

Zhen Ding Technology Holding (4958 TT)

Investor Presentation

April 2024

- 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



#1

PCB Manufacturer
Worldwide

2006 Founded

(Former Foxconn Advanced
Tech, 1978)

Taoyuan, Taiwan

Headquarters

46,693

Employees (End-2023)



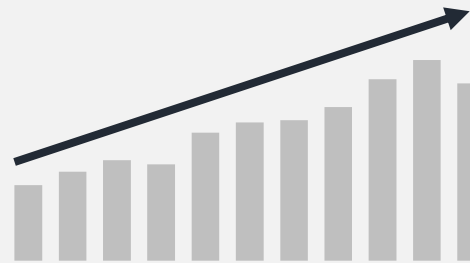
26 Facilities
Located in
Mainland China,
Taiwan, India

NT\$151.4 Bn

Revenue in 2023
(-11.6% YoY)

+9%

2013-2023
Revenue CAGR



1,648

Accumulated Valid Patents

3,528

Patents Applied
(as of Dec. 2023)



NT\$95.2 Bn

Market Cap as of
Feb. 2024

14.7%

10Y Average ROE

Revenue Breakdown – By Applications

NT\$171.4bn

3.0%
3.2%

34.6%

59.2%

NT\$151.4bn

4.1%

3.3%

23.5%

69.1%

2022

2023

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



Why Invest in ZDT?

1

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.

2

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.

3

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.

4

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. In the future, we will keep expand our global manufacturing bases to serve diversified customer needs.



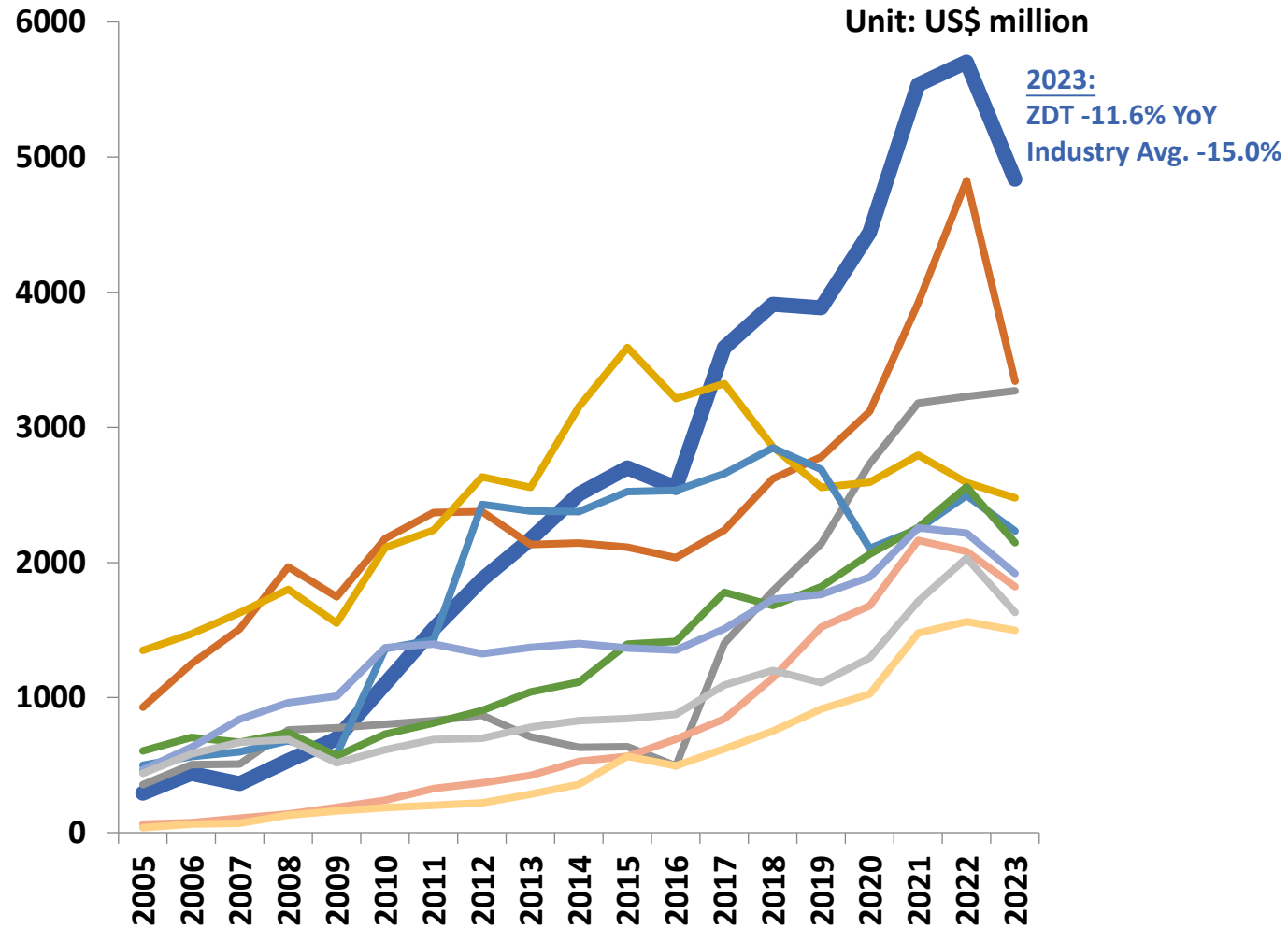
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World's Largest PCB Manufacturer with Stable Long-term Growth

ZDT Outperforms Industry Average, Maintaining #1 Position

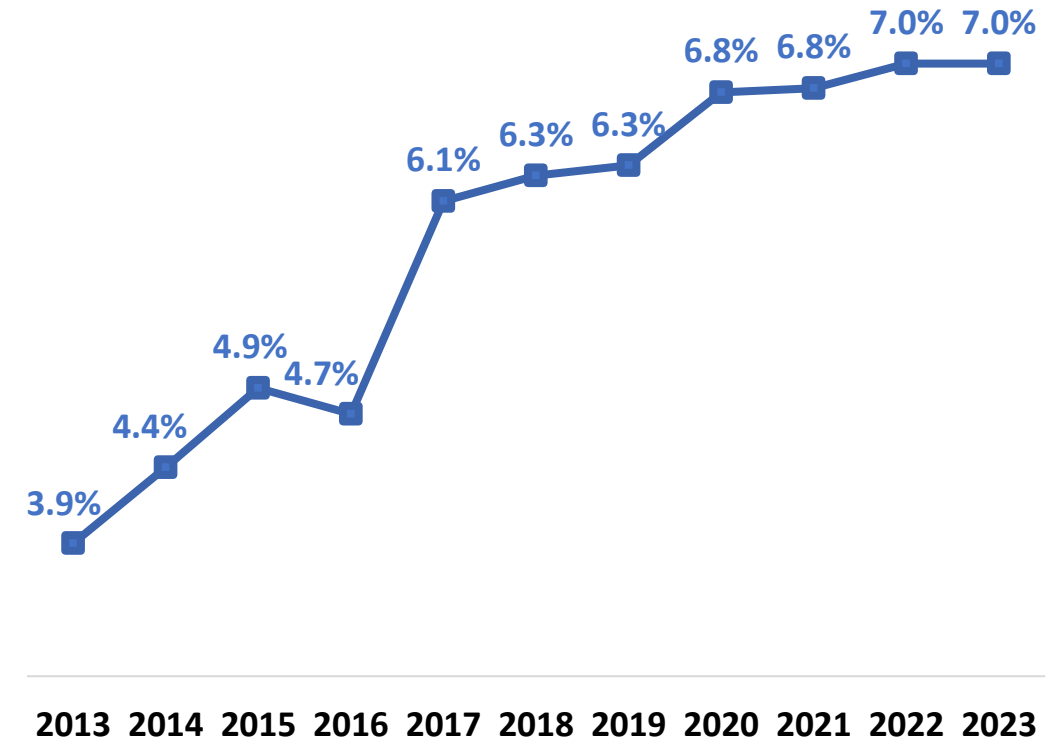
2023 Global Top 10 PCB Companies Revenue Trends



Source : NT Information ; Prismark (2024/02)

ZDT Maintains a Leading Market Share in the PCB Industry

Maintain at Global #1 for 7 Consecutive Years



Source : Prismark

1

2023 revenue declined by 11.6% YoY, in line with our expectation, and better than the industry average decline of 15%:

In 2023, due to the weak global demand for consumer electronics, ZDT's revenue declined for the first time since 2017 but was better than the industry average decline. Thanks to the "One ZDT" strategy, our product mix became more diversified, and our revenue for automotive/server/base station increased by 19% YoY in 2023.

2

2024 revenue is expected to grow moderately, and the structural adjustments of the product mix will continue. The revenue momentum of IC substrates, servers, and automotive applications is on the rise:

Our operation has bottomed out in 2023, and we will continue to optimize our product mix in 2024. We expect consumer electronics will recover moderately, and for other diversified applications, including IC substrates, servers and automotive to grow by double digits. We expect revenue growth to accelerate in 2025.

3

The introduction of more AI features into edge devices will drive increasing demand for high-end PCBs/IC substrates, and ZDT will greatly benefit from this trend:

Under the Edge AI trend, devices such as smartphones and PCs/notebooks will gradually incorporate various AI applications, driving the demand for high-end PCBs/IC substrates with fine lines and high layer counts. We are a global leading manufacturer of high-end PCBs/IC substrates and is expected to benefit from the Edge AI trend.

4

The new fab in Thailand has started construction in December 2023, strengthening our global manufacturing footprint:

The Thailand fab commenced construction in December last year, with an initial investment of US\$250 million. Currently, the construction is progressing according to plan, with the goal of entering trial production in 1H25 and mass production in a small scale in 2H25. It will be our key manufacturing base in Southeast Asia.



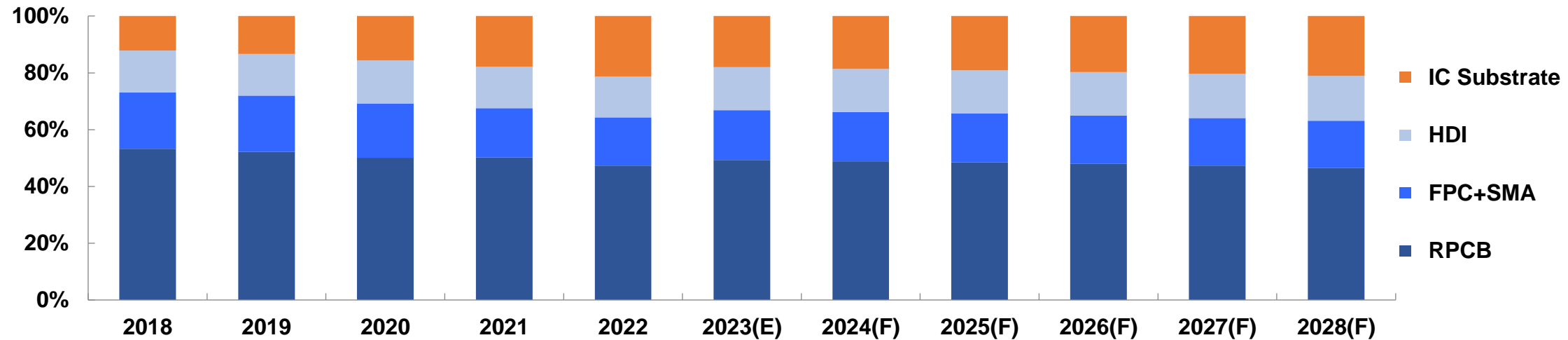
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Leverage One ZDT Synergies to Further Widen the Market Share Gap

Aim to Reach 10% Global PCB Market Share by 2030

All PCB Segments to Resume Growth in 2024



Product	Item	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	35,659	37,554	39,240	40,724	42,005	4.1%
	%	53.2%	52.1%	50.1%	50.2%	47.4%	49.3%	48.9%	48.5%	48.0%	47.3%	46.5%	
FPC+SMA	Value	12,395	12,195	12,483	14,058	13,842	12,191	12,649	13,225	13,828	14,458	15,117	4.4%
	%	19.9%	19.9%	19.1%	17.4%	16.9%	17.5%	17.3%	17.1%	16.9%	16.8%	16.7%	
HDI	Value	9,222	9,008	9,874	11,811	11,763	10,536	11,095	11,806	12,563	13,369	14,226	6.2%
	%	14.8%	14.7%	15.1%	14.6%	14.4%	15.2%	15.2%	15.3%	15.4%	15.5%	15.7%	
IC Substrate	Value	7,554	8,139	10,188	14,410	17,415	12,498	13,568	14,772	16,083	17,511	19,065	8.8%
	%	12.1%	13.3%	15.6%	17.8%	21.3%	18.0%	18.6%	19.1%	19.7%	20.3%	21.1%	
Total		62,396	61,311	65,219	80,920	81,740	69,517	72,971	77,358	81,715	86,062	90,413	5.4%
YoY Change (%)		6.0%	-1.7%	6.4%	24.1%	1.0%	-15.0%	5.0%	6.0%	5.6%	5.3%	5.1%	

Source : Prismark(2024/2) ; 2025~27's data is calculated based on Prismark's estimation

One ZDT : One Stop Shopping Synergies

FPC (+Module)

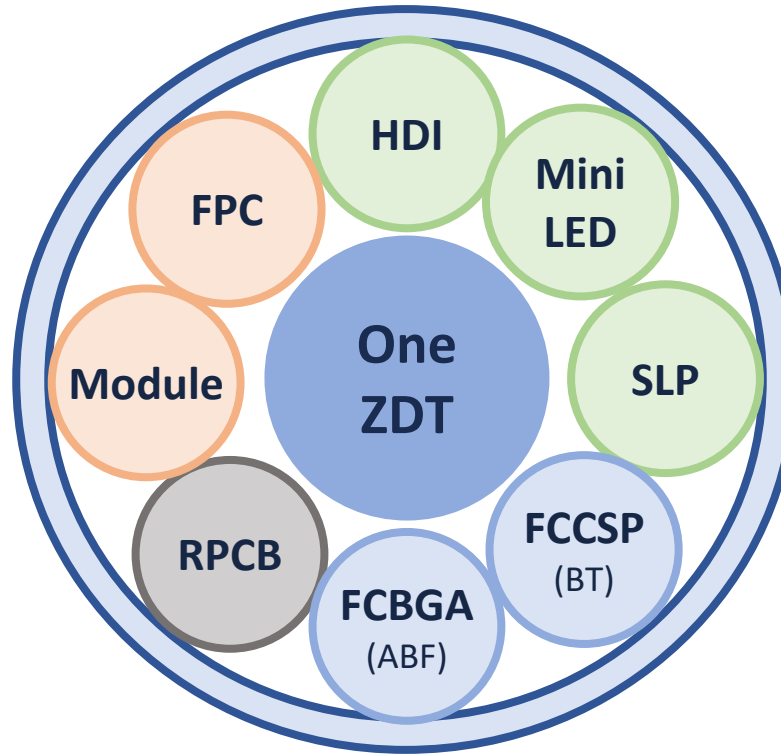


AI Smart-phone AR/VR Metaverse Wearable Devices NEV/Battery Next Gen Display

RPCB (+Base Station + Automotive + Server)



AI Server Edge Server mmWave Radar Intelligent Vehicle Base Station



HDI (+mSAP+Mini LED)



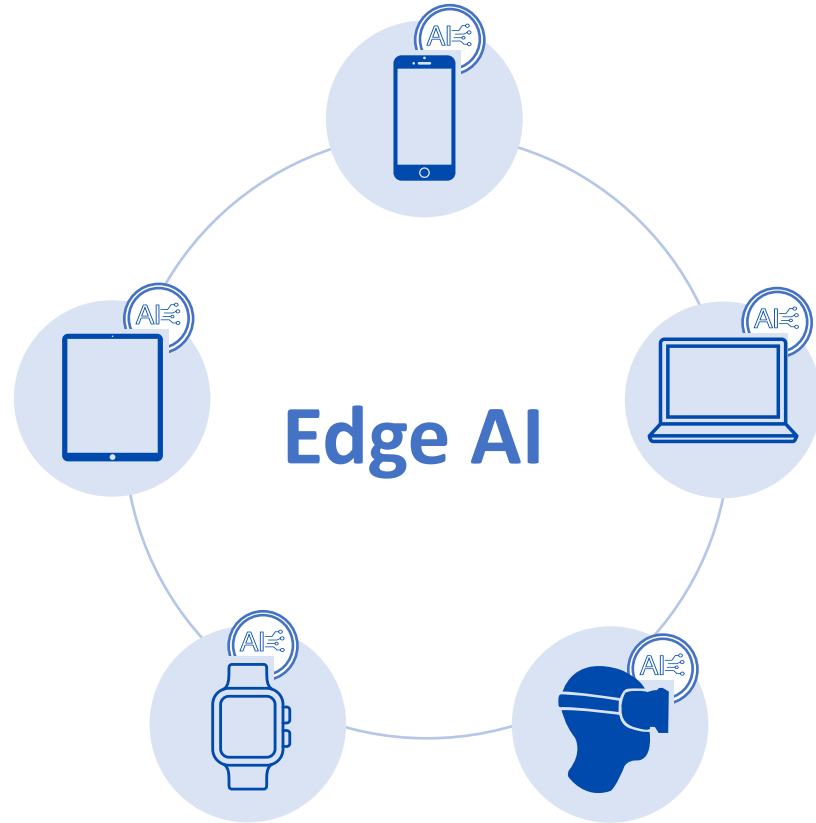
AI Smart-phone AI PC AR/VR Metaverse Wearable Devices Smart Cockpit

IC Substrate (FCCSP+FCBGA)



AI Smart-phone Chip High Performance Memory Autopilot Chip

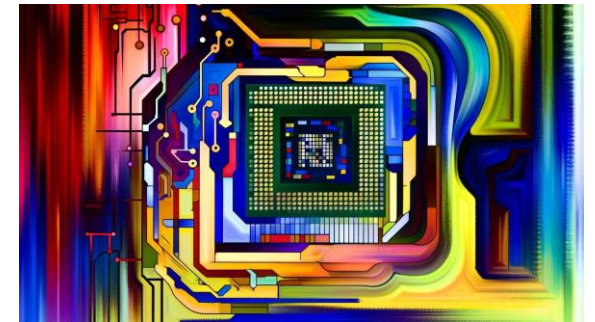
The diversification of AI applications will increase design complexity for PCBs, driving growing demand for IC substrates, high-end HDI, and FPC.



Execute various AI applications, including real-time translation, voice note assistants and image editing assistants.

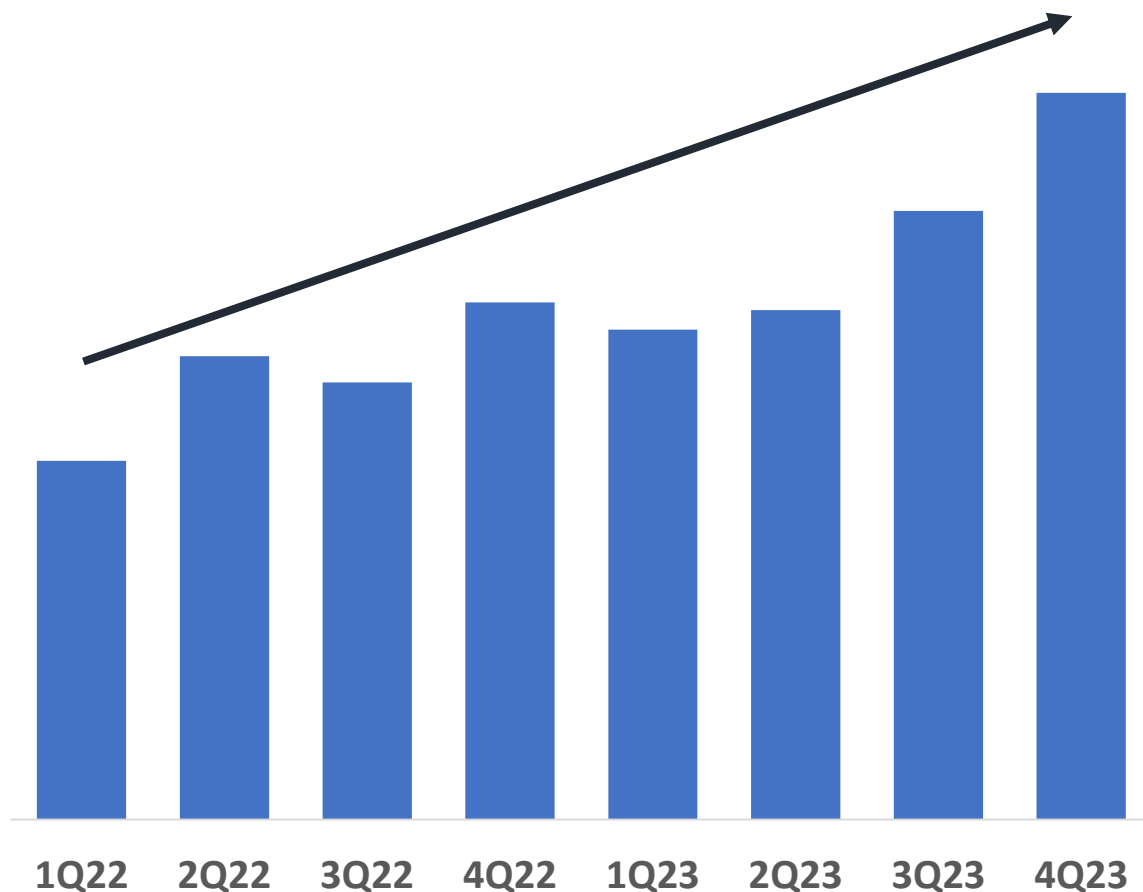
The human-machine interface is evolving towards diversification, including sound, gestures and eye movements.

The design of PCB and IC substrate become more complex, with growing demand for fine lines and high layer counts products.

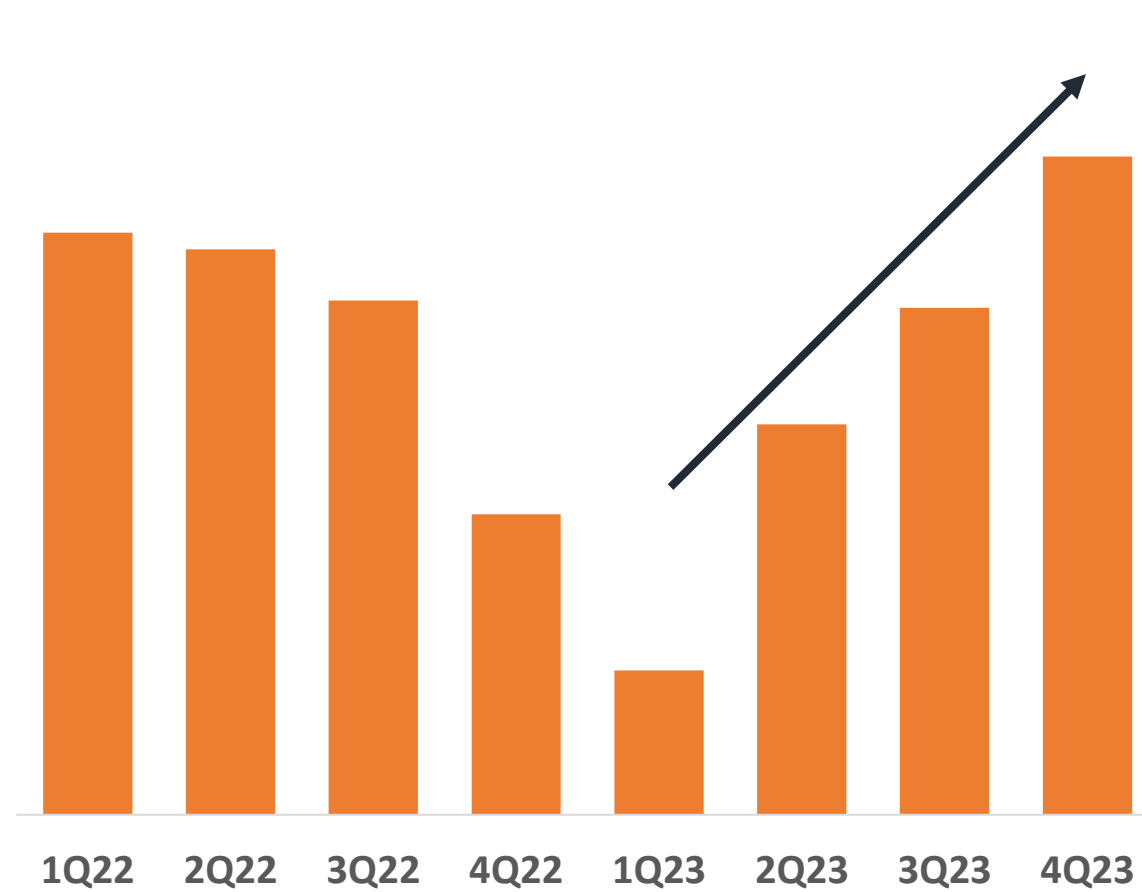


Zhen Ding is a leading manufacturer of high-end PCB and IC substrates. We have a strong competitive advantage under the Edge AI trend.

ZDT's Revenue for Automotive/Server/Base Station
Marked Record Highs Repeatedly

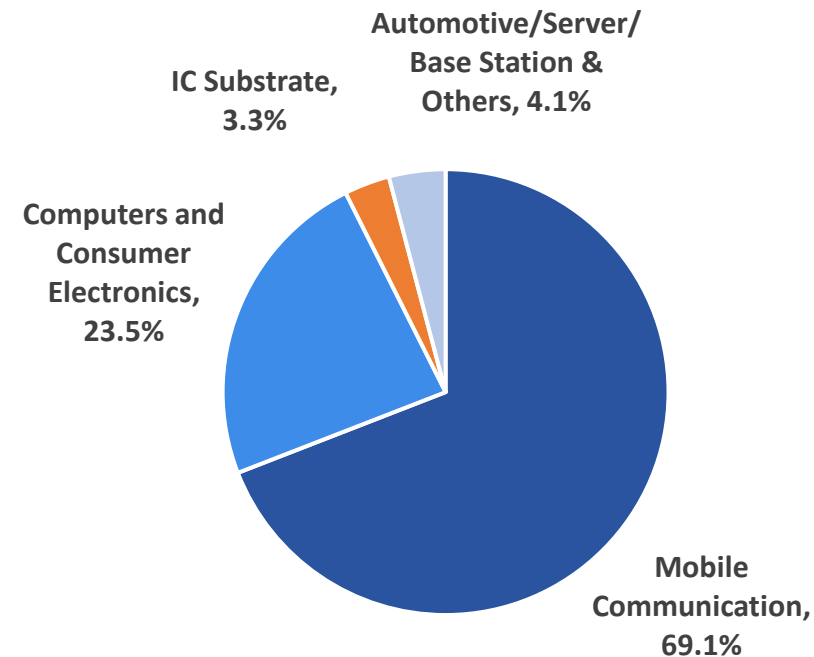


ZDT's 4Q23 Revenue for IC Substrates also Reached a
Record High

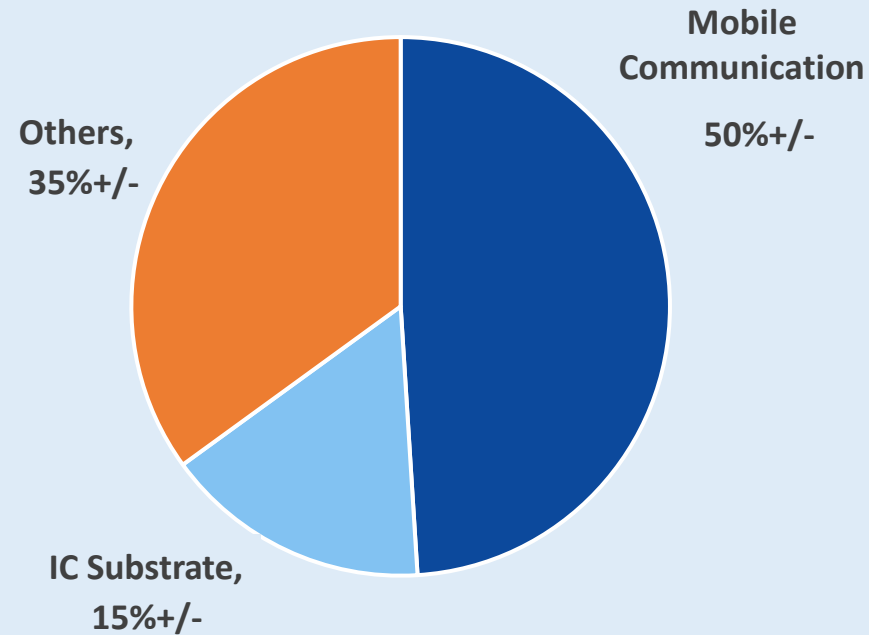


Aim to Reach 10% Global PCB Market Share by 2030

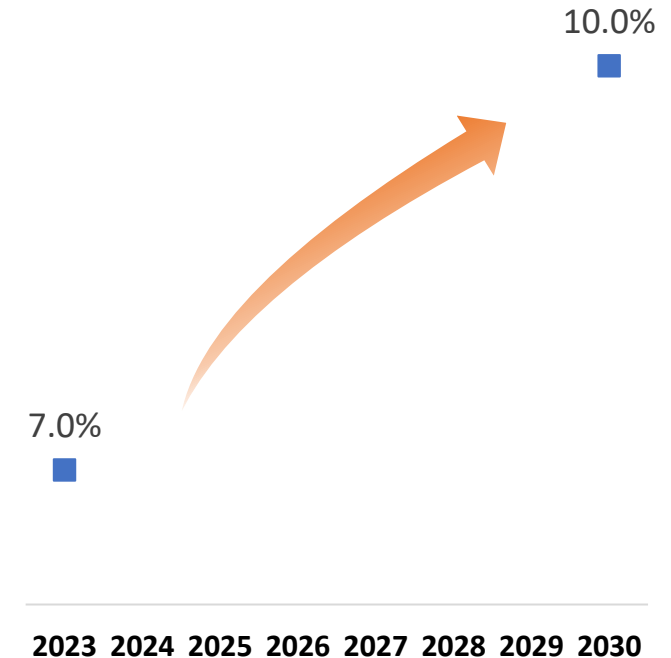
2023 Revenue by Application



2027 Target Revenue by Application



Aim to Reach 10% Global Market Share by 2030





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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 reached a record high in 4Q23. BT substrates continue to recover, and the average utilization rate in 2024 is expected to exceed 80%. The BT business may turn profitable this year:

- The utilization rate of BT substrates in 4Q23 has recovered to over 70%, ahead of previous expectations. We expect the utilization rate will further increase this year, and the BT business may turn profitable.

2

ABF substrates have obtained customer qualifications and entered mass production, with revenue and utilization rate expected to increase quarter by quarter this year:

- In terms of ABF substrates, the demand for AI and automotive is strong. We are actively expanding our presence in these two major areas, and we have obtained customer qualifications and entered mass production. We expect that ABF revenue and capacity utilization rates will increase quarter by quarter this year.

3

We have a distinct advantage in fulfilling international customers' "China for China" demand:

- To increase market share, international customers need to gradually deploy local production capacity in the mainland China market. We have the most advanced IC substrate fabs in mainland China, which can fulfill international customers' "China for China" demand. This is our distinct advantage in the IC substrate industry.

4

Focusing on developing high density and fine line products:

- For ABF substrates, we have collaborated with customers to develop high-end substrates for Chiplet. Currently, we are shipping products with 18-20 layers and a maximum body size of 92mm x 92mm to customers. Our yield has been on par with Tier 1 ABF substrate suppliers. We have shipped 102mm x 102mm body size to customers for testing.
- For BT substrates, we can offer fine-line 6/8um Embedded Trace Substrate (ETS), and the yield is also on par with Tier 1 players.

AI

**High-speed
Computing**

**Data
Transmission**

AI applications require high-speed computing capabilities and the integration of fast read-write memory.

Chip Solution

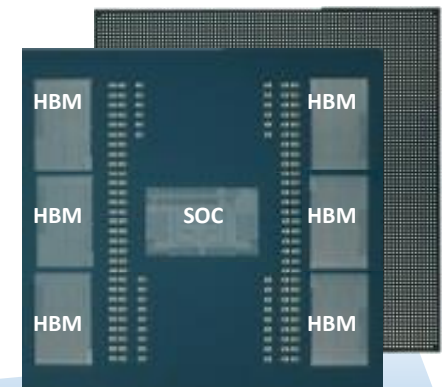
**Single SOC
(System on Chip)**

Larger die size, more complicated manufacturing process, and higher costs






Chiplet

Chiplet packaging increases efficiency

Chiplet Substrate



IC Substrate Technology

High Layer Counts	Large Body Size	Micro-drilling	Fine Line	Surface Finish Process
 18~20 Layers	 90x90 ~ 95x95mm	 40~60 um	 9~15 um	 Low roughness, high cohesion

**Zhen Ding's
IC Substrate**

Automotive IC Substrate

Intelligence



DCU

- Autopilot DCU
- Cockpit DCU

Sensor

- mmWave Radar
- Laser Radar
- Camera

Chip

Autopilot AI Chip
Smart Cockpit Chip
DCU Chip

CMOS
Storage Chip
ADAS Chip

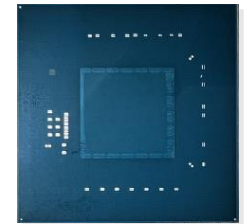


Packaging

FCBGA
CSP

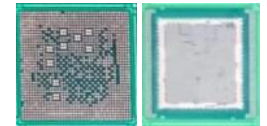
ZDT's IC Substrate

FCBGA



4~18L
17x17~75x75mm

FCCSP



2~4L
7x7~21x21mm

WBCSP



2~4L
7x7~27x27mm

Connectivity



Communication Module

- Remote Communication Box

Internet of Vehicle

- 5G Module

Smart Cockpit Chip



FCCSP

Information



Display System

- HUD
- AR/VR
- NFC

Smart Cockpit Chip
Storage Chip

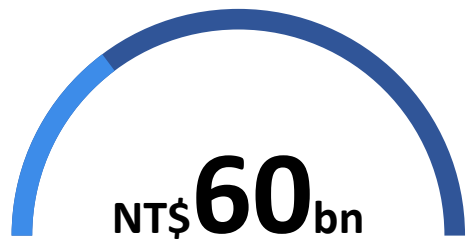


FCCSP
CSP

IC Substrate Capacity Expansion Plan

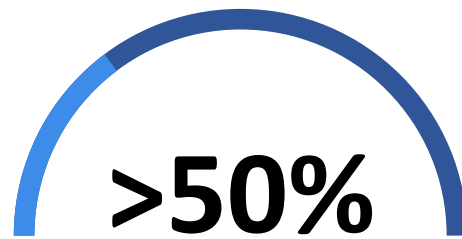
		2023				2024				2025				2026				
		1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	
SZ ABF Substrate Plant (Two Fabs’ floor area in total: 170,000 m²)	Fab 1 (Mid to high-end products)	Installation																
		Sample certification																
		Mass production, target yield: comparable to tier 1 peers										Full utilization, target yield: comparable to tier 1 peers						
	Fab 2 (High end products)										Installation							
											Sample certification							
													Mass production					
QHD BT Substrate Plant (Two Fab’s floor area in total: 60,000 m²)	Fab 1	Industry Leading Quality																
	Fab 2	Mass Production			Utilization at 80%+				Industry Leading Quality									

IC Substrate Goals



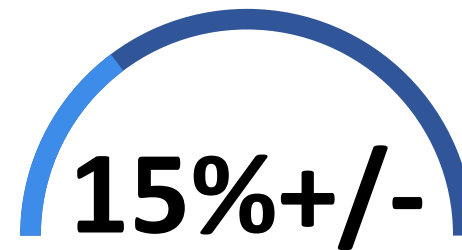
IC Substrate Capex:

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



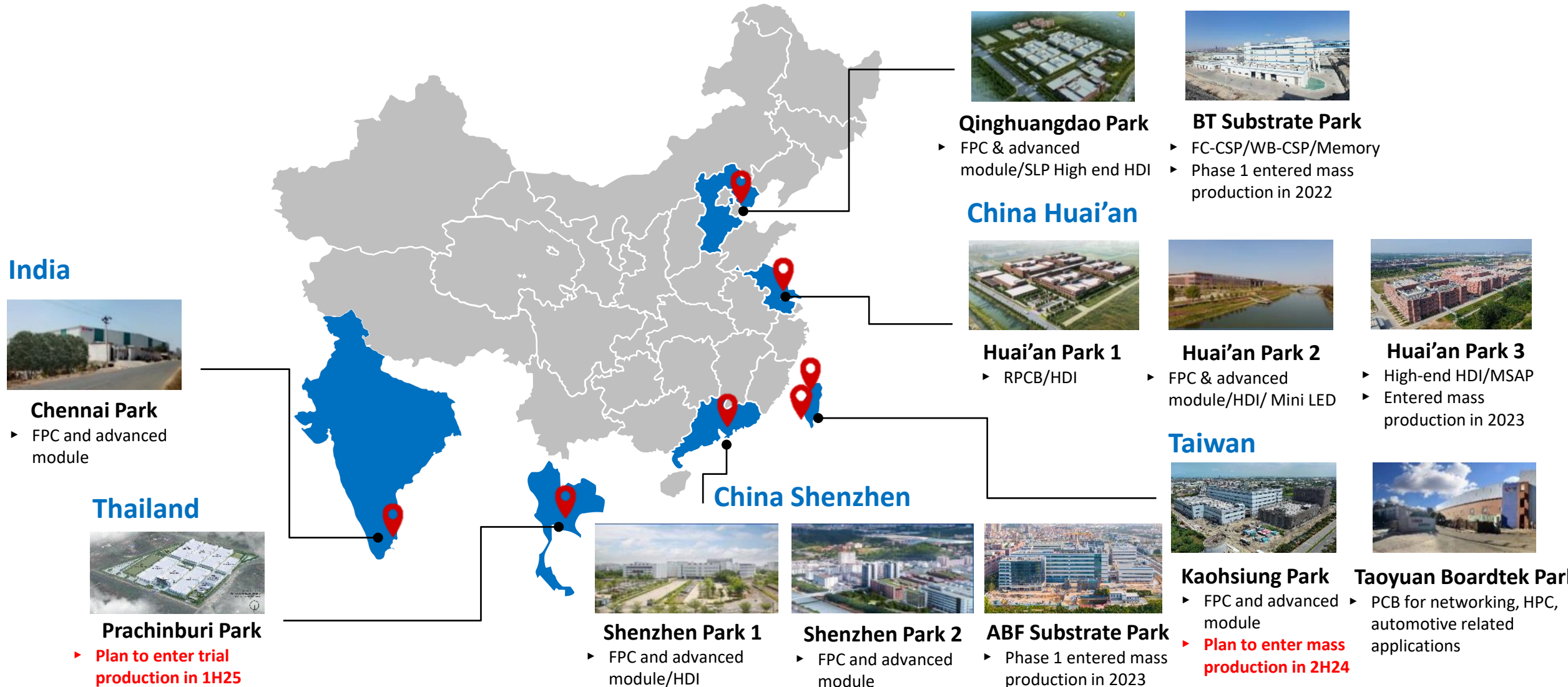
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Global Manufacturing Footprint

Six Major Global Manufacturing Campuses

Multiple manufacturing campuses to fulfill clients' needs



Kaohsiung Luzhu Science Park: FPC and Advanced Module Production Line

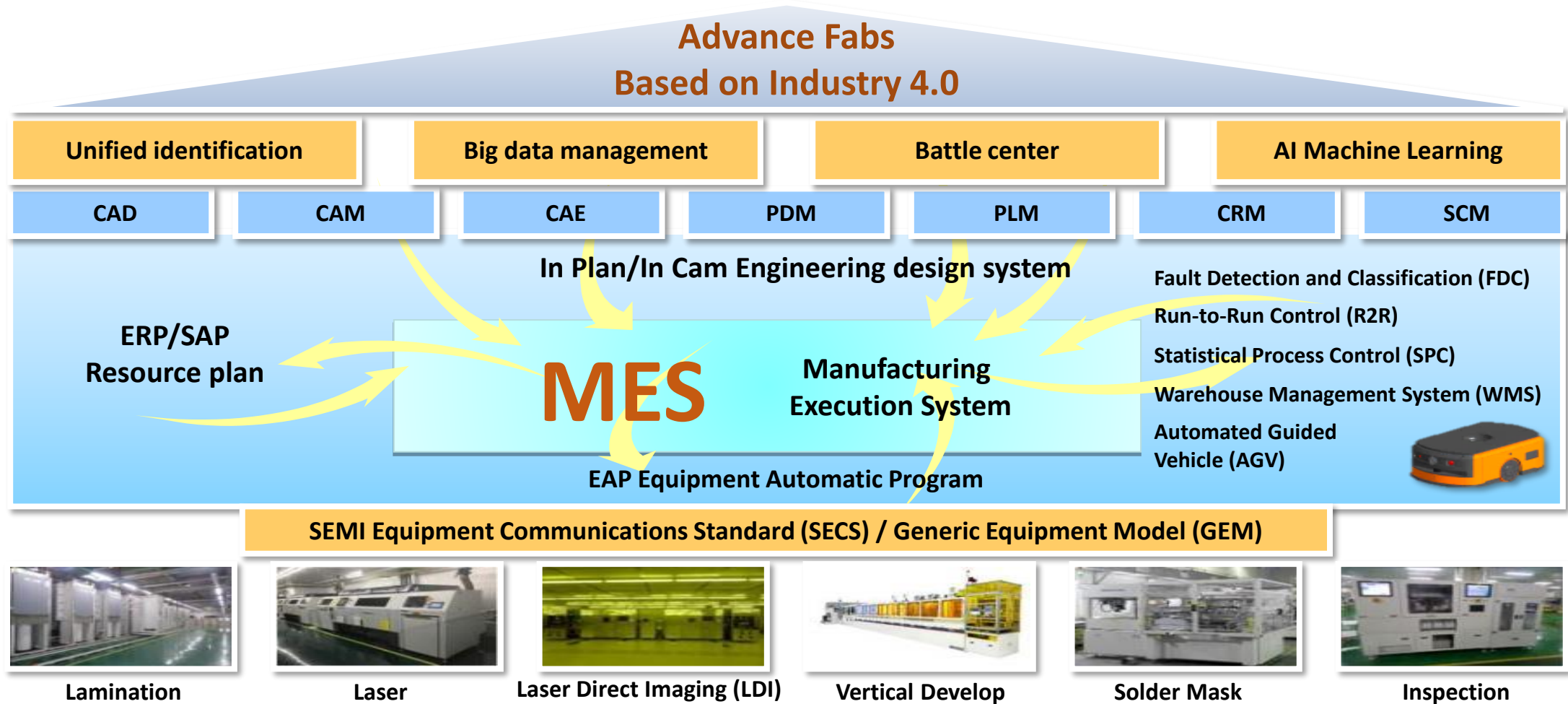


- Plan to enter mass production in 2H24.
- It will be the most advanced FPC fab. ZDT will collaborate with its customers to develop high-end new products.

Thailand Prachinburi Park (Phase 1) : High-end RPCB/HDI



- Trial production in 1H25 and mass production in small-scale in 2H25.
- Phase 1 will focus on high-end RPCB/HDI.
- It will be ZDT's key manufacturing site in Southeast Asia.



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.



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Commitment to EPS + ESG Blueprint

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 2023, Zhen Ding's S&P ESG Score improved to 73 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.**



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Financial Summary

4Q23 Financial Results

	(Unit: NT\$ million, unless otherwise stated)				
	4Q23	3Q23	4Q22	QoQ (%)	YoY (%)
Revenue	54,396	41,919	52,902	29.8%	2.8%
Gross Profit	11,679	8,583	13,913	36.1%	-16.1%
Gross Margin	21.5%	20.5%	26.3%	+1.0ppts	-4.8ppts
Operating Expense	5,424	5,008	5,219	8.3%	3.9%
Operating Profit	6,254	3,575	8,694	74.9%	-28.1%
Operating Margin	11.5%	8.5%	16.4%	+3.0ppts	-4.9ppts
Non-Operating Income/Expense	(409)	222	(973)		
Net Income	5,070	3,349	6,857	51.4%	-26.1%
Net Margin	9.3%	8.0%	13.0%	+1.3ppts	-3.7ppts
Net Income to Parent	3,504	2,271	4,705	54.3%	-25.5%
EPS (NT\$) ⁽¹⁾	3.71	2.40	4.98		
Cash Inflow Generated from Operations	13,248	5,143	15,458	157.6%	-14.3%
Capital Expenditures	6,233	4,801	5,569	29.8%	11.9%
Cash and Cash Equivalents ⁽²⁾	65,970	59,979	48,957	10.0%	34.8%
ROE(%) ⁽³⁾	15.2%	10.0%	22.3%	+5.2ppts	-7.1ppts

Note : (1) Weighted Average Shares outstanding as of 2023 : 944,956 thousand shares (Issued capital was 947,049 thousand shares within treasury shares 2,093 thousand) (2) Including current financial assets at amortized cost (time deposits, etc.) (3) Property, Plant and Equipment includes investment property (4) PPE Turnover = annualized net revenue / average net property, plant and equipment

2023 Financial Results

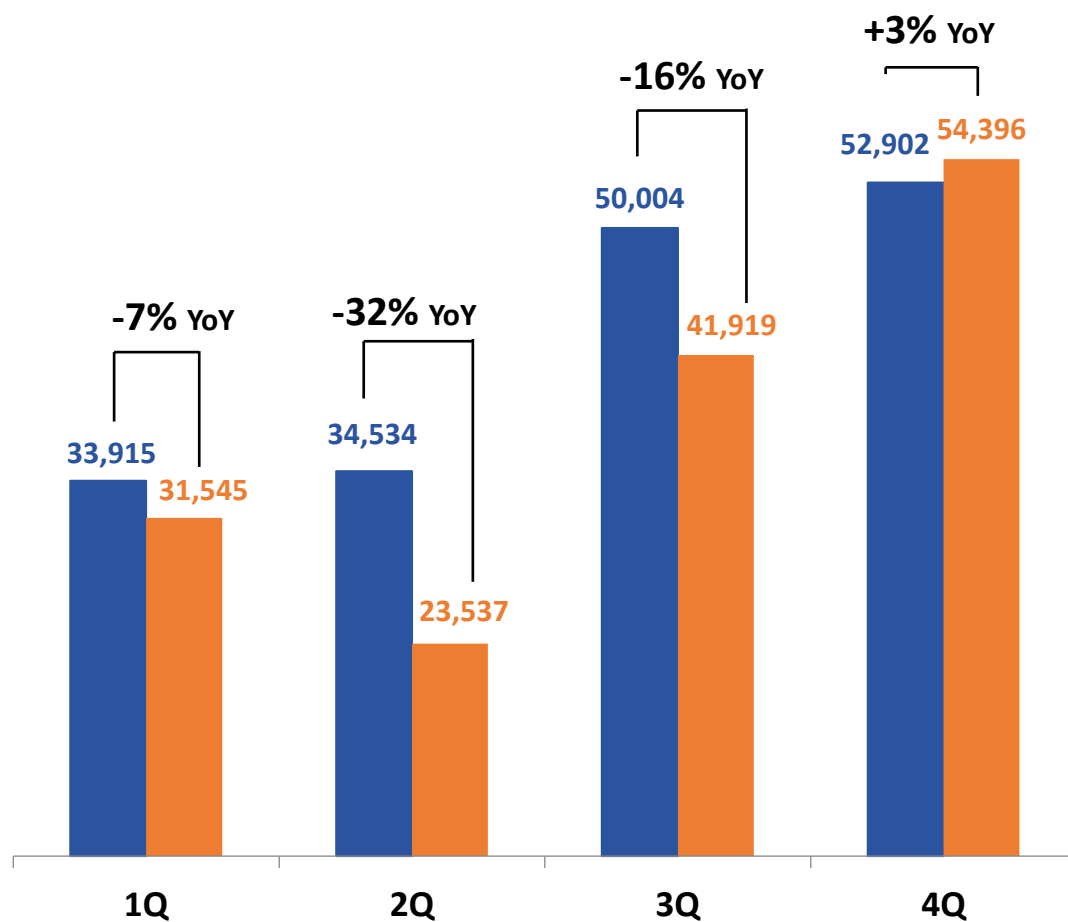
	(Unit: NT\$ million, unless otherwise stated)		
	2023	2022	YoY (%)
Revenue	151,398	171,356	-11.6%
Gross Profit	27,459	39,888	-31.2%
Gross Margin	18.1%	23.3%	-5.2ppts
Operating Expense	18,300	17,441	4.9%
Operating Profit	9,160	22,447	-59.2%
Operating Margin	6.1%	13.1%	-7.0ppts
Non-Operating Income/Expense	888	1,022	-13.1%
Net Income	9,432	20,535	-53.8%
Net Margin	6.2%	12.0%	-5.8ppts
Net Income to Parent	6,189	14,197	-56.4%
EPS (NT\$) ⁽¹⁾	6.55	15.02	
Cash Inflow Generated from Operations	33,608	45,311	-25.8%
Capital Expenditures	26,066	29,032	-10.2%
Cash and Cash Equivalents ⁽²⁾	65,970	57,599	14.5%
ROE(%) ⁽³⁾	7.1%	16.7%	-9.6ppts

Note : (1) Weighted Average Shares outstanding as of 2023 : 944,956 thousand shares (Issued capital was 947,049 thousand shares within treasury shares 2,093 thousand) (2) Including current financial assets at amortized cost (time deposits, etc.) (3) Property, Plant and Equipment includes investment property (4) PPE Turnover = annualized net revenue / average net property, plant and equipment

Quarterly Operation Results

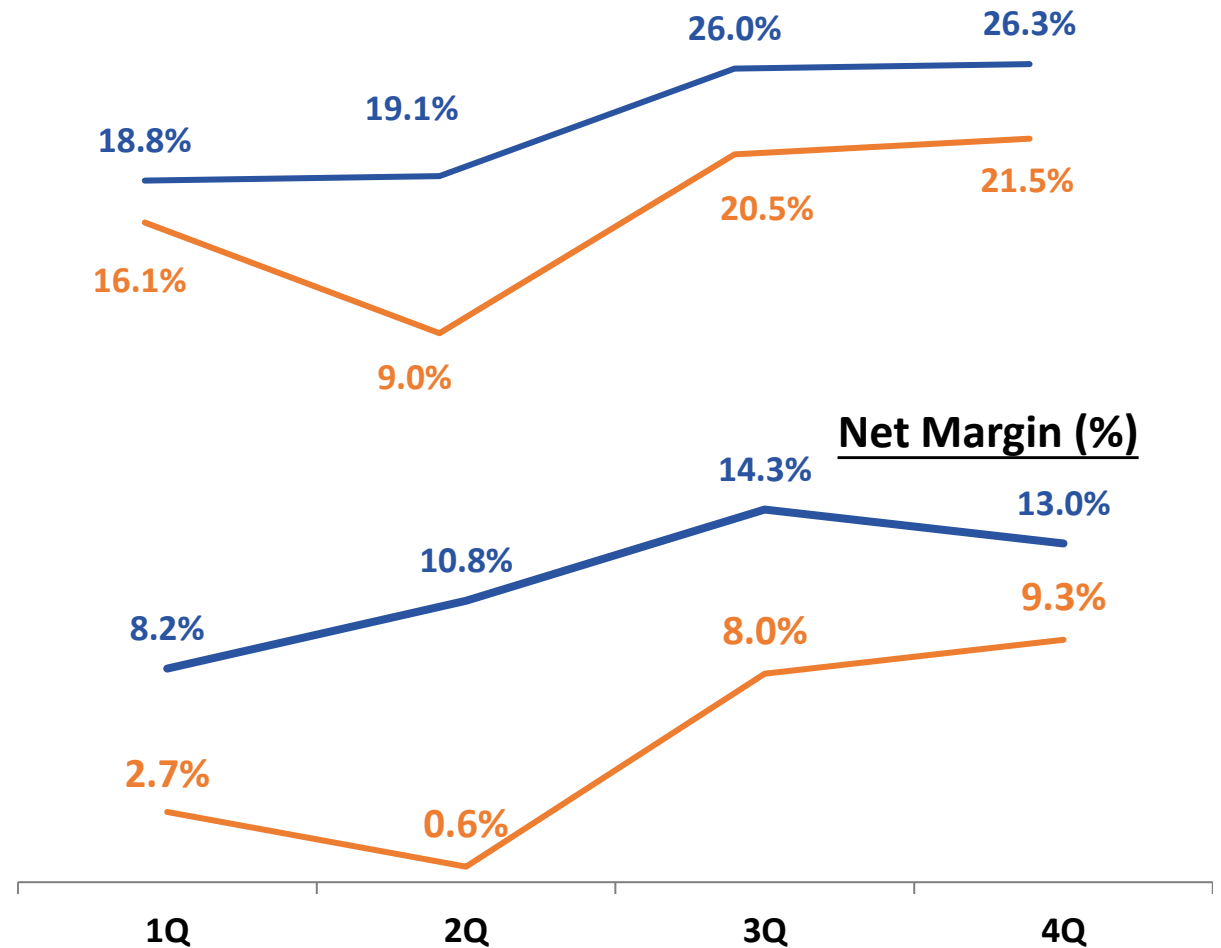
Revenue

■ 2022 ■ 2023 Unit: NT\$ million

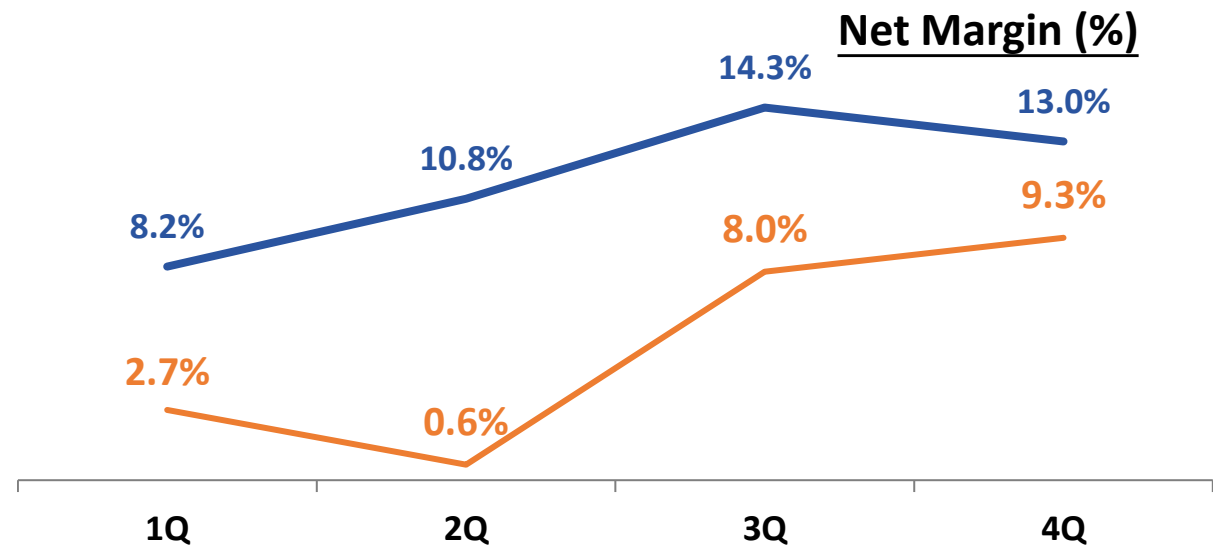


Gross Margin (%)

— 2022 — 2023

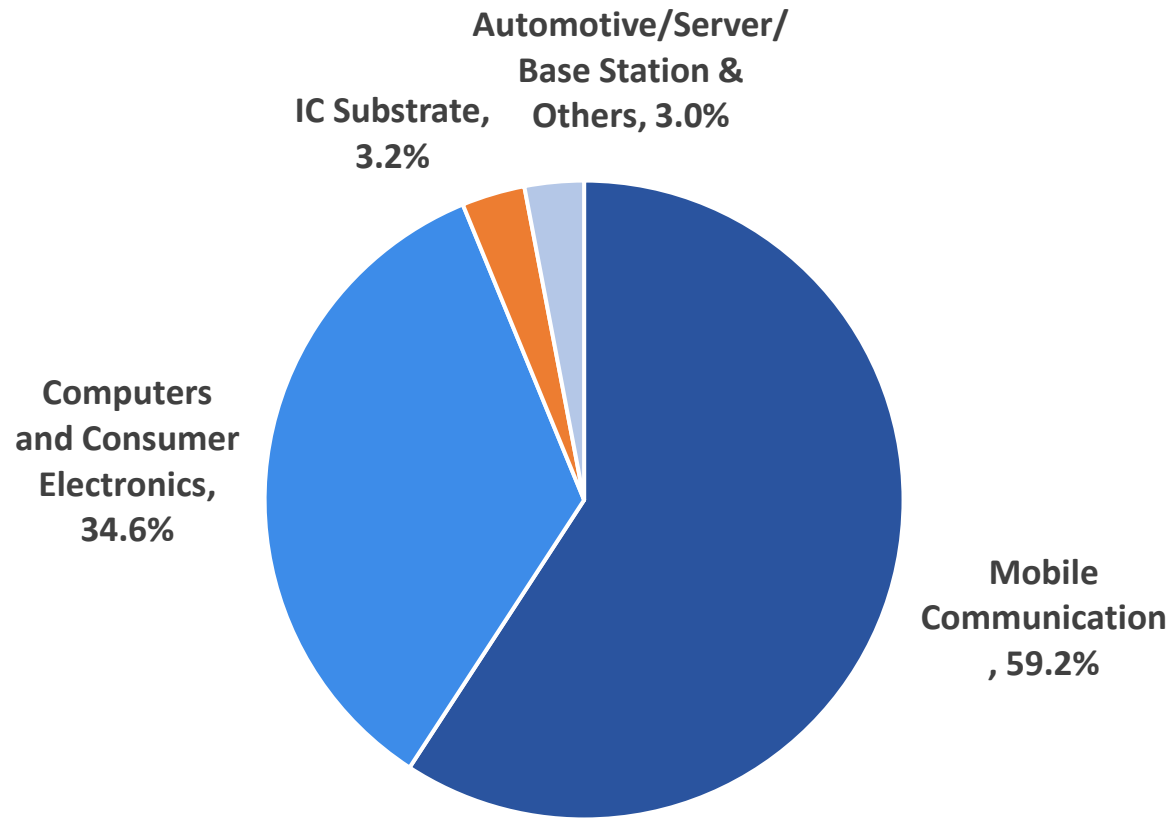


Net Margin (%)

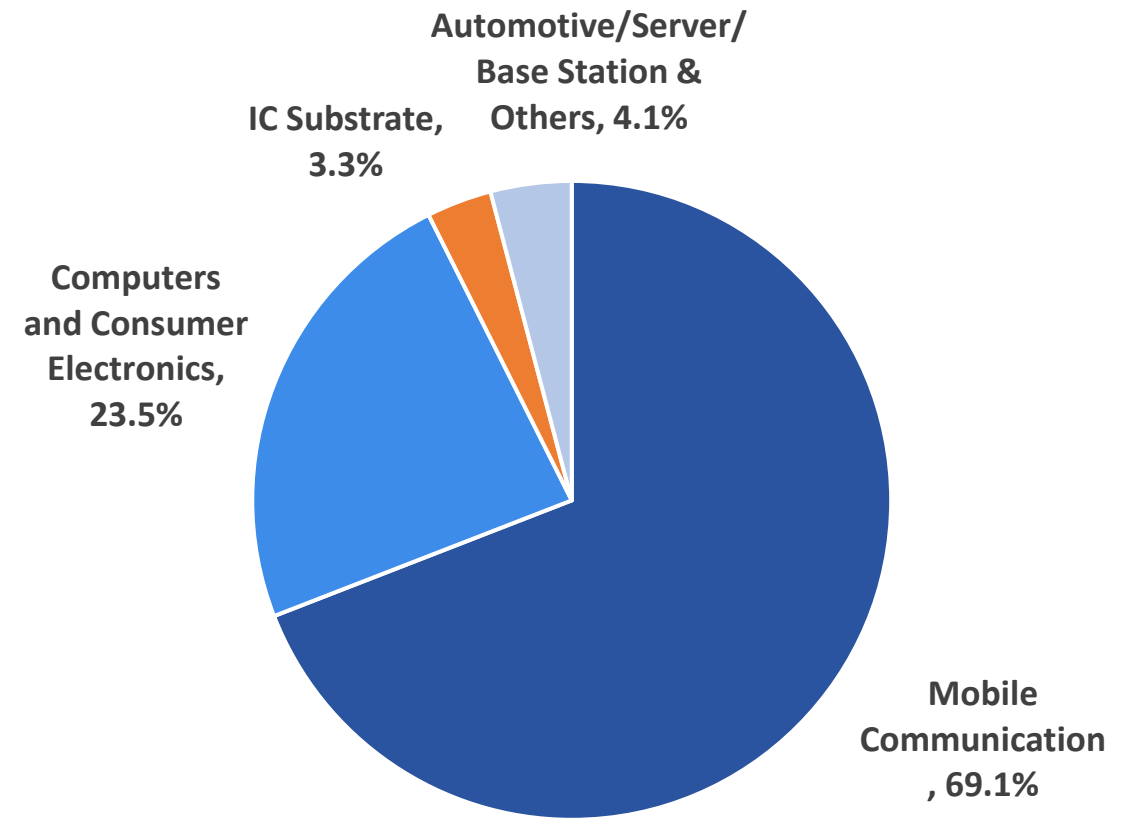


Revenue Breakdown – By Applications

2022 Revenue NT\$171.4bn



2023 Revenue NT\$151.4bn



Consolidated Balance Sheet and Key Indices

	2023-12-31		2022-12-31		Unit: NT\$ million Change	
	Amount	%	Amount	%	Amount	%
Cash and Cash Equivalents ⁽²⁾	65,970	27.2%	57,599	24.8%	8,371	+2.4ppts
Notes & Accounts Receivable	29,503	12.2%	30,529	13.1%	-1,026	-0.9ppts
Inventories	15,508	6.4%	17,725	7.6%	-2,217	-1.2ppts
Property, Plant and Equipment ⁽³⁾	109,965	45.3%	104,814	45.1%	5,151	+0.2ppts
Total Assets	242,932	100.0%	232,560	100.0%	10,372	
Debt	53,130	21.9%	45,359	19.5%	7,771	+2.4ppts
Notes & Accounts Payable	37,853	15.6%	37,082	15.9%	771	-0.3ppts
Total Liabilities	108,450	44.7%	99,694	42.9%	8,756	
Total Equity	134,326	55.3%	132,866	57.1%	1,460	-1.8ppts
Key Indices						
A/R Turnover Days	72		72		-	
Inventory Turnover Days	52		52		-	
Current Ratio (x)	1.44		1.49		(0.05)	
PPE Turnover (x) ⁽⁴⁾	1.47		1.84		(0.37)	

Note : (1) Weighted Average Shares outstanding as of 2023 : 944,956 thousand shares (Issued capital was 947,049 thousand shares within treasury shares 2,093 thousand) (2) Including current financial assets at amortized cost (time deposits, etc.) (3) Property, Plant and Equipment 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