



臻鼎科技控股
Zhen Ding Tech. Holding

Zhen Ding Technology Holding (4958 TT)

Investor Presentation

November 2024



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



No. 1

PCB Manufacturer Worldwide

2006 Founded
(Former Foxconn Advanced Tech, 1978)

Taoyuan, Taiwan
Headquarter



26 Facilities
Located in Mainland China,
Taiwan and India

46,693 Employees
(as of Dec. 31, 2023)

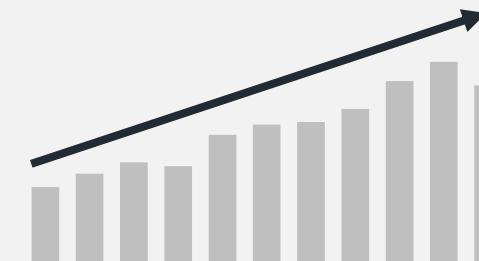


NT\$151.4bn

Revenue in 2023
(-11.6% YoY)

+9%

2013-2023年
Revenue CAGR



1,796

Accumulated Valid Patents

3,739

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

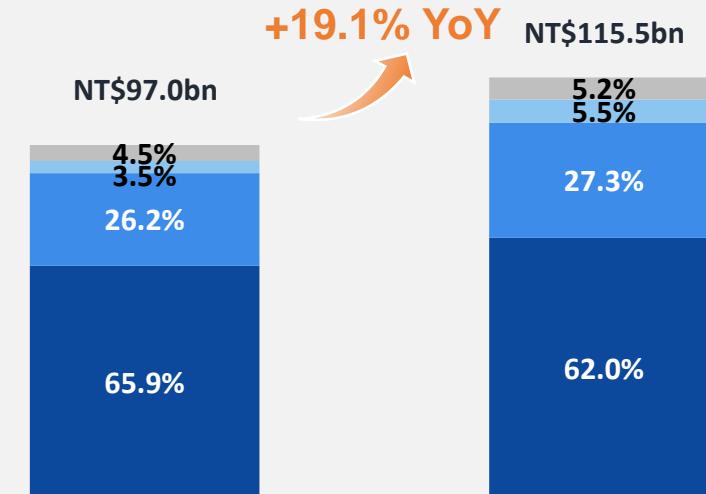
NT\$112.4bn

Market Cap
(as of Nov. 11, 2024)

14.7%

10yr Average ROE

Revenue Breakdown – By Applications



1-3Q23

1-3Q24

- Automotive/Server/Base Station & Others
- IC Substrate
- Computers and Consumer Electronics
- Mobile Communication

Why Invest in ZDT?

- 1
- 2
- 3
- 4

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 2013-2023.

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 7.0% in 2023, and we aim to increase it to 10% by 2030.

Aggressive expansion in IC substrate:

We plan to invest NT\$60 billion capex for IC substrates in 2022-2027. We strive to become one of the top five global IC substrate suppliers by 2030.

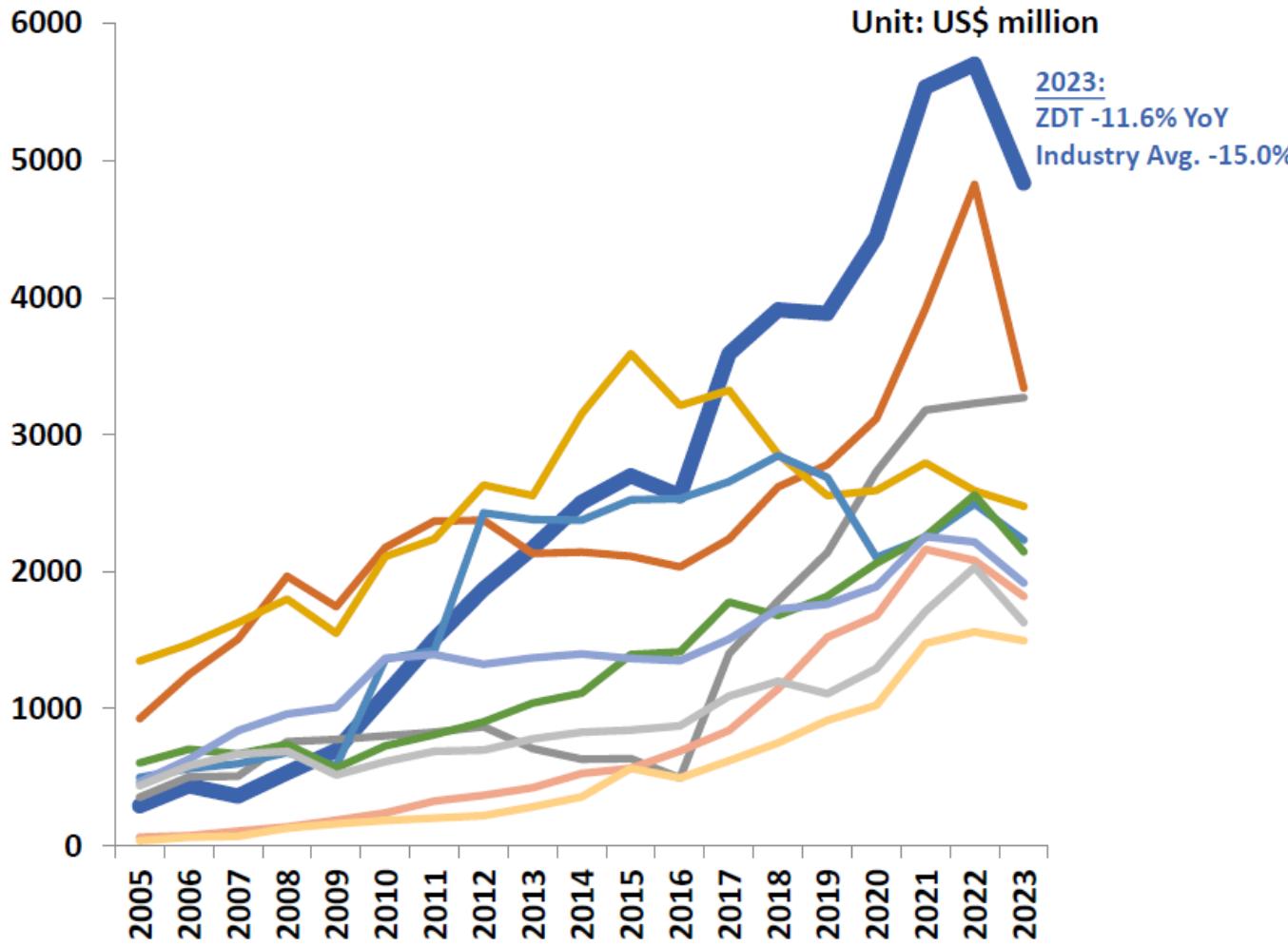
Global manufacturing footprint:

In addition to the three major manufacturing campuses in Mainland China, we also own manufacturing plants in Taiwan and India, and are constructing a new plant in Thailand while planning to transform Kaohsiung into an AI-driven 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

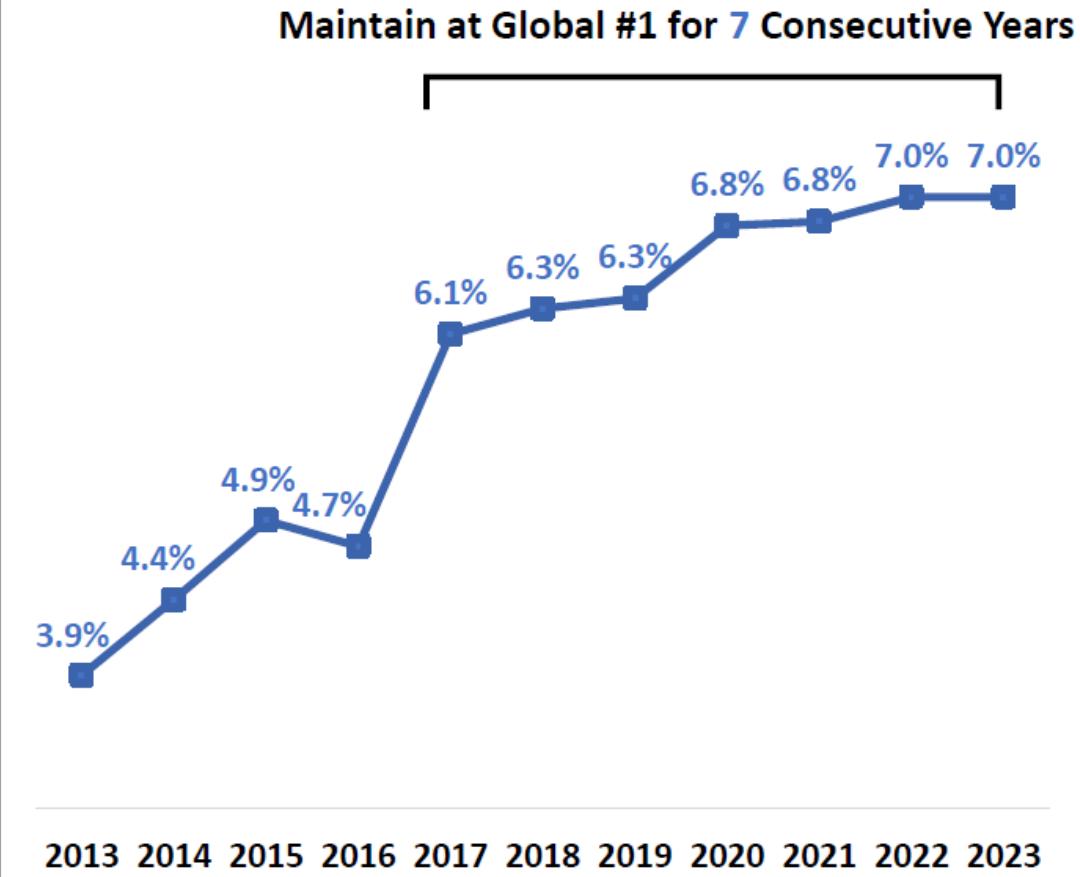


2023 Global Top 10 PCB Companies Revenue Trends



Source : NT Information ; Prismark (2024/02)

ZDT Maintains a Leading Market Share in the PCB Industry



Source : Prismark

Business Review and Outlook

1

3Q24 revenue set a record high for the same period. All four major product applications delivered QoQ and YoY growth:

3Q24 revenue achieved a robust growth and marked a record high for the same period, increasing by 56% QoQ and 21% YoY. Revenue for Mobile Communication benefited from the peak season of customers' new product shipments, setting a record high for the same period in the company's history. Revenue for IC substrates and Automotive/Server/Base Station both reached a record high for a single quarter.

2

4Q24 performance will reach the peak of the year. We maintain our target of delivering double-digit revenue growth this year. We are positive on the PCB content growth opportunity for new smartphone models launching next year:

For 4Q24, it will still be the peak season for customers' new product shipments, and we expect 4Q24 performance to reach the peak of the year, with utilization maintaining at a high level. In addition, as hardware spec requirements for AI smartphones become higher, this drives changes in product designs and materials, and increases complexity for PCBs. As a result, we are positive on the PCB content growth opportunity for new models launching next year.

3

For AI servers, we actively engage with customers for future generation products. In addition, our optical products have also entered mass production:

We have been deeply involved in developing server applications for many years. For AI servers, we not only have offered samples for customers' next-generation products, but also actively engage with customers for future generation products. Our optical products have entered mass production and started contributing to revenue, and samples of high-end products are provided to customers for qualifications.

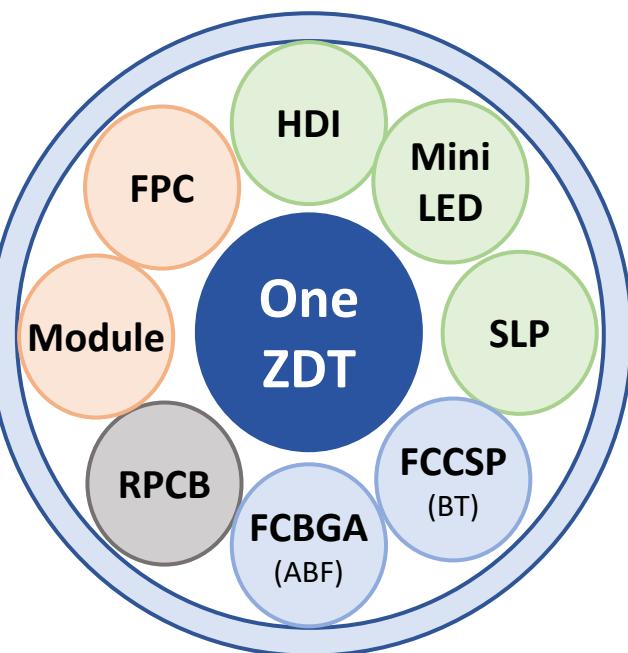
4

The first phase of our Thailand fab remains on schedule for trial production in 1H25, with small-scale mass production planned for 2H25. We plan to convert our Kaohsiung fab into an AI park:

The capacity of the first phase of the new fab in Thailand will focus on high-end server, automotive, and optical applications. Once the new fab enters mass production, it will be able to meet the growing customer demand for related products. Also, we plan to convert Kaohsiung fab into an AI park, providing design and manufacturing capacity for high-end AI products to cater to the rising demand.

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



AI

Cloud



AI Server



Edge Server



High Performance Memory

Channel



Optical Communication



Switch



Base Station

Device



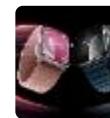
AI Smartphone/
Chip



AI PC



AI Tablet



Wearable
Devices



AR/VR
Metaverse



Intelligent Vehicle/
Smart Cockpit
Domain Controller



Autopilot Chip/
mmWave Radar



NEV/
Battery

Zhen Ding: Revenue Contribution from AI Related Products

8%

2023

~45%

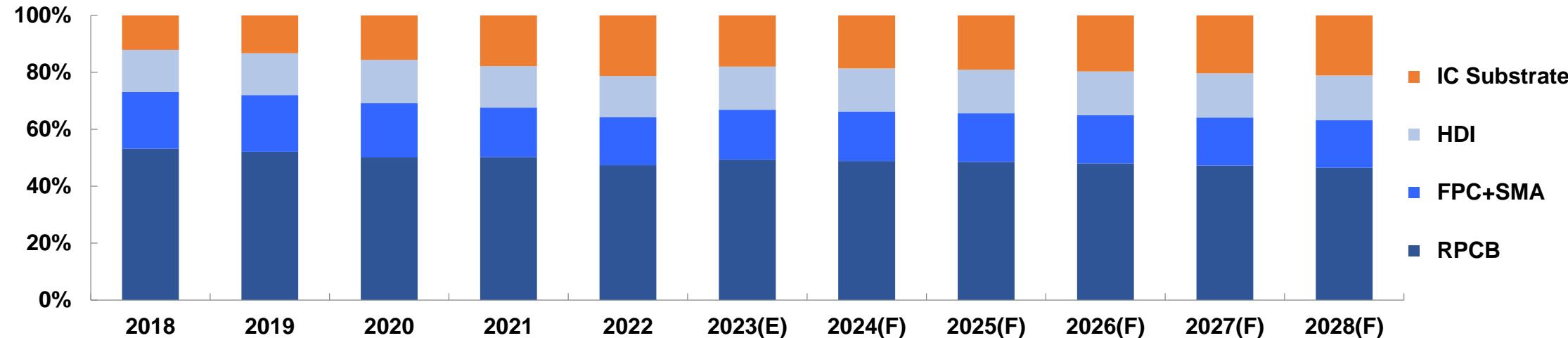
2024E

Leverage One ZDT Synergies to Further Widen the Market Share Gap

Aim to Reach 10% Global PCB Market Share by 2030



All PCB Segments to Resume Growth in 2024

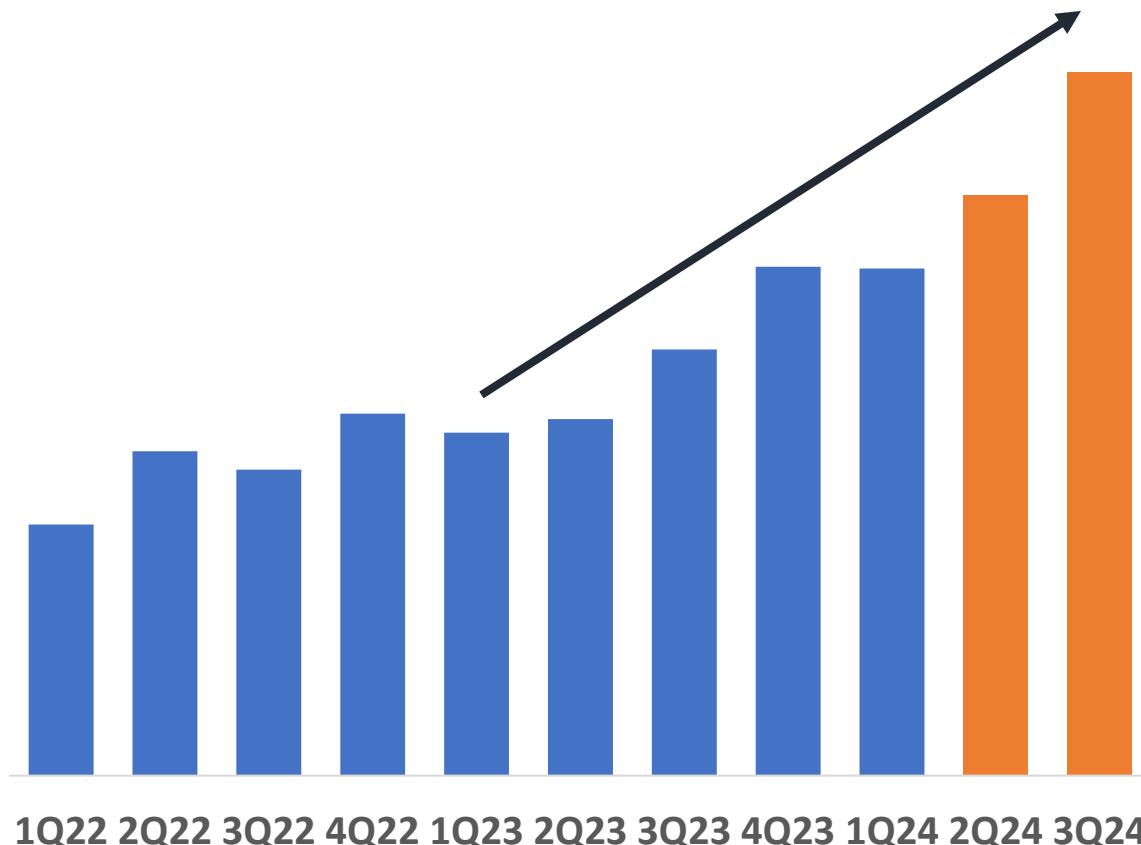


產品	項目	2018	2019	2020	2021	2022	2023(E)	2024(F)	2025(F)	2026(F)	2027(F)	2028(F)	2023-2028 CAGR
RPCB	Value	33,225	31,969	32,674	40,641	38,720	34,292	35,387	37,472	39,174	40,553	41,405	3.8%
	%	53.2%	52.1%	50.1%	50.2%	47.4%	49.3%	48.2%	48.1%	47.6%	46.9%	45.8%	
FPC+SMA	Value	12,395	12,195	12,483	14,058	13,842	12,191	13,106	13,693	14,307	14,947	15,617	5.1%
	%	19.9%	19.9%	19.1%	17.4%	16.9%	17.5%	17.9%	17.6%	17.4%	17.3%	17.3%	
HDI	Value	9,222	9,008	9,874	11,811	11,763	10,536	12,024	12,776	13,575	14,424	15,326	7.8%
	%	14.8%	14.7%	15.1%	14.6%	14.4%	15.2%	16.4%	16.4%	16.5%	16.7%	17.0%	
IC Substrate	Value	7,554	8,139	10,188	14,410	17,415	12,498	12,829	13,975	15,224	16,584	18,065	7.6%
	%	12.1%	13.3%	15.6%	17.8%	21.3%	18.0%	17.5%	17.9%	18.5%	19.2%	20.0%	
Total		62,396	61,311	65,219	80,920	81,740	69,517	73,346	77,916	82,279	86,508	90,413	5.4%
YoY Chang (%)		6.0%	-1.7%	6.4%	24.1%	1.0%	-15.0%	5.5%	6.2%	5.6%	5.1%	4.5%	

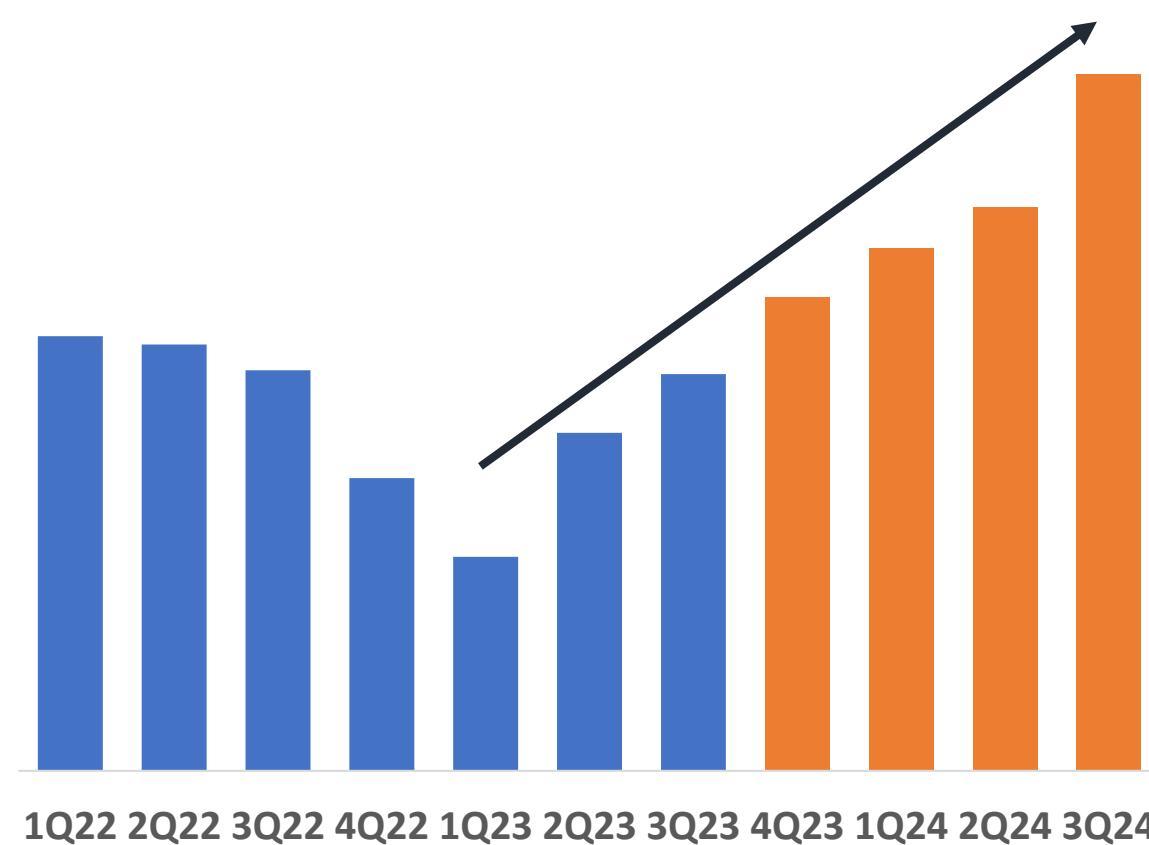
Source : Prismark (2024/9) ; 2025~2028 data is calculated based on Prismark's estimation.

One ZDT Strategy Achieved Desired Results, with Automotive/Server and IC Substrate Revenues Setting Record Highs

ZDT's 3Q24 Revenue for Automotive/Server/Base Station Continues to Reach a Record High



ZDT's 3Q24 Revenue for IC Substrates Reached a Record High for Four Consecutive Quarters

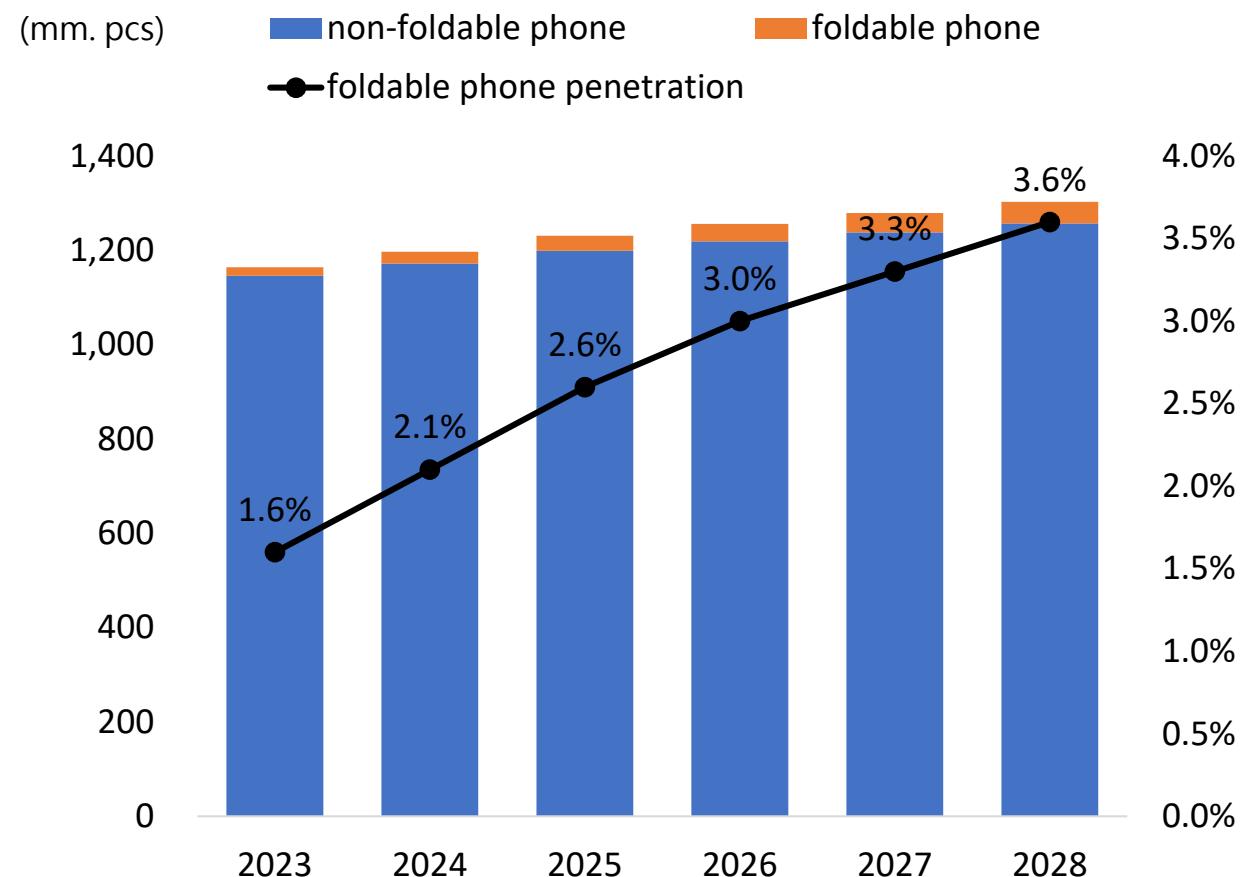




- 1 We are accelerating the development of PCB and IC substrate products for AI servers.
- 2 For high-end AI servers, customer demand for high-layer count (HLC) + HDI designs has increased. This is our area of expertise with a leading technology.
- 3 We are actively involved in the advanced technology development with customers, and engage with customers for future generation products.
- 4 After the capacity of Kaohsiung AI Park coming online and the new fab in Thailand entering mass production next year, we will have ample capacity to fulfill the increasing demand from customers.

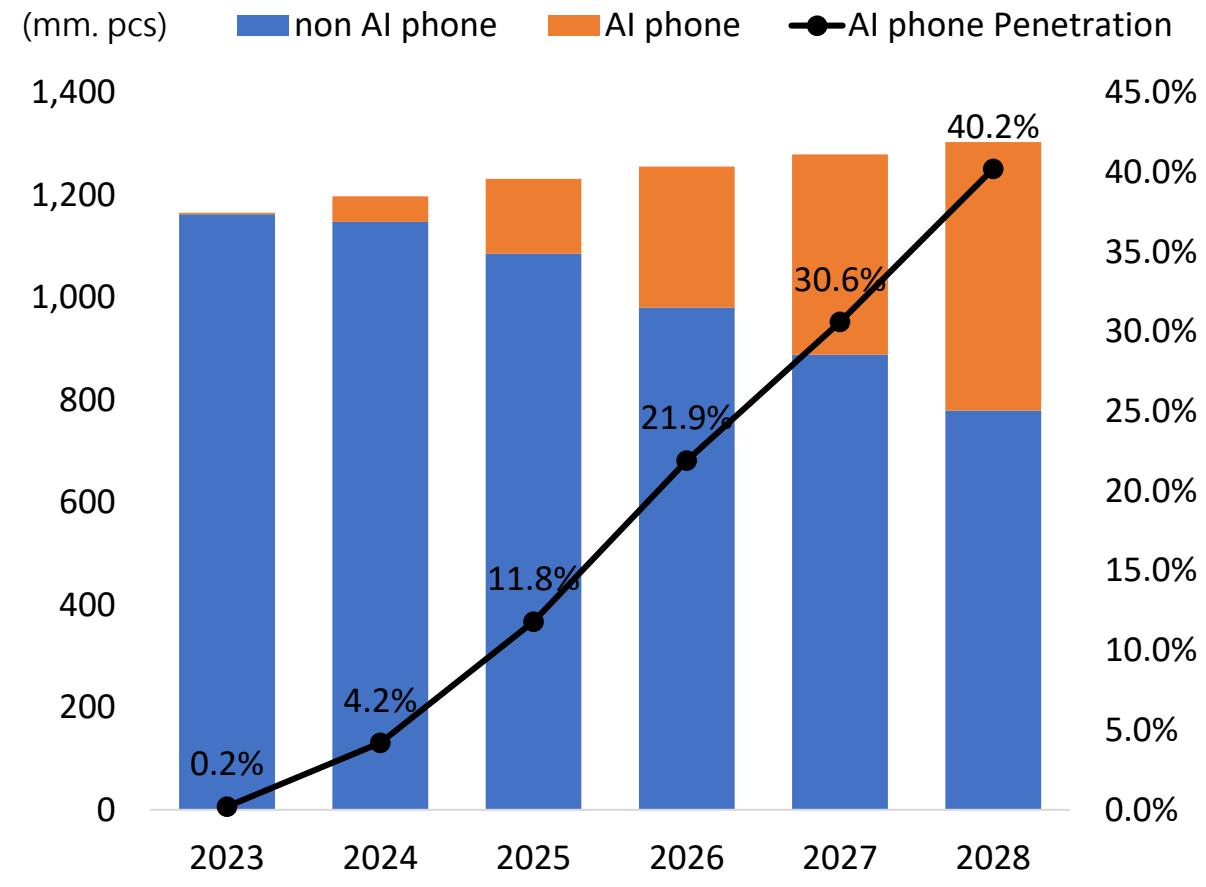
Demand for High-end Mobile PCB continues to increase

Global Foldable Phone Market Scale : ZDT has delivered to multiple customer



資料來源：IDC(2024/2)

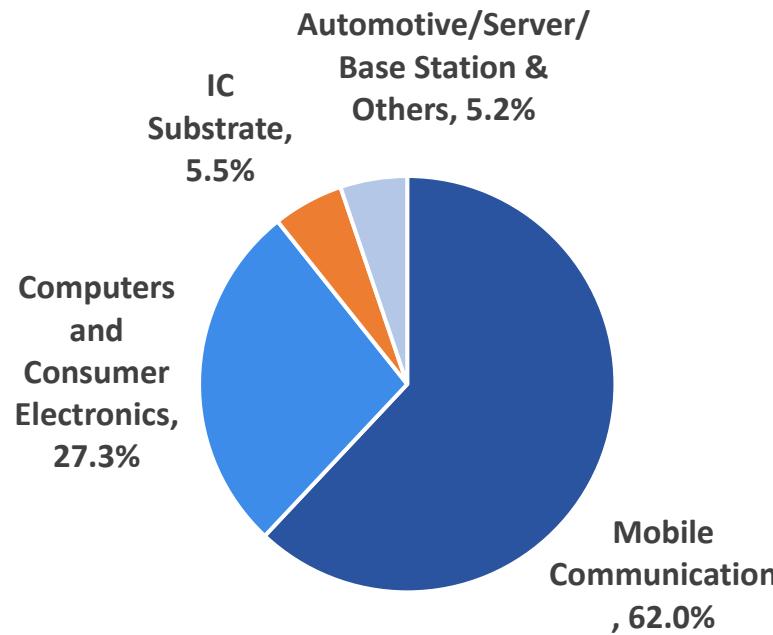
Global AI phone Market Scale : ZDT actively collaborates with customers to develop new products



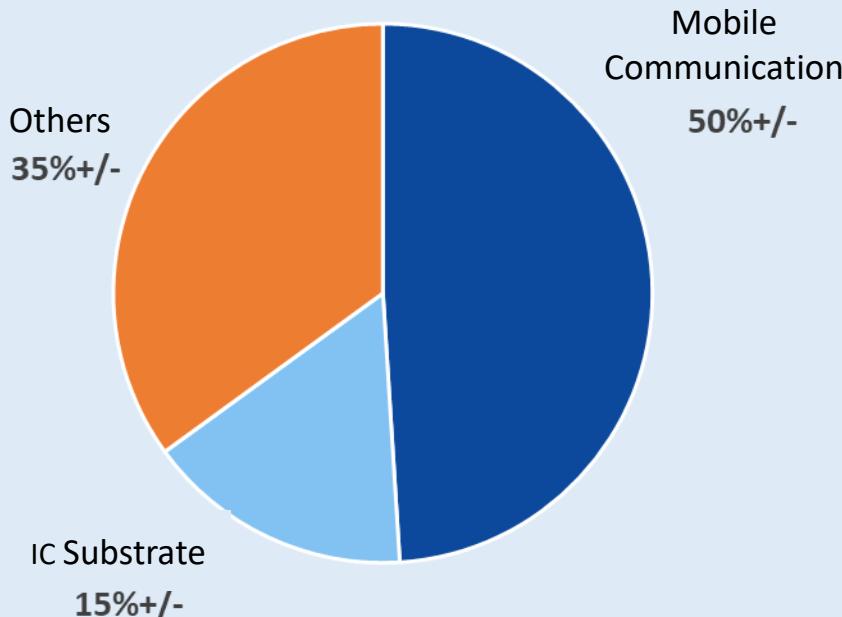
資料來源：IDC(2024/2)

Aim to Reach 10% Global PCB Market Share by 2030

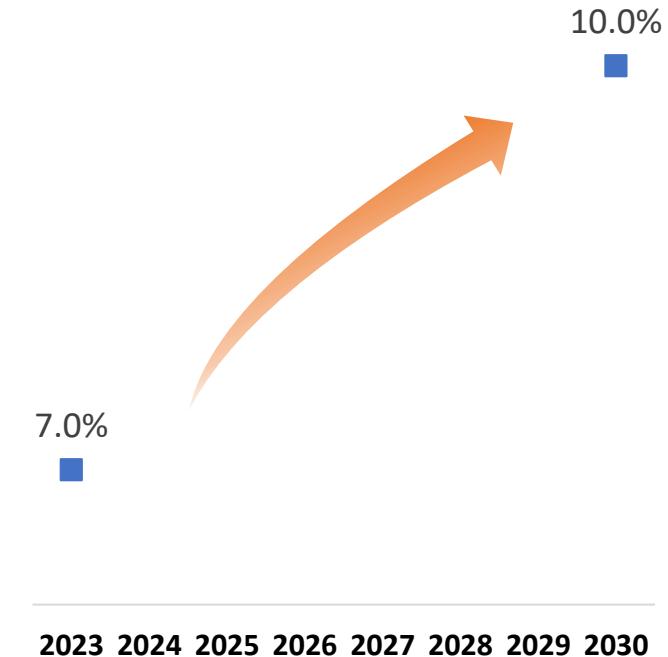
1-3Q24 Revenue NT\$115.5bn



2027 Target Revenue by Application



Aim to Reach 10% Global Market Share by 2030





Aggressive Expansion in IC Substrate

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

IC Substrate Business Update

1

IC substrate revenue has set new quarterly records for four consecutive quarters, increasing by 88% for the first three quarters of 2024, which is consistent with our previous expectation:

- IC substrate revenue increased by 88% YoY for the first three quarters of 2024, and it is expected to maintain rapid growth for the entire year. In the mid-term, we maintain our goal of achieving a >50% revenue CAGR for IC substrate during 2023-2027.

2

ABF substrates: The utilization rate continues to increase, driven by the robust demand for advanced packaging. Next year, we will begin mass production of next-generation products for customers:

- Our utilization rate of ABF substrate continues to increase, primarily driven by the demand for Chiplet and 2.5D advanced packaging products. We expect to secure orders for high-end automotive ADAS chip products and will support HPC and AI customers in the mass production of next-generation products.
- High-end ABF substrates are primarily used in AI chips and networking chips, and the market demand has begun to recover. With future product upgrades, the proportion of large body size (over 70mm x 70mm) and high-layer-count (over 16 layers) products is expected to gradually increase.

3

BT substrates: Revenue has steadily increased. Rising orders from new customers and new products will drive its growth next year:

- Our BT substrates are primarily used in smartphone processors, memory, and RF applications. With rising orders from new customers and new products, the business will continue to grow next year.
- Fine line 6/8um Embedded Trace Substrate (ETS) is expected to enter mass production by the end of the year. Additionally, in 2024, the newly developed DDR-5 and NAND substrates will gradually enter mass production. Our yield is also on par with Tier 1 players.

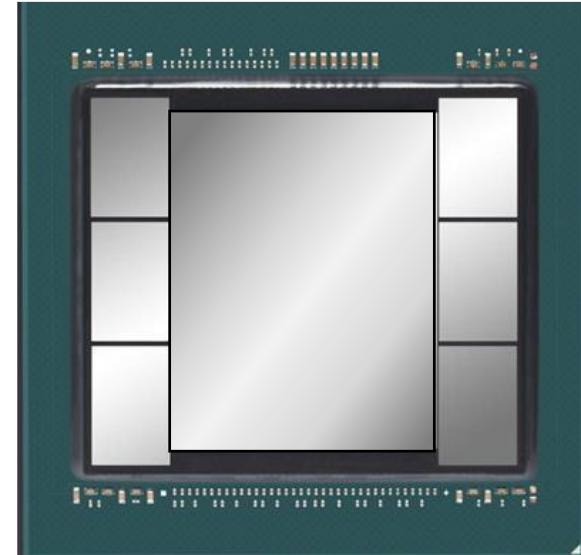
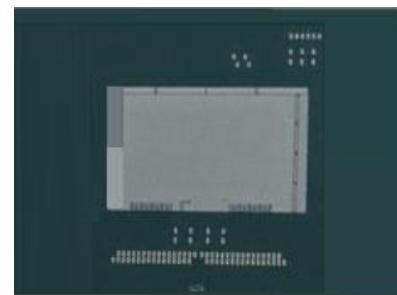
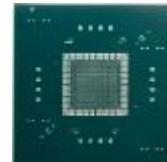
The complexity of IC substrates is increasing:

High layer counts

Large body size

Flat surface

Accurate production precision



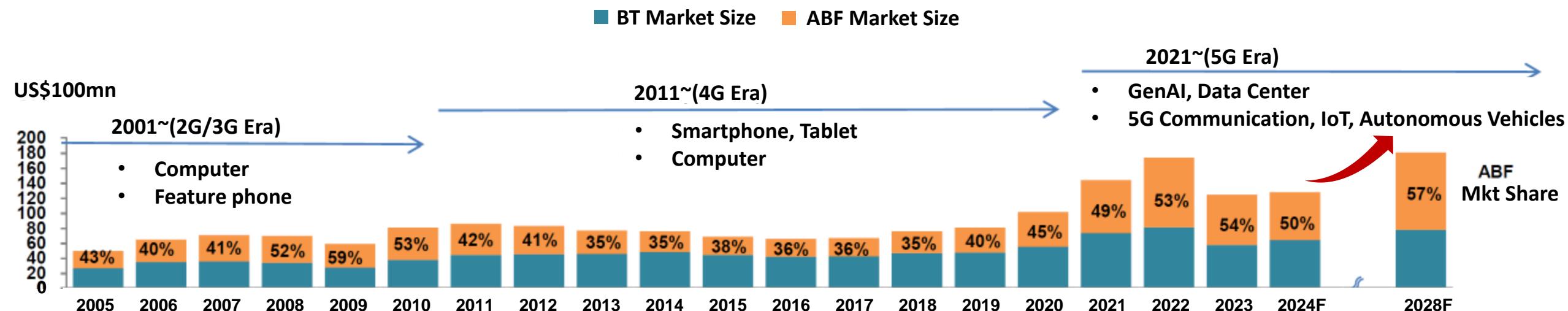
2005

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+

New AI Applications Drive the Demand of High-end IC Substrates



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.

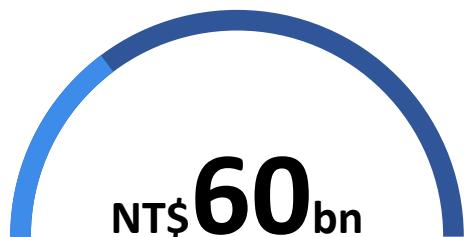
Advanced Chiplet

- 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.

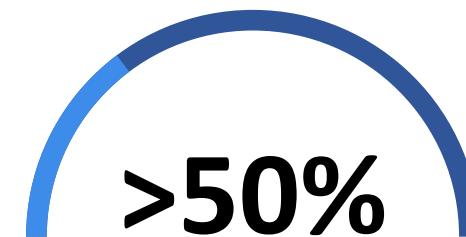
Co-Packaged Optics (CPO)

- 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.

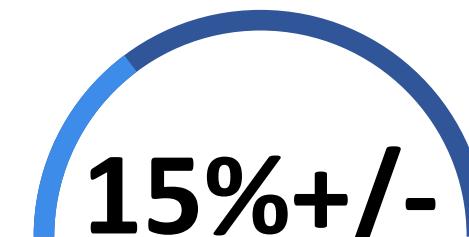
IC Substrate Goals



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

Multiple manufacturing campuses to fulfill clients' needs

India

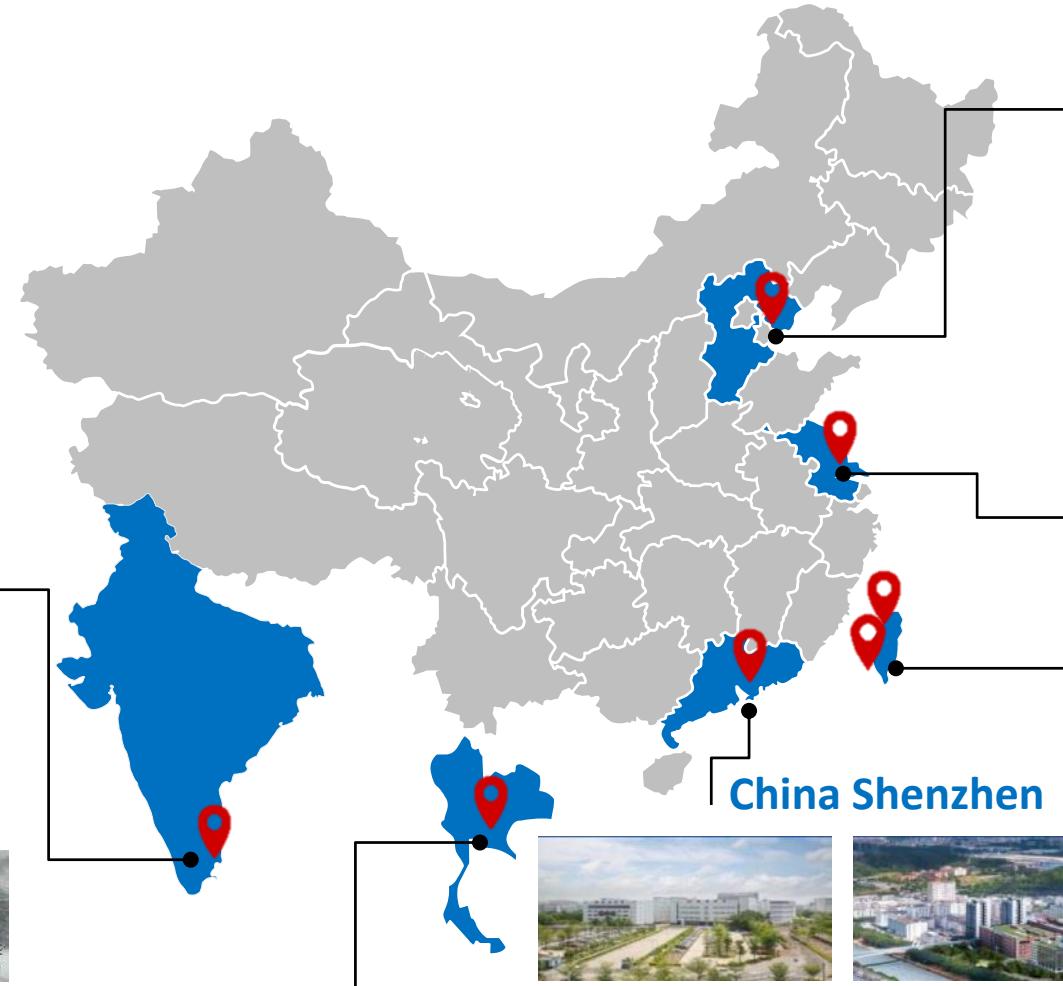


Chennai Park
► FPC and advanced module

Thailand



Prachinburi Park
► Plan to enter trial production in 1H25



Shenzhen Park 1
► FPC and advanced module/HDI

Shenzhen Park 2
► FPC and advanced module

ABF Substrate Park
► Phase 1 entered mass production in 2023

China Qinghuangdao



Qinghuangdao Park

► FPC & advanced module/SLP High end HDI



BT Substrate Park

► FC-CSP/WB-CSP/Memory
► Phase 1 entered mass production in 2022

China Huai'an



Huai'an Park 1

► RPCB/HDI



Huai'an Park 2

► FPC & advanced module/HDI/ Mini LED



Huai'an Park 3

► High-end HDI/MSAP
► Entered mass production in 2023

Taiwan



Kaohsiung AI Park

► R&D and Manufacturing Site for AI Product



Taoyuan Boardtek Park

► PCB for networking, HPC, automotive related applications

The Construction of Thailand Fab is Progressing According to Plan, with Equipment Installation Scheduled by the End of This Year

(Last Dec.) Thailand Prachinburi Park (Phase I)



(2024/8/26) Thailand Prachinburi Park (Phase I): Beam-Raising Ceremony



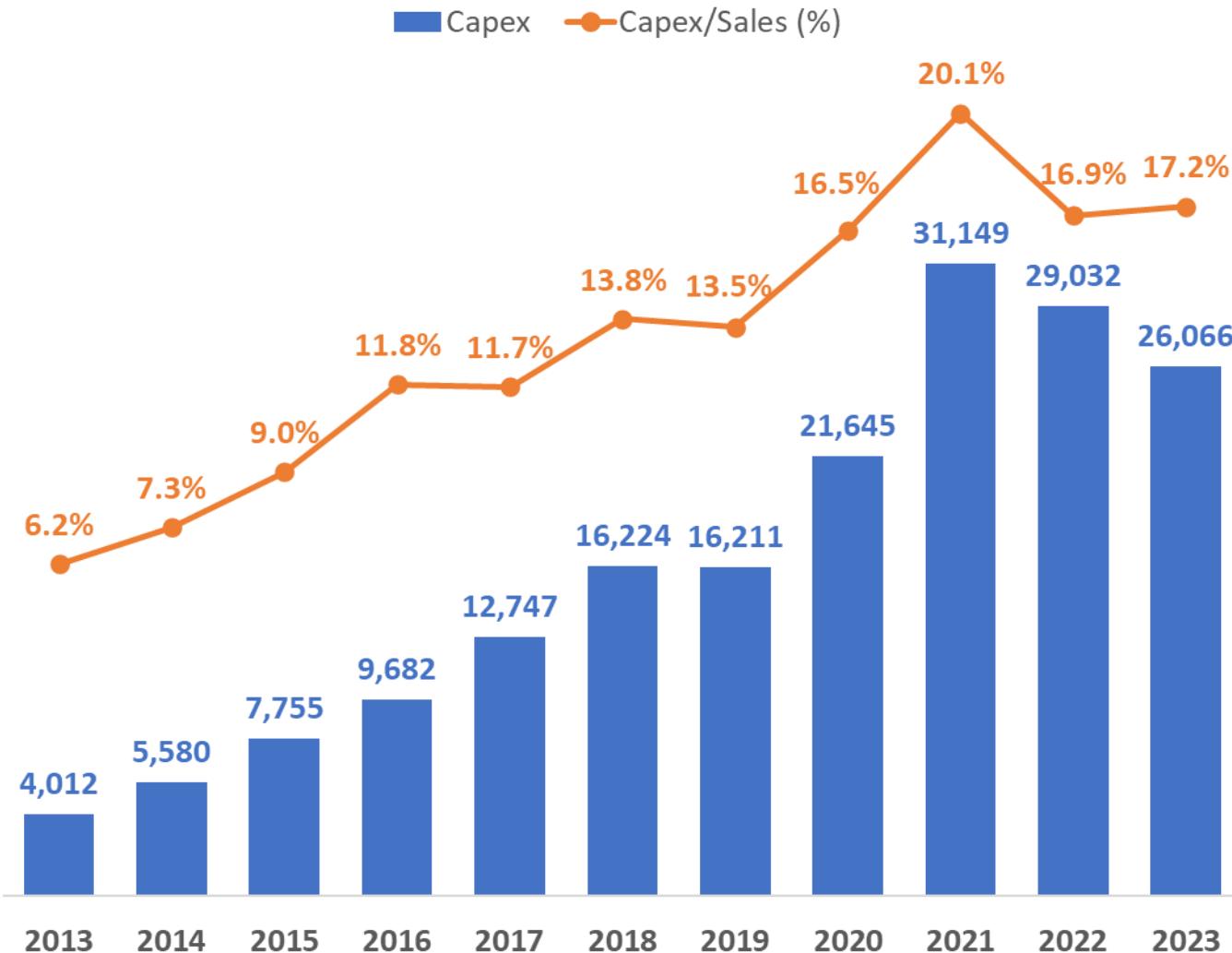
- The construction of the new fab in Prachinburi Province, Thailand is progressing according to plan. The main building is topped out on August 26th, with equipment installation by the end of this year, trial production in 1H25, and mass production in small scale in 2H25.
- Phase 1 capacity will focus on high-end server, automotive, and optical applications, providing high-end RPCB/HDI products.
- It will be ZDT's key manufacturing site in Southeast Asia.

Kaohsiung AI Park: R&D and Manufacturing Site for AI Products



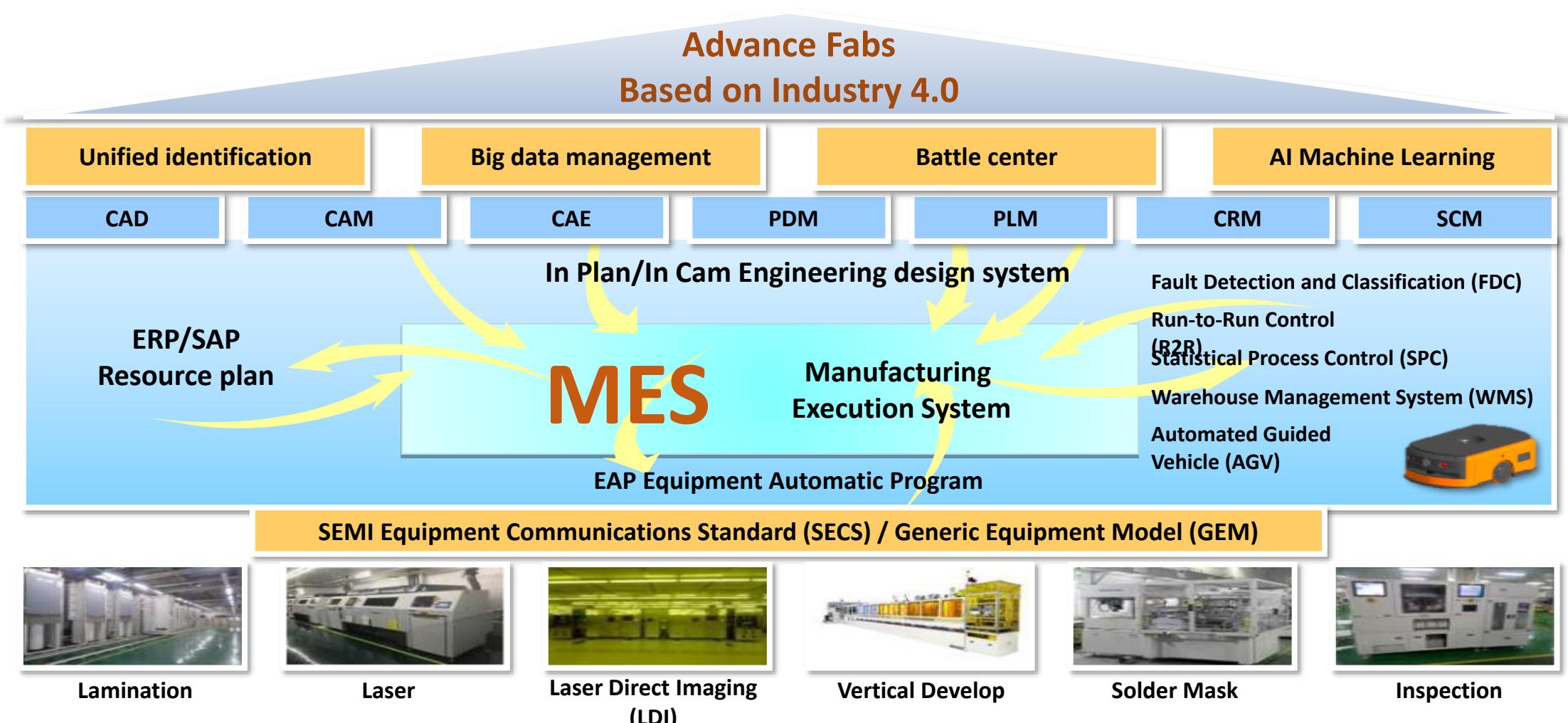
- The Kaohsiung AI Park will be Zhen Ding's key R&D and manufacturing site for AI related products, to cater to the rising demand of AI applications.

Continued Capacity Expansion, Pursuing Stable Growth



- As the world's largest PCB manufacturer, we keep positioning ourselves as a growth-oriented business, continually adopting early deployment of production capacity to meet customers' need.
- Continually investing in KH and Thailand, laying the foundation for long-term growth.

Introduce Smart Manufacturing into Each Plant Step by Step



Under the One ZDT strategy, we have been introducing smart manufacturing into each plant step by step. Currently, Huai'an Park 3 is the 9th smart fab. These fabs have significant improvements in yields and efficiency.

EPS + ESG – Improvement of ESG Ratings

► Corporate Governance Evaluation Ranking

Ranked between 6% to 20% in the 2023 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, Zhen Ding's S&P ESG Score improved to 76; and was **selected as the only PCB company in the S&P Global Sustainability Yearbook** for the second consecutive year.

► Sustainalytics ESG Risk Rating

Zhen Ding's 2023 Sustainalytics ESG Risk Ratings improved from 17.8 to 15.6, classified as **low risk.**

► ISS ESG Rating

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

► CDP

In 2023, Zhen Ding received a 'B' rating from CDP for climate change, marking a one-notch improvement from last year. Additionally, we achieved an **'A-' leadership** rating for water security, also advancing by one notch compared to the previous year.

► FTSE Russell ESG Rating

Zhen Ding's FTSE Russell ESG Rating reached 4.3 (out of 5) and ranked in the **4th place among all listed companies in Taiwan.**

Financial Summary

1Q~3Q24 Financial Results

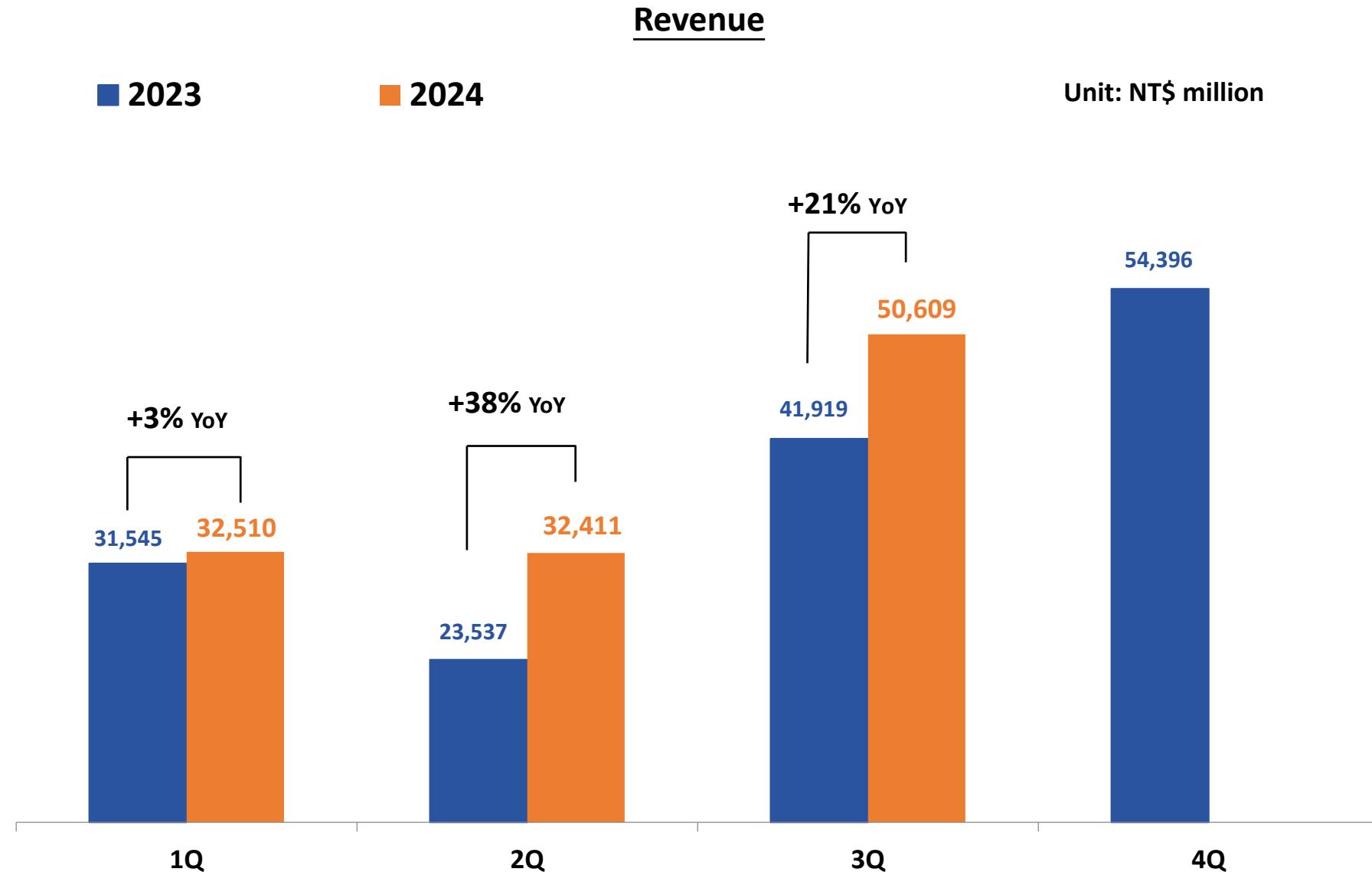
(Unit: NT\$ million, unless otherwise stated)

	1-3Q24	1-3Q23	YoY (%)
Revenue	115,531	97,002	+19.1%
Gross Profit	20,990	15,781	+33.0%
Gross Margin	18.2%	16.3%	+1.9ppts
Operating Expense	14,958	12,875	+16.2%
Operating Profit	6,032	2,905	+107.6%
Operating Margin	5.2%	3.0%	+2.2ppts
Non-Operating Income/Expense	1,253	1,298	-3.4%
Net Income	6,855	4,362	+57.1%
Net Margin	5.9%	4.5%	+1.4ppts
Net Income to Parent	4,816	2,685	+79.4%
EPS (NT\$)⁽¹⁾	5.08	2.84	
R&D Expense	8,668	6,799	+27.5%
Depreciation and Amortization	13,094	12,124	+8.0%
Cash Inflow Generated from Operations	9,542	20,360	-53.6%
Cash and Cash Equivalents ⁽²⁾	64,714	59,979	+7.9%
ROE(%)⁽³⁾	6.6%	4.4%	+2.2ppts

Note: (1) Weighted average shares outstanding of 1Q~3Q24: 947,678 thousand shares (actual issuance 956,653 thousand shares, with 2,093 thousand shares held in treasury)

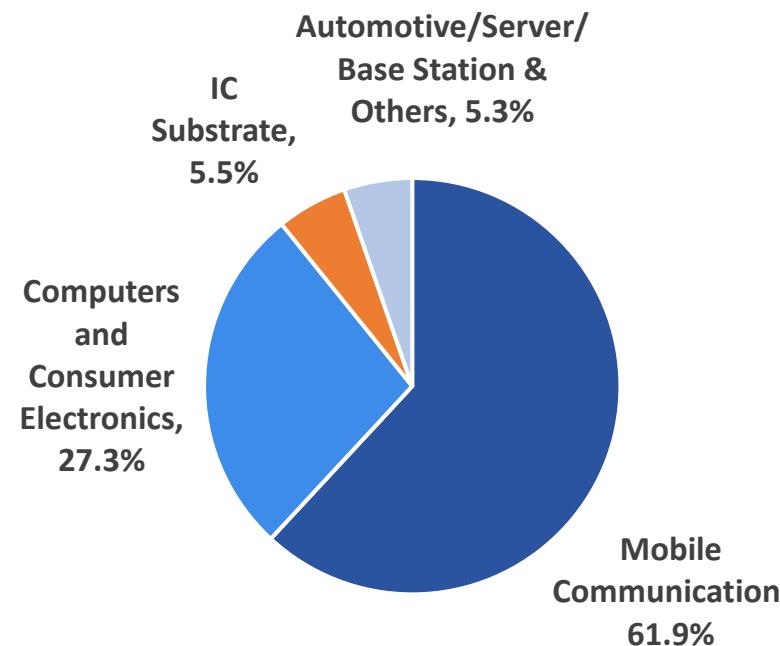
(2) Including current financial assets at amortized cost (time deposits, etc.) (3) ROE is annualized data calculated based on the average of equity attributable to owners of parent

Quarterly Operation Results

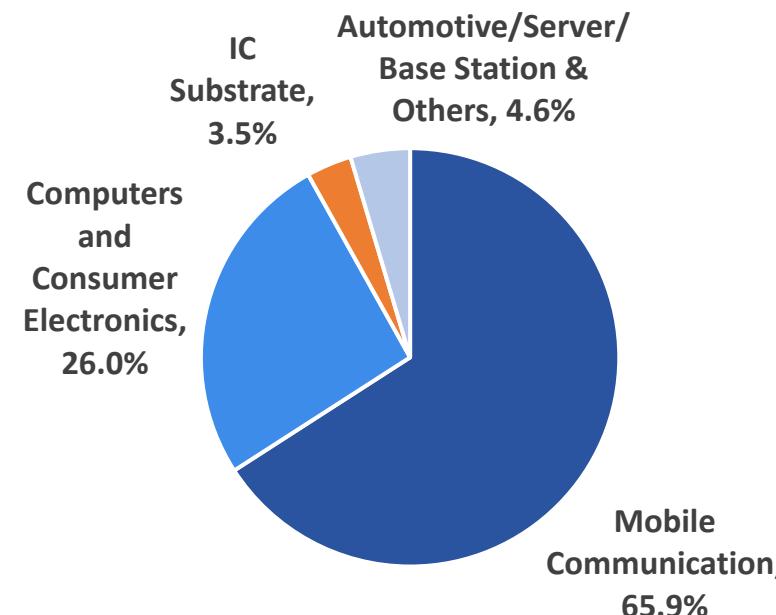


Revenue Breakdown – By Applications

1-3Q24 Revenue NT\$115.5bn



1-3Q23 Revenue NT\$97.0bn



Applications	1-3Q24 Revenue YoY%
Mobile Communication	11.9%
Computers and Consumer Electronics	25.0%
IC Substrate	87.9%
Automotive/Server/Base Station & Others	36.7%

Consolidated Balance Sheet and Key Indices

	2024-9-30		2023-9-30		Unit: NT\$ million	
	Amount	%	Amount	%	Amount	%
Cash and Cash Equivalents ⁽²⁾	64,714	24.9%	59,979	24.2%	4,736	+0.7ppts
Notes & Accounts Receivable	35,675	13.7%	32,141	13.0%	3,534	+0.8ppts
Inventories	24,799	9.5%	22,311	9.0%	2,487	+0.5ppts
Property, Plant and Equipment ⁽³⁾	111,026	42.8%	112,780	45.5%	-1,754	-2.8ppts
Total Assets	259,685	100.0%	247,800	100.0%	11,886	
Debt	56,260	21.7%	51,640	20.8%	4,620	+0.8ppts
Notes & Accounts Payable	43,776	16.9%	44,196	17.8%	-420	-1.0ppts
Total Liabilities	115,599	44.5%	113,329	45.7%	2,270	-1.2ppts
Total Equity	144,087	55.5%	134,471	54.3%	9,616	+1.2ppts

Key Indices

A/R Turnover Days	77	87	(10)
Inventory Turnover Days	62	72	(10)
Current Ratio (x)	1.78	1.41	0.37
PPE Turnover (x) ⁽⁴⁾	1.39	1.21	0.18

Note: (1) Weighted average shares outstanding of 1Q~3Q24: 947,678 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

2013-2023 Financial Summary

Unit: NT\$ million

Period	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Revenue	64,483	75,954	85,738	82,393	109,238	117,913	120,068	131,279	155,022	171,356	151,398
Gross Profit	11,894	14,323	16,427	12,542	17,833	26,061	27,222	26,584	30,537	39,888	27,459
Net Income	5,471	6,735	7,731	3,456	6,772	11,536	12,402	11,508	13,694	20,535	9,432
Net Income to Parent	5,471	6,735	7,731	3,456	5,172	8,448	8,685	8,095	9,651	14,197	6,189
Depreciation & Amortization	3,742	4,293	4,850	5,295	5,679	6,820	7,955	8,405	11,875	14,638	16,323
EPS (NT\$)	7.41	9.12	9.80	4.29	6.43	10.50	9.93	8.90	10.21	15.02	6.550
DPS (NT\$)	3.00	3.67	4.50	2.20	3.30	4.46	4.50	4.50	5.00	6.00	3.275
Payout Ratio (%)	40.5%	40.2%	45.9%	51.3%	51.3%	42.5%	45.3%	50.6%	49.0%	40.0%	50.0%
Cash and Cash Equivalents*	10,016	23,482	31,572	30,241	33,296	49,154	43,071	46,775	35,179	57,599	65,970
Property, Plant and Equipment	27,843	30,073	32,074	32,262	36,681	41,913	46,243	68,177	86,073	104,814	109,965
Capital	7,386	7,386	8,047	8,047	8,047	8,047	9,022	9,470	9,470	9,470	9,470
ROE (%)	23.77%	23.33%	20.82%	8.59%	14.49%	17.30%	14.72%	11.84%	12.59%	16.67%	7.10%
Debt Ratio (%)	64.06%	62.54%	53.70%	59.72%	55.33%	44.25%	35.41%	42.56%	42.01%	42.87%	44.67%

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

Q&A





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THANK YOU