

# Zhen Ding Technology Holding (4958 TT)

## Investor Presentation

April 11, 2022

# 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.

# ZDT At a Glance



#1

PCB Manufacturer  
Worldwide

**2006** Founded

(Former Foxconn Advanced  
Tech, 1999)

**Taoyuan, Taiwan**

Headquarters

**44,300**

Employees (2021 average)



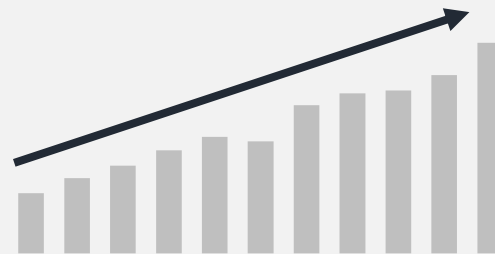
**22** facilities  
located in  
Mainland China,  
Taiwan, India

**NT\$155.0 Bn**

Revenue in 2021  
(+18.1% YoY)

**+13%**

2011-2021  
Revenue CAGR



**1,190+**

Patents Obtained



**2,780+**

Patents Applied

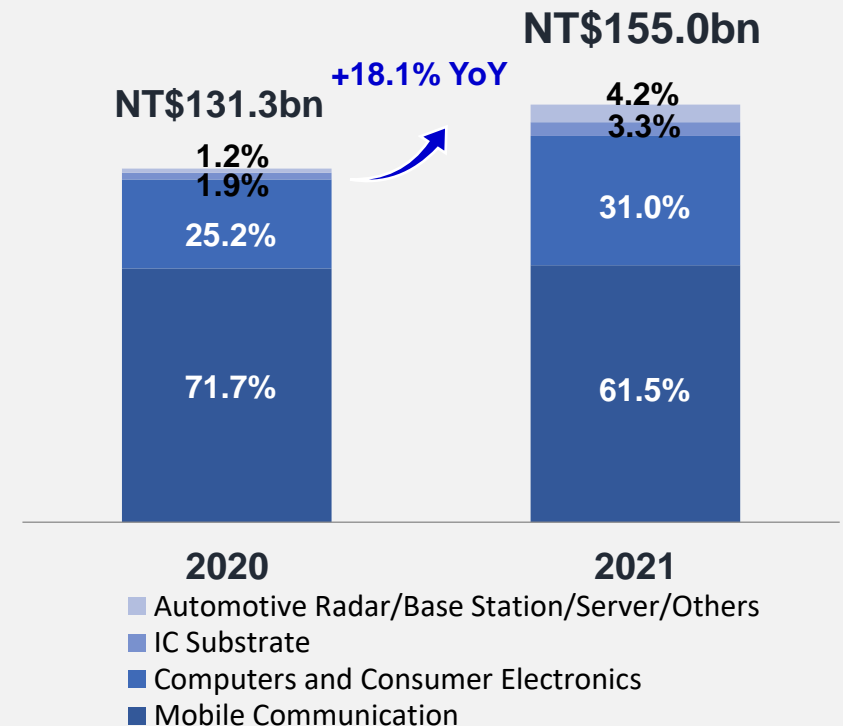
**NT\$104.7 Bn**

Market Cap as of  
March, 2022

**16.9%**

10Y Average ROE

## Revenue Breakdown – By Applications





# AGENDA

- 1 Company Strategy
- 2 Business Roadmap and Execution
- 3 4Q21 & 2021 Financial Results



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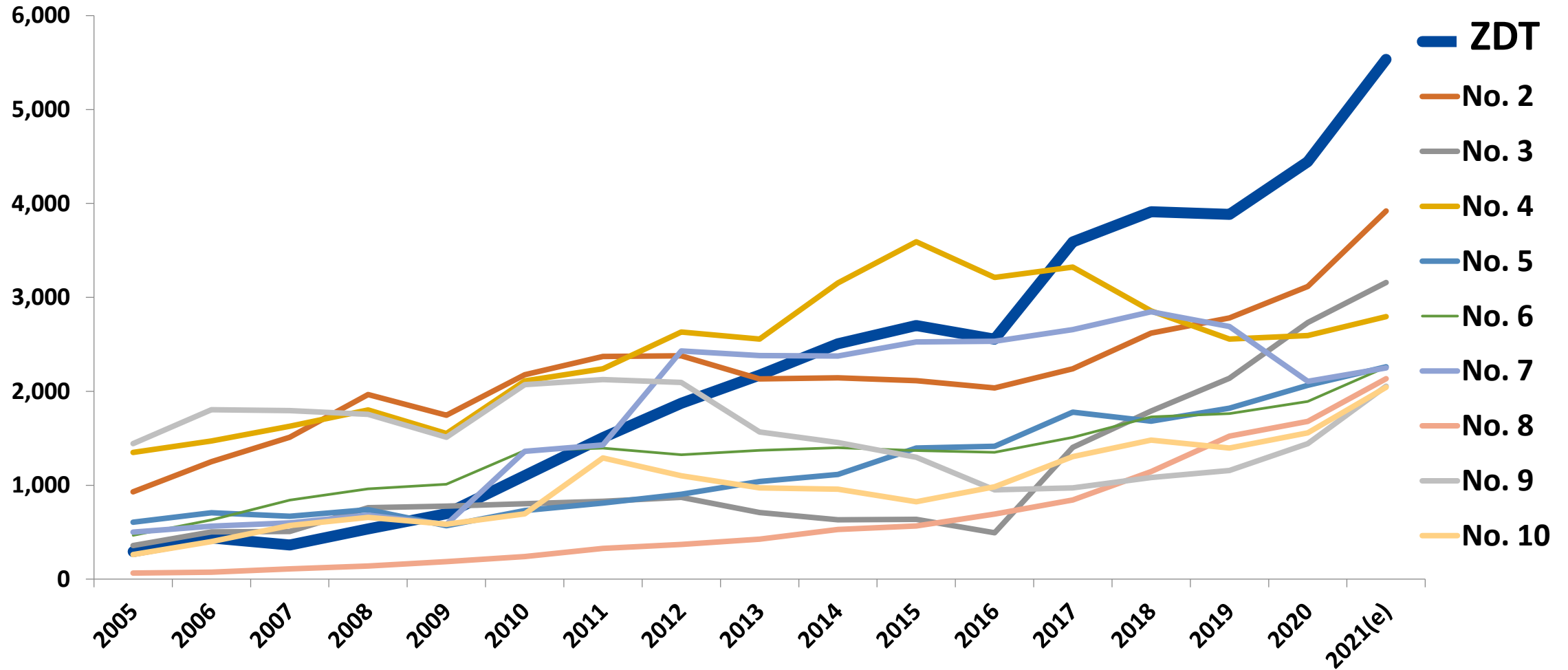
# Company Strategy

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# ZDT Has Maintained Robust Revenue Growth

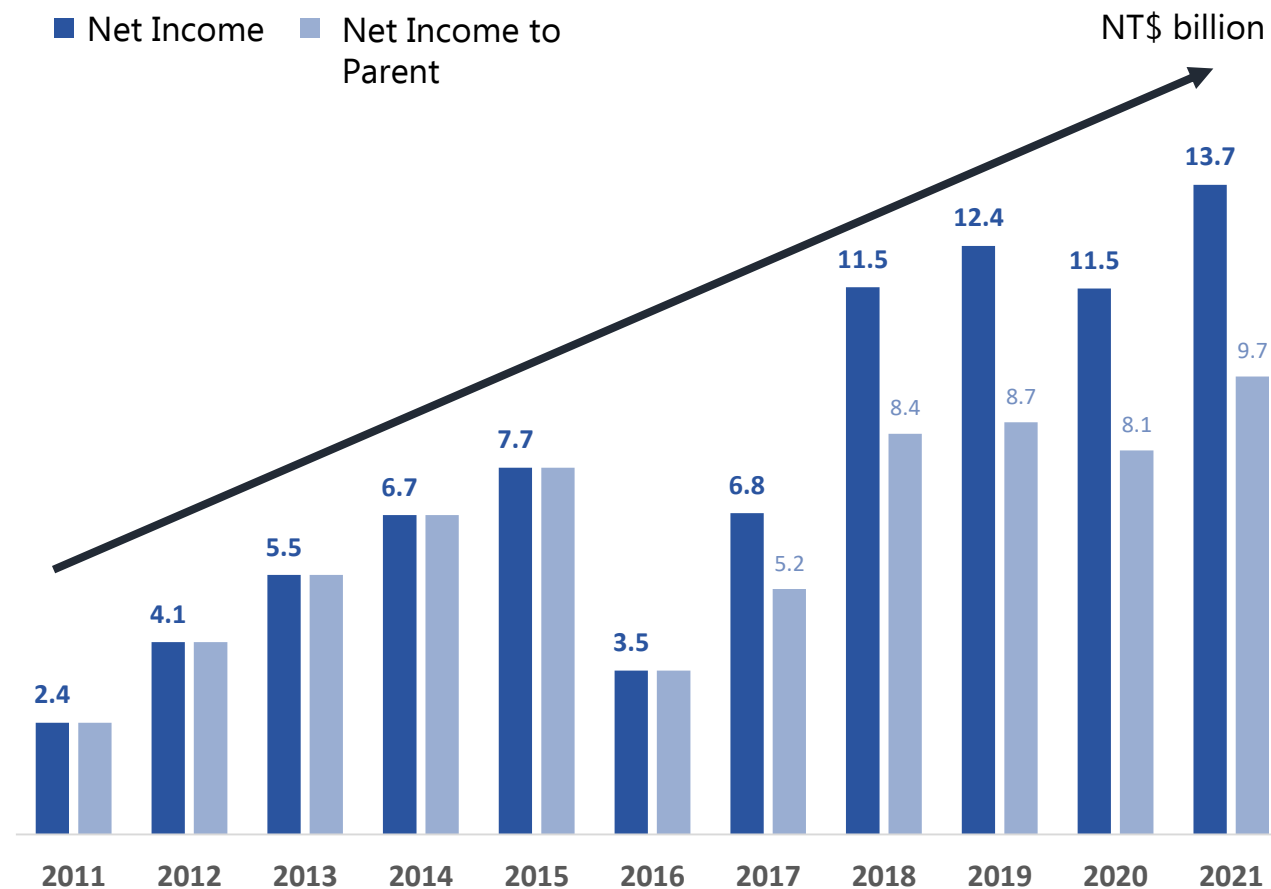
2021 Global Top 10 PCB Companies Revenue Trends

Unit: US\$ million



Source: NT Information; Prismark (2022/02)

# Our Strategy Brings Us Robust Earning Growth



# Global Leading PCB Companies

Unit: US\$100 million

Rank	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1	CMK	CMK	Sanmina	Ibiden	Ibiden	Mektron	Ibiden	Ibiden	Ibiden	Ibiden	UMTC	UMTC
	10.31	11.55	15.00	9.09	9.32	11.75	12.26	14.44	18.03	17.94	19.66	17.46
2	Viasystems	Ibiden	Viasystems	CMK	CMK	CMK	Mektron	Mektron	Mektron	Mektron	Mektron	Mektron
	9.80	9.92	12.50	8.36	9.31	10.49	12.05	13.50	14.71	16.29	18.02	15.50
3	Ibiden	Viasystems	CMK	Sanmina	Mektron	Ibiden	CMK	CMK	UMTC	UMTC	Ibiden	Ibiden
	9.80	8.90	11.12	7.50	8.87	10.27	11.05	10.36	12.50	15.10	17.55	15.11

Source: NT Information; Prismark (2022/02)



# ZDT Has Been the World's Largest PCB Company Since 2017

Unit: US\$100 million

Rank	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1	UMTC	UMTC	Mektron	Mektron	Mektron	Mektron	Mektron	ZDT	ZDT	ZDT	ZDT	ZDT
	21.77	23.70	26.32	25.56	31.54	35.91	32.12	35.90	39.11	38.84	44.43	55.35
2	Mektron	Mektron	TTM	TTM	ZDT	ZDT	ZDT	Mektron	Mektron	UMTC	UMTC	UMTC
	21.11	22.40	24.30	23.80	25.06	27.01	25.54	33.23	28.56	27.81	31.17	39.20
3	Ibiden	Ibiden	UMTC	ZDT	TTM	TTM	TTM	TTM	TTM	TTM	DSBJ	DSBJ
	20.71	21.26	23.77	21.72	23.76	25.25	25.33	26.58	28.47	26.89	27.31	31.58

Source: NT Information; Prismark (2022/02)

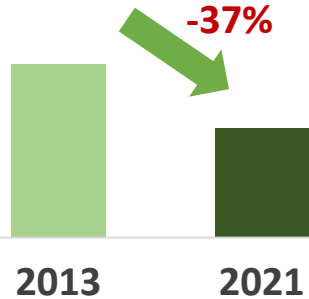
- ✚ **One ZDT Synergies: One Stop Shopping**
- ✚ **Globalization**
- ✚ **M&A Strategy**

# Commitment to EPS + ESG Blueprint



**E:** Implement highest environmental standards in the industry to raise competitive barriers

GHG emissions  
per unit revenue



## Reduce GHG Emissions

In 2021, reduced GHG emissions per unit revenue by **37%** compared to 2013.

In 2021, annual **energy savings of 28,750 MWh**, a total **reduction of 14,469 tons of CO2 emissions** compared to 2020.

## Water Management

In 2019, our manufacturing sites in Shenzhen **became the first in the PCB industry** to receive the Alliance for Water Stewardship (AWS) Platinum Certification. In 2020, all manufacturing sites in China obtained the AWS Platinum Certification.

## Waste Management

All manufacturing sites in China achieved the UL 2799 Platinum Certification of Zero Waste to landfill for manufacturing.

2021  
Water  
Recycling Rate  
**50%↑**

2021  
Waste  
Recycling Rate  
**90%↑**



**S:** Benchmark international human rights standards and value human capital development

Since 2021/5, ZDT has become **a member of BSR and RBA**, benchmarking international human rights standards.

2021 SER Awards: **81** awards (labor: 57; environment: 20; safety: 4)

2021: **26** industry-academia research collaboration projects

2021: Scholarships for **479** students



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**G:** Implement corporate governance, risk management and comprehensive information disclosure

**Innovation Management:** **2,782** patents applied. **1,193** global patents obtained, **92%** of which are invention patents (as of 2021/12/31).

**Supply Management:** A total of 205 suppliers completed the audit and training related to quality, hazardous substances, social responsibility in 2021.

**Risk and Crisis Management:** Develop strategic, financial, and hazardous event risk management policies.



# ZDT Was Selected in International ESG Indices and Invited to Participate in ESG Evaluation

## S&P Global

- **S&P Global Corporate Sustainability Assessment (CSA)**  
(the basis for many ESG indices including DJSI)

2021 S&P Global ESG score outperformed 86% of companies in the industry



FTSE4Good  
TIP Taiwan ESG Index

- **FTSE4Good TIP Taiwan ESG Index**

Selected as a constituent of FTSE4Good TIP Taiwan ESG Index for two consecutive years (2020-2021)

- **TWSE Corporate Governance 100 Index (CG100)**

Selected as a constituent of TWSE Corporate Governance 100 Index for three consecutive years (2019-2021)



Wind ESG

- **Wind ESG**

Avary Holding, subsidiary of ZDT, received a ESG rating of A, ranking 16th in the industry. (2022/3)



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# Business Roadmap and Execution

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## Mr. D.J. Lee

### Experiences :

General Manager, Subtron Technology Co., Ltd.

Vice President, Unimicron Technology Corp.

Manager, Compeq Manufacturing Company Limited

### Education:

EMBA, National Taiwan University

Master in Chemical Engineering, National Central University

Bachelor in Chemical Engineering, Chung Yuan Christian University

## IC Substrate Team with Extensive Experience

Director : 6 directors, average tenure  $\geq 20$  years

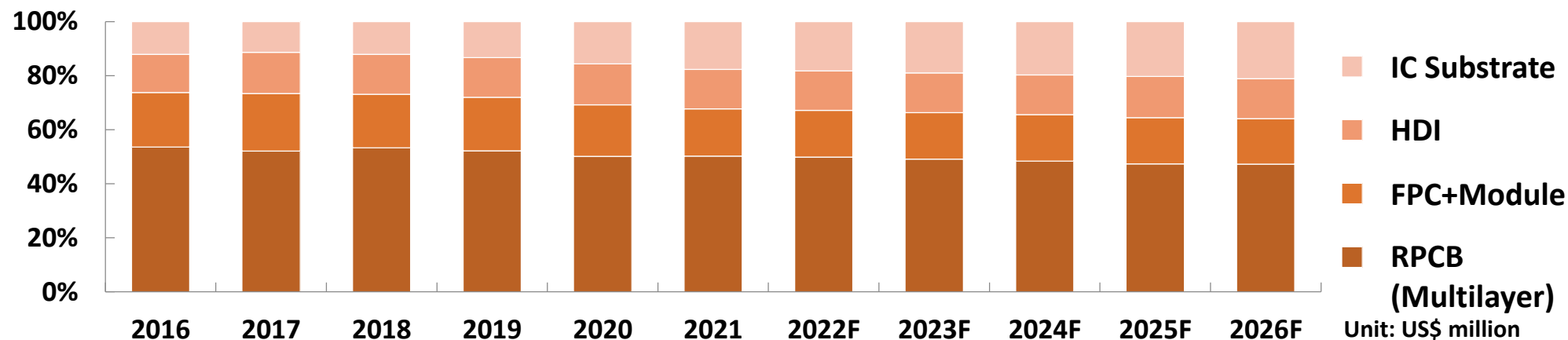
Manager : 40 managers, average tenure  $\geq 15$  years

Section Manager : 79 managers, average tenure  $\geq 10$  years





# PCB Markets are Expected to Continue to Grow



Product	Item	2016	2017	2018	2019	2020	2021(E)	2022(F)	2023(F)	2024(F)	2025(F)	2026(F)	2021-2026 CAGR
RPCB (Multilayer)	Value	29,054	30,656	33,225	31,969	32,674	40,402	42,174	43,347	44,679	45,543	47,933	3.5%
	%	53.6%	52.1%	53.2%	52.1%	50.1%	50.2%	49.9%	49.1%	48.4%	47.3%	47.2%	
FPC+ Module	Value	10,901	12,523	12,395	12,195	12,483	14,058	14,634	15,234	15,859	16,509	17,179	4.1%
	%	20.1%	21.3%	19.9%	19.9%	19.1%	17.5%	17.3%	17.3%	17.2%	17.2%	16.9%	
HDI	Value	7,683	8,968	9,222	9,008	9,874	11,791	12,369	12,975	13,611	14,617	15,012	4.9%
	%	14.2%	15.2%	14.8%	14.7%	15.1%	14.7%	14.6%	14.7%	14.7%	15.2%	14.8%	
IC Substrate	Value	6,569	6,696	7,554	8,139	10,188	14,198	15,419	16,745	18,185	19,549	21,435	8.6%
	%	12.1%	11.4%	12.1%	13.3%	15.6%	17.6%	18.2%	19.0%	19.7%	20.3%	21.1%	
Total		54,207	58,843	62,396	61,311	65,219	80,449	84,596	88,301	92,334	96,218	101,559	4.8%

Source: Prismark (2022/2)



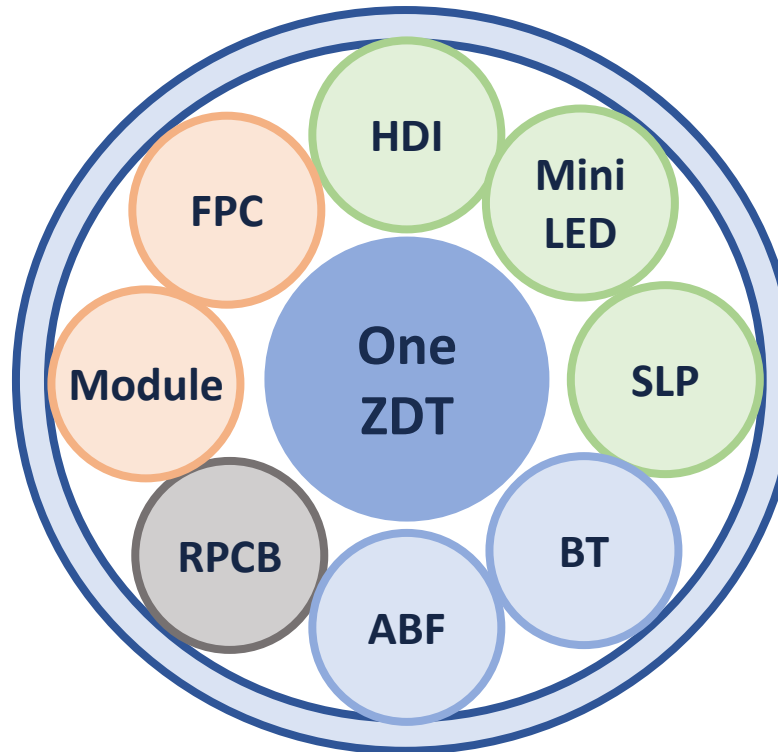
# One ZDT: One Stop Shopping Synergies

## FPC (+Module)

- 5G Applications
- AR/VR Metaverse
- New Energy
- Intelligent Vehicles
- Next-gen Display

## RPCB(+Base Station + Automotive PCB + Server)

- High Performance Computing
- 5G Base Station
- Next-gen Radar PCB
- Intelligent Vehicles
- High-end Server & AI



## HDI(+ SLP+Mini LED)

- Advanced HDI, SLP
- NB, Automotive HDI
- 5G AiP & SiP
- AR/VR Metaverse
- Mini LED/Micro LED

## IC Substrate (BT+ABF)

- 5G Chips
- Cloud HPC
- Server & AI
- AR/VR Metaverse
- Intelligent Vehicles

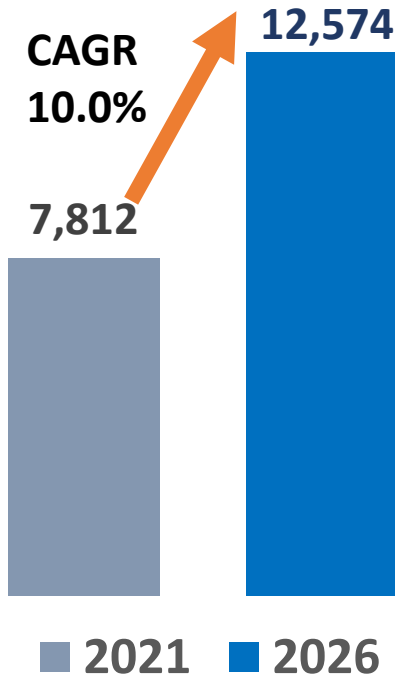
Supply chain management is getting more complex. Customers focus on supply chain integration, instead of seeking the lowest cost through division.



# Strong Growth Momentum in Multiple Businesses

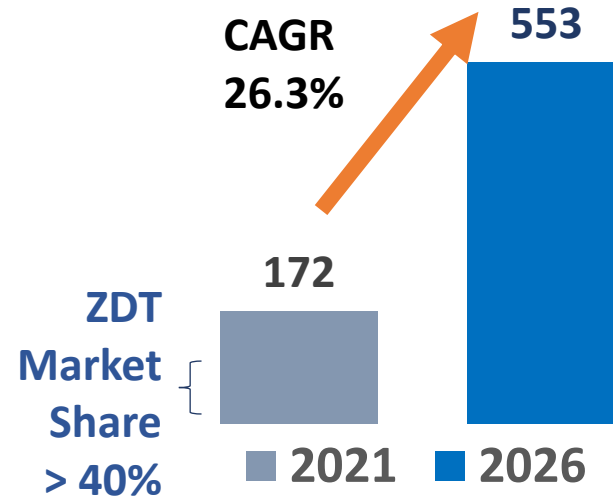
## High-Performance Cloud Computing Technology

Server/Storage PCB Market  
(US\$ million)



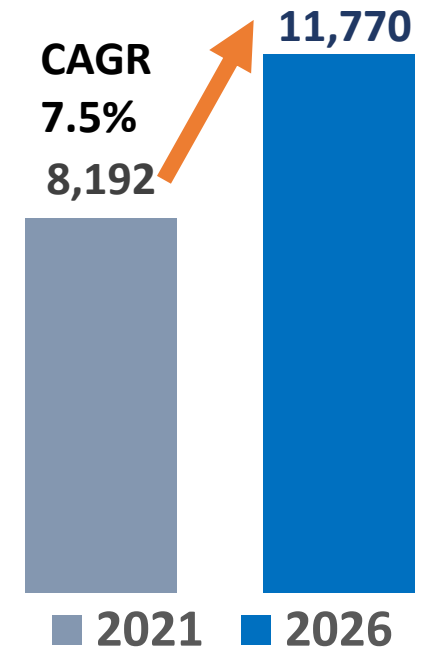
## Growing Opportunities in Metaverse

AR/VR Headset PCB Market  
(US\$ million)

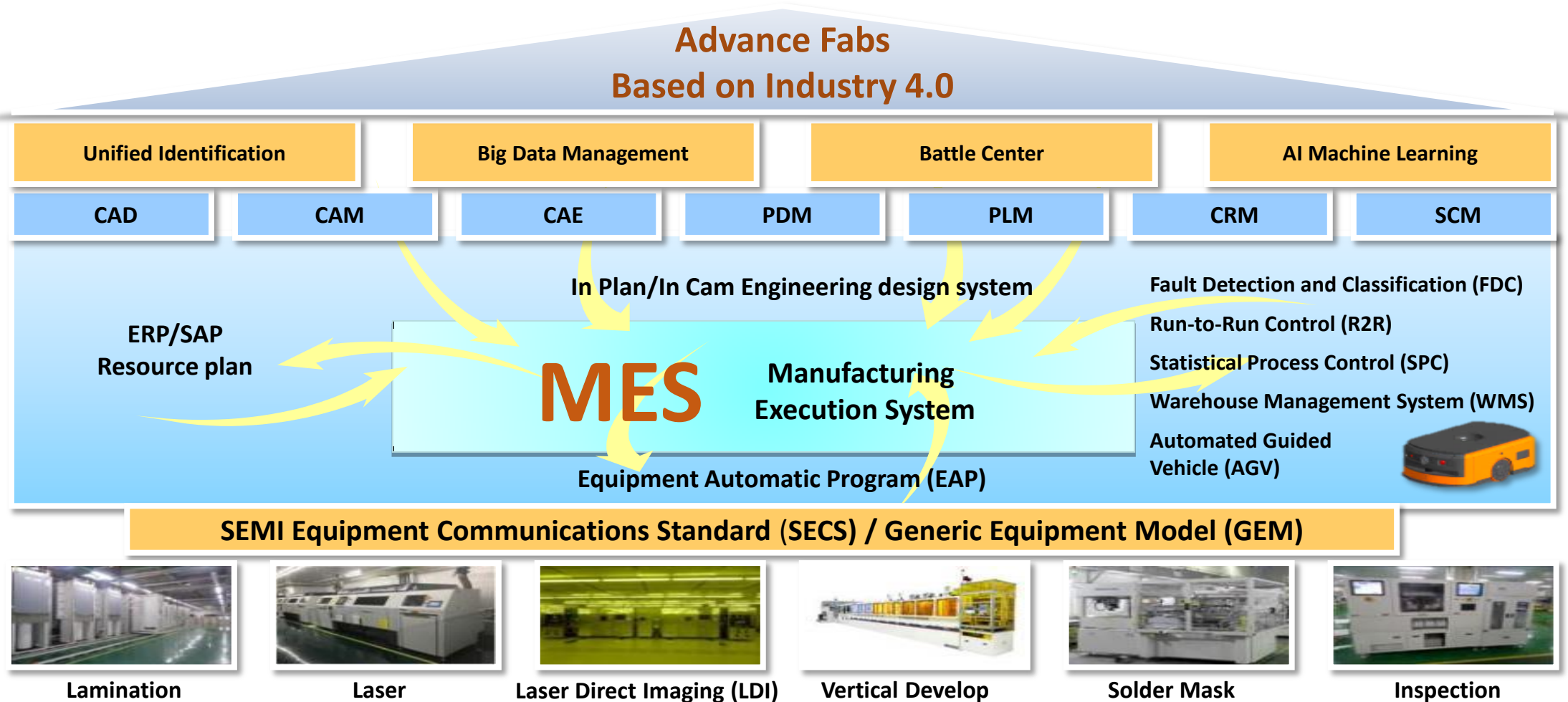


## Intelligent Internet of Vehicles (IoV) Ecosystem

Automotive Electronics PCB Market  
(US\$ million)

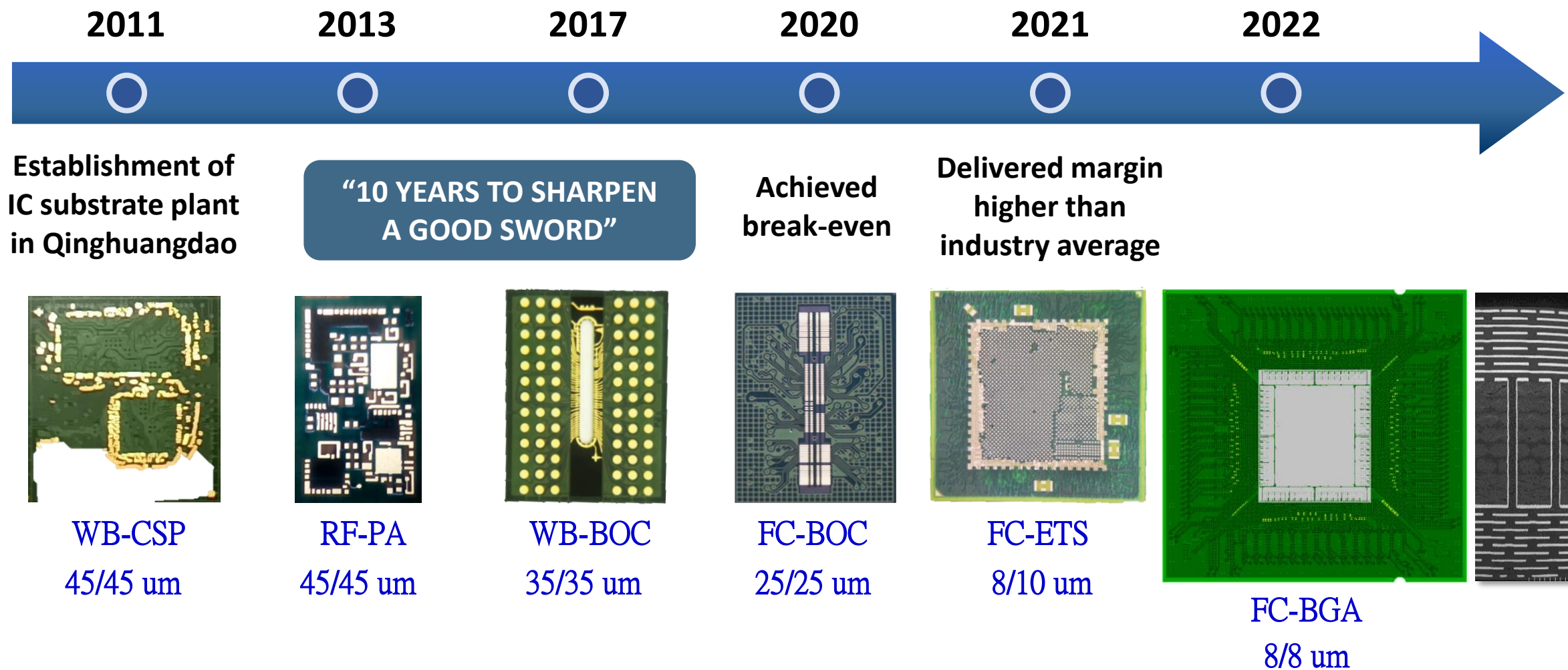


Source: Prismark, IDC (2022/2)

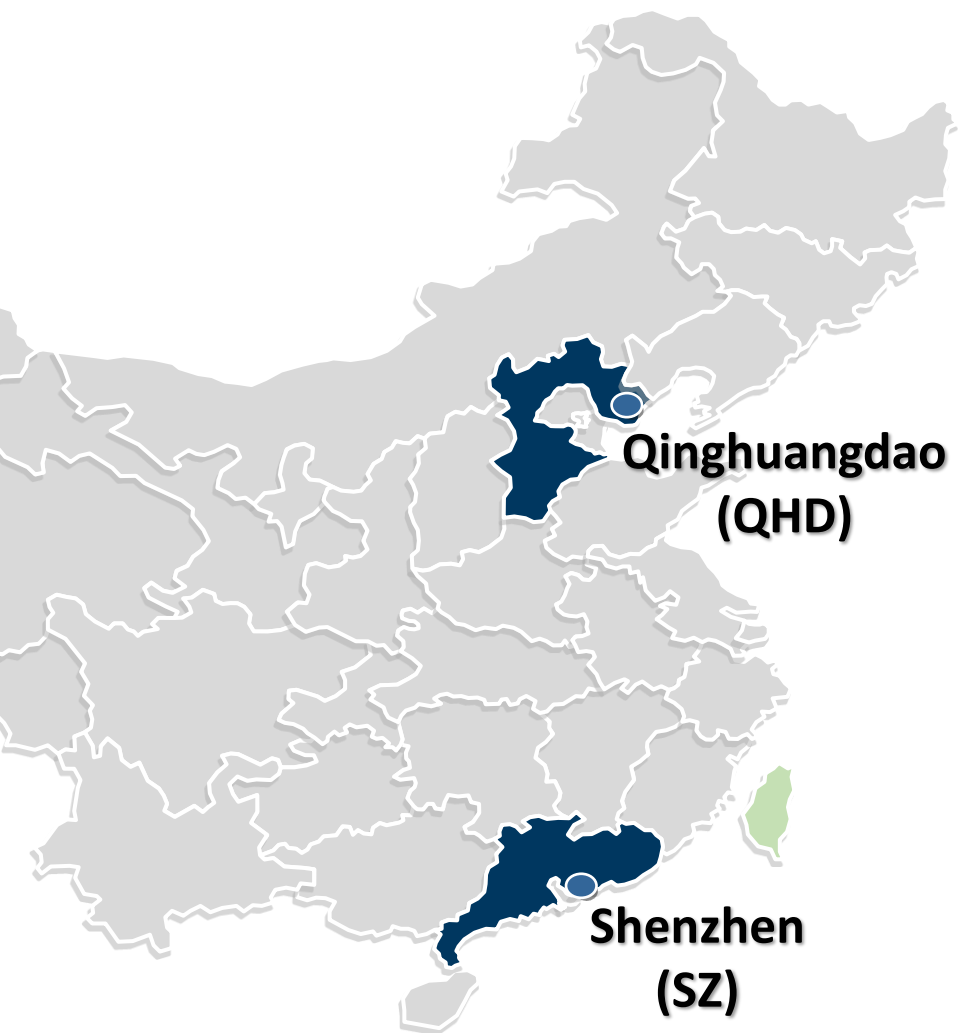


ZDT has built three smart factories in the past three years, which have significant benefits in yield rate and efficiency. On this basis, the new IC substrate factory continues to enhance the depth of intelligence and the breadth of systems.

# IC Substrate Development Path



# IC Substrate Plants and Product Roadmap



## Qinghuangdao BT Substrate Plant



## Shenzhen ABF Substrate Plant



### Product

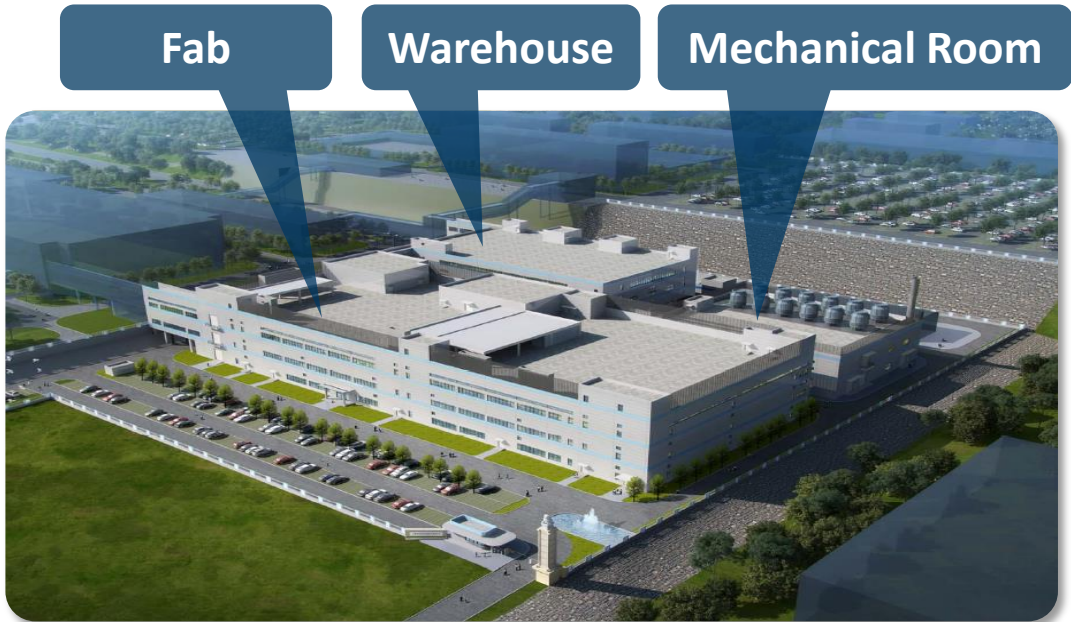
FC-CSP

WB-CSP

Memory

ABF FCBGA





Project Schedule	2022				2023			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Fab Construction								
Fab Installation								
Fab Sample Certification								
Fab Mass Production								

- Existing plant floor area: 30,000 square meters  
New plant floor area: 30,000 square meters; supporting facilities: 30,000 square meters
- Installation in progress, production ramp-up on schedule

Buildings Construction



2<sup>nd</sup> Floor Flooring Construction – Horizontal Plating



2<sup>nd</sup> Floor Flooring Construction – Pattern Plating



**Goal: Become the world’s most advanced and largest high-end BT substrate supplier**



# ShenZhen ABF Substrate Plant Roadmap



Project Schedule	2022				2023			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
FAB1 & FAB2 Construction								
FAB1 Installation								
FAB1 Sample Certification								
FAB1 Mass Production								

1. Floor area: 170,000 square meters; Supporting facilities: 120,000 square meters
2. Two FABs, One step
3. Equipment and materials pre ordered. More than 100 IC substrate talents recruited
4. Capacity fully booked until 2027

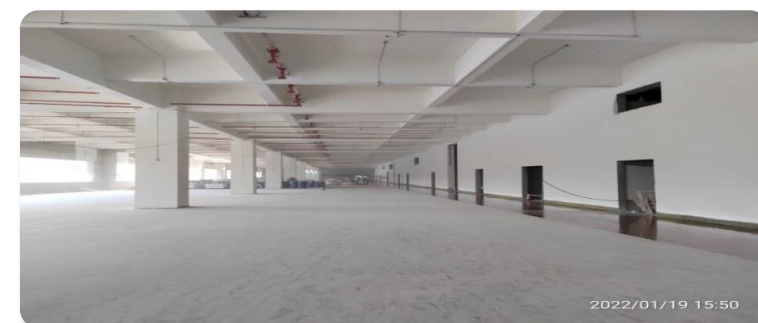
Buildings Construction



FAB1 1<sup>st</sup> Floor Flooring Construction



FAB1 2<sup>nd</sup> Floor Fire Protection Construction



**Goal: Build a world-class ABF substrate manufacturing site**

**Based on our current business outlook, management targets:**

- **2022 revenue and net income: Double-digit growth**
- **Capex for IC substrate: Plan to invest NT\$60bn in the next 4 years, NT\$15bn per year**
- **Revenue from IC substrate: Continue to grow >50% annually in the next 4 years and account for >15% of company's consolidated revenue in 2025**
- **Aim to become one of the global top 5 companies in IC substrate market in 2030**



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# 4Q21 & 2021 Financial Results

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# Consolidated Statements of Income

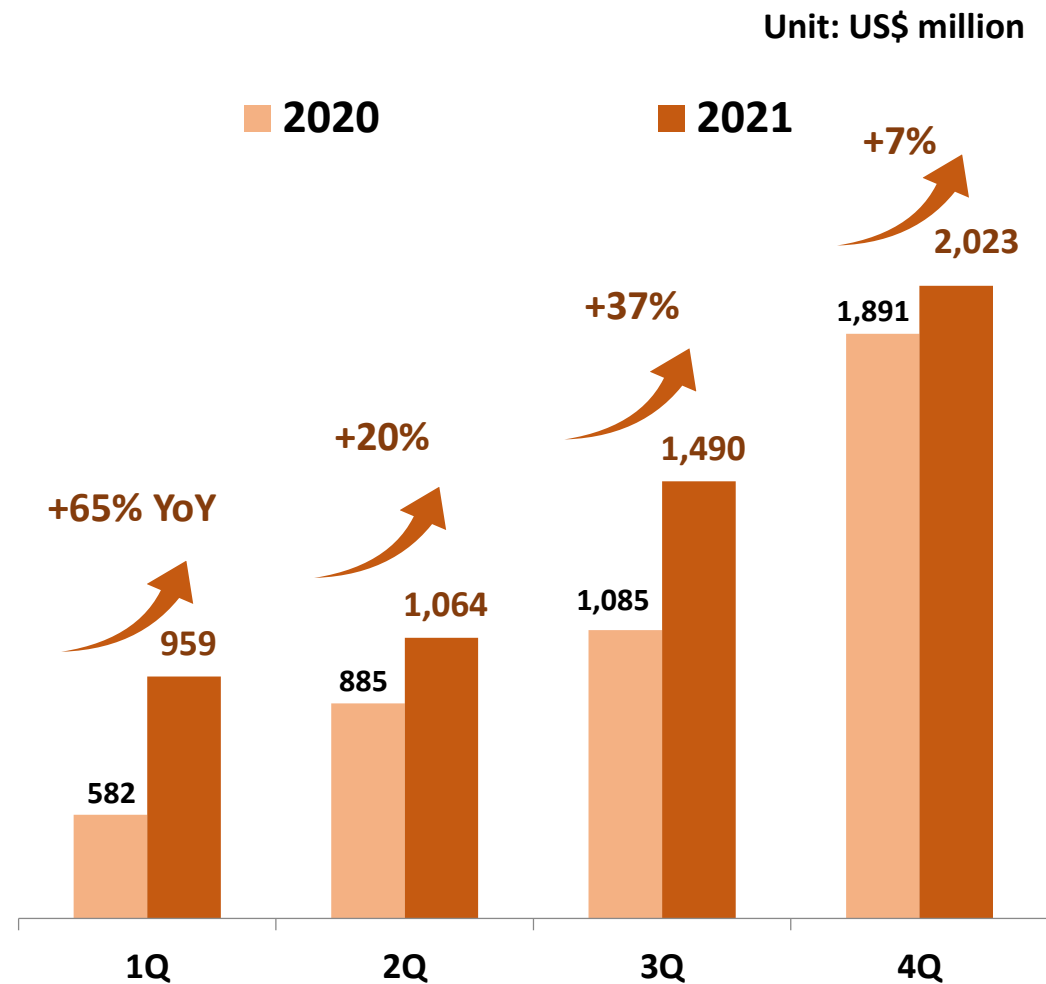
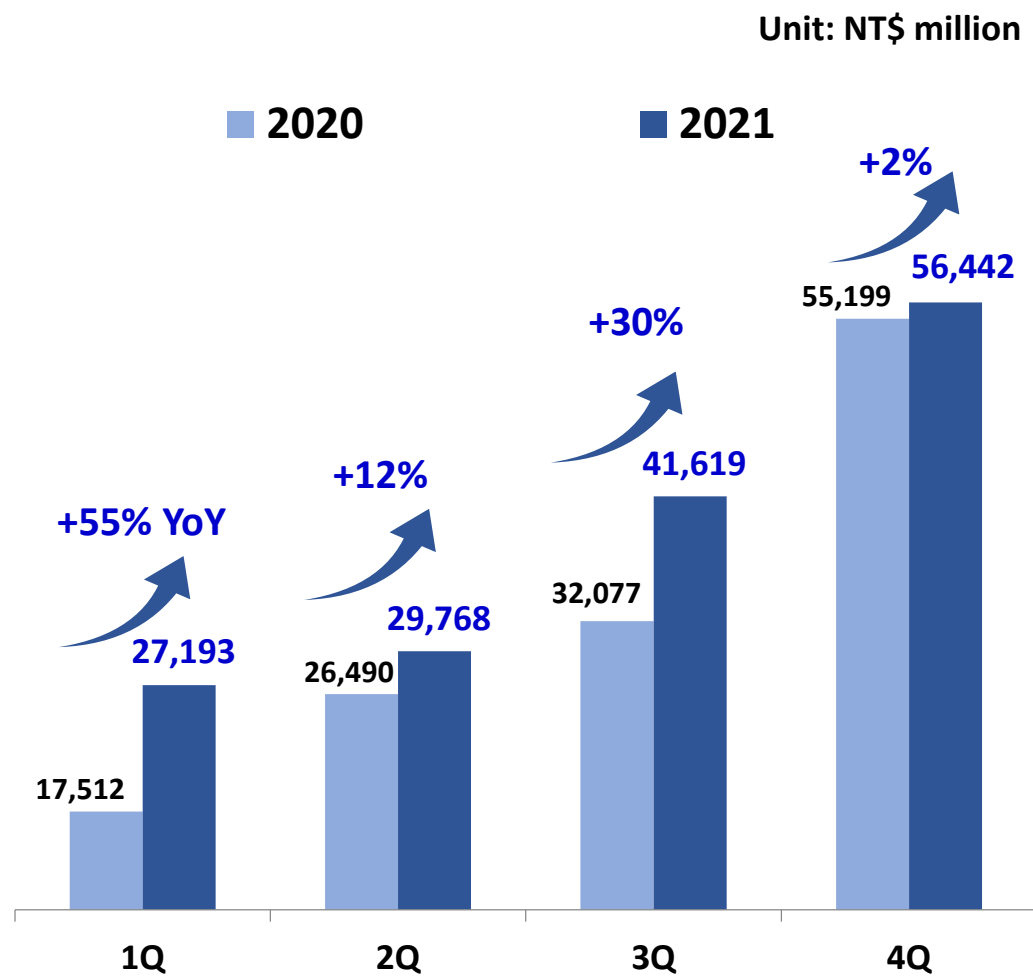
(Unit: NT\$ million, unless otherwise stated)

	4Q21	3Q21	4Q20	QoQ (%)	YoY (%)
Revenue (US\$ million)	2,023	1,490	1,891	+35.8%	+6.9%
Revenue	56,442	41,619	55,199	+35.6%	+2.3%
Gross Profit	12,167	8,783	12,606	+38.5%	-3.5%
<b>Gross Margin</b>	<b>21.6%</b>	<b>21.1%</b>	<b>22.8%</b>	<b>+0.5 pts</b>	<b>-1.2 pts</b>
Operating Expenses	3,864	3,852	4,521	+0.3%	-14.6%
Operating Income	8,303	4,931	8,084	+68.4%	+2.7%
<b>Operating Margin</b>	<b>14.7%</b>	<b>11.9%</b>	<b>14.6%</b>	<b>+2.8 pts</b>	<b>+0.1 pts</b>
Total Non-Operating Income (Loss)	(321)	207	(771)		
Net Income	6,861	4,345	6,055	+57.9%	+13.3%
Net Income to Parent	4,870	3,074	4,318	+58.4%	+12.8%
<b>Net Margin</b>	<b>12.2%</b>	<b>10.4%</b>	<b>11.0%</b>	<b>+1.8 pts</b>	<b>+1.2 pts</b>
EPS (NT\$)	5.15	3.25	4.71	+58.5%	+9.3%
ROE	25.2%	16.6%	24.9%	<b>+8.6 pts</b>	<b>+0.3 pts</b>
Average Exchange Rate	27.91	27.93	29.19		

\*4Q21 weighted average of shares outstanding: 944,956 thousand shares

\*\* ROE is annualized data calculated based on the average of equity attributable to owners of parent

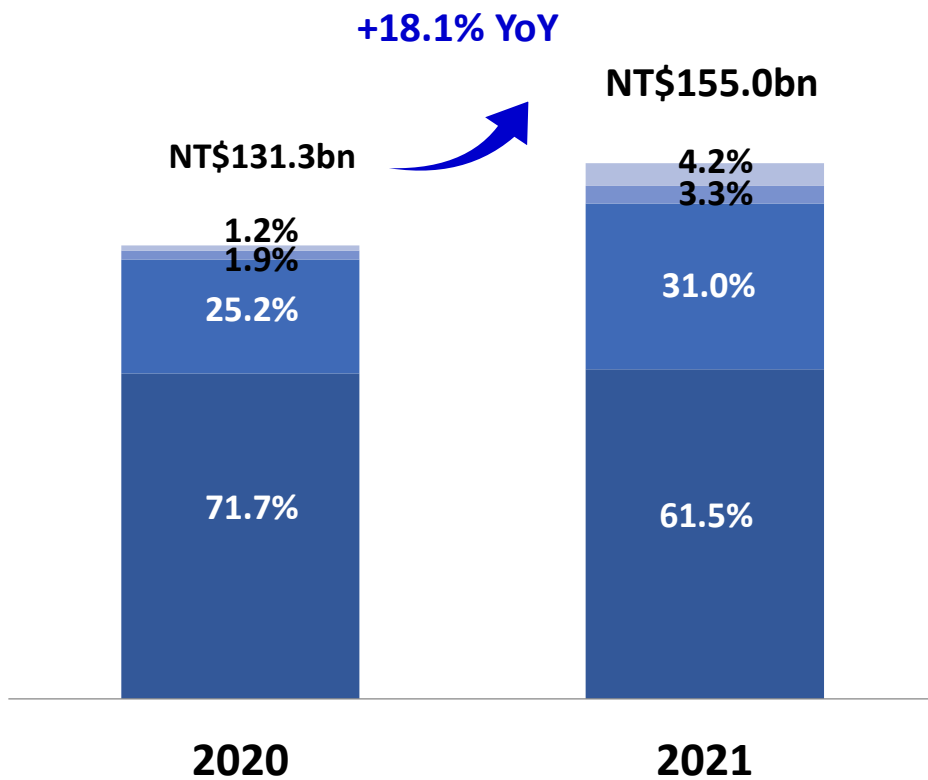
# Quarterly Revenue Trends



# 2021 Revenue Breakdown – By Applications

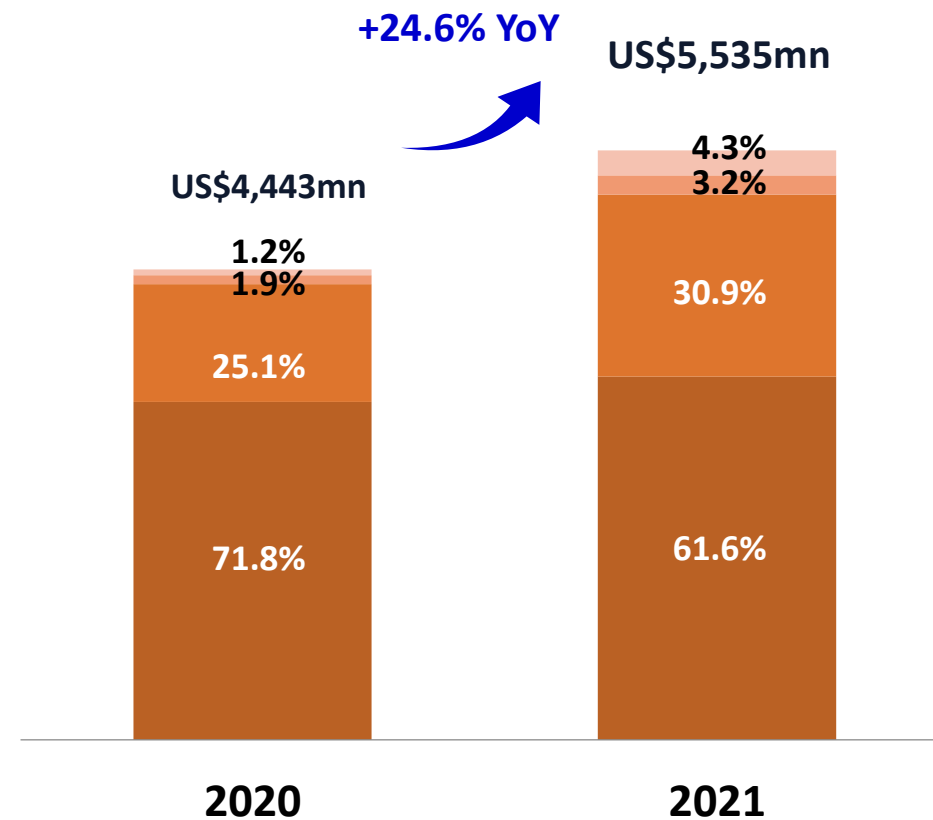
## Revenue (NT\$) YoY

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



## Revenue (US\$) YoY

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



# Consolidated Balance Sheet and Key Indices

Unit: NT\$ million

	2021-12-31		2021-09-30		2020-12-31	
	Amount	%	Amount	%	Amount	%
Cash and Cash Equivalents**	35,179	18.0%	32,229	16.9%	46,775	25.9%
Notes & Accounts Receivable	38,669	19.8%	29,048	15.3%	34,744	19.2%
Inventories	17,675	9.0%	27,233	14.3%	12,999	7.2%
Property, Plant and Equipment	86,073	44.0%	82,387	43.3%	68,177	37.6%
<b>Total Assets</b>	<b>195,755</b>	<b>100.0%</b>	<b>190,207</b>	<b>100.0%</b>	<b>181,120</b>	<b>100.0%</b>
Current Liabilities	56,880	29.1%	63,756	33.5%	63,424	35.0%
Interest-bearing Long-term liabilities	17,982	9.2%	18,052	9.5%	10,521	5.8%
<b>Total Liabilities</b>	<b>82,235</b>	<b>42.0%</b>	<b>85,247</b>	<b>44.8%</b>	<b>77,083</b>	<b>42.6%</b>
<b>Total Equity</b>	<b>113,520</b>	<b>58.0%</b>	<b>104,959</b>	<b>55.2%</b>	<b>104,038</b>	<b>57.4%</b>

## Key Indices

A/R Turnover Days	84	87	85
Inventory Turnover Days	48	73	41
Current Ratio (x)	1.69	1.47	1.57
PPE Turnover (x) ***	1.80	1.60	1.93

\* Shares outstanding as of 2021/12/31: 944,956 thousand shares

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

\*\*\* PPE Turnover = annualized net revenue / average net property, plant and equipment

# Consolidated Statements of Cash Flow

Unit: NT\$ million

	4Q21	3Q21	4Q20
<b>Beginning Balance</b>	<b>30,336</b>	<b>36,266</b>	<b>32,529</b>
Cash Inflow Generated from Operations	7,768	950	3,896
Capital Expenditures	(7,184)	(9,254)	(7,417)
Cash Dividend Paid	-	(4,262)	-
Increase (Decrease) of Short-term Debt	(2,939)	6,976	8,878
Investments and Others	5,808	(340)	6,336
<b>Ending Balance</b>	<b>33,790</b>	<b>30,336</b>	<b>44,223</b>

# 2021 Financial Summary

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

	2021	2020	YoY
Revenue (US\$ million)	5,535	4,443	+24.6%
Revenue	155,022	131,279	+18.1%
<b>Gross Margin</b>	<b>19.70%</b>	<b>20.25%</b>	<b>-0.6 pts</b>
<b>Operating Margin</b>	<b>10.18%</b>	<b>10.77%</b>	<b>-0.6 pts</b>
Net Income	13,694	11,508	+19.0%
Net Income to Parent	9,651	8,095	+19.2%
<b>EPS (NT\$)</b>	<b>10.21</b>	<b>8.90</b>	<b>+14.7%</b>
Cash Inflow Generated from Operations	14,058	16,948	-17.1%
Capital Expenditures	31,149	21,645	+43.9%
Cash Dividend Paid	4,262	4,060	+5.0%
Cash and Cash Equivalents*	35,179	46,775	-24.8%
<b>ROE (%)</b>	<b>12.6%</b>	<b>11.8%</b>	<b>+0.8 pts</b>

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

# 2011-2021 Financial Summary

Unit: NT\$ million

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Revenue	44,280	55,369	64,483	75,954	85,738	82,393	109,238	117,913	120,068	131,279	155,022
Gross Profit	6,993	10,775	11,894	14,323	16,427	12,542	17,833	26,061	27,222	26,584	30,537
Net Income	2,356	4,056	5,471	6,735	7,731	3,456	6,772	11,536	12,402	11,508	13,694
Net Income to Parent	2,356	4,056	5,471	6,735	7,731	3,456	5,172	8,448	8,685	8,095	9,651
Depreciation & Amortization	3,008	3,375	3,742	4,293	4,850	5,295	5,679	6,820	7,955	8,405	11,875
EPS (NT\$)	3.30	5.49	7.41	9.12	9.80	4.29	6.43	10.50	9.93	8.90	10.21
DPS (NT\$)	1.50	2.50	3.00	3.67	4.50	2.20	3.30	4.46	4.50	4.50	5.00**
Payout Ratio (%)	45.45%	45.54%	40.49%	40.24%	45.92%	51.28%	51.32%	42.48%	45.32%	50.56%	48.97%
Cash and Cash Equivalents*	4,084	8,756	10,016	23,482	31,572	30,241	33,296	49,154	43,071	46,775	35,179
Property, Plant and Equipment	27,097	26,637	27,843	30,073	32,074	32,262	36,681	41,913	46,243	68,177	86,073
Capital	6,699	7,034	7,386	7,386	8,047	8,047	8,047	8,047	9,022	9,470	9,470
ROE (%)	15.34%	21.27%	23.77%	23.33%	20.82%	8.59%	14.49%	17.30%	14.72%	11.84%	12.59%
Debt Ratio (%)	67.03%	66.28%	64.06%	62.54%	53.70%	59.72%	55.33%	44.25%	35.41%	42.56%	42.01%

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



# Q&A

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Zhen Ding Tech. Holding

THANK YOU