speed	1.5m/s no load,1.2m/s fully load	1.8m/s no load,1.5m/s fully load	4m/s no load,4m/s fully load
Run Time	Charging for 10 minutes, working for 2hours		Charging for 10 minutes, working for 1-1.5hours

Source: Company data, CMBIGM

■   **Geek+ pallet-to-person picking solution**

With the feature of "storage on top, picking at the bottom," the Geek+ pallet-to-person picking solution is especially suitable for industries that require high-density storage and frequent piece-picking of goods in different sizes, such as manufacturing, retail, fashion, FMCG, third-party logistics, pharmaceutical distribution, and cold chain logistics. By combining X-series four-way shuttles that operate on the upper levels for pallet storage and P800 robots that handle ground-level picking, the solution utilizes vertical space for pallet storage while maximizing ground-level space for picking, achieving floor-to-ceiling vertical space utilization.

As a world-class revolutionary and industry-leading storage solution, the Geek+ pallet-to-person picking solution can be customized to meet business needs by adjusting the number of robots and integrating intelligent devices. Empowered by intelligent algorithms, the storage height of the solution can reach up to 10 meters, effectively utilizing vertical space and enabling warehouses to transform into multi-level storage environments with full automation from storage to retrieval.

According to CIC, Geek+'s Pallet-to-Person solution can increase storage efficiency by >5 times, saving 60% of aisle space compared to traditional forklifts, and maximize warehouse capacity by up to 500%.

Figure 32: Characteristics of X-series robots and P800R robots

X1200

High density storage and flexible scheduling

X-series robots work within the racks, running on a track to complete inbound/outbound tasks. Their narrow body design saves up to 60% aisle space compared to a traditional forklift.

Robot Model	X1200	P800R
Dimensions (L*W*H)	1090*1030*160mm	1090*1030*275mm
Maximum Payload	1200kg	1000kg
Payload Size (L*W*H)	1200*1000*1800mm	1020*1020 mm~1250*1250 mm
Speed	Unload 1.5 m/s , Full-load1.2m/s	Unload 2m/s, Full-load 1.5m/s
Security	Laser obstacle detection, goods inspection, derailment prevention, etc.	Infrared Obstacle detection, LiDAR surpport
Working Temperature	32~113°F	14~122°F

Source: Company data, CMBIGM

■ **FleetSort solution**

As one of the world's first robotic flexible sorting solutions, the FleetSort solution, equips proprietary S-series robots to facilitate automatic sorting without the need for a steel platform, fully optimizing space and operations. The sorting solutions can be integrated with the Geek+ shelf-to-person picking solution, Geek+ tote-to-person picking solution, and Geek+ pallet-to-person picking solution, improving sorting efficiency to ten times that of manual processing.

With these advantages, the FleetSort solution works well with warehouses and sorting centers in industries that require parcel sorting, merchandise sorting, and returns processing, such as retail, pharmaceuticals, express delivery, and FMCG, optimizing automation, efficiency, flexibility, and ROI for customers. Classified by different sorting platforms, the Company primarily provides two types of solutions:

1) **Floor-based sorting:** This solution uses S20-series robots to sort small to medium-sized parcels at floor level.

2) **Multi-layer sorting:** This solution enables robots to function on different platform levels to improve efficiency and space utilization.

■ **Smart moving solution**

Designed for scenarios that require production line-side material handling, the smart moving solutions provide a full set of hardware and software capabilities covering processes from raw material storage and retrieval to material handling, transportation, and finished product warehousing in warehouses and factories. The solutions consist of (i) a material handling solution and (ii) a forklift solution, which supports a load range of up to two tons and a lift height of up to three meters. It is equipped with 360-degree, three-dimensional obstacle avoidance, efficiently automating inter-area transportation for industrial production processes while reducing the possibility of safety incidents.

In addition, the self-developed laser-vision fusion SLAM technology enables the smart moving solutions to use QR codes for navigation and precise positioning, enhancing the efficiency and flexibility of the solutions.

■   **AMR solution design and delivery**

Geekplus's AMR solution design consists of processes including solution prototyping, project distribution, proof of concept, project promotion, implementation design, and final delivery, with customization services provided in terms of interface, business processes, and other specific requirements of customers. By understanding the different focuses of non-domestic customers on software customization and domestic customers on hardware configuration, Geekplus leverages its advanced technologies to meet customer needs.

Regarding delivery and installation, the timelines vary due to differences in factors such as the type of solution, the customer's shelving installation schedule, and cross-border transportation. For standard AMR solutions, it primarily takes 6-8 weeks for manufacturing, 6-8 weeks for shipping, 1-3 months for deployment, and additional time before final customer acceptance.

Geekplus's AMR technology infrastructure

The infrastructure of the Company is primarily empowered by three technology platforms: (i) Robot Matrix, (ii) Geek+ Software Suite, and (iii) Hyper+ Core Algorithms. This platform-based approach enables Geekplus to maintain consistency in core capabilities while tailoring adjustments according to the specific needs of customers, enhancing product quality and efficiency.

■   **Robot Matrix**

Robot Matrix was launched in 2019 and integrates Geekplus's core hardware, software, and algorithm components to provide a series of ready-to-use technologies and functions that empower the development and research of AMRs.

By leveraging three core functions—positioning, motion control, and vision perception—of the platform, the Company can efficiently develop tailor-made AMR solutions according to the specific needs of customers from different industries and usage scenarios, while maintaining the foundation of standardized technology. This effectively ensures safety and reliability, enhances development efficiency, shortens project timelines, and reduces project costs for customers.

Figure 33: Three key functions of Robot Matrix

Key functions	Descriptions
Positioning	- Laser-vision fusion SLAM technology using LiDAR/RGBD cameras - Accuracy of less than ±10mm (±1°) - SLAM enables a robot to start from a location with a given environment and determine its own position and orientation
Motion control	- Execute predefined tasks autonomously - Adapt to uneven floors and adjust the speed - Monitor own performance and fault data for improvements
Vision perception	Revolutionary vision perception technologies based on 2D/3D cameras and the vision algorithm platform

Source: Company data, CMBIGM

■ **Geek+ Software Suite**

Geekplus's modular software solutions consist of (i) RMS, which is a traffic management and task allocation system, (ii) WES, a business system supporting various picking solutions, (iii) IOP, a data-driven intelligent operations platform providing operational insights and real-time monitoring, and (iv) G-Studio, a toolbox for project planning, deployment, and on-site service. Geek+ software plays a leading position in the industry and provides superior flexibility, compatibility, efficiency, and accuracy, with a simulation error of <5%. Geekplus reviews and updates the software suite regularly to ensure it keeps pace with the needs of customers as well as advancement in technology.

Figure 34: Core systems of Geek+ Software Suite

Functions	Descriptions
RMS	- Support both cloud and local deployment - handle path planning, traffic management, task allocation, capacity optimization and safety emergency stops for large-scale mobile robot clusters - Schedule 5,000 robots at the same time in warehouse fulfillment - Manage large-scale logistics in a 100,000-square-meter warehouse
WES	- Support both B2B and B2C operations - Manage various scenarios including dynamic wave picking and full case picking strategies - High availability architecture to ensure reliability and automatic failover capabilities to reduce downtime
IOP	- Detect exceptions across the whole warehouse system and trigger automatic alerts to stop potential disruptions - Real-time monitoring and alert capabilities to optimize operations like route settings - Offer low-code customization to meet specific needs in warehouse fulfillment - Track daily performance, analyze and deliver valuable reports and dashboards
G-studio	- G-plan: offer scenario modeling, simulation and data-driven evaluations to enhance efficiency and accuracy - G-service: streamline system diagnosis, upgrades and operations - G-deploy: streamline system implementation with features such as one-click installation and date migration - Mapbuilder: generate and adjust warehouse maps compatible with RMS and G-plan systems

Source: Company data, CMBIGM

Figure 35: Key advantages of Geek+ Software Suite

Key advantages	Descriptions
Intelligence and efficiency	▪ Improve warehouse operation efficiency by three times compared to manual picking ▪ Prevent scheduling deadlock or congestion ▪ Equipped with automated tally and a combination of push/pull picking
Security and reliability	▪ High reliability with a 99.99% uptime ▪ Minimize fulfillment interruptions by equipment failures ▪ Restart system and recover the task within 10 minutes
Openness	▪ Integrates smoothly with customers' existing business systems
User-friendliness	▪ A single portal access to reduce complexity
Integration flexibility	▪ Can be tailored to meet diverse and complex needs of customers in terms of warehouse automation

Source: Company data, CMBIGM

■ **Hyper+ Core Algorithms**

Geekplus's Hyper+ Core algorithms support one of the largest cluster scheduling scales and the widest range of algorithm types. The system consists of 25 algorithms specialized in warehouse tasks, including (i) traffic management and task allocation, (ii) warehouse management, and (iii) supply chain algorithms, improving picking efficiencies to up to 400 units per workstation per hour in the Geek+ shelf-to-person picking solution and 300 units per hour in the Geek+ tote-to-person picking solution.

In addition, the scheduling algorithms can coordinate over 5,000 AMRs in warehouse environments while enabling different types of robots to operate under a unified platform by supporting both homogeneous and heterogeneous robot systems, optimizing allocation and communication.

Figure 36: Key functions of Hyper+ Core Algorithms

Functions	Descriptions
Traffic management and task allocation	▪ Realize a dynamic task-matching algorithm using online and offline methods through real-time feedback ▪ Avoid deadlocks and traffic congestion between various robot paths based on historical data ▪ Build a framework supporting distributed online management and planning strategy learning among different types of robots
Warehouse management	▪ Provide optimal inventory storage solutions, sorting methods, and order grouping strategies ▪ Use operational research algorithms to solve for the optimal matching relationships between workstations, shelves and robots, as well as achieving maximization of warehouse throughput with minimal shelf movement
Supply chain algorithms	▪ Offer intelligent replenishment, transportation scheduling, product selection, location recommendations, product pricing and production planning ▪ Enable AMRs to execute automatically ▪ Assign tasks to the most suitable robots based on proximity and workload ▪ Optimize warehouse layout and task batching

Source: Company data, CMBIGM

Geekplus's sales channels

The major sales channels of Geekplus consist of (i) direct sales and (ii) channel partner sales in both domestic and non-domestic markets. In 2022 / 23 / 24, the direct sales of AMR solutions accounted for 51.5% / 73.1% / 66.8% of total revenue, while channel partner sales accounted for 34.4% / 26.0% / 32.9%, respectively.

Figure 37: Revenue breakdown of AMR solutions by sales channel
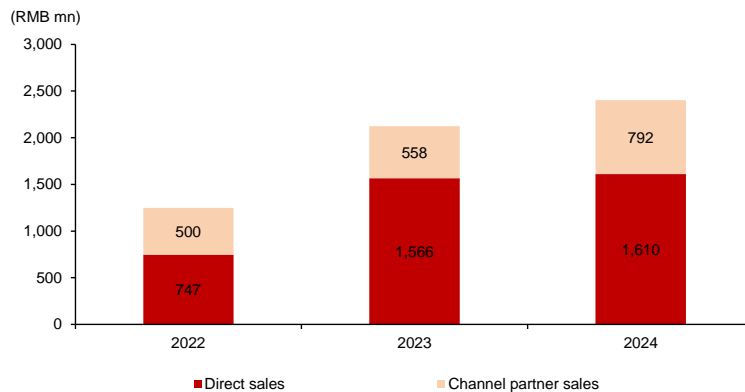
Source: Company data, CMBIGM

■ **Direct sales**

Geekplus generally utilizes direct sales to manage key customers by directly communicating and efficiently offering tailor-made solutions, which are essential to introduce and demonstrate the Company's advanced and complex products which require more specialist knowledge.

Figure 38: Key terms of direct sales agreements

Key terms	Descriptions
Product and project details	▪ The types of robots, software, and custom developments provided
Product and pricing structure	▪ A lump-sum price for the entire order or a detailed quotation covering single products
Pricing	▪ Subject to the terms of the agreements with provisions for additional charges
Maintenance and service	▪ A 12-month period of maintenance and post-sales services
Implementation and delivery	▪ Provide implementation services including the transport and customs clearance (if any)

Source: Company data, CMBIGM

■ **Channel partner sales**

In order to further expand its customer base, Geekplus has established a growing channel partner network consisting of 301 channel partners domestically and 64 channel partners non-domestically as of Dec 31, 2024.

Geekplus engaged 71 / 58 / 79 new channel partners in 2022/23/24, to expand its business scope while reducing internal costs.

Geekplus defines its channel partners as integrators and others. Integrators, which accounted for the majority of Geekplus's revenue from channel partner sales in 2022-24, typically purchase Geekplus's AMR solutions or products, consolidate them as part of their customized warehousing solutions, and then deliver these solutions to end customers. Other channel partners primarily resell Geekplus's AMR solutions to end customers, with supporting services including design, implementation, and after-sales services.

The agreements signed between Geekplus and local partners vary depending on the scenario. In non-domestic markets, the channel partners are typically mid-sized to large market players who have strong local warehousing-related knowledge and capabilities. Geekplus enters specific types of agreements, such as general framework agreements or detailed project-based purchase agreements, based on the collaboration models and specific projects. In the domestic market, Geekplus usually signs project-specific purchase agreements that include detailed terms and conditions with businesses having robust local networks, customer bases, and service infrastructure.

Figure 39: Change in Geekplus's channel partners in 2022-24

	FY2022	FY2023	FY2024
As the beginning of the period	181	248	299
Additions of channel partners	71	58	79
Exit of channel partners	4	7	13
As of the end of the period	248	299	365

Source: Company data, CMBIGM

Figure 40: Key contractual terms of agreements with channel partners

Key terms	Descriptions
Scope of agreement	▪ Non-exclusivity ▪ Products and services: can purchase various Geek+ products with no minimum purchase amount or minimum sales target

Pricing and payment	▪ Pricing flexibility
	  ○ Prices offer to channel partners according to price lists and update the lists from time to time
	  ○ Channel partners have the flexibility to determine the prices they offer to end customers
	▪ Payment structure: an initial deposit upon order confirmation, milestone payments tied to receipt and acceptance of the products
	▪ Deposit: some integrators require a fixed deposit as a performance security. The amount of such deposit vary from case to case. Deposit, less any deductions, will be refund upon the expiration of the warranty period

Responsibilities of channel partners	▪ Allocation of work
	  ○ Standard projects: Geekplus only supplies necessary products and solutions
	  ○ Complex and customized projects: channel partners focus on customer communication and overall project execution while Geekplus responsible for the remaining. The prices charged to channel partners also cover installation and implementation services
	▪ Training and support: channel partners undergo training by Geekplus and pass applicable warranties and indemnities to end customers
	▪ Order accuracy: channel partners ensure order accuracy
	▪ Acceptance and Installation: channel partners conduct acceptance checks to ensure products meet the requirement. In projects involving integrators, Geekplus typically is responsible for the installation and commissioning.

Quality	▪ Quality Standard: Geekplus provide products and services that meet the requirements of channel partners. If lack explicit provisions, products and services comply with the quality standards set by applicable laws and regulations. ▪ Technical Support: Geekplus offer 24/7 technical support services to its channel partners and project teams to integrators throughout the project lifecycle. ▪ Engagement of Third Parties: In order to ensure project quality, Geekplus may engage with third-party providers with the prior consent of the integrator.
Logistics and after-sales	▪ Product delivery: Geekplus is responsible for delivering. The risks will be transferred to the channel partner after acceptance or confirmation of delivery ▪ Warranties: warranties cover repairs or replacements except for certain exclusions
Product return and inventory	▪ Return policy ○ Return policy: generally do no accept product returns except for damage or defection upon receipt ▪ Inventory and channel stuffing: relieved due to product return policy and channel partner collaboration model
Project-based agreements	▪ Enter project-based agreements with channel partners and do not engage in business with customers sourced by channel partners unless customers request
Intellectual property and confidentiality	▪ IP rights: retain ownership of all IP rights, channel partners can use trademarks but must respect proprietary notices ▪ Confidentiality: both must obey strict confidentiality terms
Termination and renewal	▪ Term length: last for an initial term and renew upon mutual agreement ▪ Termination: by mutual agreement or means indicated in the agreement
Indemnification and liability	▪ Indemnification: agree to indemnify the channel partner against any claims related to IP infringement related to the use of Geek+ products ▪ Liability limitations: both agree to limit the liability with certain exceptions

Source: Company data, CMBIGM

Figure 41: Management of channel partners

Methods	Descriptions
Tiered management	▪ Select channel partners by evaluating various capabilities, legal status and financial resources ▪ Adopt a tiered management system for channel partners to ensure their incentives for improvements
Anti-cannibalism and business allocation	▪ Channel partners are required to report the leads in internal system when potential business opportunities occur ▪ Allocate opportunities on a "first-come, first-served" basis to ensure no channel partner competes with another for the same customer
Channel partner enablement	▪ Offer extensive training and certification programs with the coverage of sales, planning and project implementation ▪ Assess and certify channel partners based on their proficiency in distribution and marketing ▪ Channel partners must complete the theoretical and practical assessments to earn certification
Satisfaction survey	▪ Conduct the channel satisfaction survey process biannually across all regions ▪ Results, plans and updates are shared and reviewed quarterly during channel business reviews

Source: Company data, CMBIGM

Customers

Geekplus's customer base spans across countries and industries, with a specific focus on the e-commerce, FMCG, and third-party logistics (3PL) sectors. As one of the AMR solution providers with the widest industry coverage, Geekplus also ranks first among global AMR solution providers in the e-commerce, FMCG, and third-party logistics industries in terms of revenue in 2024, according to CIC.

Geekplus's customers include direct customers such as corporations and businesses striving for warehouse automation solutions, as well as channel partners consisting of integrators and others. In 2022/23/24 direct sales accounted for 51.5%/ 73.1%/ 66.8% of total AMR solutions sales, while channel partner sales accounted for 34.4%/26.0%/32.9%.

In 2022/23/24, revenue from the top five largest customers accounted for 30.8%/45.3%/42.1% of the Company's total revenue, respectively. Revenue from the single largest customer contributed 9.3%/15.4%/15.5% of total revenue. One of the top five largest customers in 2024, Geekplus JP, is a Japanese company in which Geekplus holds approximately 39.6% equity shares. In 2022/23/24, Geekplus JP, operated as a channel partner in Japanese market, contributed 2.8%/4.9%/7.3% of Geekplus total revenue.

Figure 42: Geekplus's revenue from top 5 customers as % of total revenue

2024: Customer G 3.6%, Customer C 15.5%, 8.9%, Customer H 6.8%, Geekplus JP 7.3%

2023: Customer A 15.4%, Customer C 5.4%, Customer D 13.1%, Customer F 5.8%, 5.6%

2022: Customer A 9.3%, Customer B 6.3%, Customer C 5.8%, Customer D 4.9%, Customer E 4.5%

Legend: ■ Customer A ■ Customer B ■ Customer C ■ Customer D ■ Customer E ■ Customer F ■ Customer G ■ Customer H ■ Geekplus JP
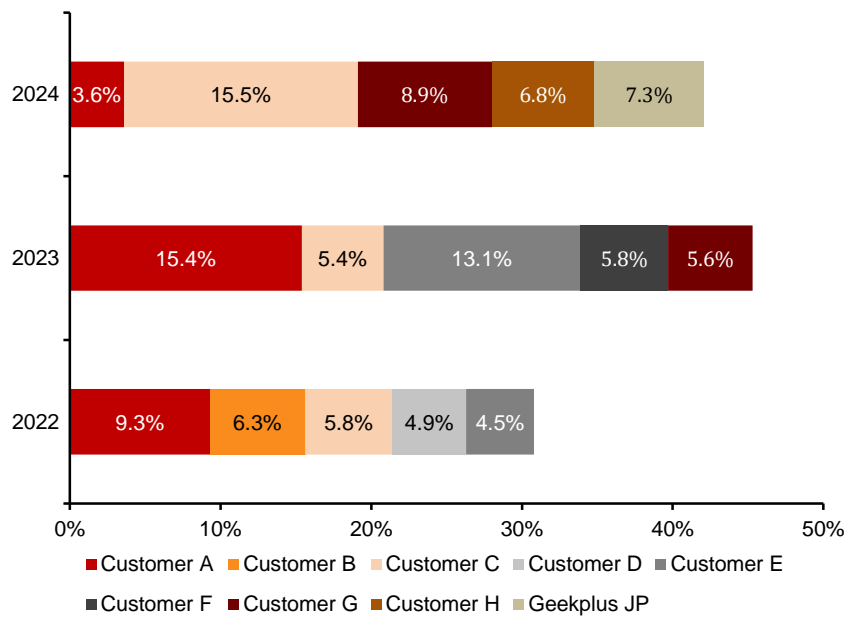
Source: Company data, CMBIGM

Suppliers

Geekplus's principal materials include robot structure parts, motors, drive wheels, controllers, and power batteries. The Company develops key components proprietarily and collaborates with specific suppliers for certain semi-finished products.

In 2022/23/24, purchases from the five largest suppliers accounted for 14.7%/15.1%/17.5% of total purchases, while purchases from the largest supplier amounted to 3.6%/3.8%/4.4% of total purchases.

Competitive Edges

Global AMR pioneer with leading position in warehouse fulfillment

Geekplus is a global AMR pioneer with a leading market position in warehouse fulfillment. Geekplus was the first to introduce the PopPick Solution and the Geek+ Tote-to-Person Picking Solution, which is considered the benchmark of the industry and is the world's largest warehouse fulfillment AMR solution provider in terms of revenue in 2024, with a market share of 9%, according to CIC.

With presence in ~40 countries and regions, Geekplus has the widest coverage among AMR solution providers worldwide. It also has the largest global customer base in the warehouse fulfillment AMR solution market, with ~806 end customers across different industries and regions. Thanks to the impactful AMR solutions and high customer loyalty, Geekplus achieved a repurchase rate of 74.6%/84.3% among all customers / key account customers in 2024.

Flexible and integrated AMR solutions to provide exceptional value

Compared with traditional systems, the Company's modular AMR solutions can satisfy various needs and sizes with a 99.99% picking accuracy rate while supports complicated,

mixed scheduling for different types of robots and operations. Moreover, Geekplus provides a series of components, from robots and workstations to software systems, as well as fully integrated hardware and software solutions to cater to the specific needs of each customer, reducing labor costs and optimizing the return on investment and profitability for them.

Continuous technology innovation on platforms

Geekplus's comprehensive understanding of AMR hardware, software, and algorithms enables the Company to build its platform-based development framework, which drives innovation and creates new solutions in the field of AMR technologies. The Company's core full-stack technology architecture consists of (i) Robot Matrix, which is the world's first robotic general technology platform providing a suite of significant technologies for AMRs' R&D, according to CIC; (ii) Geek+ Software Suite, which is the software platform presenting core site deployment systems, including RMS, WES, and IOP; and (iii) Hyper+ Core Algorithms, which is a suite of high-performance optimization algorithms coordinating AMRs in warehouse scenarios. These platforms effectively facilitate Geekplus's expansion across various industries and geographical regions.

Quality customer service and efficient supply chain

Geekplus is focused on improving customer service quality to meet thriving market needs and raise industry standards. Within the principle of "customer first," the Company provides a 24/7 English call center and local hotlines to respond to customer inquiries within 10 minutes. Hardware issues can be addressed by online support within 24 hours, while technicians can be sent onsite within 48 hours, regardless of the customer's location. The Company is also equipped with 13 spare parts centers, as well as >48 service stations and partner sites worldwide, to deliver replacement parts within one day for clients.

To establish an efficient supply chain, the Company employs a mixed-line product approach, which can manufacture different models of AMRs on the same production line to improve capacity utilization and reduce costs. High levels of automation have been achieved in key production and testing processes to optimize production quality and minimize human error. Additionally, the Company constantly replaces key components with domestically produced alternatives that provide equal or better functionality at a lower cost by leveraging the mature supply chain in China to improve the quality of its solutions worldwide.

Forward-thinking management team and visionary corporate values

Geekplus's founders, Mr. Zheng Yong, Mr. Li Hongbo, Mr. Liu Kai, and Mr. Chen Xi, have many years of experience in AMR solutions, while their bonding, cooperation, and shared vision toward AMR solutions can be traced back 10 years. Together with a capable executive team and corporate principles centered on clients, innovation, and collaboration, Geekplus is able to implement its strategies and solidify its market leadership in the global market.

Growth Strategy

Solidify leading position by continuous R&D

Geekplus aims to solidify its existing market leadership in the AMR market by constantly investing in improving R&D capabilities focused on areas including AMR innovation, intelligent warehouse management, robot control and management software, robotic hardware, and more. The Company also seeks to develop and upgrade its hardware-software architecture to ensure the smooth integration of hardware with software and algorithms, improve operational efficiency and system stability of solutions, optimize the R&D process, strengthen AMRs' capabilities and operational management, and enrich existing product functions.

Improve global presence

As one of the earliest Chinese AMR solution providers achieving international commercialization, Geekplus intends to further enhance its global presence in developed markets with warehouse automation opportunities. For instance, the Company will expand its sales team, regional partnerships, and channel partner network while allocating resources to improve service capabilities for international customers and further boost overseas sales. In addition, Geekplus will strengthen business partnerships with existing key customers by upgrading current facilities and establishing new partnerships by identifying key customers in industries with strong warehouse automation demand and expanding into key sub-sectors.

Expand solution matrix

Geekplus strives to broaden its solution offerings by improving existing product features and upgrading products through consolidating the latest industry trends and customer feedback. In addition to standardized solutions, the Company will also provide tailor-made AMR solutions, such as localized AMR solutions across various markets by offering technical tools and core capabilities. Moreover, Geekplus will explore AMR software monetization opportunities to optimize operational efficiency for customers and seize the industry trend of shifting to integrated AMR solutions with key software capabilities.

Enhance supply chain capability and operational efficiency

Geekplus plans to utilize economies of scale in delivering AMR solutions to enhance supply chain capability by entering strategic agreements with key suppliers to ensure price stability. The Company will also establish a localized supply chain to improve efficiency by setting up more spare parts centers in key markets. To further improve operational efficiency, Geekplus intends to integrate the procurement system into its internal enterprise resource planning system to facilitate the digital transformation of the supply chain, as well as expand the local team and provide training to local partners.

Fulfill ESG practices and attract global talents

Geekplus is committed to fulfilling ESG practices and driving sustainable development by adhering to the latest international ESG standards, constantly integrating eco-friendly elements into AMR solutions, and maintaining a green supply chain to minimize carbon emissions and reduce the carbon footprint in its offices and production facilities.

With a view to regarding talent as a core strategic asset of the Company, Geekplus continuously seeks to attract and retain global talents who fit and understand the corporate culture and values. To achieve this goal, Geekplus intends to build its talent base through external recruitment and internal development, seeking management professionals with prior experience from multinational corporations, as well as valuing R&D talents and local engineering professionals with both AMR product knowledge and an understanding of local culture to facilitate the growth of the Company.

Financial Analysis and Earnings Forecast

Revenue

Warehouse fulfillment was the major source of revenue in 2024 (90% of total revenue), while industrial material transport accounted for 9.4% of total revenue. The total revenue surged 48% YoY to RMB2.1bn in 2023, and further grew 12% YoY to RMB2.4bn in 2024, driven by (1) expansion of customer base, and (2) higher average revenue per customer. The revenue contribution from individual customers has been largely driven by the increase in recurring purchases from the large and high-value key customers (thanks to the strong loyalty). In 2022/23/24, the conversion ratio (revenue / order intake) were 73%/80%/77%.

Assumptions: We forecast order intake of RMB4.4bn in 2025E (+40% YoY). Assuming a 73% conversion ratio, we forecast revenue of RMB3.2bn in 2025E (+32% YoY). We forecast revenue growth of 36% in 2026E.

Figure 43: Revenue projection
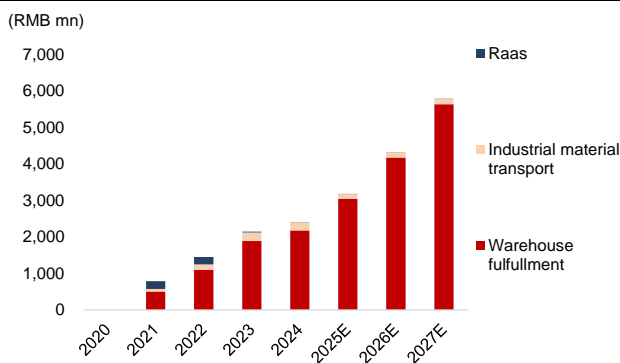
Source: Company data, CMBIGM estimates

Figure 44: Revenue / order intake
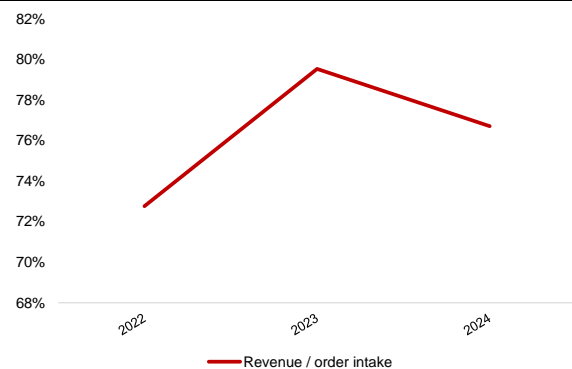
Source: Company data, CMBIGM

Gross margin

In 2023, the blended gross margin expanded 13.1ppt YoY to 30.8%, driven by rising contribution of warehouse fulfillment which carried high gross margin (expanded 2.4ppt YoY to 39%).

In 2024, the blended gross margin expanded 4ppt YoY to 34.8%, mainly due to further increase in contribution of warehouse fulfillment business. The segment gross margin of warehouse fulfillment slightly expanded 0.2ppt YoY to 39.2% in 2024, driven by the continuous cost reduction through product design optimization and supply chain management.

Assumptions: We expect the warehouse fulfillment segment gross margin to gradually increase from 38% in 2025E to 39.8% in 2027E, driven by the increase in KA clients that contribute a higher margin. We forecast the blended gross margin to expand gradually from 37% in 2025E to 38% in 2026E, driven by continuous increase in warehouse fulfilment contribution.

Figure 45: Gross margin by segment
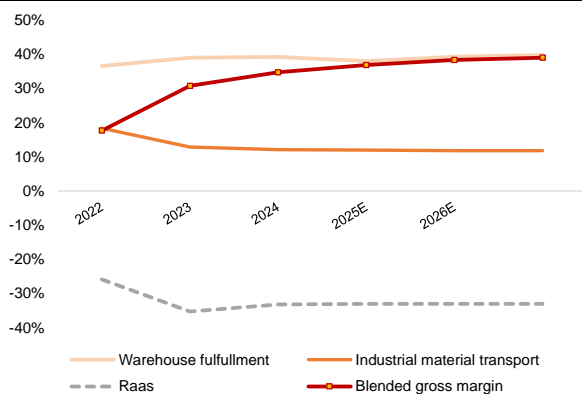
Source: Company data, CMBIGM estimates

Figure 46: Gross margin by location
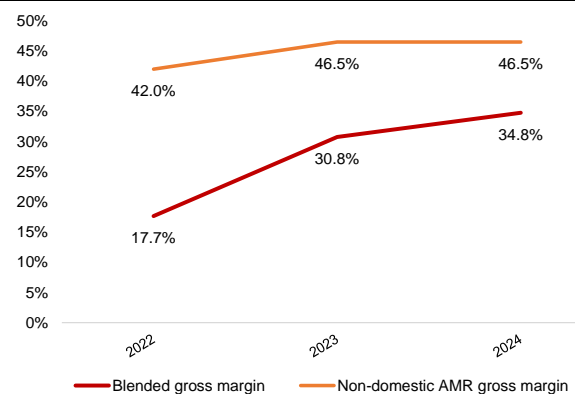
Source: Company data, CMBIGM

Figure 47: Key assumptions

(RMB mn)	2022	2023	2024	2025E	2026E	2027E
Revenue						
Sales of AMR solution	1,247	2,124	2,402	3,171	4,311	5,783
Warehouse fulfillment	1,099	1,885	2,176	3,047	4,174	5,635
Industrial material transport	149	240	226	124	137	148
Raas	205	19	7	5	5	5
Total revenue	**1,452**	**2,143**	**2,409**	**3,176**	**4,316**	**5,788**
Revenue growth						
Sales of AMR solution	*117.1%*	*70.3%*	*13.1%*	*32.0%*	*35.9%*	*34.1%*
Warehouse fulfillment	*118.9%*	*71.5%*	*15.5%*	*40.0%*	*37.0%*	*35.0%*
Industrial material transport	*104.3%*	*61.2%*	*-5.6%*	*-45.0%*	*10.0%*	*8.0%*
Raas	*-4.8%*	*-90.8%*	*-64.5%*	*-20.0%*	*0.0%*	*0.0%*
Total revenue growth	*83.9%*	*47.6%*	*12.4%*	*31.9%*	*35.9%*	*34.1%*
Gross profit						
Sales of AMR solution	429	766	881	1,173	1,656	2,260
Warehouse fulfillment	402	735	854	1,158	1,640	2,243
Industrial material transport	27	31	27	15	16	17
Raas	(53)	(7)	(2)	(2)	(2)	(2)
Write-down of inventories	(120)	(100)	(42)	0	0	0
Total gross profit	**257**	**659**	**837**	**1,171**	**1,655**	**2,258**
Gross margin						
Sales of AMR solution	*34.4%*	*36.1%*	*36.7%*	*37.0%*	*38.4%*	*39.1%*
Warehouse fulfillment	*36.6%*	*39.0%*	*39.2%*	*38.0%*	*39.3%*	*39.8%*
Industrial material transport	*18.4%*	*12.9%*	*12.1%*	*12.0%*	*11.8%*	*11.8%*
Raas	*-25.9%*	*-35.3%*	*-33.2%*	*-33.0%*	*-33.0%*	*-33.0%*
Blended gross margin	***17.7%***	***30.8%***	***34.8%***	***36.9%***	***38.3%***	***39.0%***

Source: Company data, CMBIGM estimates

Selling and marketing expenses

Selling and marketing expense ratio dropped substantially from 31.4% in 2022 to 18.5% in 2024, driven by the growing acceptance of the products, repeat purchases from key accounts and the improvement of channel capabilities.

Administrative expenses

Administrative expense ratio dropped from 15.2% in 2022 to 9.1% in 2024, mainly due to improved efficiency and strict control over the expenses. Given that listing expense of ~RMB24mn was recognized in 2024, the administrative expense ratio (excluding listing expense) would be 8.1% only.

Assumptions: We forecast the SG&A expense ratio to further drop in 2025E-26E, driven by further expense control and operating leverage.

R&D expenses

Research and development expenses decreased from RMB437mn in 2022 to RMB282mn in 2024, mainly due to the strategic focus on the streamlining and standardization of solutions in the warehouse fulfillment area rather than the entire range of AMR solutions. The R&D expense ratio fell from 30% in 2022 to 11.7% in 2024.

Assumptions: We forecast the R&D expense ratio will only slightly decrease (from 11% in 2025E to 9.5% in 2026E) as we expect the Company will need continuous spending to enhance the technology.

Figure 48: SG&A expense ratio
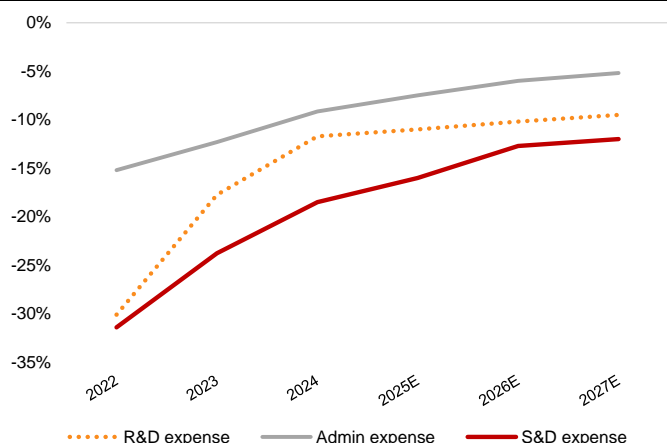
Source: Company data, CMBIGM estimates

Net profit

Geekplus recorded attributable loss of RMB1,567mn / 1,127mn / 832mn in 2022/23/24. Stripping out (1) the listing expenses, (2) the changes in the carrying amount of redemption liabilities, and (3) the share-based expense, we calculate that the adjusted net losses were RMB821mn / 458mn / 92mn in 2022/23/24.

Forecast: We expect Geekplus to start delivering marginal net profit in 2025E. We expect the adjusted net profit to reach ~RMB400mn in 2026E, implying >9% adjusted net profit margin.

Risk Factors

Uncertainties in the AMR solution industry and threat from new entrants

Geekplus's business relies heavily on the growth of the fast-paced AMR solution industry in warehouse fulfillment and industrial material transport. The industry is primarily influenced by several factors, including: 1) technological development and emphasis on automation, 2) market interest in AMR solutions, 3) regulations for AMR solutions, and 4) economic or industry trends. These factors could lead to the market not adopting, or delaying the adoption of, the Company's AMR solutions, thereby impacting the Company's business and growth. Geekplus also faces fierce industry competition from new entrants, despite high barriers and existing advanced AMR providers.

Failure to develop efficient AMR solutions

As R&D capabilities remain essential to Geekplus's operations, the Company continuously invests heavily in R&D, including financial resources, labor, and time. However, R&D processes may encounter uncertainties. Situations such as unsuccessful outcomes, heavy costs incurred during the processes, and benefits delivered below expectations could negatively affect Geekplus's business.

Limited operating history and loss-making

With a limited operating history (since 2015), the Company's capacity to accurately predict future operational results is influenced by several uncertainties, such as the ability to plan for and model future growth. In addition, the Company has incurred operating losses and net losses in 2022-24. As the Company is still in the stage of expansion, the earnings visibility remains limited at this stage.

Challenges in managing expanded business

As Geekplus strives to expand its global presence, it faces various challenges in managing this expansion, particularly including: 1) managing a larger organization with an increasing number of employees across countries and regions; 2) managing the supply chain and channel partner network to facilitate rapid growth; 3) balancing expansion with expense and investment control; 4) establishing and improving relevant facilities, systems, and processes; and 5) effectively addressing new markets and unforeseen challenges. If Geekplus is unable to respond to new challenges in a timely manner, customer satisfaction, reputation, operations, and financial performance may be negatively impacted.

Dependence on certain customers

Collaborating with key customers is a key strategy for Geekplus to fuel its earnings growth. In 2022, 2023, and 2024, the revenue generated from the top five largest customers accounted for 30.8%, 45.3%, and 42.1%, respectively. There is no guarantee that the Company will be able to sustain these relationships in the future. Key customers may cancel, reduce, or delay their purchases, and some may choose to collaborate with Geekplus's competitors or develop technology independently.

Unable to recruit or retain highly skilled professionals

Key employees, including senior management, engineers, product designers, and support service professionals, are regarded as the core of the Company's future success and are difficult to replace. There is no assurance that the Company can maintain these professionals while controlling labor costs reasonably. Additionally, the Company plans to hire additional talent to foster further growth. If it is unsuccessful in hiring, training, and retaining qualified professionals, the Company's business objectives and overall operational performance may be adversely impacted.

Appendix

Company background

Figure 49: Geekplus's major business development milestones
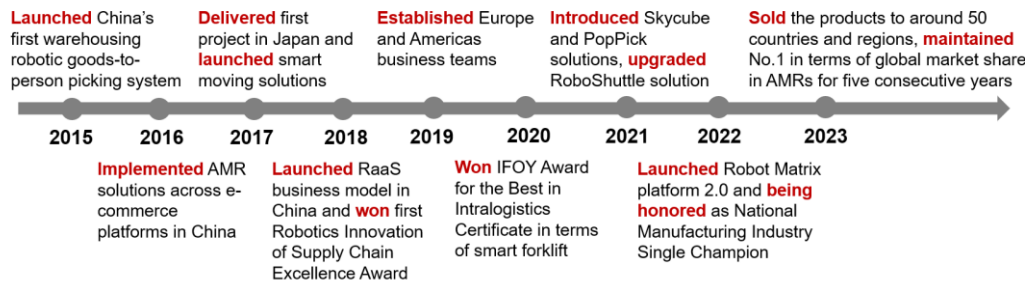
Source: Company data, CMBIGM

Figure 50: Geekplus's management profile

Name	Age	Position	Role	Profile
Zheng Yong	45	Chairman of the Board, executive Director and chief executive officer	Overall business and product strategies, overall product management, core management team recruiting, organizational management and financing activities of the group	Mr.Zheng founded the company and has been serving as a Director since its inception in Feb 2015. Mr.Zheng was re-designated as an executive Director in Nov 2024. He has also been concurrently serving as a director and/or general manager of various subsidiaries of the company. Mr.Zheng started his career in supply chain management at global enterprises. After graduation, he was first with various subsidiaries of ABB Ltd, a globally recognized company in electrification and automation from Jul 2004 to Oct 2009 as an operations manager, and then with a subsidiary of Compagnie de Saint-Gobain S.A. from Apr 2010 to Apr 2013 as a plant manager. Based on his industrial knowledge and expertise, Mr.Zheng joined New Horizon Capital as a senior manager from May 2013 to Jun 2015. Mr. Zheng was recognized as one of Fortune China's 40 under 40 business elites in Sep 2018 and obtained 25 invention patents relevant to robotics. He was also honored with the China Smart Logistics Industry Elite Award in 2020, awarded with the 9th LT China Logistics Technology Award (Person of the Year) by Soo56 in 2020, as well as recognized as "Pioneer of the Year" by OFweek in the OFweek China Industrial Automation and Digitalization Industry Annual Awards in 2021. Mr.Zheng obtained his bachelor's degree in management science and engineering from Tsinghua University in Jul 2001, and obtained a master's degree in management science and engineering from Tsinghua Univeristy as well as a master's degree in production engineering from RWTH Aachen University through its joint master's program with Tsinghua University in 2004.
Li Hongbo	44	Executive Director, chief technology officer and vice president	Overall R&D of the group, management of product and technology initiatives and maintaining industry relations	Mr.Li co-founded the company and has been serving as a Director since Dec 2015, re-designating as an executive Director in Nov 2014. He has also been concurrently serving as a director, supervisor and/or general manager of various subsidiaries of the company. Mr.Li is a senior engineer at the professor level recognized by Beijing Senior Professional and Technical Qualification Review Committee in May 2019, and a recipient of a special government allowance from the State Council since June 2024. Mr.Li is also recognized as a Prominent Figure in the Zhongguancun High-level Talent Project, a Leading Talent in Capital Science and Technology, an Outstanding Young Member of the China Federation of Logistics & Purchasing Technology and an Excellent Engineer in Beijing. Before co-founding the Company, Mr.Li served as a postdoctoral researcher and as an associate researcher in the Department of Computer Science and Technology at Tsinghua University, and has published over 50 papers in top scientific journals and holds over 130 authorized patents. Mr.Li obtained the Natural Science Award by the Ministry of Education of the PRC in Jan 2011, the Beijing Science and Technology Award by the People's Government of Beijing Municipality in Dec 2014, the Natural Science and Technology Award by the Chinese Association of Automation in Oct 2015, "Inventor Entrepreneurship Award-Project Award at International Invention Exhibitions by China Association of Inventions in Sep 2018, an Excellent Patent Award by China National Intellectual Property Administration of PRC in Jul 2023 and the Science and Technology Award by China Federation of Logistics & Purchasing in Aug 2023. Mr.Li has also been an editorial board member of the International Journal of Control Automation and Systems since Sep 2013, a member of China Association for Artificial Intelligence since Dec 2014, the director of the Beijing Logistics Robotics Innovation Center since Dec 2022 and a member of the Chinese Association of Automation. Mr.Li obtained bachelor's degree in automation from Northeastern University in Jul 2004 and doctoral degree in computer science and technology from Tsinghua University in Jul 2019.
Liu Kai	38	Executive Director and vice president	Overall software R&D of the group	Mr.Liu co-founded the company in Feb 2015 and has been serving as a Director since Jun 2016. He was re-designated as an executive Director in Nov 2024 and has also been concurrently serving as a director and/or general manager of various subsidiaries of the company. Before co-founding the company, Mr.Liu worked at the Beijing Institute of Control Engineering from Aug 2011 to Jul 2015 as an engineer with expertise in the R&D of intelligent robots and multi agent system. Mr.Liu holds 144 patents and received the Science and Technology Progress Award from the China Federation of Logistics & Purchasing in Sep 2019, and was named an "X.36Under36" S-Class Entrepreneur by 36 Kr in Jun 2022 and recognized as one of the Hurun Under 40s China Entrepreneurs by the Hurun Research Institute in Nov 2023. Mr.Liu obtained his bachelor's degree in electronic information engineering from the University of Science and Technology Beijing in Jul 2008 and his master's degree in computer science and technology from Tsinghua University in Jun 2011.
Chen Xi	40	Executive Director and vice president	Overall hardware R&D of the group	Mr.Chen co-founded the company in Feb 2015 and has been serving as a Director since Jun 2016. He was re-designated as an executive Director in Nov 2024 and has also been concurrently serving as a director or supervisor of various subsidiaries of the company. Mr.Chen contributed to the National High Technology Research and Development Program project on "High-Precision Positioning Technology for Underground Unmanned Mining Equipment and the Model Technology Research of Intelligent Unmanned Loaders", which further polished his knowledge in the robotics, intelligent systems and automation areas. Before co-founding the company, Mr.Chen worked at Raisecome Technology Development Co., Ltd. from Jan 2010 to Jul 2015 specializing in the fields of high-speed fiber optic communication and wireless communication. He has also been a committee member under the automation committee under the Chinese Association of Automation since Jan 2024. Mr. Chen obtained a bachelor's degree in electronic information engineering in Jul 2007 and a master's degree in automotive engineering from the University of Science and Technology Beijing in Jan 2010.
Liu Hongyan	42	Chief financial officer and secretary to the Board	Overall management of finance, investments and capital market activities of the group	Ms.Liu is also in charge of finance for some of the subsidiaries and was the Director of the company from Jan 2018 to Mar 2021. Prior to joining the company, Ms.Liu was a deputy financial director and a financial director successively at Zhejiang Yasha Decoration Co., Ltd. from Oct 2008 to Dec 2014. After that, she served as a risk control direcor in Xiamen Deep Century Investment Management Partnership (Limited Partnership) from Mar 2016 to Jul 2017, and a fund operation manager at the financial department of Cathay Capital Investment Consulting (Shanghai) Co., Ltd. from Jul 2017 to Nov 2017. Ms. Liu is also served as the supervisor of Tianjin Shuzhi Jiachuang, Tianjin Yunzhi Jiachuang, Tianjin Huizhi Jiachuang and Tianjin Yuanzhi Jiachuang, which are the controlling shareholders of the company. Ms. Liu obtained her bachelor's degree and master's degree in accounting in Jul 2004 and Dec 2014 from Xiamen University.

Source: Company data, CMBIGM

Employee headcount

As of 31 Dec 2024, Geekplus had 994 employees, of which ~74% were based in the Chinese mainland.

Figure 51: Geekplus's employee breakdown by function (Dec 31, 2024)

Function	#	% of total
Sales and marketing	464	46.7%
Research and development	408	41.0%
General and administrative	68	6.8%
Supply chain and manufacturing	54	5.4%
Total	**994**	**100.0%**

Source: Company data, CMBIGM

Figure 52: Geekplus's employee breakdown by region
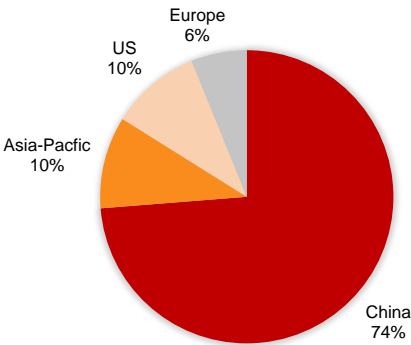
Source: Company data, CMBIGM

Financial Summary

INCOME STATEMENT	2022A	2023A	2024A	2025E	2026E	2027E
YE 31 Dec (RMB mn)						
Revenue	**1,452**	**2,143**	**2,409**	**3,176**	**4,316**	**5,788**
Cost of goods sold	(1,196)	(1,484)	(1,572)	(2,005)	(2,661)	(3,530)
Gross profit	**257**	**659**	**837**	**1,171**	**1,655**	**2,258**
Selling expense	(456)	(509)	(446)	(508)	(548)	(695)
Admin expense	(221)	(264)	(220)	(238)	(259)	(301)
R&D expense	(437)	(380)	(282)	(349)	(440)	(550)
Other income	70	14	(15)	0	0	0
Other gains/(losses)	(732)	(648)	(686)	0	0	0
Share of (losses)/profits of associates/JV	(15)	15	0	1	1	1
EBITDA	**(682)**	**(408)**	**(79)**	**105**	**440**	**746**
Depreciation	125	88	62	42	44	44
EBIT	**(807)**	**(496)**	**(141)**	**62**	**396**	**702**
Interest income	3	20	14	27	43	43
Interest expense	(12)	(13)	(14)	(14)	(16)	(17)
Net Interest income/(expense)	**(10)**	**6**	**(0)**	**13**	**27**	**26**
Pre-tax profit	**(1,564)**	**(1,123)**	**(827)**	**76**	**424**	**729**
Income tax	(3)	(4)	(4)	(8)	(47)	(80)
Minority interest	0	0	0	0	0	0
Net profit	**(1,567)**	**(1,127)**	**(832)**	**68**	**378**	**648**
Adjusted net profit	**(821)**	**(458)**	**(92)**	**112**	**402**	**673**
Gross dividends	0	0	0	0	0	0

BALANCE SHEET	2022A	2023A	2024A	2025E	2026E	2027E
YE 31 Dec (RMB mn)						
Current assets	**3,249**	**3,267**	**2,929**	**5,652**	**6,466**	**7,658**
Cash & equivalents	1,121	760	636	2,470	2,631	2,510
Account receivables	373	708	714	1,027	1,338	1,833
Inventories	1,185	1,191	1,029	1,498	1,710	2,351
ST bank deposits	90	99	131	131	131	131
Financial assets at FVTPL	0	51	0	0	0	0
Other current assets	479	457	419	526	656	832
Non-current assets	**185**	**180**	**276**	**357**	**417**	**476**
PP&E	99	91	197	287	354	418
Deferred income tax	0	0	0	0	0	0
Investment in JVs & assos	21	35	32	33	34	34
Intangibles	9	12	13	13	14	14
Goodwill	0	0	0	0	0	0
Financial assets at FVTPL	0	0	0	0	0	0
Other non-current assets	56	43	34	24	16	11
Total assets	**3,434**	**3,447**	**3,204**	**6,009**	**6,883**	**8,134**
Current liabilities	**7,717**	**8,844**	**9,404**	**2,664**	**3,161**	**3,763**
Short-term borrowings	211	421	414	464	514	564
Account payables	642	821	1,000	1,308	1,754	2,307
Tax payable	2	0	2	2	2	2
Other current liabilities	6,862	7,601	7,989	891	891	891
Non-current liabilities	**45**	**47**	**49**	**49**	**49**	**49**
Long-term borrowings	0	0	0	0	0	0
Other non-current liabilities	45	47	49	49	49	49
Total liabilities	**7,762**	**8,890**	**9,453**	**2,713**	**3,210**	**3,812**
Total shareholders equity	**(4,328)**	**(5,443)**	**(6,249)**	**3,296**	**3,674**	**4,322**
Minority interest	0	0	0	0	0	0
Total equity and liabilities	**3,434**	**3,447**	**3,204**	**6,009**	**6,883**	**8,134**

CASH FLOW	2022A	2023A	2024A	2025E	2026E	2027E
YE 31 Dec (RMB mn)						
Operating						
Profit before taxation	**(1,564)**	**(1,123)**	**(827)**	**76**	**424**	**729**
Depreciation & amortization	125	124	124	42	44	44
Tax paid	(1)	(6)	(2)	(8)	(47)	(80)
Change in working capital	(134)	(382)	(282)	(581)	(207)	(760)
Others	926	916	882	(14)	(28)	(27)
Net cash from operations	**(648)**	**(471)**	**(106)**	**(484)**	**187**	**(94)**
Investing						
Capital expenditure	(36)	(46)	(97)	(120)	(100)	(100)
Acquisition of subsidiaries/ investments	0	0	0	0	0	0
Others	(184)	15	145	24	40	40
Net cash from investing	**(219)**	**(31)**	**48**	**(96)**	**(60)**	**(60)**
Financing						
Dividend paid	0	0	0	0	0	0
Net borrowings	131	210	(7)	50	50	50
Proceeds from share issues	1,450	0	0	2,379	0	0
Others	(77)	(60)	(49)	(14)	(16)	(17)
Net cash from financing	**1,505**	**150**	**(56)**	**2,414**	**34**	**33**
Net change in cash						
Cash at the beginning of the year	0	1,121	760	636	2,470	2,631
Exchange difference	484	(9)	(11)	0	0	0
Cash at the end of the year	**1,121**	**760**	**636**	**2,470**	**2,631**	**2,510**

GROWTH	2022A	2023A	2024A	2025E	2026E	2027E
YE 31 Dec						
Revenue	na	47.6%	12.4%	31.9%	35.9%	34.1%
Gross profit	na	157.0%	27.0%	39.9%	41.3%	36.5%
EBITDA	na	na	na	na	321.2%	69.5%
EBIT	na	na	na	na	539.0%	77.1%
Net profit	na	na	na	na	455.1%	71.7%
Adj. net profit	na	na	na	na	258.5%	67.7%

PROFITABILITY	2022A	2023A	2024A	2025E	2026E	2027E
YE 31 Dec						
Gross profit margin	17.7%	30.8%	34.8%	36.9%	38.3%	39.0%
EBITDA margin	(47.0%)	(19.0%)	(3.3%)	3.3%	10.2%	12.9%
Adj. net profit margin	(56.5%)	(21.4%)	(3.8%)	3.5%	9.3%	11.6%
Return on equity (ROE)	na	na	na	na	10.8%	16.2%

GEARING/LIQUIDITY/ACTIVITIES	2022A	2023A	2024A	2025E	2026E	2027E
YE 31 Dec						
Net debt to equity (x)	na	na	na	(0.6)	(0.6)	(0.5)
Current ratio (x)	0.4	0.4	0.3	2.1	2.0	2.0
Receivable turnover days	46.9	92.1	107.7	100.0	100.0	100.0
Inventory turnover days	na	292.3	257.8	230.0	220.0	210.0
Payable turnover days	na	180.0	211.5	210.0	210.0	210.0

VALUATION	2022A	2023A	2024A	2025E	2026E	2027E
YE 31 Dec						
P/E	ns	ns	ns	341.2	61.5	35.8
P/B	na	na	ns	7.0	6.3	5.4
Div yield (%)	0.0	0.0	0.0	0.0	0.0	0.0

Source: Company data, CMBIGM estimates. Note: The calculation of net cash includes financial assets.

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