

# Zhen Ding Technology Holding (4958 TT)

## Investor Presentation

May 2025



# Safe Harbor Notice

- Zhen Ding Technology Holding's statements of its current expectations are forward looking statements subject to significant risks and uncertainties and actual results may differ materially from those contained in the forward-looking statements.
- Except as required by law, we undertake no obligation to update any forward-looking statement, whether as a result of new information, future events, or otherwise.

# Zhen Ding (ZDT) at a Glance



## Global No. 1

PCB Manufacturer

**2006** Founded  
(Former Foxconn  
Advanced Tech, 1978)

**Taoyuan, Taiwan**  
Headquarter

**48,141**

Employees as of End-2024



**29** Facilities

Located in Mainland  
China, Taiwan,  
Thailand and India

**NT\$171.7bn**

Revenue in 2024  
(13.4% YoY)

**NT\$99.0bn**

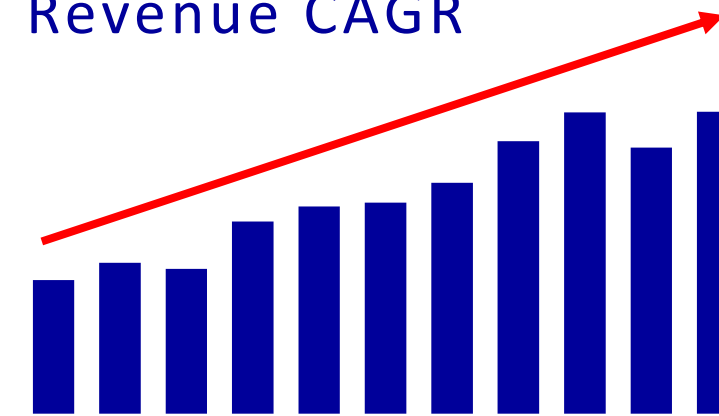
Market Cap  
(as of May 12, 2025)

**13.3%**

10-yr Average ROE  
(2015-2024)

**+9%**

2014-2024  
Revenue CAGR



**1,868**

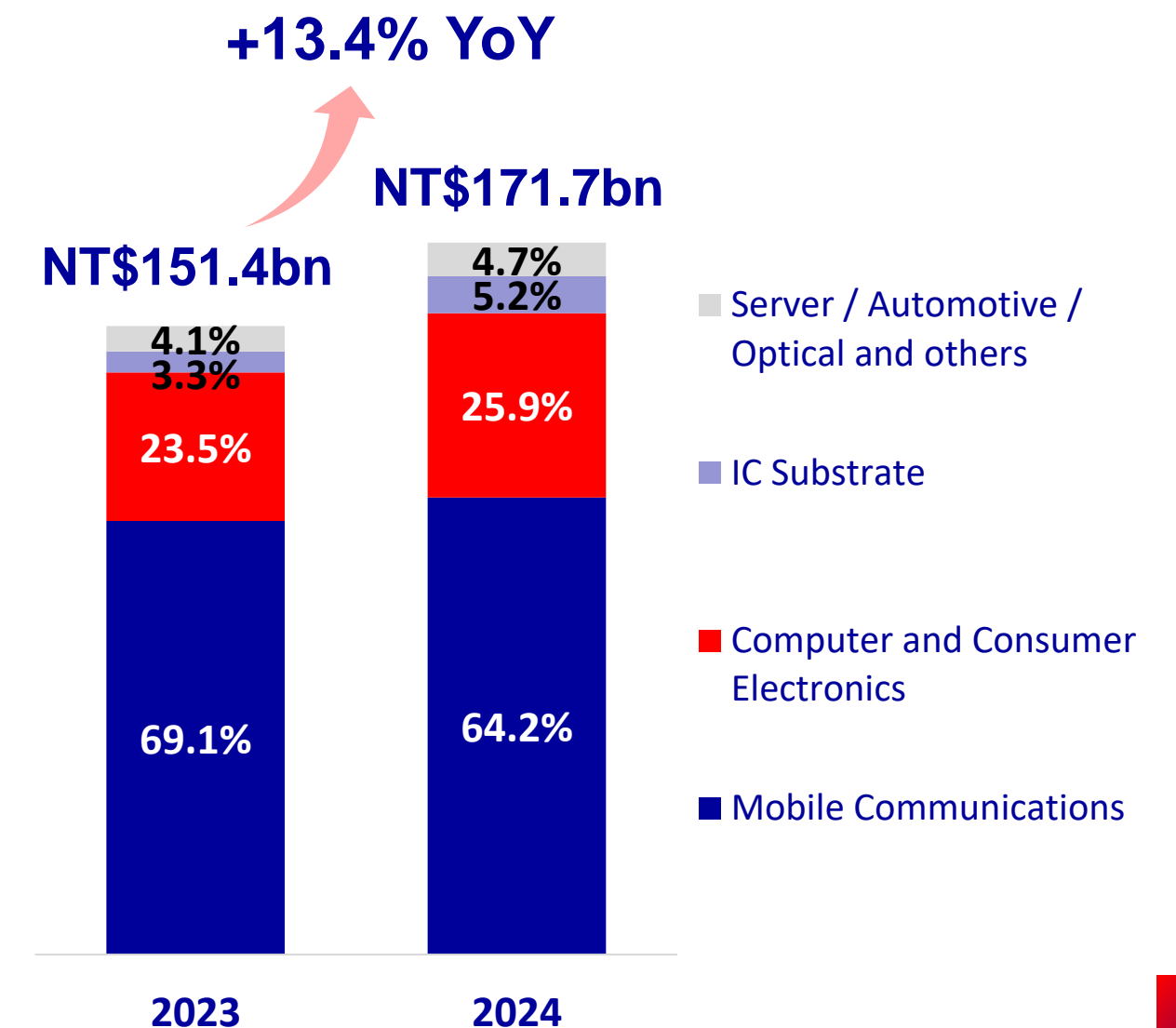
Accumulated Valid Patents

**3,866**

Accumulated Filing  
Patents (as of Dec. 31, 2024)



## Revenue Breakdown – By Applications





# Business Review and Outlook

**1** 1Q25 revenue increased by 23.3% YoY, setting a new record for the same period, while operating profit grew over 40% YoY.

In 1Q25, we delivered double-digit revenue growth across all four major applications including Mobile Communications, Computer and Consumer Electronics, Server/Automotive/Optical, and IC substrates, demonstrating strong competitiveness of our diversified product portfolio across key application markets.

With stringent control of OPEX, operating margin rose by 0.3 percentage points YoY to 2.6%, and operating profit grew by 42.2%, reflecting ongoing improvements in operational efficiency.

**3** Global capacity expansion is on track, with the phase 1 of the Thailand fab entering trial production as scheduled on May 8.

We have global production sites in Mainland China, Thailand, Kaohsiung, and India, laying a solid foundation to mitigate international trade risks.

Phase 1 of the Thailand fab began trial production on May 8, serving demand for high-end server, automotive, and optical applications. Groundbreaking for the phase 2 fab also took place on the same day.

Capacity expansion for high-end ABF substrates and RPCBs at the Kaohsiung AI Park is progressing as planned. Contribution to overall performance from the Thailand and Kaohsiung sites is expected to gradually materialize from 2026-2027.

**2** Aim to achieve another record-high revenue in 2025, with operational resilience to navigate policy changes and market volatility.

The direct impact of US tariff on Zhen Ding is limited. We will continue to closely monitor end-market demand and flexibly allocate global capacity to ensure operational agility.

With rising demand for edge AI devices (e.g., AI smartphones, smart glasses, humanoid robots, and intelligent vehicles), along with new orders in high-end applications including AI servers, optical, and IC substrates, revenue across all four major applications is expected to grow this year.

**4** Actively invest in advanced technologies, partnering with global clients to co-develop new products and technologies for the next 1–2 years.

For foldable and wearable devices, we leverage dynamic bending FPC modules and ultra-long FPC assemblies to become a key supplier for foldable smartphones, AR/VR devices, and AI glasses.

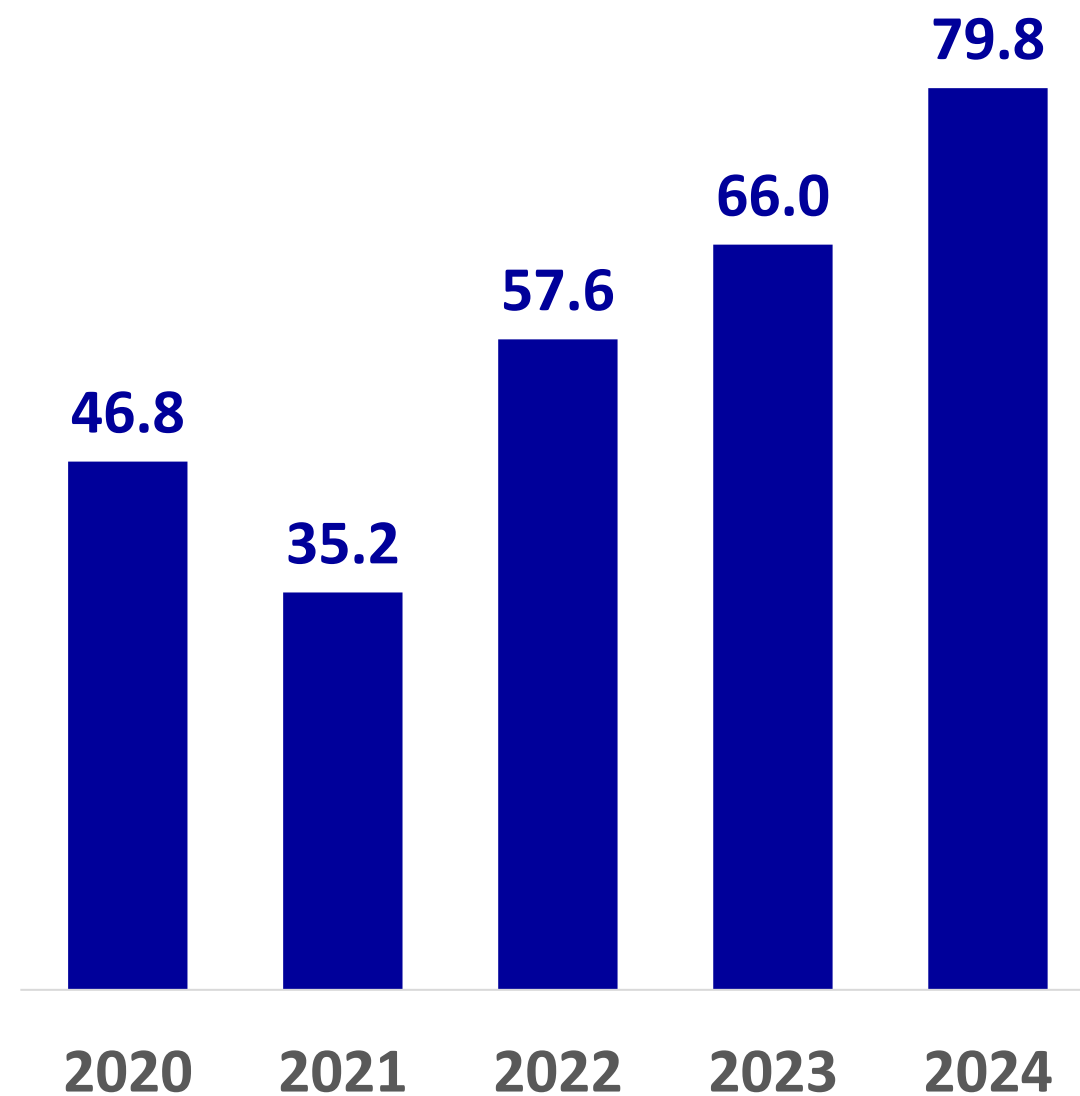
For AI servers, we offer advanced HDI solutions that support GPU modules and high-speed transmission interfaces, meeting the demands of high-performance computing.

For optical, we provide advanced mSAP designs targeting the 800G/1.6T upgrade cycle, and work closely with customers to develop next-generation 3.2T solutions.

# Robust Cash Position Provides Strategic Flexibility in Response to Evolving Economic Conditions

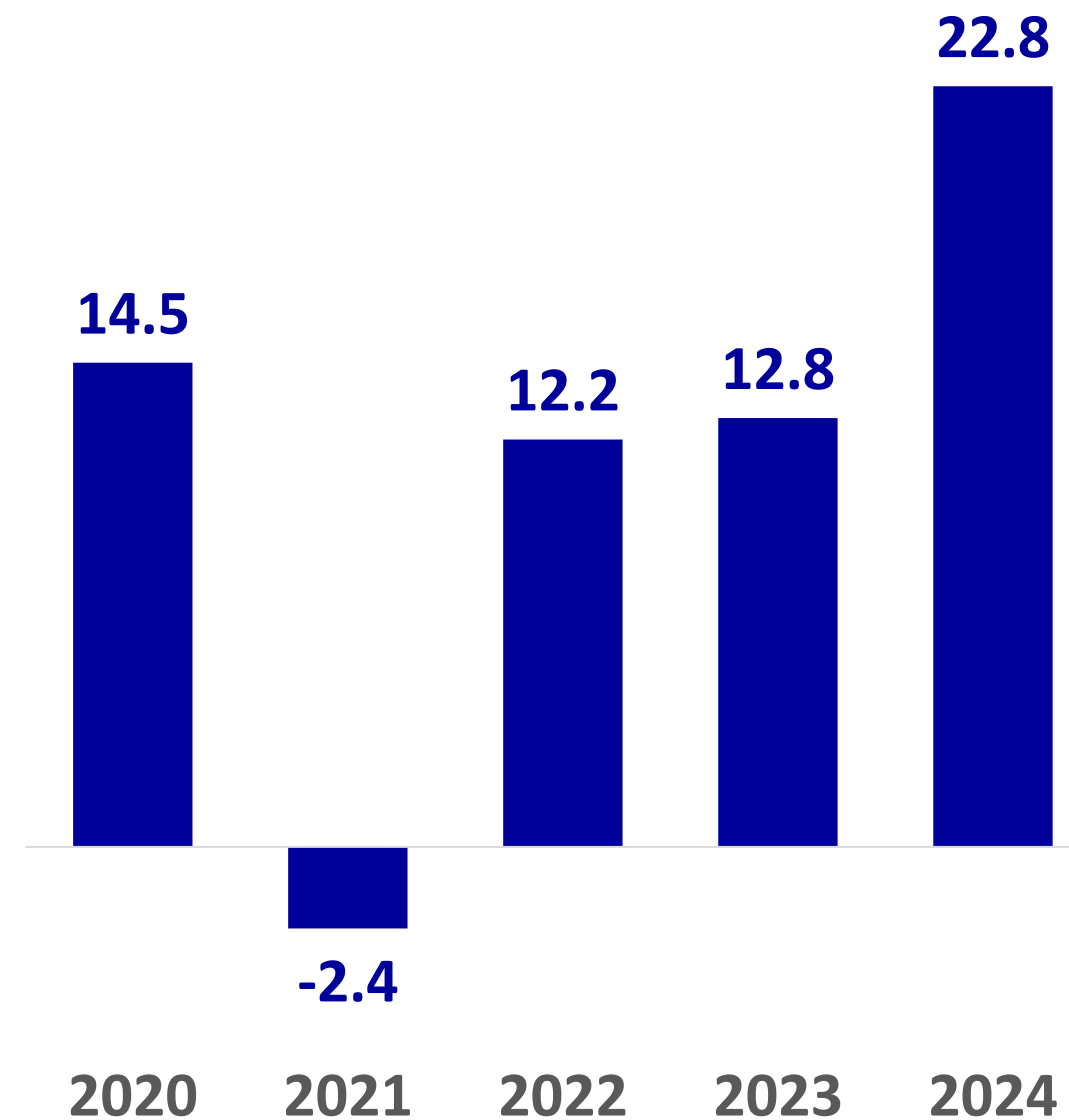
## Cash & Cash Equivalents\*

Unit: NT\$bn



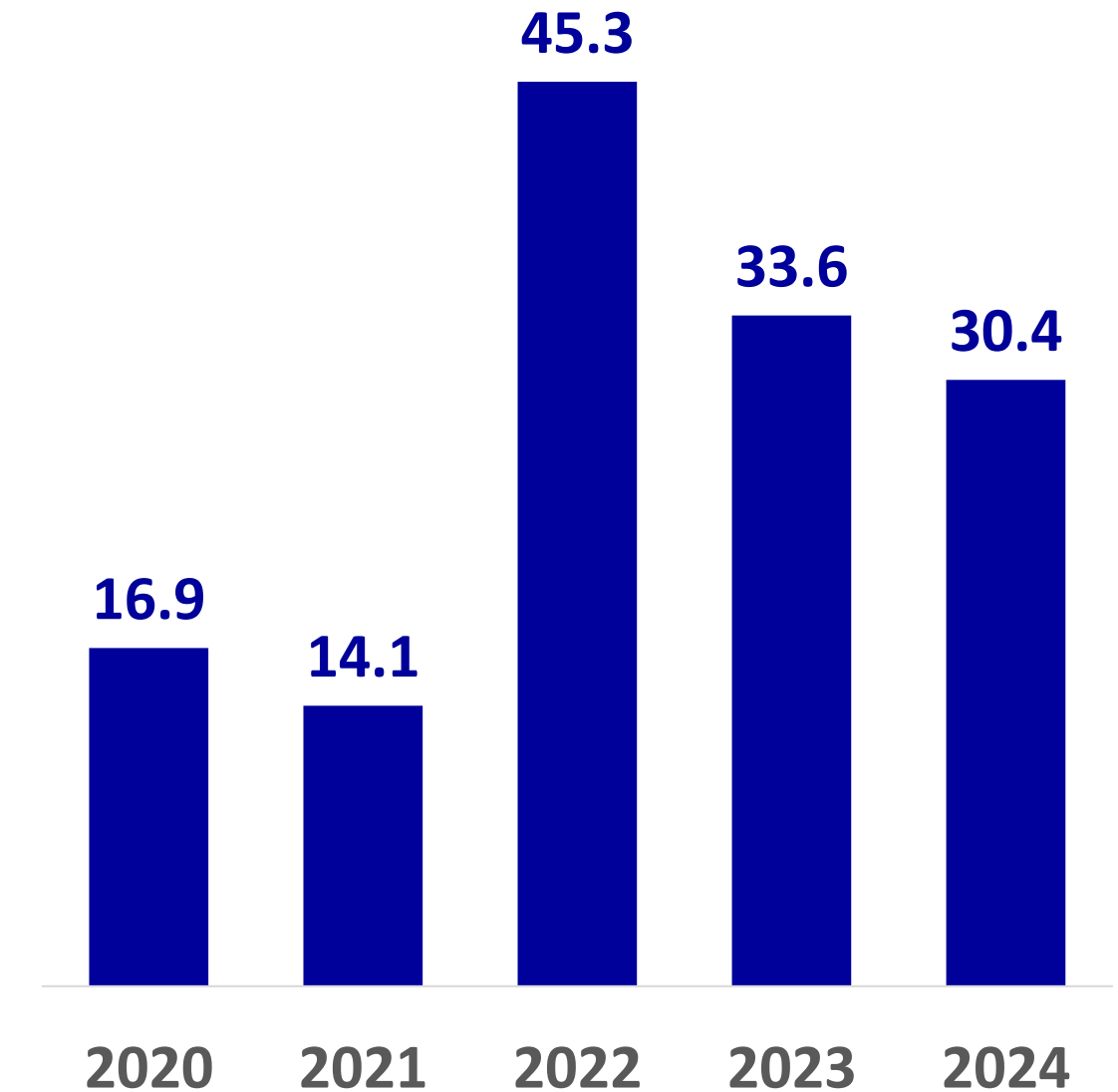
## Net Cash

Unit: NT\$bn



## Operating Cash Flow

Unit: NT\$bn



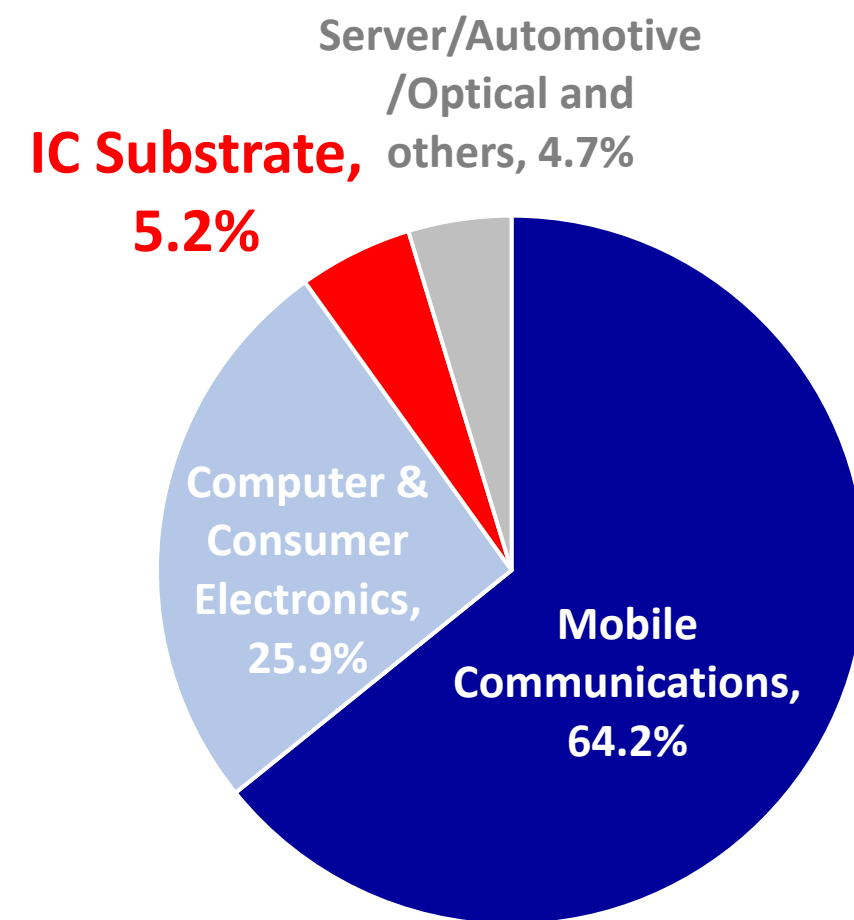
\* Including current financial assets at amortized cost  
(time deposits, etc.)

# Advanced Technologies to Fuel Rapid Growth in IC Substrates

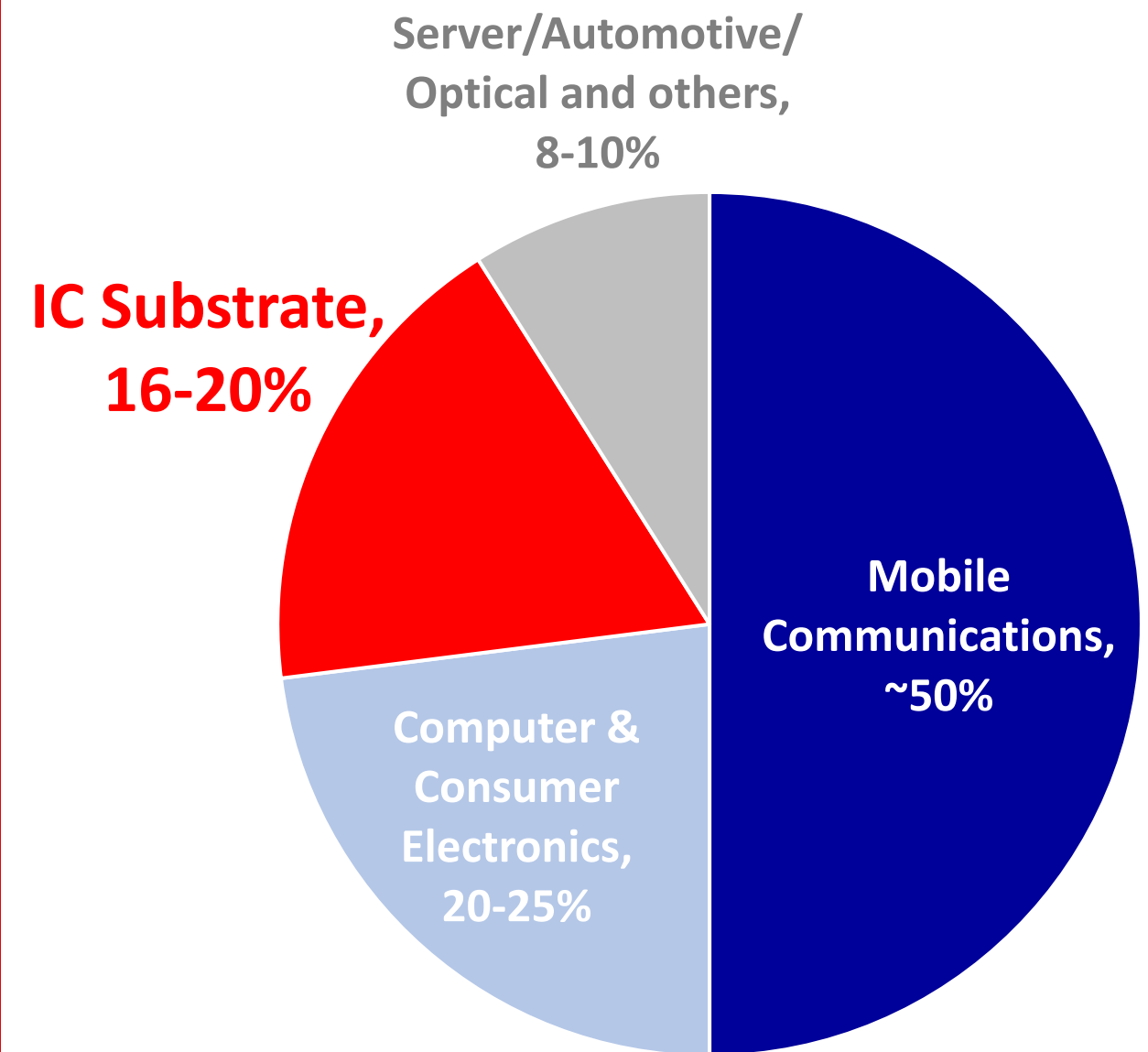


# Steadily Advancing IC Substrate Business to Drive Increasing Revenue Contribution

**ZDT: 2024 Revenue Breakdown  
by Applications**

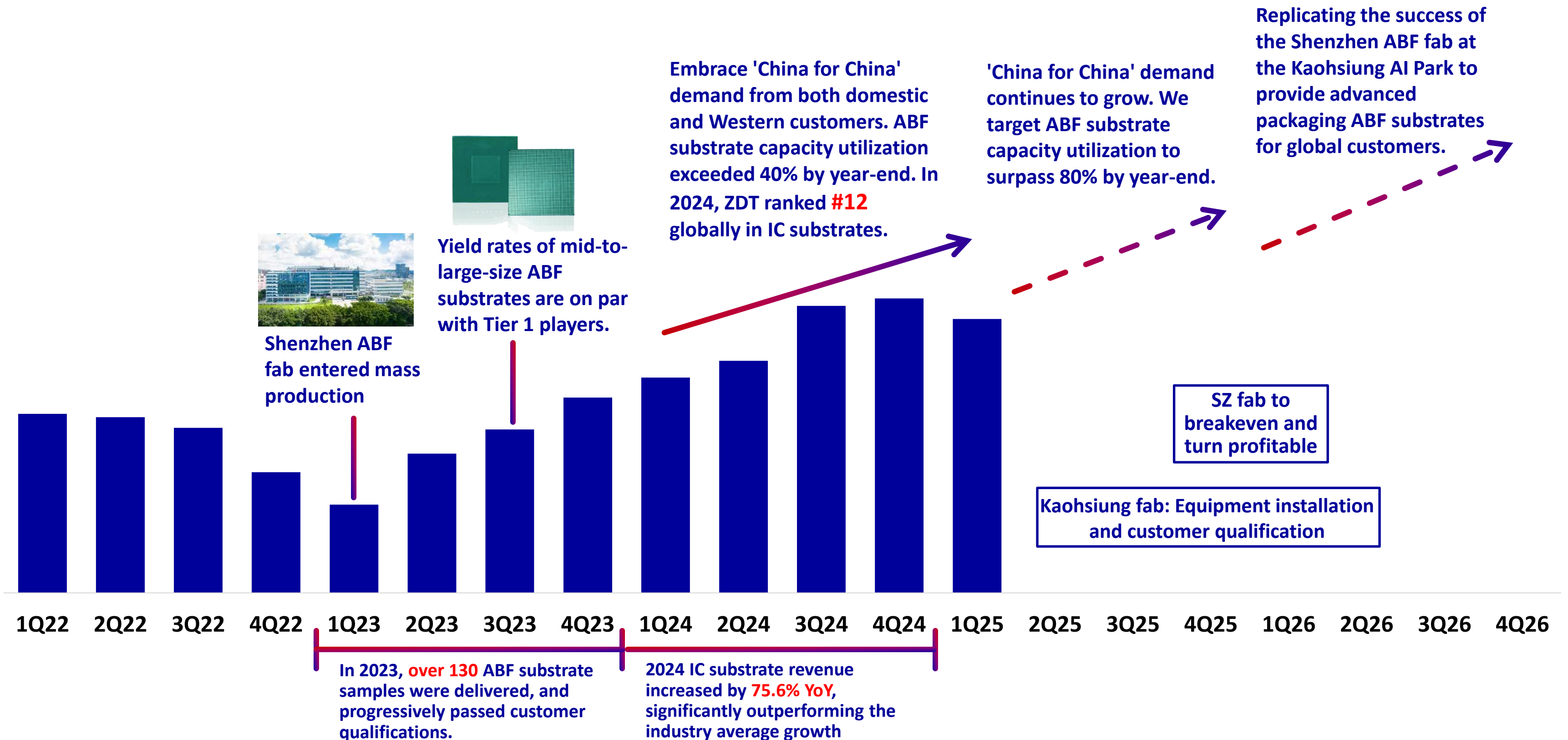


**ZDT: 2030 Target Revenue Breakdown  
by Applications**



# Embracing 'China for China' Demand, While Expanding the Outside China Customer Base with Advanced Packaging ABF Substrates

## ZDT's IC Substrate Revenue Trend





# Target to Rank among the Top Five Global IC Substrate Manufacturers by 2030

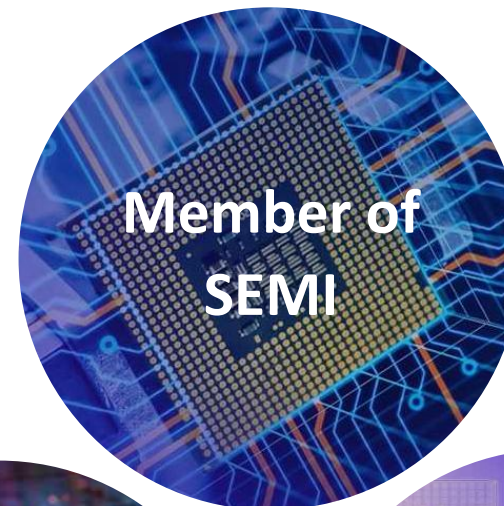
## Focus on High-end Demand

- With the industry's most advanced IC substrate production base, we focus on meeting the high-end demands of customers.
- The rapid development of AI, HPC, and advanced packaging technologies continues to drive demand for high-end ABF substrates, particularly for large-size (70mm × 70mm and above) and high-layer-count (16 layers and above) products.
- We continue developing ABF substrates for new technology platforms, which may contribute to revenue in the second half of the year once customer qualification is completed.



## Connect with the Semiconductor Supply Chain

- Actively engage with semiconductor industry organizations and collaborate closely with the supply chain to explore market opportunities in emerging technologies.



## Replicate China Experience at Kaohsiung AI Park

- Our Mainland China ABF fab is highly recognized by customers for its high quality, yield, and efficiency, with capacity utilization steadily increasing.
- We will replicate the successful experience from Mainland China and establish a full-process advanced packaging FCBGA mass production site at the **Kaohsiung AI Park**, focusing on developing key semiconductor customers in Asia, the U.S, and Europe.
- We are the first PCB manufacturer to establish a presence in Taiwan's Science Park, meeting high standards in both technology and environmental protection.



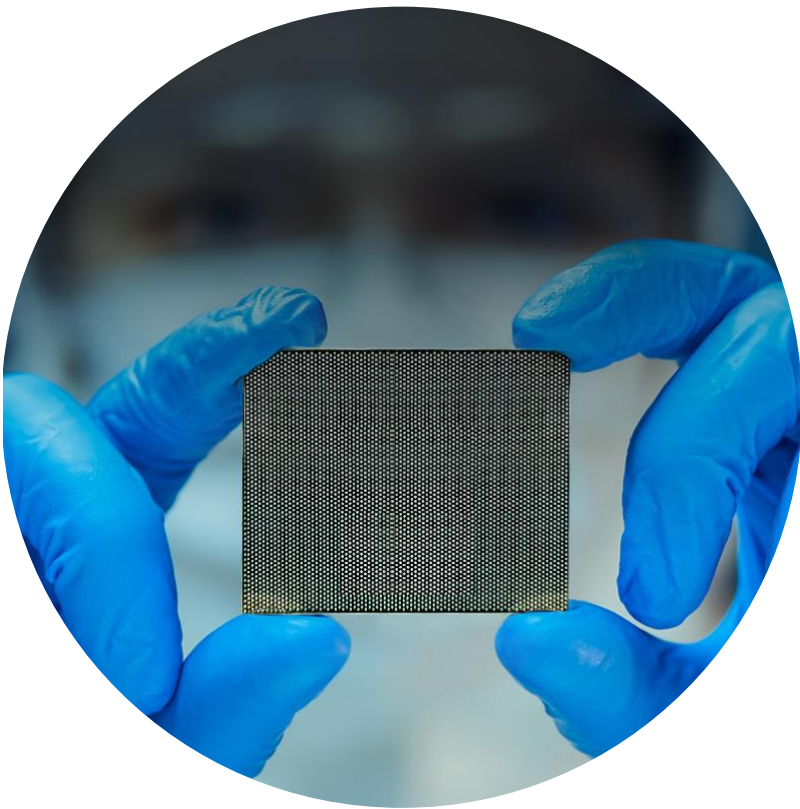
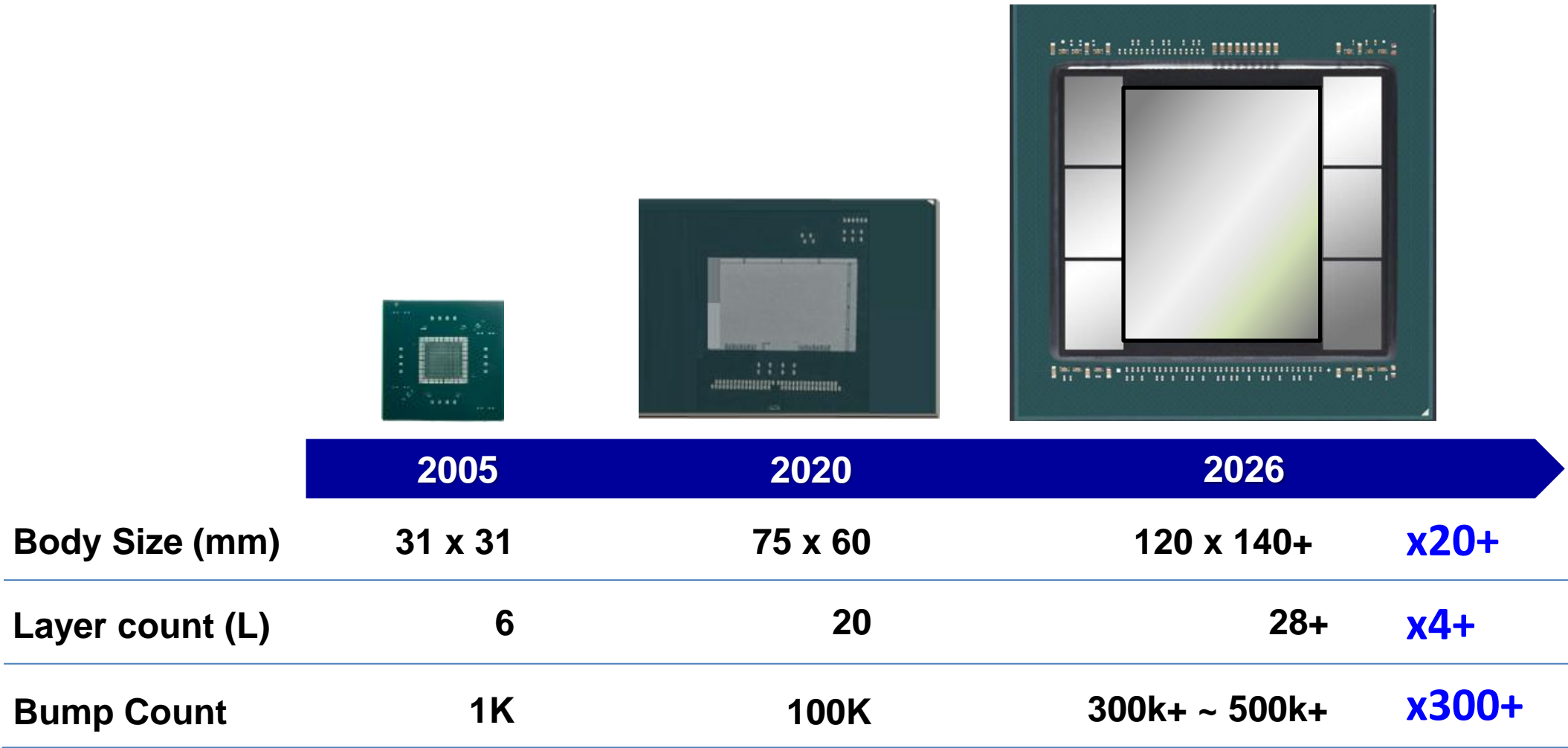


# ZDT’s ABF Substrate Technology Capabilities are On Par with Tier 1 Players; We Actively Secure Global Leading Semiconductor Customers

## ABF Substrate Development Trends

High layer counts, Large body size, Flat surface, Accurate production precision

Our technology capabilities have reached an industry-leading level





# Strengthen Leadership Position and Further Expand Market Presence

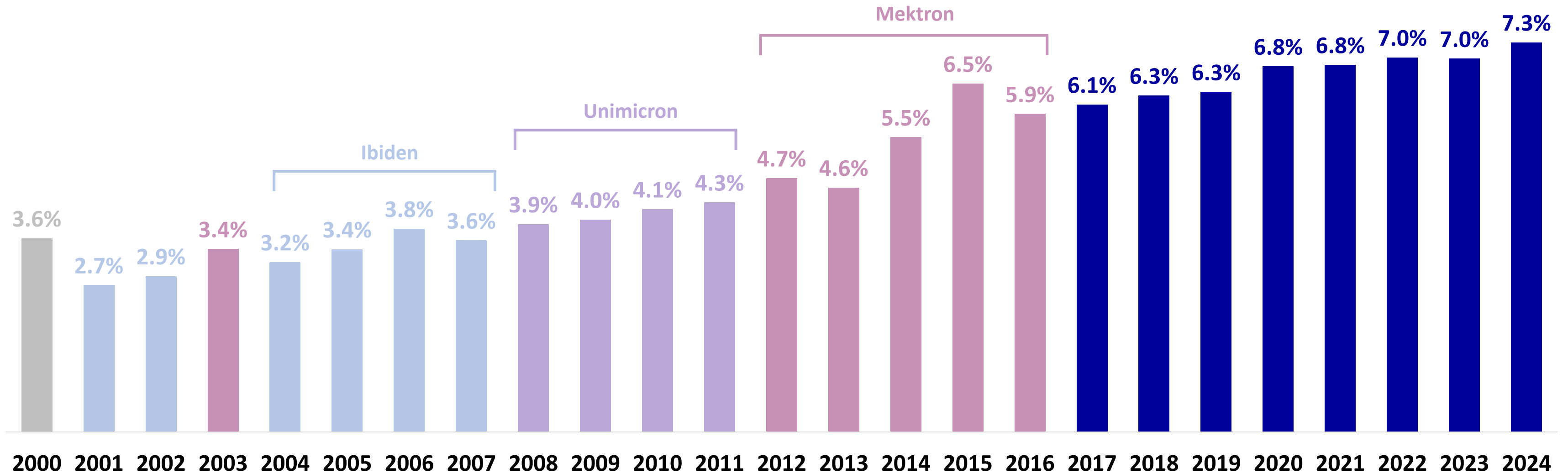


# ZDT Sustains Its Leadership in the PCB Industry

## Historical Market Share of Global #1 PCB Players

■ Sanmina ■ Ibiden ■ Mektron ■ UMTC ■ ZDT

**ZDT has ranked #1 globally in the PCB industry for 8 consecutive years**  
(The first PCB company that surpassed a 7% global market share)

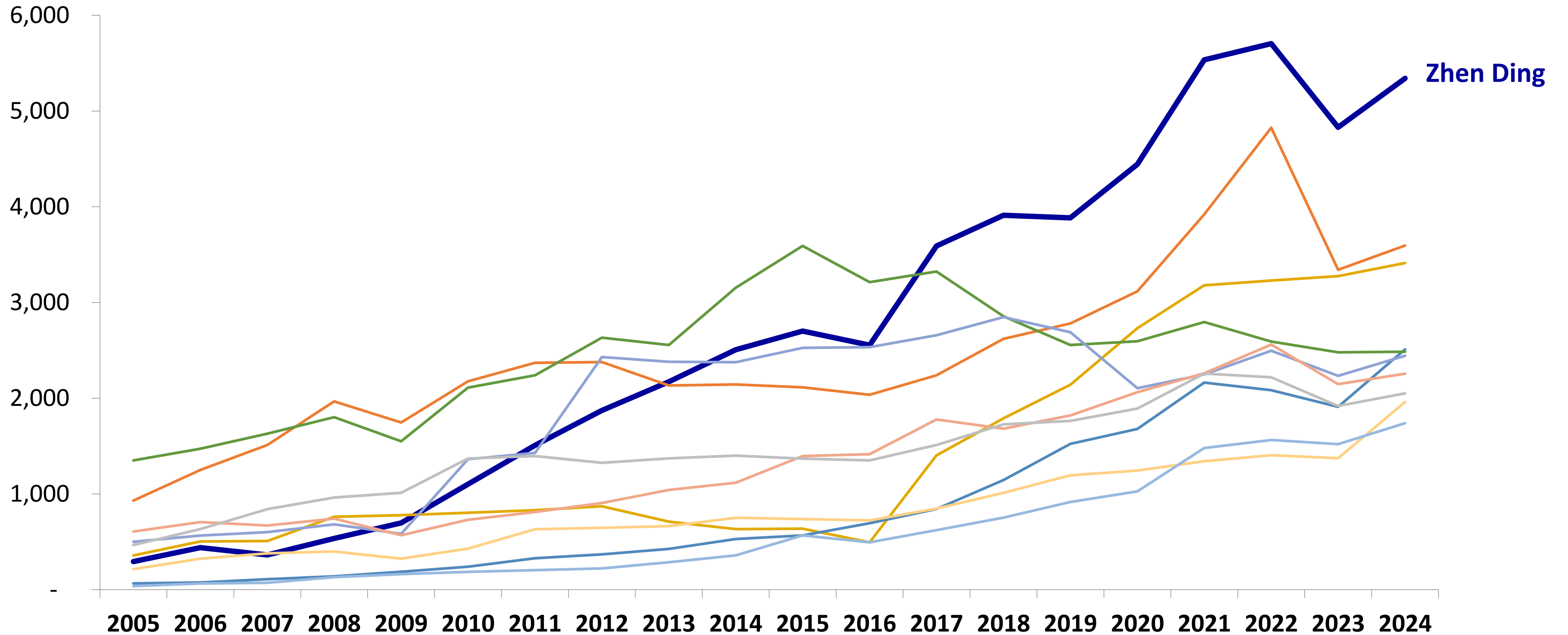


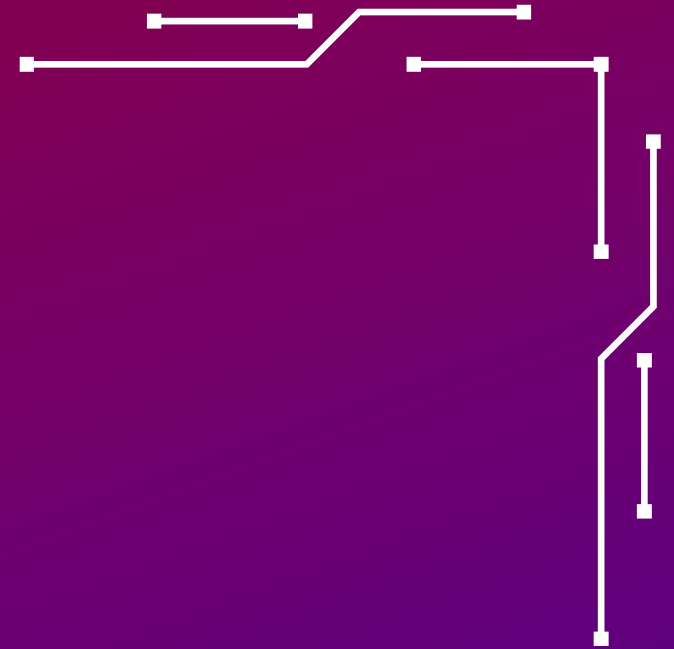
Source: Prismark

# ZDT Maintains a Clear Lead Over Peers

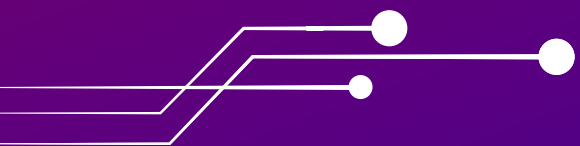
2024 Global Top 10 PCB Companies Revenue Trend

Unit: US\$ million





# What enables ZDT to maintain our leadership position?

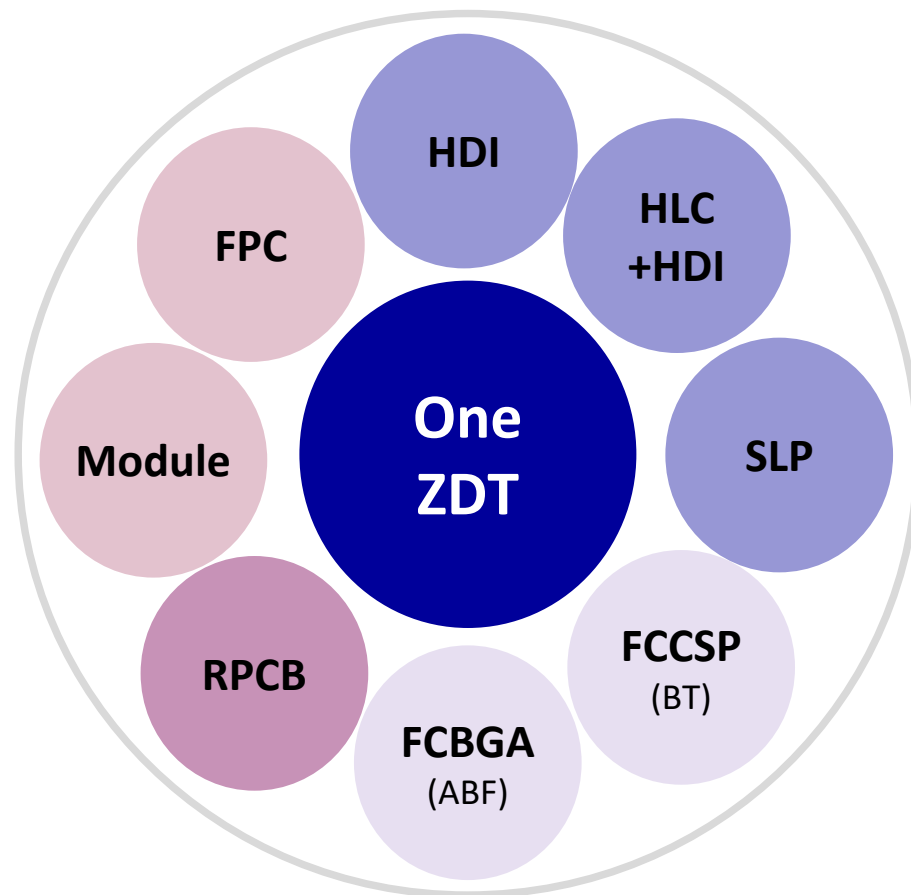




# The 'One ZDT' Strategy Empowers ZDT to Widen Its Lead over Competitors

## Zhen Ding: The Only PCB Leader with a Full-Range Product Portfolio

Leveraging our full product portfolio under the 'One ZDT' strategy, we deliver end-to-end solutions across cloud, channel, and edge applications in the AI era — reinforcing our leadership in an increasingly complex PCB landscape.



AI

Cloud



AI Server



Edge Server



High Performance Memory

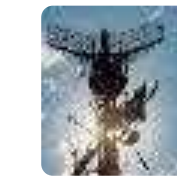
Channel



Optical Communication



Switch



Base Station

Device



AI Smartphone/ Chip



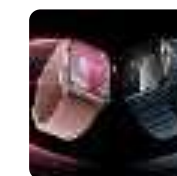
AI PC/ Tablet



Humanoid Robot



Smart Glasses/ AR/VR



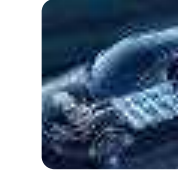
Wearable Device



Intelligent Vehicle/ Smart Cockpit/ Domain Controller

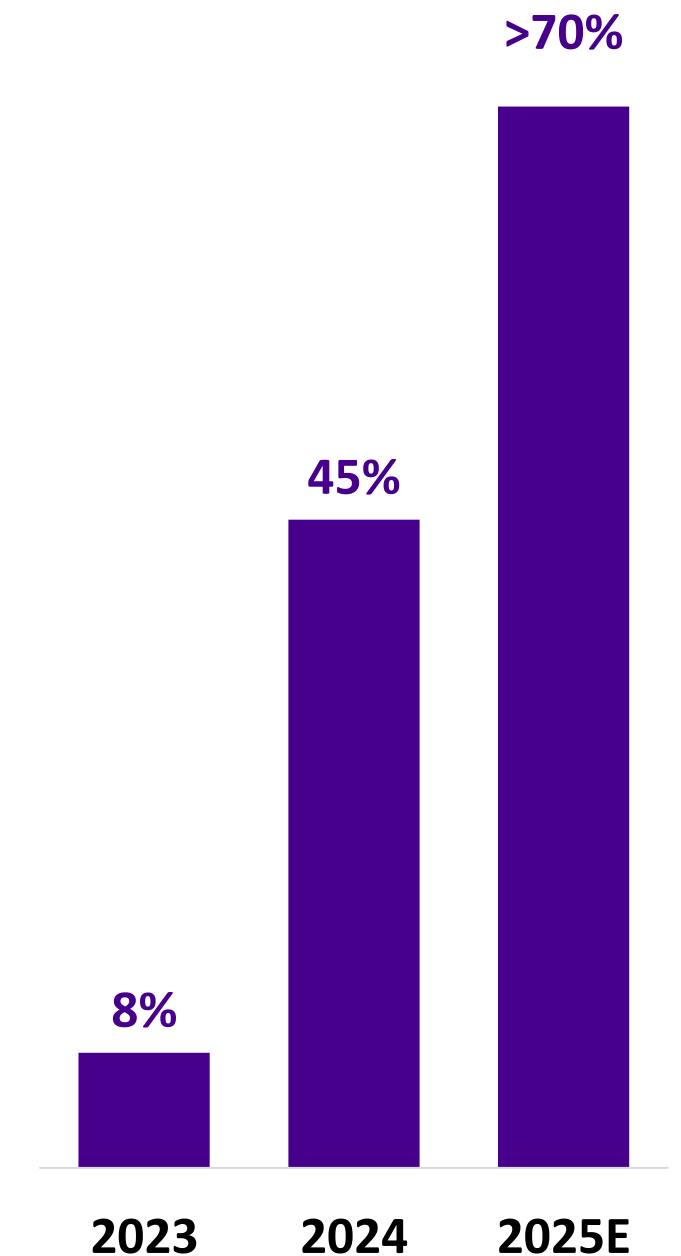


Autopilot Chip/ mmWave Radar

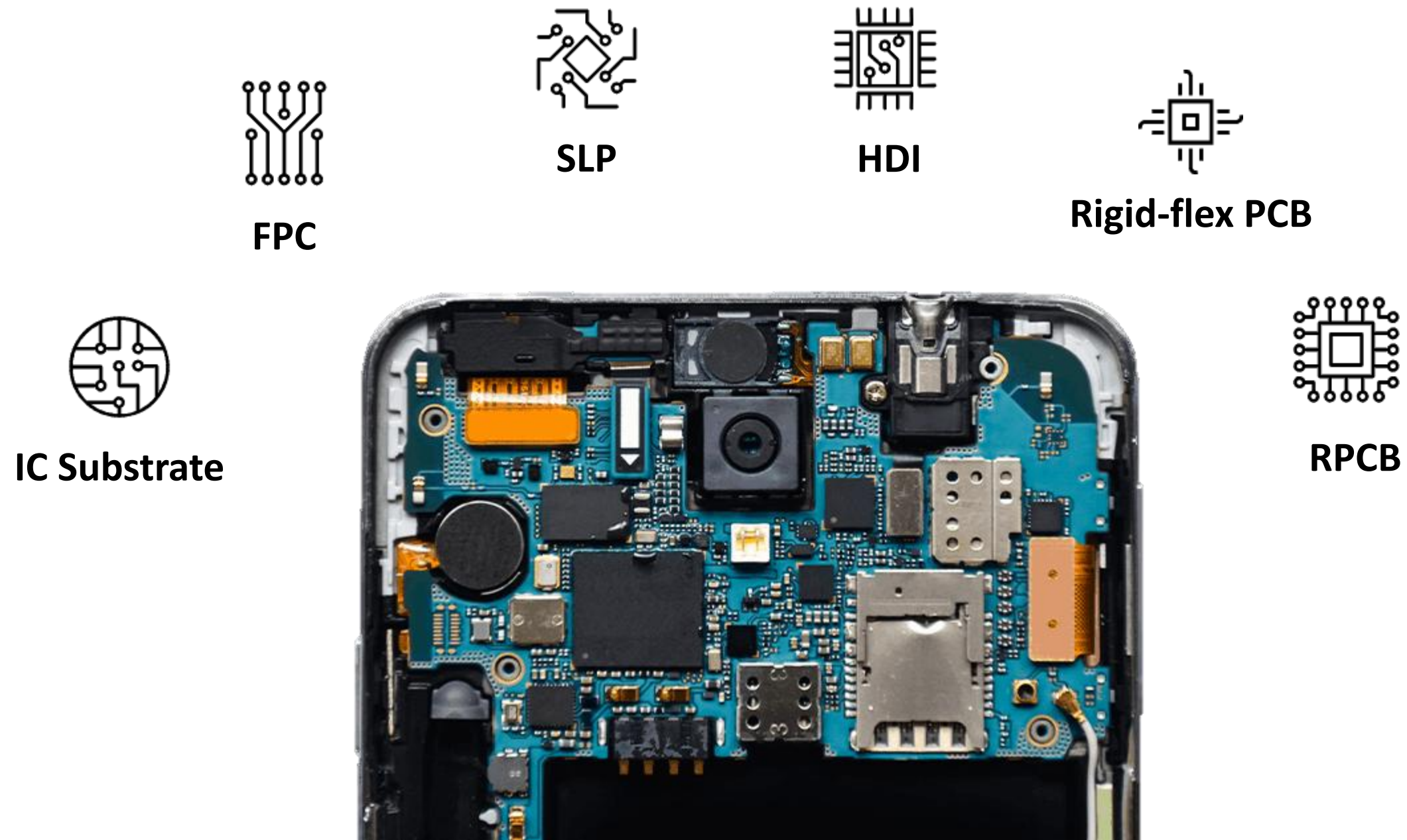


NEV/ Battery

ZDT: Revenue Contribution for AI Related Products



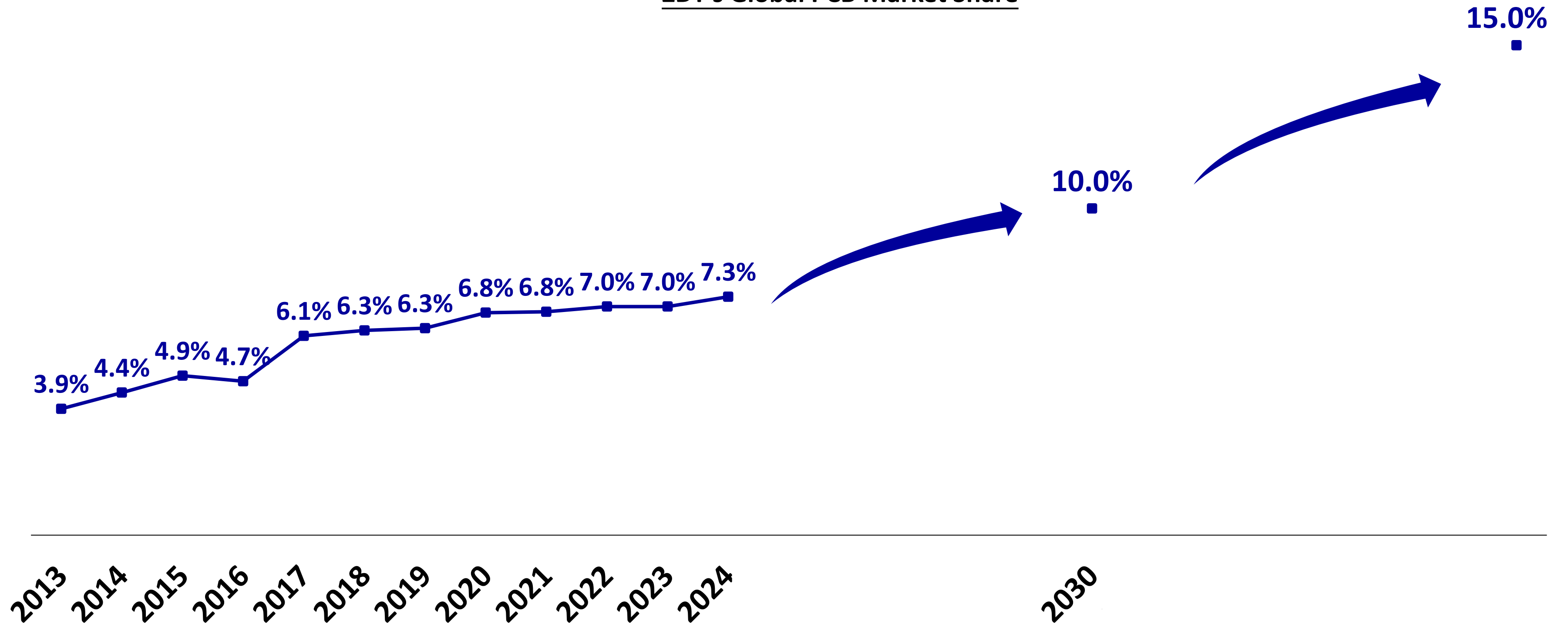
# Why is 'One ZDT' the Key to Our Success?



Take smartphones as an example—One ZDT enables customers to optimize overall product design, enhance product performance, and accelerate time-to-market.

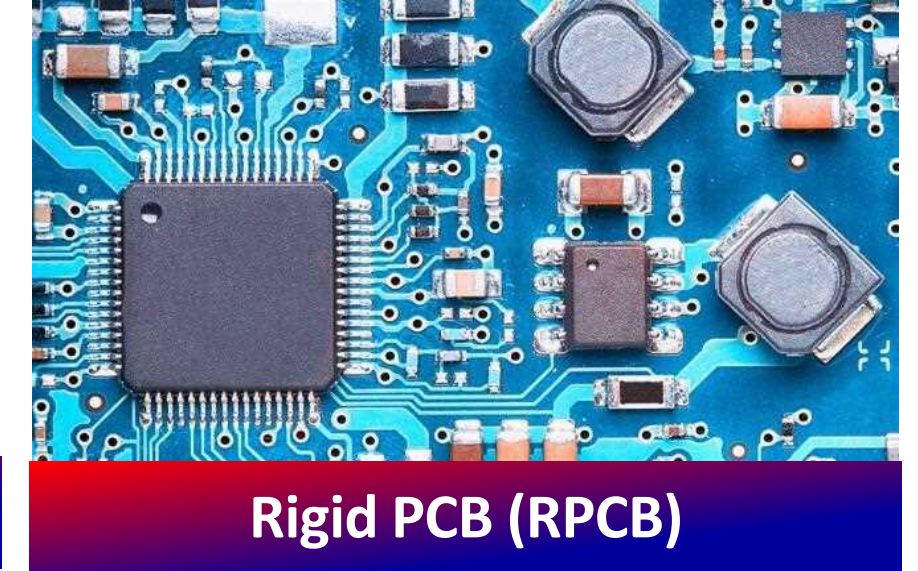
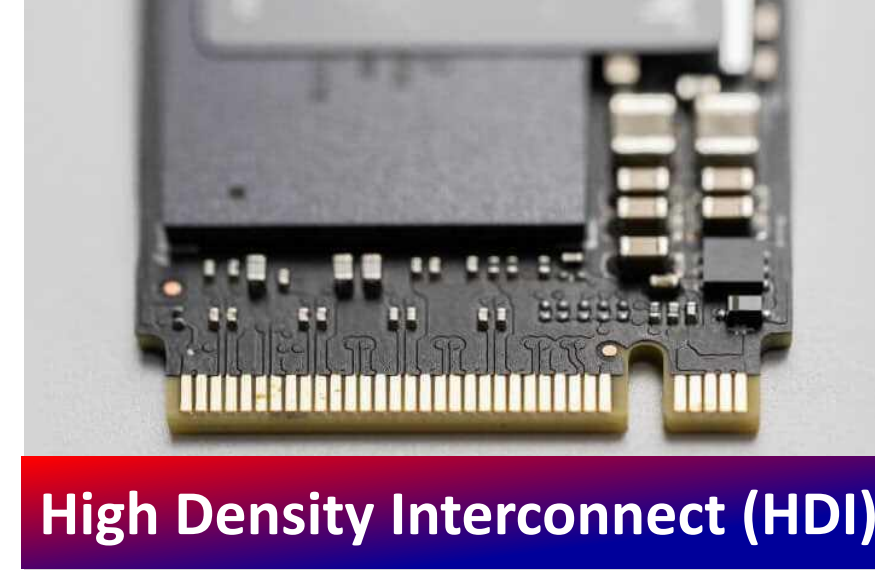
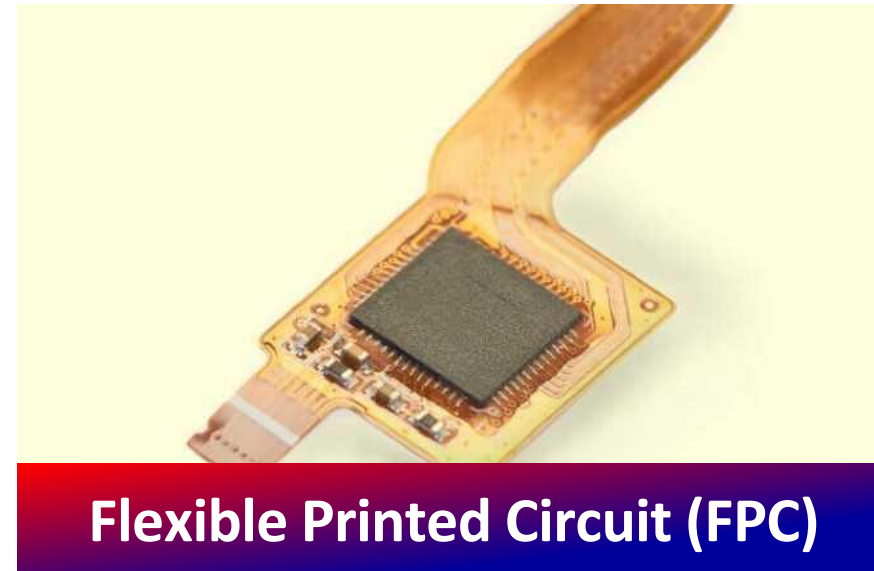
# Strive to Further Grow Our Presence in the Global PCB Market

ZDT's Global PCB Market Share





# Sustained Growth Across All Four Product Lines



2030 Target

Global Top 5

2030 Target

Maintain  
Global #1

2030 Target

Global #1

2030 Target

Global Top 10

Deepening collaboration with customers and supply chain partners  
to deliver above-industry-average revenue and profit growth

# Rising Design Complexity in Edge AI Devices is Accelerating PCB Demand

We continue working closely with leading global customers to develop high-end products featuring high precision and high density, reinforcing our leadership in edge AI applications.

## AI Smartphone/Tablet/PC



- AI development accelerates the upgrade of PCB specifications.
- We work closely with leading global customers to co-develop high-value products, including foldable smartphones.

## Smart Glasses/VR/AR



- Demand for related products is projected to multiply in 2025.
- We collaborate with leading global customers to develop new products, maintaining our position as a key supplier.

## Humanoid Robot



- Humanoid robots have high technical requirements for PCBs, primarily used in core functions such as the main control system, sensor modules, power management, and joint actuators.

## Wearable Devices



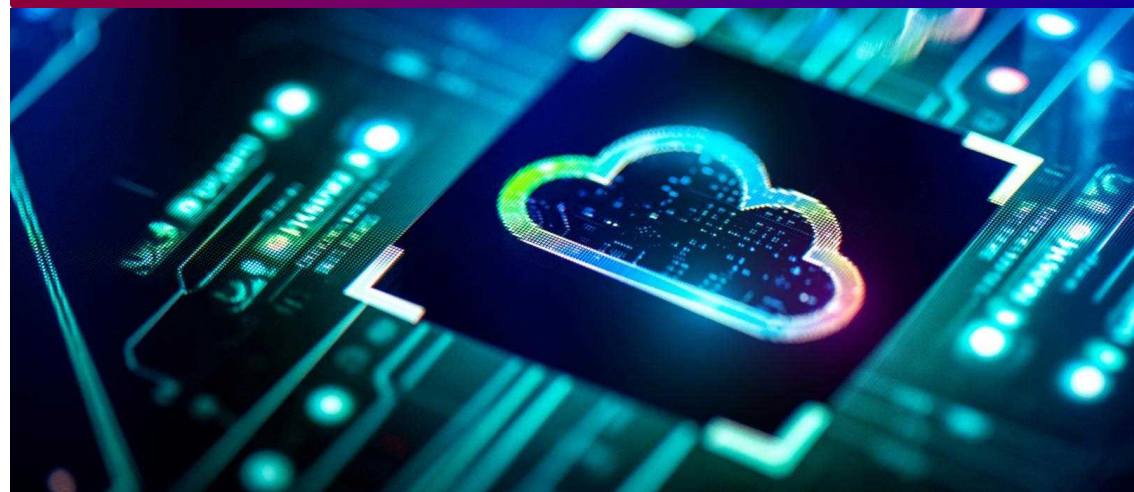
- AI functions are gradually being integrated into wearable devices, with 'light, thin, and compact' as the main R&D direction. This drives hardware specification upgrades and fuels growing demand from customers for high-layer count and fine-line products.



# Aim to Secure More High-end Customer Orders in Servers, Automotive, and Optical Applications to Increase Market Share

New capacity in Thailand is coming online in 2025. It is well-positioned to meet rising demand in high-growth applications including servers, automotive, and optical.

## AI Server



- We have successfully expanded from general-purpose servers into AI servers. With the expertise in key manufacturing processes, we have secured stable AI server orders to drive revenue growth.
- Actively expand collaborations with customers on projects for Intel, AMD, and ASIC-based architectures.
- Support the AI ASIC product development plans of our two major cloud customers.

## Optical



- After passing customer qualifications last year, our optical products entered mass production. This year, we are focusing on high-end 800G/1.6T mSAP designs, aiming to secure more customers and orders, while 3.2T products have also entered the R&D and design phase.
- As AI continues to evolve, the demand for high-end products is primarily driven by mSAP technology. This trend is expected to sustain strong growth over the next 3 to 5 years.

## Automotive



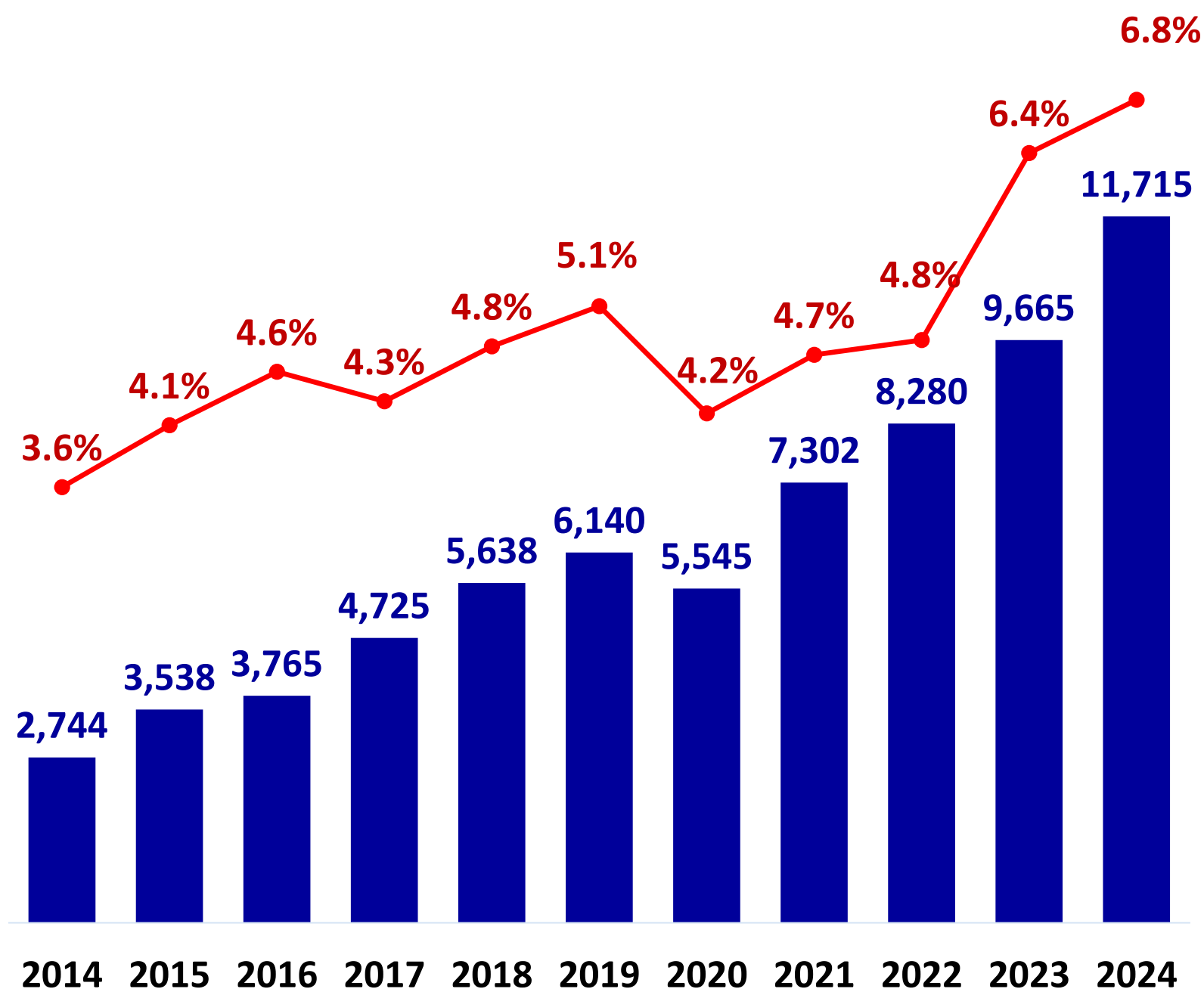
- Actively expand our presence in high-end high-layer-count HDI products for autonomous driving, with ADAS domain control motherboards and high-end sensors entering mass production.
- For EV related products, shipments of battery-related products continue to grow.
- For automotive connectivity, we are working closely with customer to develop products, with high-end SLP applications emerging.



# Ongoing R&D Investment in Advanced Products to Sustain Market Leadership

■ R&D Expense — R&D Expense / Revenue

Unit: NT\$ million



ZDT follows 12 R&D principles in our PCB and semiconductor development initiatives, focusing on the R&D of advanced technologies and their application in next-generation products.

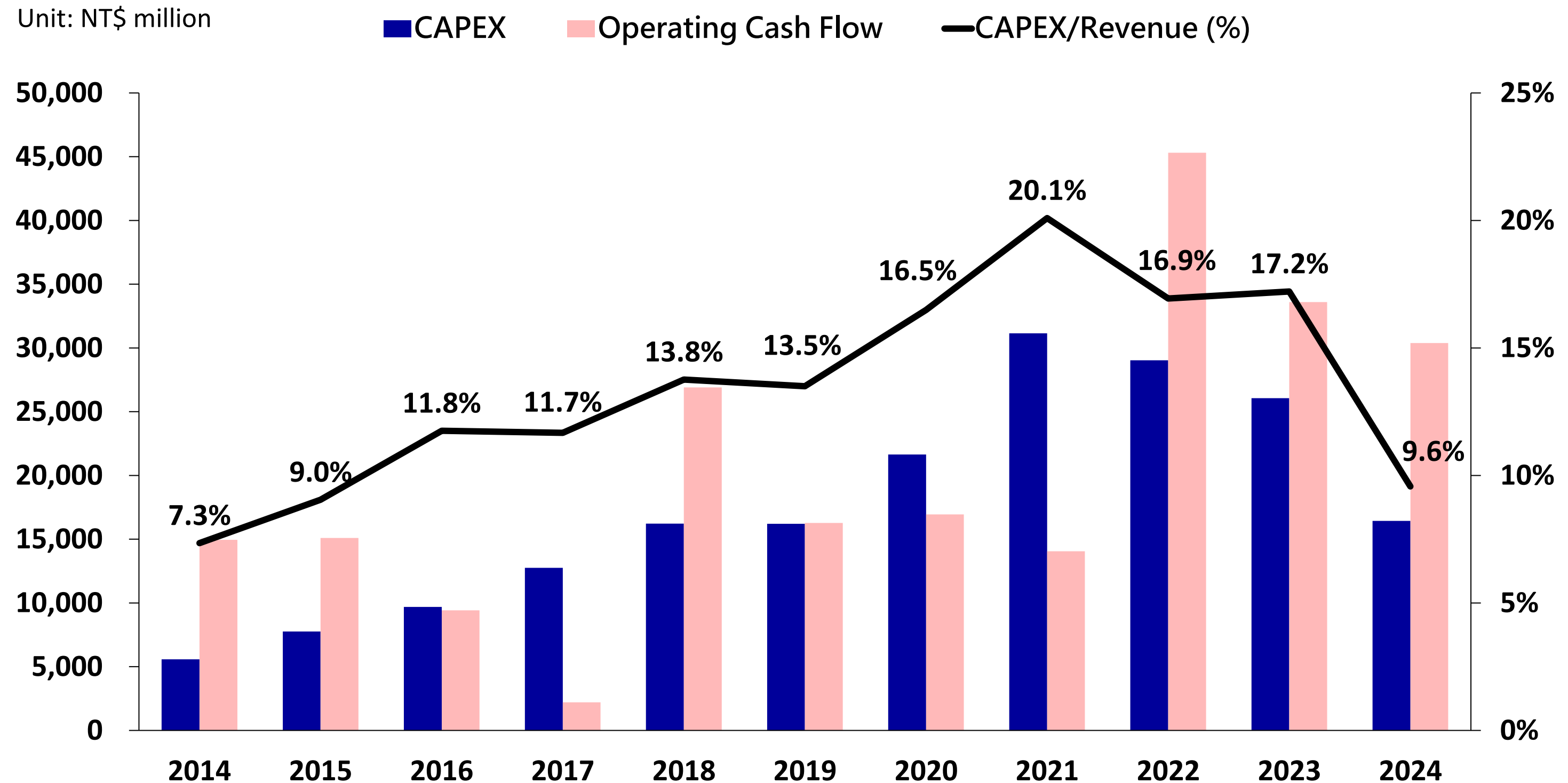
## 12 R&D Principles:

Light	Thin	Short Process	Compact
High Frequency/ High Speed/ High Heat Dissipation	Low Pollution/ Low Cost/ Low Power Consumption	Multi-Function/ Multi-Layer	Fast R&D/ Fast Manufacturing
Precise	Appealing	Fine Line	Intelligent

We have established R&D centers in both Taiwan and Mainland China. We continue to enhance our new technology development capabilities to maintain leadership in high-end products and technologies.

# Disciplined Capacity Expansion, Advancing Steadily to Seize Market Opportunities

# With Strong Cash Flow, We Prudently Manage CAPEX, Ensuring Stability in the Face of Macroeconomic Changes





# Global Production Footprint Continues to Expand, with Benefits Expected to Materialize Starting in 2026-2027

## Capacity Expansion Plan



**Mainland China**

- In 2025, we will expand capacity for automotive and energy storage FPCs and collaborate with customers to build up high-end capacity to de-bottlenecks.



**Thailand Prachinburi Park**

- Phase 1 fab began equipment installation in Feb, with trial production on May 8 and small-scale volume production expected in the second half of the year. Groundbreaking for the phase 2 fab also took place on May 8.
- Phase 1 capacity focuses on high-end server, automotive, and optical applications, providing high-end RPCB and HDI products.



**Kaohsiung AI Park**

- To invest NT\$8bn in equipment to establish a full-process FCBGA mass production facility for advanced packaging.
- To invest NT\$2bn in equipment to build HDI+HLC PCB production capacity.
- FPC production lines have entered trial production.

## Strategy to Enhance Operational Efficiency

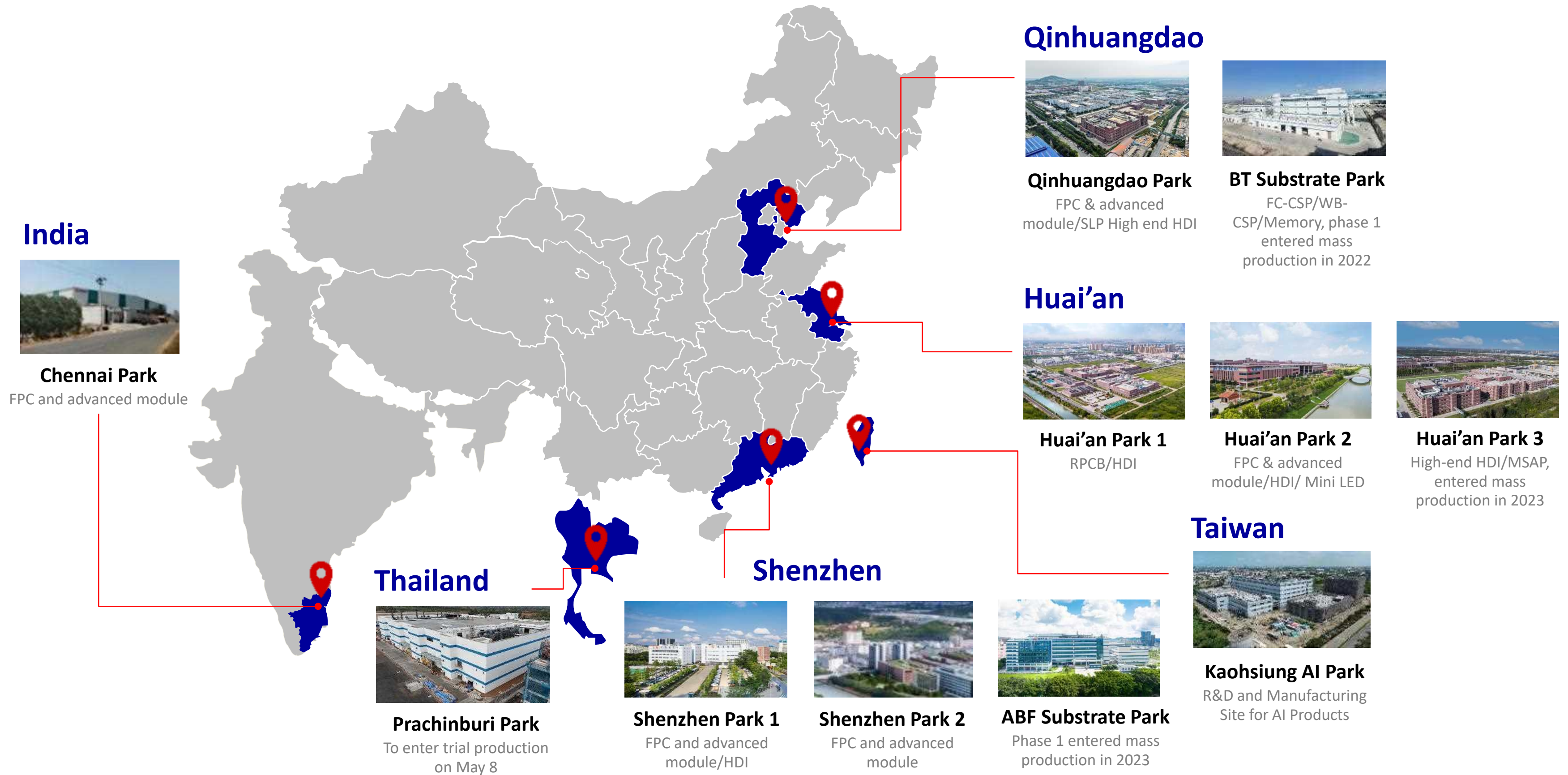
- Each fab will implement smart manufacturing and digital transformation in phases to improve operational efficiency, increase per capita productivity, and further enhance overall profitability.

- Manufacturing mid-to-high-end RPCB/HDI products for servers, automotive, and optical, which will help improve gross margins.
- Actively allocating resources and developing new products, aiming to secure more Tier-1 customers after production capacity comes online.

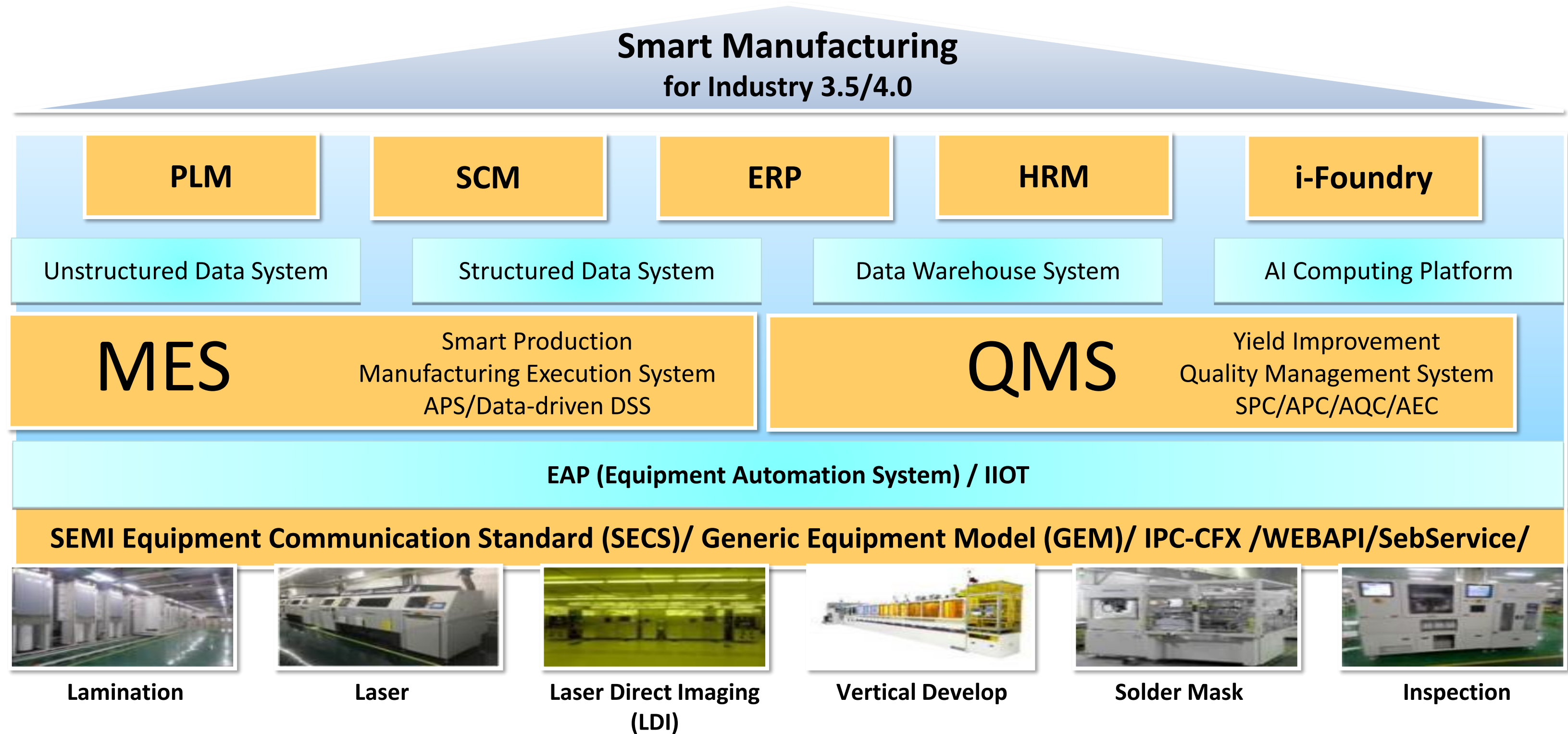
- Plan to manufacture ultra-high-end products (30L–80L).
- Customer qualifications are expected to begin gradually in early 2026.



# Establish Diverse Production Bases with Advanced Capacities To Meet Global Customer Demands

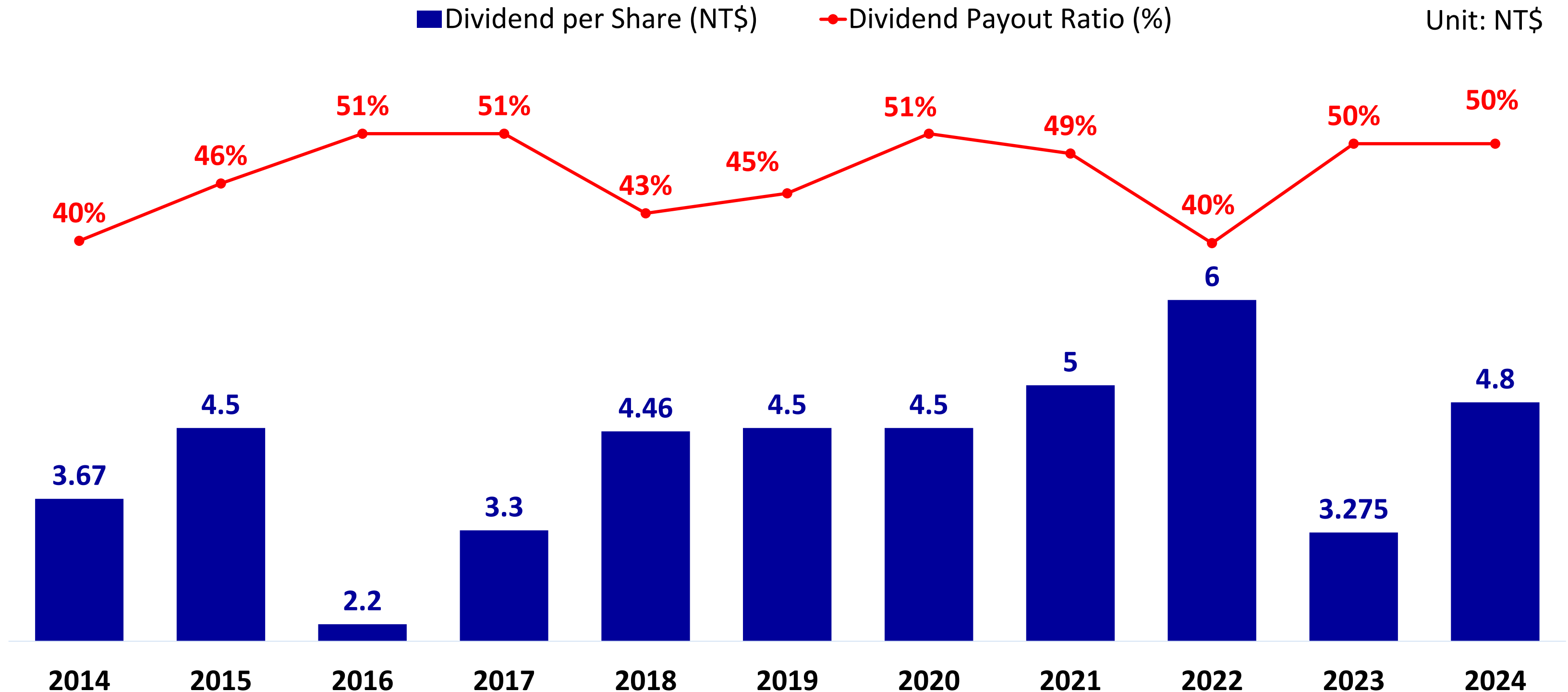


# Leverage Smart Manufacturing to Increase Per Capita Productivity and Enhance Profitability



Operational Digitization, Platform Digitalization, Platform Intelligence, and Intelligent Implementation

# Maintain High Dividend Payout Ratios; Share Business Success With Shareholders





# EPS + ESG – Improvement of ESG Ratings

## ► Corporate Governance Evaluation Ranking

Ranked between 6% to 20% in the 2024 Corporate Governance Evaluation for listed companies and **re-selected for inclusion in the TWSE Corporate Governance 100 Index.**

## ► S&P Global ESG Rating

In 2024, our S&P ESG Score improved to 78 and was **selected as the only PCB company in the S&P Global Sustainability Yearbook** for the third consecutive year.

## ► Sustainalytics ESG Risk Rating

Our latest Sustainalytics ESG Risk Ratings was 15.7, classified as **low risk.**

## ► ISS ESG Rating

ISS has upgraded our ESG Rating from "C" to "C+," granting Zhen Ding **"Prime" status.**

## ► CDP

In 2024, we received an **'A' leadership** rating for water security, marking a one-notch improvement from last year. Additionally, we achieved a 'B' rating from CDP for climate change.

## ► FTSE Russell ESG Rating

Our FTSE Russell ESG Rating reached 4.4 (out of 5) and ranked in the **5th place among all listed companies in Taiwan.**



# Financial Summary

# 1Q25 Financial Results

Unit: NT\$ million, unless otherwise stated

	1Q25	1Q24	YoY (%)
Revenue	40,082	32,510	+23.3%
Gross Profit	5,885	5,337	+10.3%
<b>Gross Margin</b>	<b>14.7%</b>	<b>16.4%</b>	<b>-1.7ppts</b>
Operating Expense	4,829	4,594	+5.1%
Operating Profit	1,056	743	+42.2%
<b>Operating Margin</b>	<b>2.6%</b>	<b>2.3%</b>	<b>+0.3ppts</b>
Non-Operating Income/Expense	401	755	-46.9%
Net Income	1,025	1,436	-28.6%
<b>Net Margin</b>	<b>2.6%</b>	<b>4.4%</b>	<b>-1.8ppts</b>
Net Income to Parent	632	977	-35.3%
<b>EPS (NT\$) <sup>(1)</sup></b>	<b>0.66</b>	<b>1.03</b>	
R&D Expense	2,563	2,634	-2.7%
Depreciation and Amortization	4,739	4,231	+12.0%
Cash Inflow Generated from Operations	11,144	8,257	+35.0%
Cash and Cash Equivalents <sup>(2)</sup>	85,879	72,995	+17.7%
ROE(%) <sup>(3)</sup>	<b>2.7%</b>	<b>4.2%</b>	-1.5ppts

Note : (1) Weighted Average Shares outstanding as of 1Q25 : 954,559 thousand shares (actual issuance 956,652 thousand shares, with 2,093 thousand shares held in treasury)  
 (2) Including current financial assets at amortized cost (time deposits, etc.) (3) ROE is annualized data calculated based on the average of equity attributable to owners of parent

# Quarterly Operation Results

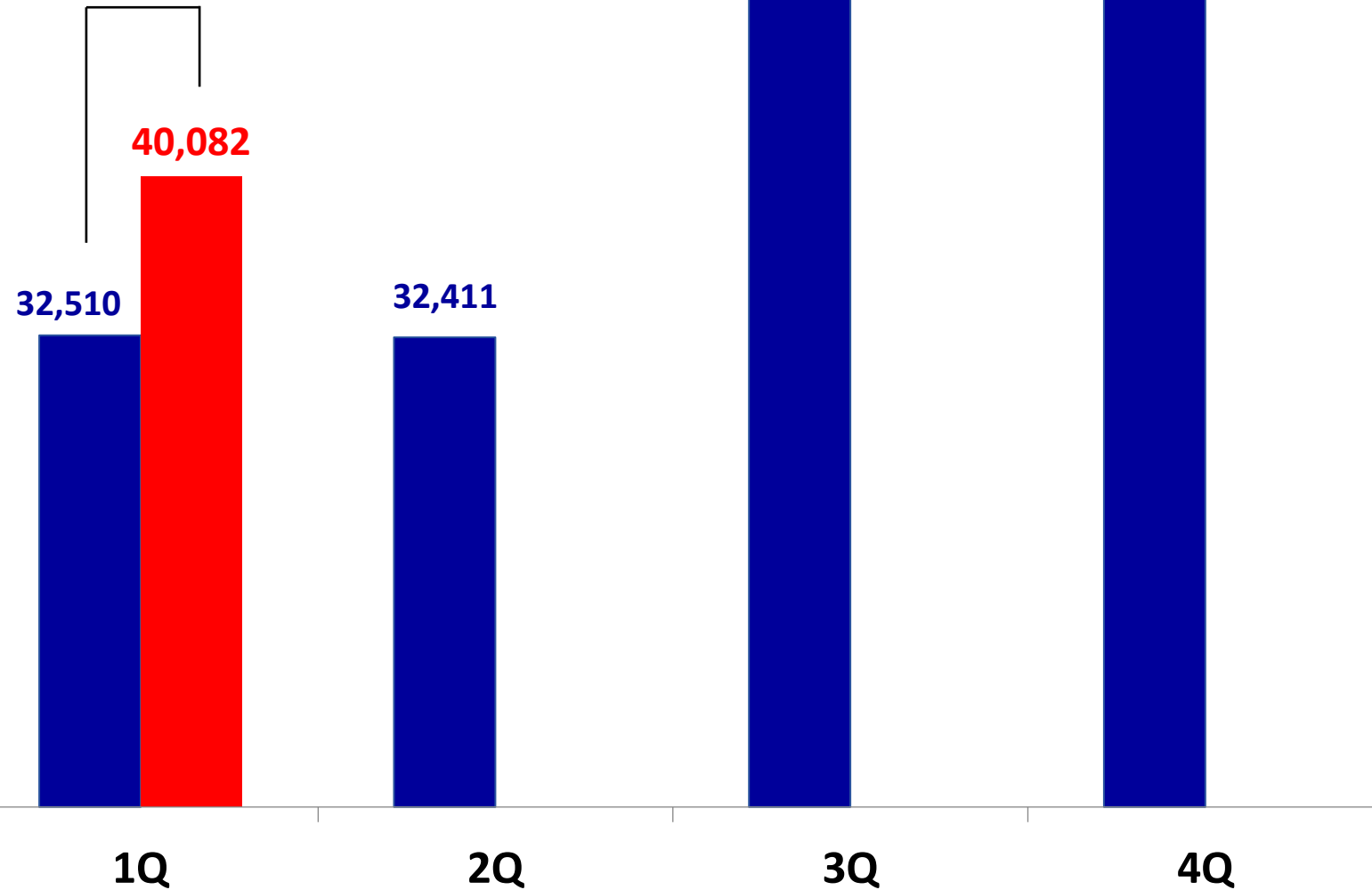
## Revenue

■ 2024 ■ 2025

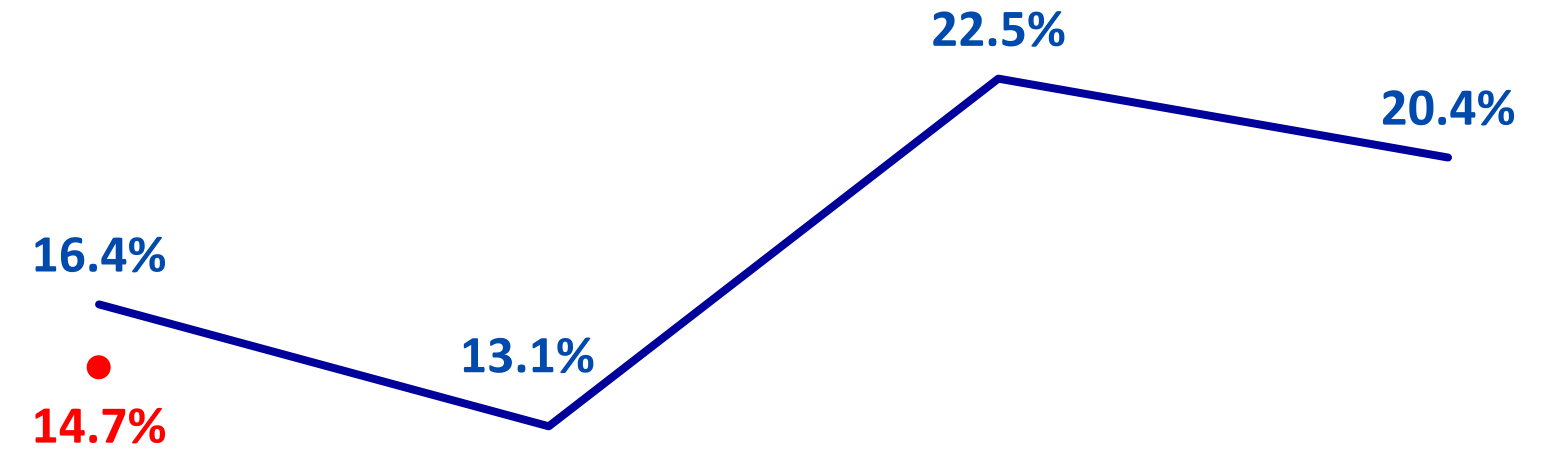
Unit: NT\$ million

— 2024 — 2025

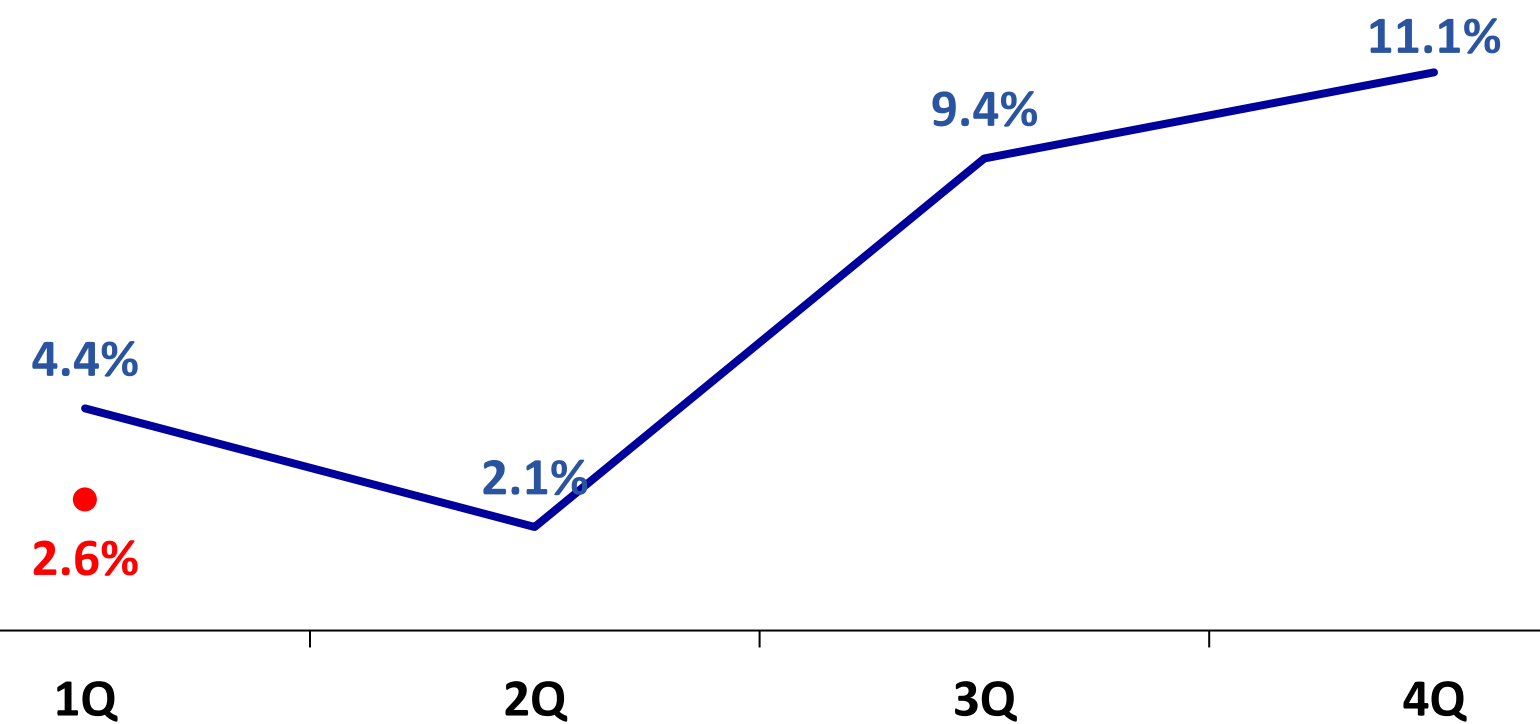
+23% YoY



## Gross Margin (%)



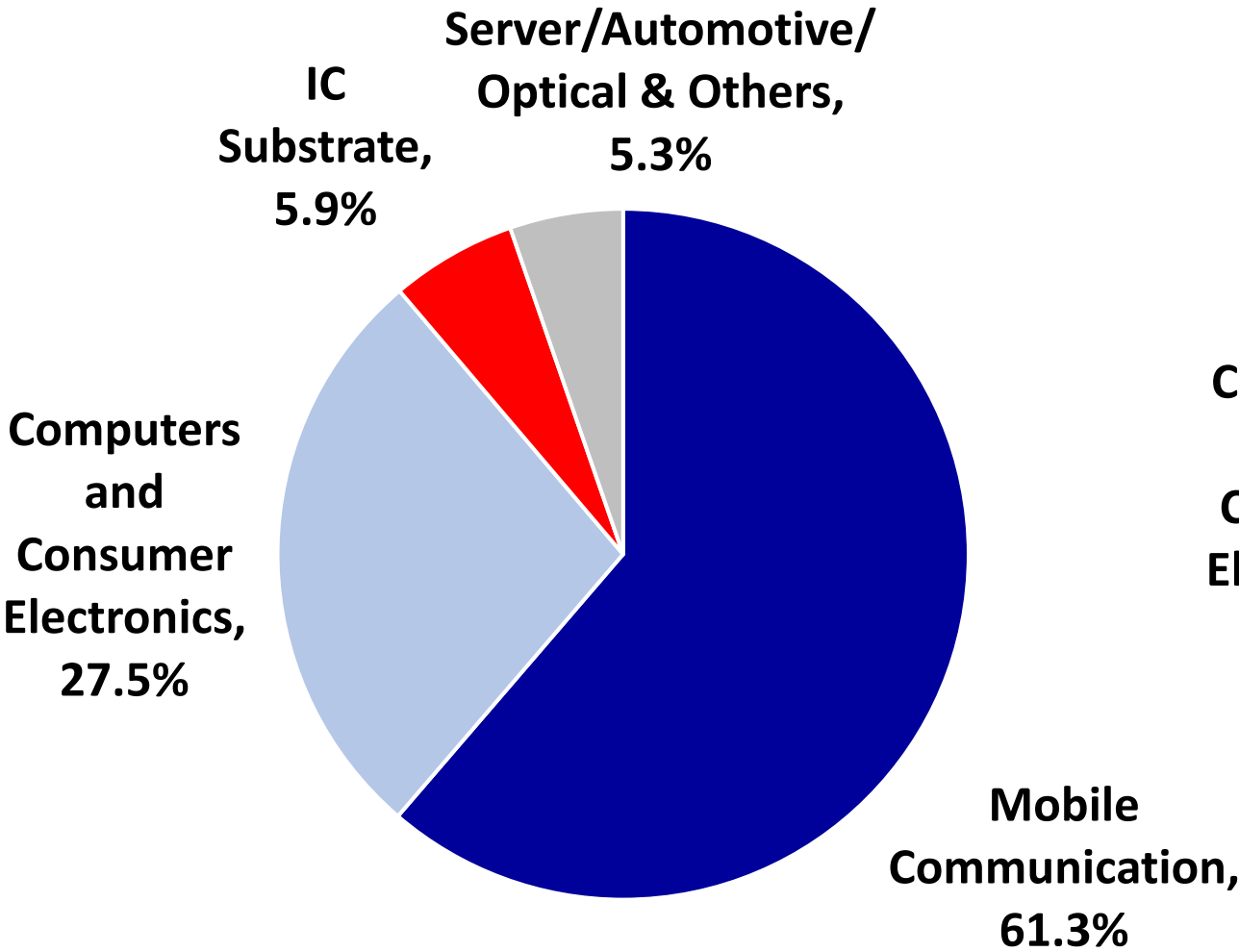
## Net Margin (%)



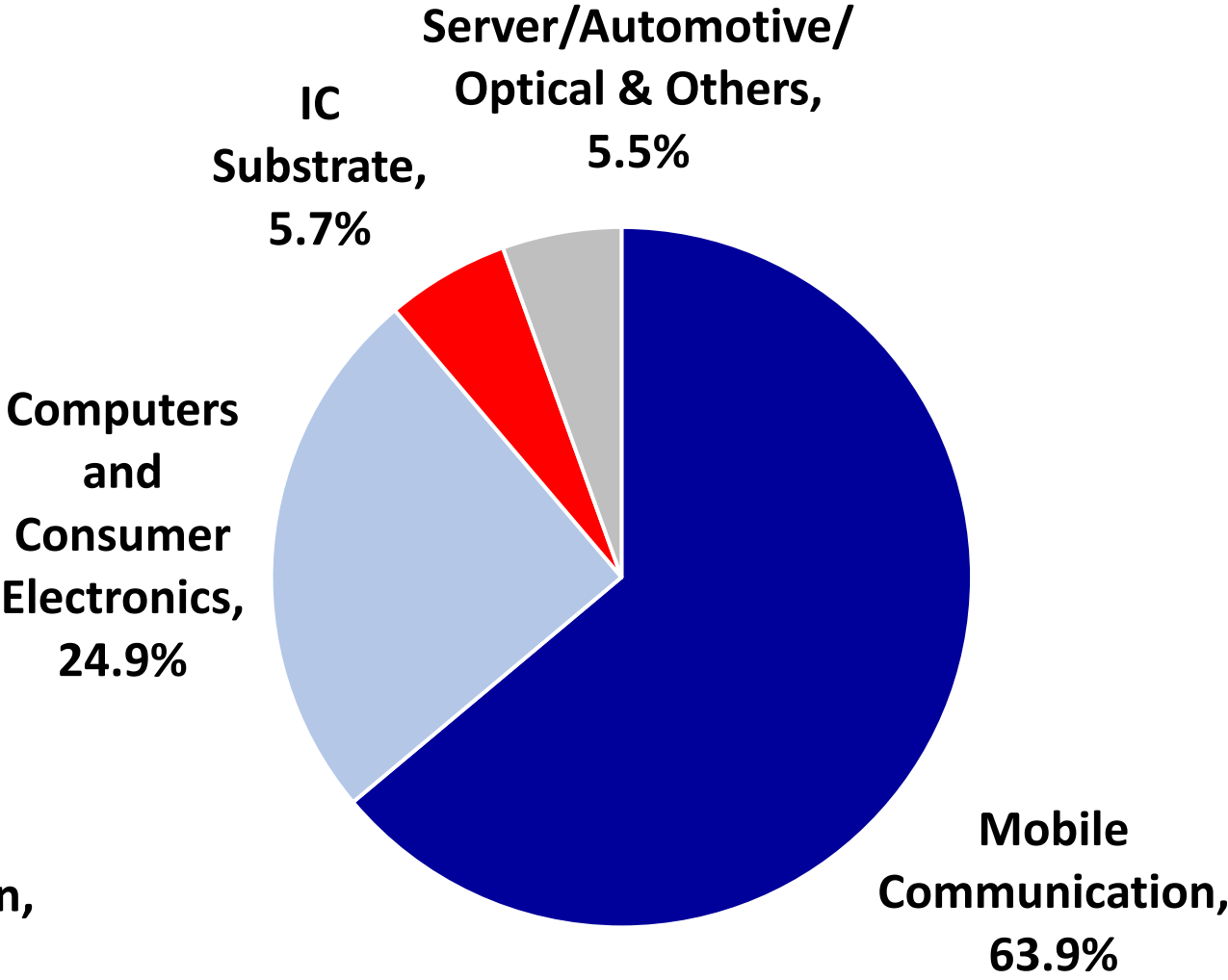


# Revenue Breakdown – By Applications

1Q25 Revenue NT\$40.1bn



1Q24 Revenue NT\$32.5bn



Applications	1Q25 Revenue YoY%
Mobile Communication	+18.4%
Computers and Consumer Electronics	+36.2%
IC Substrate	+27.2%
Automotive/Server/Optical & Others	+18.1%

# Consolidated Balance Sheet and Key Indices

	Unit: NT\$ million					
	2025-3-31		2024-3-31		Change	
	Amount	%	Amount	%	Amount	%
Cash and Cash Equivalents <sup>(2)</sup>	85,879	32.3%	72,995	30.0%	12,884	+2.3ppts
Notes & Accounts Receivable	22,676	8.5%	20,856	8.6%	1,820	-0.1ppts
Inventories	16,780	6.3%	15,858	6.5%	922	-0.2ppts
Property, Plant and Equipment <sup>(3)</sup>	115,397	43.4%	110,806	45.5%	4,591	-2.1ppts
<b>Total Assets</b>	<b>265,744</b>	<b>100.0%</b>	<b>243,283</b>	<b>100.0%</b>	<b>22,461</b>	
Debt	58,910	22.2%	54,143	22.3%	4,766	-0.1ppts
Notes & Accounts Payable	40,893	15.4%	33,230	13.7%	7,663	+1.7ppts
<b>Total Liabilities</b>	<b>114,757</b>	<b>43.2%</b>	<b>104,632</b>	<b>43.0%</b>	<b>10,125</b>	<b>+0.2ppts</b>
<b>Total Equity</b>	<b>150,987</b>	<b>56.8%</b>	<b>138,652</b>	<b>57.0%</b>	<b>12,335</b>	<b>-0.2ppts</b>
<b>Key Indices</b>						
A/R Turnover Days	60		70		(10)	
Inventory Turnover Days	49		57		(8)	
Current Ratio (x)	1.75		1.82		(0.07)	
PPE Turnover (x) <sup>(4)</sup>	1.40		1.18		(0.22)	

Note : (1) Weighted Average Shares outstanding as of 1Q25 : 954,559 thousand shares (actual issuance 956,652 thousand shares, with 2,093 thousand shares held in treasury (2) Including current financial assets at amortized cost (time deposits, etc.) (3) PPE includes investment property (4) PPE Turnover = annualized net revenue / average net property, plant and equipment



# 2015-2024 Financial Summary

Unit: NT\$ million										
Period	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Revenue	85,738	82,393	109,238	117,913	120,068	131,279	155,022	171,356	151,398	171,664
Gross Profit	16,427	12,542	17,833	26,061	27,222	26,584	30,537	39,888	27,459	32,461
Net Income	7,731	3,456	6,772	11,536	12,402	11,508	13,694	20,535	9,432	13,096
Net Income to Parent	7,731	3,456	5,172	8,448	8,685	8,095	9,651	14,197	6,189	9,180
Depreciation & Amortization	4,850	5,295	5,679	6,820	7,955	8,405	11,875	14,638	16,323	17,749
EPS (NT\$)	9.80	4.29	6.43	10.50	9.93	8.90	10.21	15.02	6.55	9.67
DPS (NT\$)	4.50	2.20	3.30	4.46	4.50	4.50	5.00	6.00	3.275	4.80
Payout Ratio (%)	46%	51%	51%	43%	45%	51%	49%	40%	50%	50%
Cash and Cash Equivalents*	31,572	30,241	33,296	49,154	43,071	46,775	35,179	57,599	65,970	79,830
Property, Plant and Equipment	32,074	32,262	36,681	41,913	46,243	68,177	86,073	104,814	109,965	113,462
Capital	8,047	8,047	8,047	8,047	9,022	9,470	9,470	9,470	9,470	9,567
ROE (%)	20.82%	8.59%	14.49%	17.30%	14.72%	11.84%	12.59%	16.67%	7.10%	9.15%
Debt Ratio (%)	53.70%	59.72%	55.33%	44.25%	35.41%	42.56%	42.01%	42.87%	44.67%	42.85%

\* Including current financial assets at amortized cost (time deposits, etc.)



Thank You