

Zhen Ding Technology Holding (4958 TT)

Investor Presentation

March 2025



- 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

No. 1 PCB Manufacturer Worldwide

2006 Founded

(Former Foxconn Advanced Tech, 1978) **Taoyuan, Taiwan** Headquarter

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29 Facilities

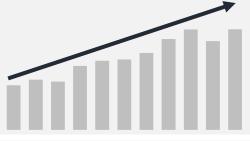
Located in Mainland China, Taiwan, Thailand and India

NT\$171.7bn

Revenue in 2024 (13.4% YoY)

+9%

2014-2024年 Revenue CAGR



1,868

Accumulated Valid Patents

3,866



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

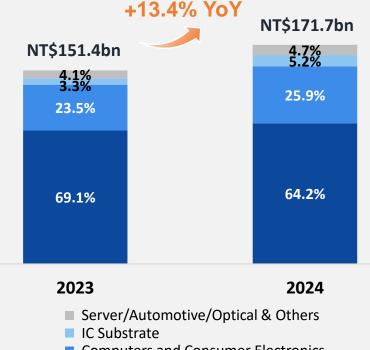
NT\$108.6bn

Market Cap (as of Mar. 10, 2025) 10yr Average ROE

(2015-2024)

13.3%

Revenue Breakdown – By Applications



- Computers and Consumer Electronics
- Mobile Communication



Why Invest in ZDT?

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World's largest PCB manufacturer with stable long-term growth:

ZDT has become the world's largest PCB manufacturer since 2017. We have achieved a 9% revenue CAGR during 2014-2024.

Leverage One ZDT synergies to further widen the market share gap:

With One ZDT as the core strategy, we will continue to drive steady growth by leveraging the synergies from one-stop shopping. Our global PCB market share was 7.3% in 2024, and we aim to increase it to 10% by 2030.

Aggressive expansion in IC substrate:

We target for our IC substrate revenue to grow by >50% CAGR during 2023~2027, and strive to become one of the top five global IC substrate suppliers by 2030.

Global manufacturing footprint:

In addition to the three major manufacturing sites in Mainland China, we also own fabs in Taiwan and India. The new fab in Thailand will enter trail production on May 8 and small-scale mass production in 2H25, and we plan to transform Kaohsiung into an Al-centric campus. In the future, we will keep expand our global manufacturing bases to serve diversified customer needs.



World's Largest PCB Manufacturer with Stable Long-term Growth

Business Review and Outlook

2024 revenue increased by 13.4% YoY, exceeding previous expectations and reaching a record high, maintaining as the world's largest PCB manufacturer for the 8th consecutive year:

Among the four major applications, Mobile Communications, Servers/Automotive/Optical, and IC Substrates all achieved historical highs, while Computers and Consumer Electronics also showed a significant recovery, increasing by 24.8% YoY. Under the "One ZDT" strategy, our product portfolio has become more diversified and balanced. The combined revenue contribution from Servers/Automotive/Optical and IC Substrates increased to 9.9% from 7.4% in the previous year. Overall, our global PCB market share further increased from 7.0% in the previous year to 7.3%.

2025 revenue to reach another record high, with AI-related products accounting for >70% of total revenue:

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Despite uncertainties in the macroeconomic environment, the rapid rise of edge AI devices—including AI smartphones, AI PCs, smart glasses, humanoid robots, and intelligent vehicles—is accelerating upgrades of PCB technologies and changes in product design. Additionally, high-end products in AI servers, optical, and IC substrates will also increase in response to growing customer demand. We expects growth across all four major applications this year, with AI-related products accounting for >70% of consolidated revenue.

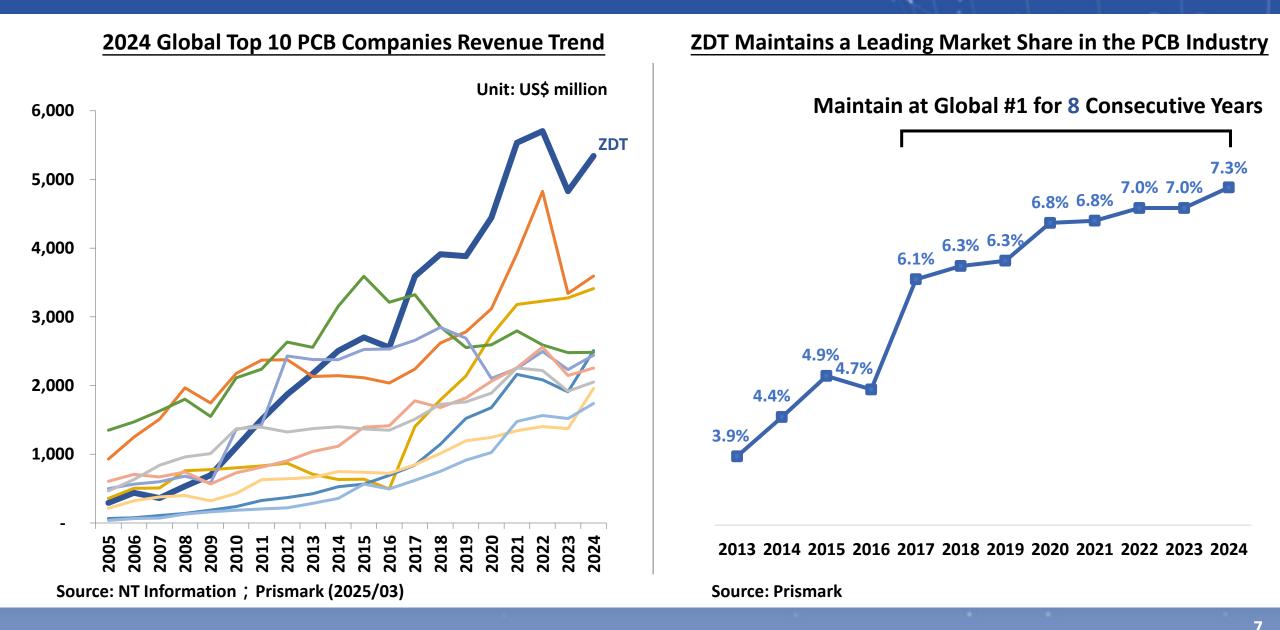
Thailand fab is scheduled to enter trial production on May 8th; We plan to invest NT\$10bn in equipment for high-end ABF substrates and RPCB for Kaohsiung AI Park. Contributions of the new fabs will materialize in 2026-2027:

The first phase of the new fab in Prachinburi will enter trial production on May 8th, with small-scale volume production expected in 2H25. Meanwhile, the second-phase fab is scheduled to break ground on May 8th. Currently, we are actively investing resources and developing new products to secure more tier-1 customers once the Thailand capacity comes online. Additionally, we plan to invest NT\$10bn in equipment for high-end ABF substrates and RPCB for Kaohsiung AI Park. We expect that by 2026-2027, the Thailand and Kaohsiung fabs will gradually improve operating efficiency and make an increasing contribution to overall performance.

Appointed Dr. Chen-Fu Chien as General Manager; Chairman & Group CSO, General Manager, and COO will form a well-balanced "iron triangle" team:

General Manager Chen-Fu Chien will leverage his extensive academic and industry experience to accelerate Zhen Ding's development in five key areas, including smart manufacturing, industrial engineering, AI empowerment, semiconductor industry engagement, and industry-academia collaboration. Moving forward, Zhen Ding's Chairman and Group Chief Strategy Officer will focus on business strategy and planning, General Manager will drive digital transformation and empowerment, and Chief Operating Officer will oversee operational management and execution. The three key leaders will form a well-balanced "iron triangle" team, each taking on a vital role to enhance overall operational efficiency and accelerate the company's transformation.

ZDT Outperforms Industry Average, Maintaining #1 Position



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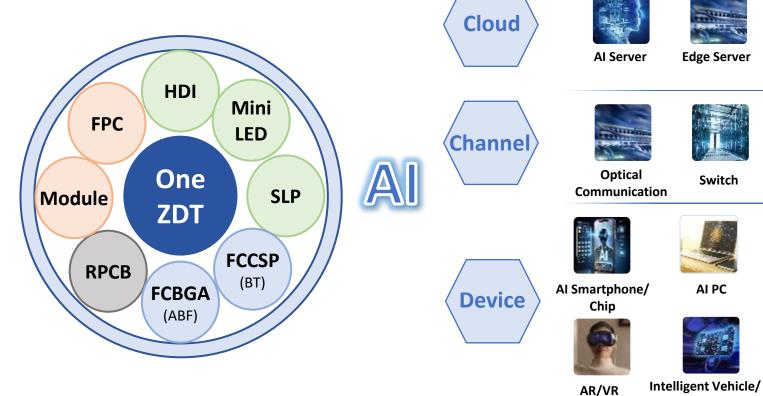
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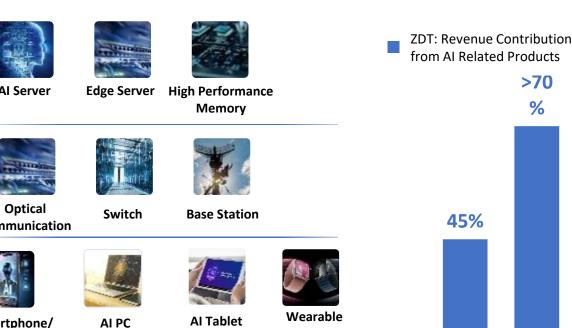


One ZDT: We Offer A Full Range of PCBs for AI

From AI Edge Devices to AI Servers – AI Increases Design Complexity for PCBs ZDT Offers the Most Comprehensive and Advanced PCBs for All Kinds of AI Applications

Metaverse





Devices

NEV/

Battery

Autopilot Chip/

mmWave Radar

Smart Cockpit

Domain Controller

8%

2023

2025E

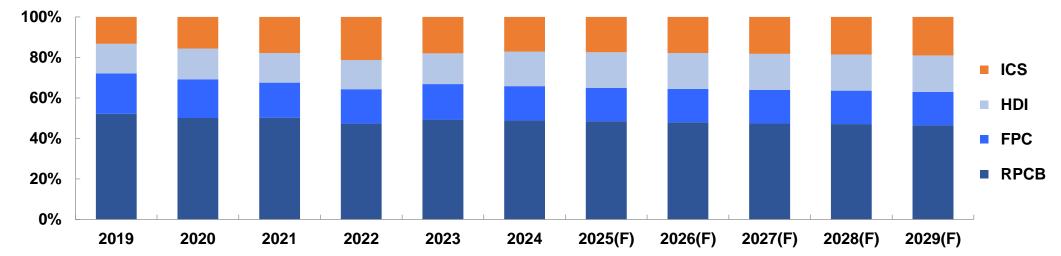
2024



Leverage One ZDT Synergies to Further Widen the Market Share Gap

Aim to Reach 10% Global PCB Market Share by 2030

All PCB Segments will Continue to Grow in 2025



Product	ltem	2019	2020	2021	2022	2023	2024	2025(F)	2026(F)	2027(F)	2028(F)	2029(F)	2024-2029 CAGR
RPCB	Value	31,969	32,674	40,641	38,720	34,292	35,941	38,091	39,471	40,823	42,679	44,022	4.1%
KPCD	%	52.1%	50.1%	50.2%	47.4%	49.3%	48.9%	48.5%	48.0%	47.4%	47.1%	46.5%	
FPC	Value	12,195	12,483	14,058	13,842	12,191	12,504	12,960	13,579	14,227	14,906	15,617	4.5%
	%	19.9%	19.1%	17.4%	16.9%	17.5%	17.0%	16.5%	16.5%	16.5%	16.5%	16.5%	
	Value	9,008	9,874	11,811	11,763	10,536	12,518	13,815	14,558	15,342	16,167	17,037	6.4%
HDI	%	14.7%	15.1%	14.6%	14.4%	15.2%	17.0%	17.6%	17.7%	17.8%	17.9%	18.0%	
	Value	8,139	10,188	14,410	17,415	12,498	12,602	13,696	14,661	15,695	16,801	17,985	7.4%
ICS	%	13.3%	15.6%	17.8%	21.3%	18.0%	17.1%	17.4%	17.8%	18.2%	18.6%	19.0%	
1	Fotal	61,311	65,219	80,920	81,740	69,517	73,565	78,562	82,269	86,087	90,553	94,661	5.2%
YoY Change (%)		-1.7%	6.4%	24.1%	1.0%	-15.0%	5.8%	6.8%	4.7%	4.6%	5.2%	4.5%	

Source : Prismark(2025/3) ; 2026~28's data is calculated based on Prismark's estimation

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Server/Automotive/Optical Business Update

In 2025, revenue from servers, automotive, and optical will continue to grow. Within the server segment, AI servers will be the primary growth driver:

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. Currently, we are actively expanding collaborations with customers on projects for Intel, AMD, and ASIC-based architectures. In alignment with the AI ASIC product development plans of our two major cloud customers, we offer comprehensive PCB solutions while accelerate our global production footprint.

For optical communications, we offer high-end products to gain more market share:

After passing customer qualifications last year, our optical products entered mass production, with revenue contributions expected to gradually increase. 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.

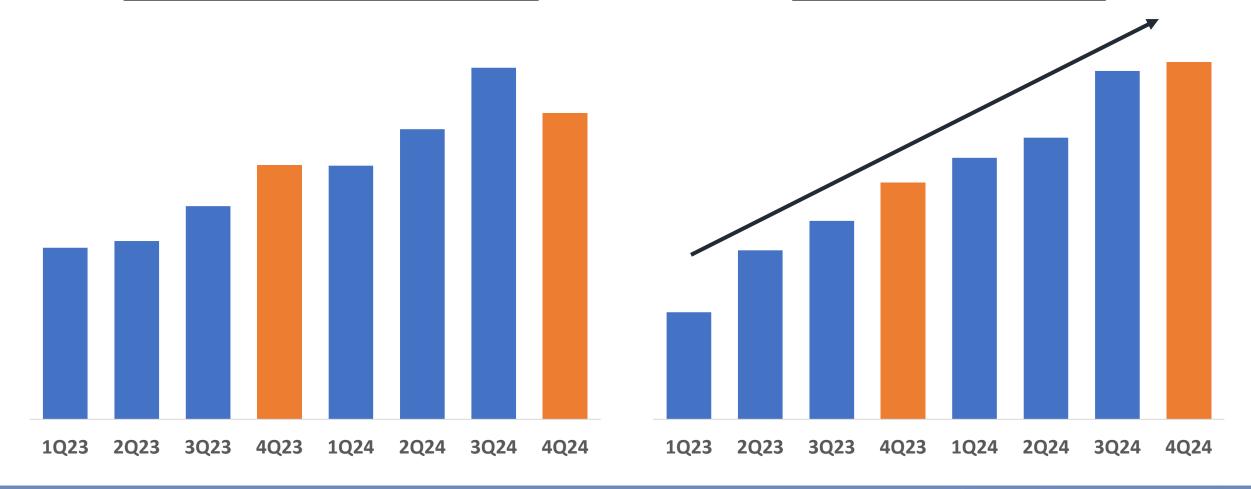
For automotive, our deployment on autonomous driving and electrification will drive growth:

Zhen Ding is actively expanding its 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 electrification, 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. Starting in 2H25, customers will begin qualifying the Thailand fab, addressing their need for diversified manufacturing bases.



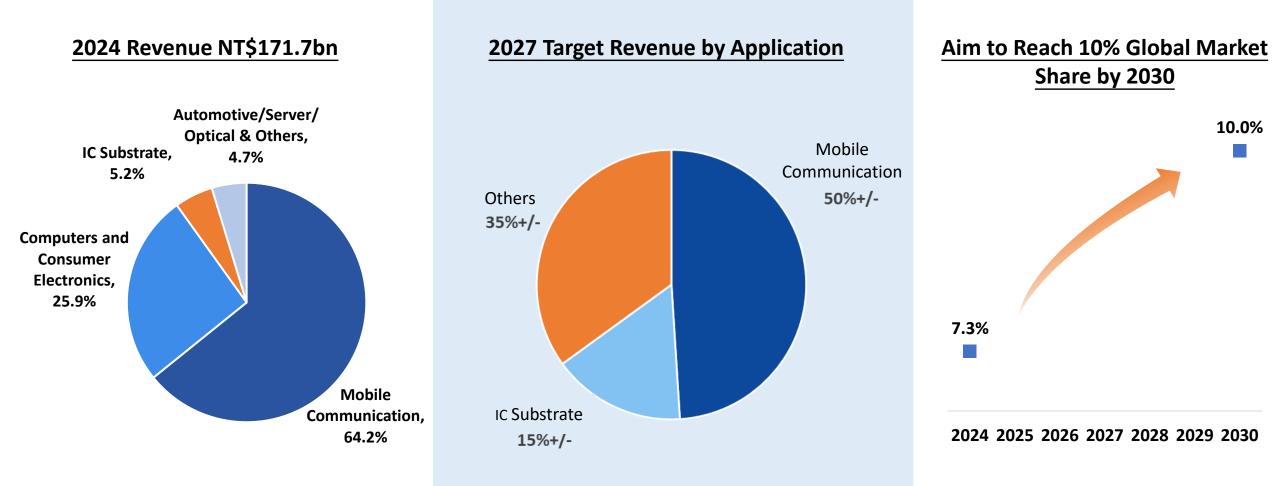
"One ZDT" Achieved Desired Results, with Continued Growth in Server/Automotive and IC substrates

ZDT's Revenue for Server/Automotive/Optical Continues Delivering Double-digit Growth ZDT's Revenue for IC Substrates Continues Setting a New Quarterly Record





Aim to Reach 10% Global PCB Market Share by 2030





Aggressive Expansion in IC Substrate

Aim to Become One of the Top Five in the World by 2030



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IC Substrate Business Update

IC substrate revenue grew by 75.6% YoY in 2024, with the growth rate far exceeding the industry average:

Our IC substrate capacity is strategically focused on high-end products. Our ABF substrates benefited from strong demand for Chiplet and 2.5D advanced packaging products, leading to a significant increase in capacity utilization, and our revenue for BT substrates also delivered steady growth. Overall, the growth of our IC substrate business far exceeded the industry average.

IC substrates to remain the fastest-growing segment among four major applications in 2025:

While the overall ABF substrate market is experiencing a slow price recovery, the rapid development of AI, high-performance computing, 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, and our capacity utilization rate is expected to improve further compared to last year.

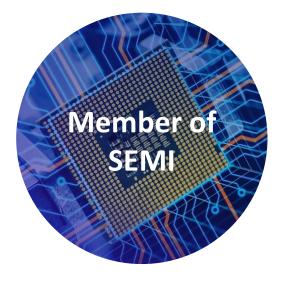
To establish an IC substrate production site at Kaohsiung AI Park, leveraging the Smart Fab 2.0 concept:

 To meet future customer demand for high-end products, we plan to build a full-process advanced packaging FCBGA mass production facility at the Kaohsiung AI Park. It is expected to develop FCBGA full-process production equipment and internal buried process production equipment, creating an advanced IC substrate production base.



Actively Connect with the Semiconductor Supply Chain

Zhen Ding has been actively engaging with semiconductor industry organizations and collaborating closely with the supply chain to explore market opportunities in emerging technologies.







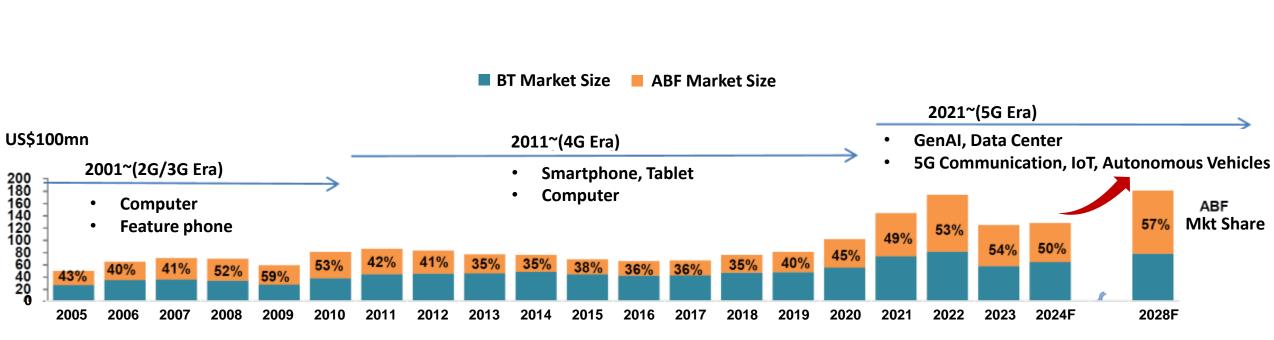
Challenges on IC Substrates in Advanced Packaging

The complexity o	f IC substrates is incr	reasing:			
High layer count	ts				
Large body size				In In a I	
Flat surface					
Accurate prod	uction precision				
		: : : : 			
	2005	2020	2026		
Body Size (mm)	31 x 31	75 x 60	120 x 140+	x20 +	
Layer count (L)	6	20	28+	x4+	
Bump Count	1K	100K	300k+ ~ 500k+	x300+	
Bump Count	1K	100K	300k+ ~ 500k+	x300+	

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Source: Prismark (2024/9)





Advanced Packaging

- As Chiplet and HBM increase, the designs of bump area will become more irregular, which requires tighter control on packaging yields.
- The demand for more complex designs with large body sizes and high layer counts will increase.
- As packaging complexity increases, the quality of IC substrate becomes more important.
- Automotive products will extensively adopt advanced packaging, which will drive new demand for IC substrates and critical materials.

Advanced Chiplet

- Interposer will become larger and bump counts will increase, driving the demand for more advanced large body size and high layer counts IC substrates.
- Optoelectronic device is the future trend, and there will be a significant number of bumps, wiring, and stacked vias along the edges of IC substrates.
- Backside power delivery to wafers will transform the structure of IC substrates and packaging designs.

Co-Packaged Optics (CPO)

- CPO is the future trend, and the current consensus is that IC substrate remains the most optimal carrier.
- CPO can significantly improve transmission efficiency while reducing power consumption and signal loss.
- Closely monitor the progress of the integration of CPO+CoWoS.



IC Substrate Goals









IC Substrate Capex:

Plan to invest NT\$60bn from 2022~2027

IC Substrate Revenue:

2023~2027 Revenue CAGR >50%

IC Substrate Revenue:

Account for 15 %+/- of company's consolidated revenue in 2027

IC Substrate Market Share:

Aim to become one of the global top 5 companies in the IC substrate market in 2030



Global Manufacturing Footprint



Six Major Global Manufacturing Campuses





The Construction of Thailand Fab is Progressing According to Plan, with Trial Production Scheduled on May 8th



- The phase 1 of the new fab in Prachinburi, Thailand, began equipment installation in February, with trial production scheduled for May 8th and small-scale volume production expected in the second half of the year. Meanwhile, the phase 2 fab is scheduled to break ground on May 8th.
- Phase 1 capacity will focus on high-end server, automotive, and optical applications, providing high-end RPCB and HDI products.
- We are actively investing resources and developing new products to secure more tier-1 customers once the Thailand capacity comes online.

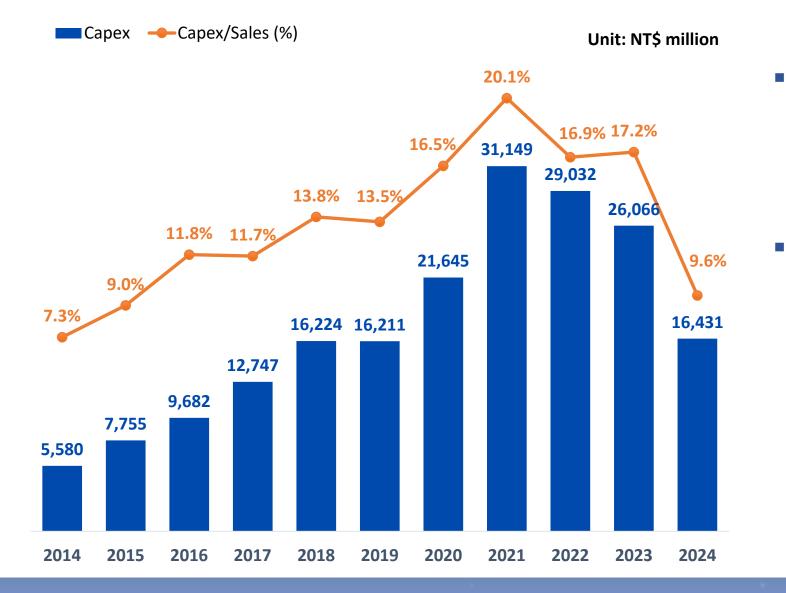
緣鼎科技控股 Chen Ding Tech. Holding Kaohsiung Al Park: R&D and Manufacturing Site for Al Products Chen Ding Tech. Holding



The Kaohsiung AI Park will be Zhen Ding's key R&D and manufacturing site for AI related products, with a focus on providing high-end products.

- <u>IC Substrates</u>: We have announced an investment of NT\$8bn in equipment to establish a full-process FCBGA mass production facility for advanced packaging.
- High-Layer-Count and High-Density Interconnect (HLC+HDI) PCBs: We have announced an investment of NT\$2bn in equipment to build production capacity.
- Flexible Printed Circuit (FPC): The facility has entered trial production.

.科技控版 Continued Capacity Expansion, Pursuing Stable Growth

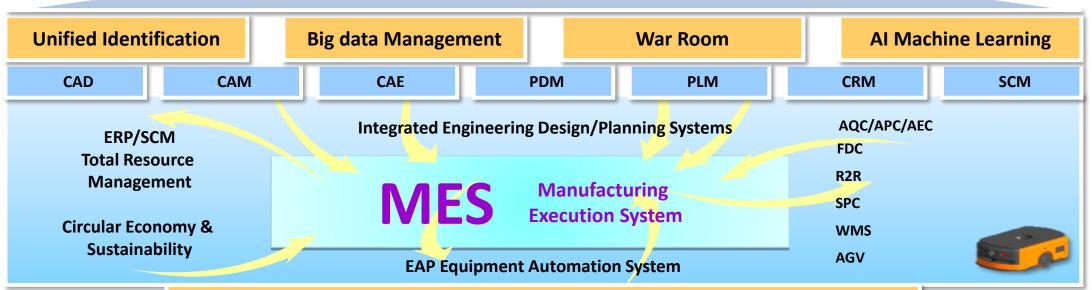


- As the world's largest PCB manufacturer, we position ourselves as a growth-oriented company, continuously adopting our "Early Deployment" strategy to proactively build the capacity to meet customers' needs.
- This year, we will invest in capacity expansion in both Mainland China and overseas. In Mainland China, we will expand capacity for automotive and energy storage FPCs and collaborate with customers to build up high-end capacity to debottlenecks. For overseas, we are progressing as planned with the construction of our Kaohsiung and Thailand fabs, laying a solid foundation for long-term growth.



Through Smart Fabs, Zhen Ding Strives to Be an Essential Partner to the Semiconductor Industry

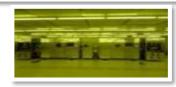
Smart fabs for Industry 3.5/4.0



SEMI Equipment Communication Standard/Generic Equipment Model













Inspection

Lamination

Laser

Laser Direct Imaging (LDI)

Vertical Develop



Introduce Smart Manufacturing and Digital Transformation into Each Fab Step by Step to Drive Manufacturing Excellence

Under the One ZDT strategy, smart management has been implemented in phases across different fabs. By the end of 2024, 9 new fabs had adopted smart management, while 6 existing fabs had been upgraded. The implementation of smart management has resulted in significant improvements in both yield and efficiency. Currently, among Zhen Ding's 29 fabs, 4 new fabs are under construction, 1 is undergoing an upgrade, and 9 older fabs are pending improvement.





Huai'an Park 1 Fab 03



Shenzhen ABF Substrate Park Fab 01



Qinghuangdao BT Substrate Park Fab 01



Huai'an Park 3 Fab 01



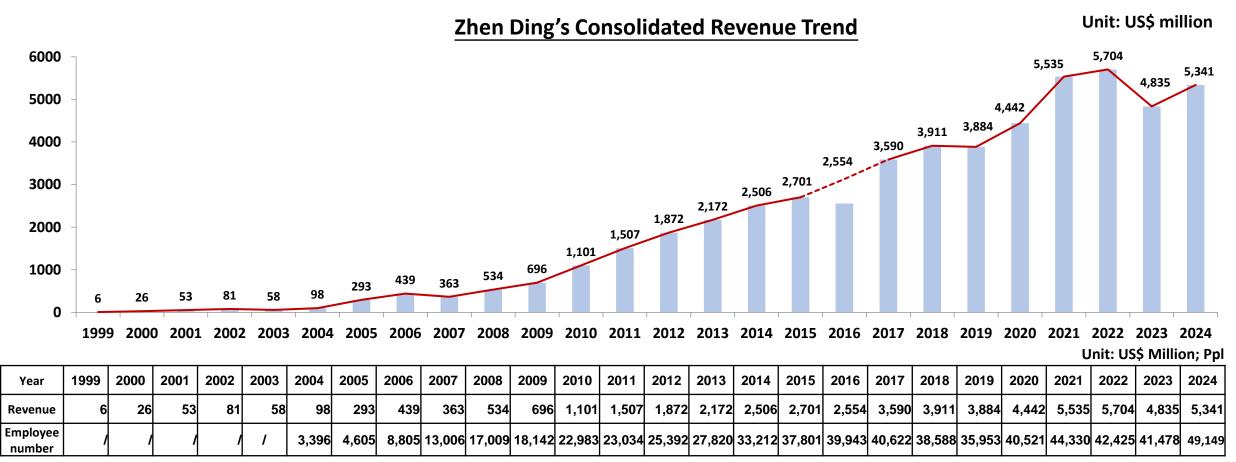
Thailand Prachinburi Park Fab 01



Huai'an Park 3 Fab 02

Aim to Continuously Increase Per Capita Productivity

By enhancing operational efficiency through digital transformation and smart fabs, Zhen Ding's goal is to achieve continuous revenue growth by 2030 while optimizing workforce management to ensure a steady increase in per capita productivity.



* Annual average number of employees

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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 **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



4Q24 Financial Results

(Unit: NT\$ million, unless otherwise stated)

	4Q24	4Q23	YoY (%)	
Revenue	56,133	54,396	+3.2%	
Gross Profit	11,471	11,679	-1.8%	
Gross Margin	20.4%	21.5%	-1.1ppts	
Operating Expense	5,917	5,424	+9.1%	
Operating Profit	5,554	6,254	-11.2%	
Operating Margin	9.9%	11.5%	-1.6ppts	
Non-Operating Income/Expense	2,206	(409)		
Net Income	6,242	5,070	+23.1%	
Net Margin	11.1%	9.3%	+1.8ppts	
Net Income to Parent	4,363	3,504	+24.5%	
EPS (NT\$) ⁽¹⁾	4.59	3.71		
R&D Expense	3,048	2,866	+6.3%	
Depreciation and Amortization	4,655	4,199	+10.8%	
Cash Inflow Generated from Operations	20,933	13,239	+58.1%	
Cash and Cash Equivalents ⁽²⁾	79,830	65,970	+21.0%	
ROE (%) ⁽³⁾	17.4%	15.2%	+2.2ppts	

Note: (1) Weighted average shares outstanding as of 2024: 949,394 thousand shares (actual issuance 956,653 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



2024 Financial Results

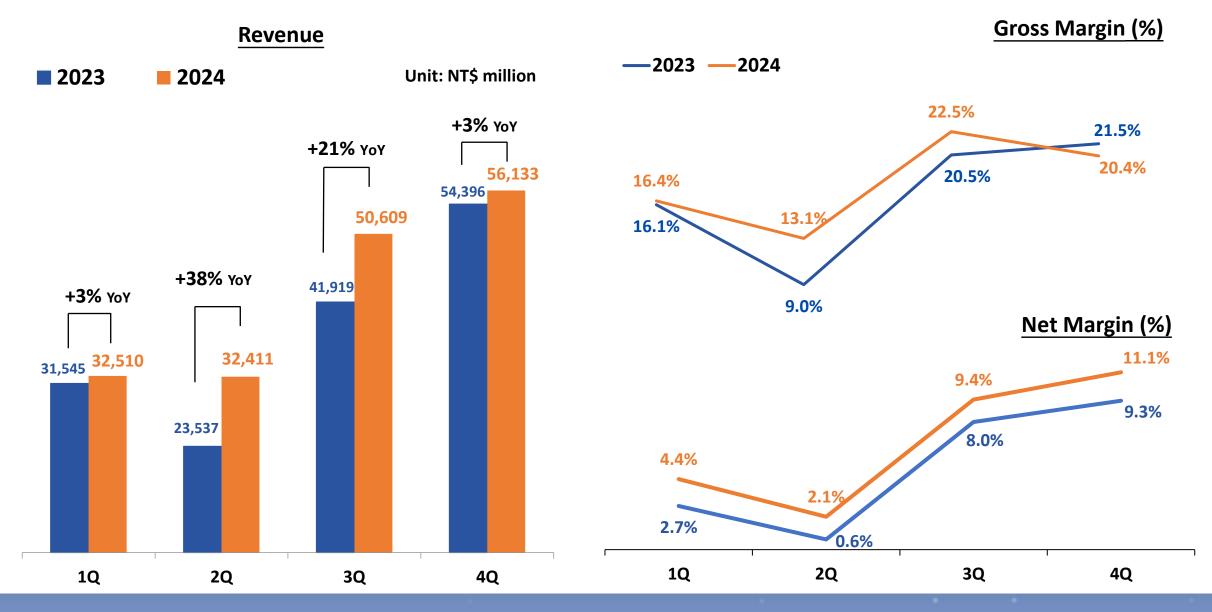
(Unit: NT\$ million, unless otherwise stated)

	2024	2023	YoY (%)
Revenue	171,664	151,398	+13.4%
Gross Profit	32,461	27,459	+18.2%
Gross Margin	18.9%	18.1%	+0.8ppts
Operating Expense	20,875	18,300	+14.1%
Operating Profit	11,586	9,160	+26.5%
Operating Margin	6.8%	6.1%	+0.7ppts
Non-Operating Income/Expense	3,459	888	+289.5%
Net Income	13,096	9,432	+38.9%
Net Margin	7.6%	6.2%	+1.4ppts
Net Income to Parent	9,180	6,189	+48.3%
EPS (NT\$) ⁽¹⁾	9.67	6.55	
R&D Expense	11,715	9,665	+21.2%
Depreciation and Amortization	17,749	16,323	+8.7%
Cash Inflow Generated from Operations	30,385	33,599	-9.6%
Cash and Cash Equivalents ⁽²⁾	79,830	65,970	+21.0%
ROE (%) ⁽³⁾	9.1%	7.1%	+2.0ppts

Note: (1) Weighted average shares outstanding as of 2024: 949,394 thousand shares (actual issuance 956,653 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

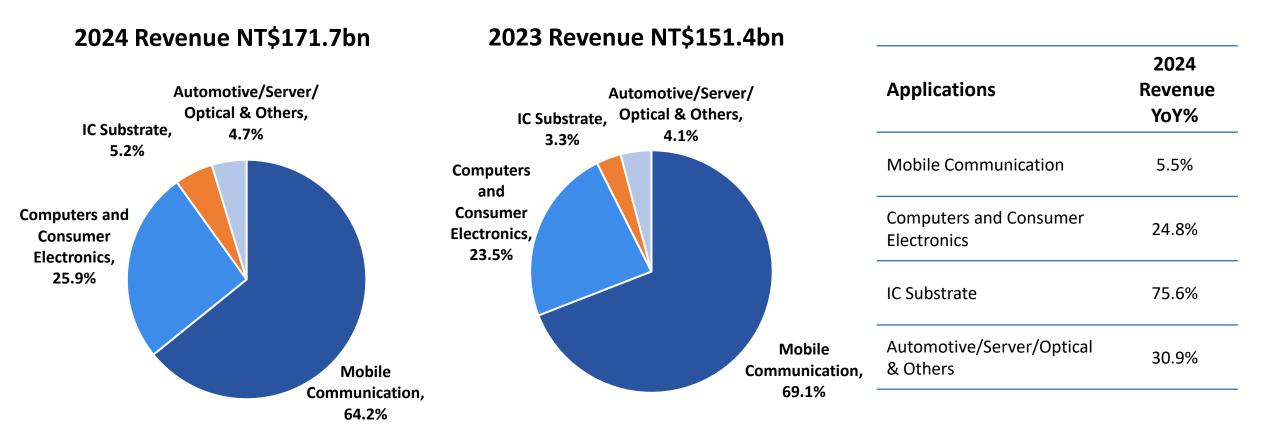


Quarterly Operation Results





Revenue Breakdown – By Applications



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Consolidated Balance Sheet and Key Indices

	2024-12-	-31	2023-12 [.]	-31	Unit: NT\$ million Change		
-	Amount	%	Amount	%	Amount	%	
Cash and Cash Equivalents ⁽²⁾	79,830	30.0%	65,970	27.2%	13,860	2.8ppts	
Notes & Accounts Receivable	30,959	11.6%	29,503	12.2%	1,455	-0.5ppts	
Inventories	17,990	6.8%	15,508	6.4%	2,482	0.4ppts	
Property, Plant and Equipment ⁽³⁾	113,462	42.7%	109,965	45.3%	3,497	-2.6ppts	
Total Assets	265,993	100.0%	242,932	100.0%	23,218		
Debt	57,051	21.4%	53,130	21.9%	3,922	-0.4ppts	
Notes & Accounts Payable	40,858	15.4%	37,853	15.6%	3,004	-0.2ppts	
Total Liabilities	113,970	42.8%	108,450	44.7%	5,520	-1.8ppts	
Total Equity	152,024	57.2%	134,326	55.3%			
Key Indices							
A/R Turnover Days	63		72		(9)		
Inventory Turnover Days	47		52		(5)		
Current Ratio (x)	1.91		1.44		0.47		
PPE Turnover (x) ⁽⁴⁾	1.59		1.47		0.12		

Note: (1) Weighted average shares outstanding as of 2024: 949,394 thousand shares (actual issuance 956,653 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.)



Q&A



THANK YOU

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