

Paragon (3518TW) Investor Conference

December 1 , 2022

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Agenda

1. Company Overview
2. Financial Information
3. Market & Applications
4. Future Strategies

Company Overview

Paragon (3518TW)

- ◆ Establishment : 1995.10.20
- ◆ Capital : NTD 807 Million
- ◆ Employees : 600
- ◆ Chairman : Mr. Eagle, Chen
- ◆ General manager : Mr. Longer, Wang
- ◆ Main of products :
 - EMI 〈 Electromagnetic Interference 〉 – 95%
 - PVD appearance coating– 5%

About Paragon



Taiwan HQ & RD Center

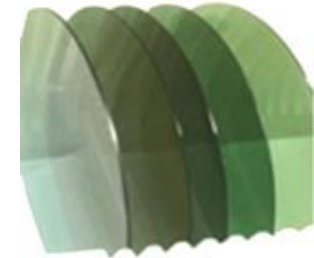
- Established: 1995 year
- Capital: 806 million (NTD)



EMI sputtering & PVD appearance coating

- Suzhou Factory (3C)
- Nanjing Factory / Neijiang Factory (EMI)
- Vietnam factory (EMI) (2023.7)

The leading company of EMI suppliers in Notebook Market, 50% of market share, Annual shipments of 50 million



Silicon carbide products

- Nankan Factory (2023.1)

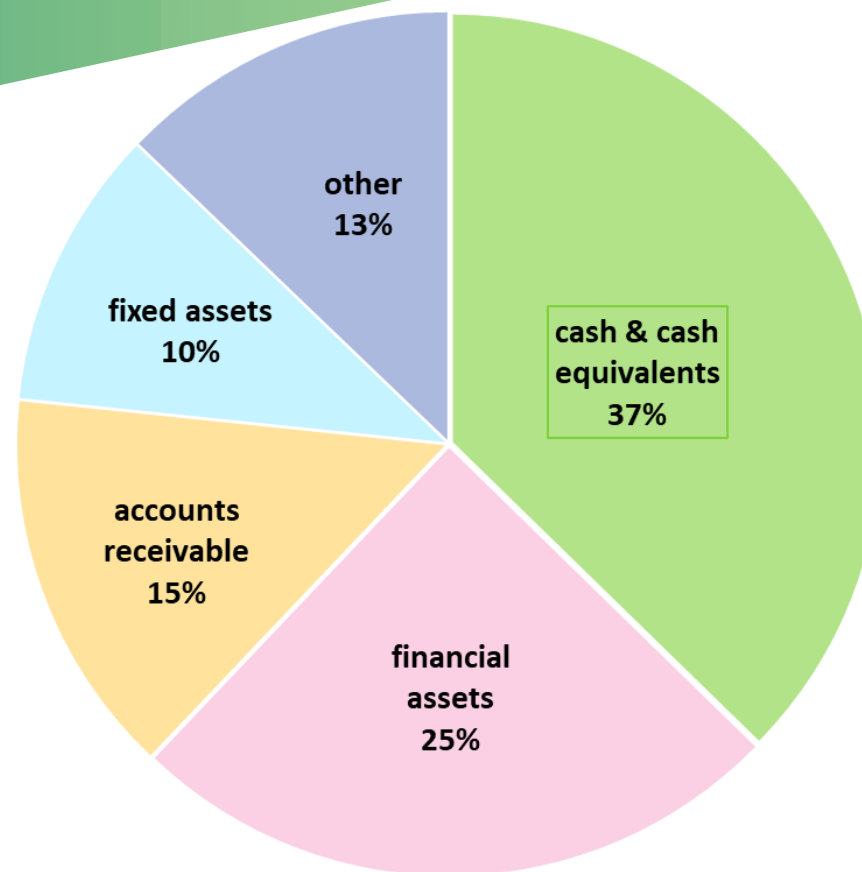
Financial Information

Q3 22' Consolidated Balance

Unit in NT\$ Million

	2022.9.30	%	2021.12.31	%	2021.09.30	%
cash& cash equivalents	726	37	723	39	609	30
Financial assets-current&noncurrent	482	25	198	11	172	9
Notes and accounts receivable	283	15	459	24	404	20
Inventories	4	-	4	-	11	1
non-liquid asset in suspense	78	4	-	-	155	8
Fixed Assets & Right-of-use asset	205	11	296	16	325	16
Other Assets	167	8	198	10	332	16
Total Assets	1,945	100	1,878	100	2,008	100
Short-term loans & current portion of longterm loans payable	118	6	174	9	343	17
other payables	116	6	162	9	122	6
unearned receipts	150	8	-	-	-	-
long-term debt payable	72	4	78	4	78	4
other liabilities	50	2	47	3	93	5
Total Liabilities	506	26	461	25	636	32
Total Owners' Equity	1,439	74	1,417	75	1,372	68
Net Worth Per Share	17.05		17.90		17.34	

Q3 22' Financial Structure



ITEM	2022.Q3	2021	2020	2019	2018
Debt Ratio	26.01	24.55	37.12	32.60	29.72
Current Ratio	384.08	377.86	185.25	187.80	181.07
Cash flow Ratio	31.10	31.54	(1.05)	(21.64)	(2.94)

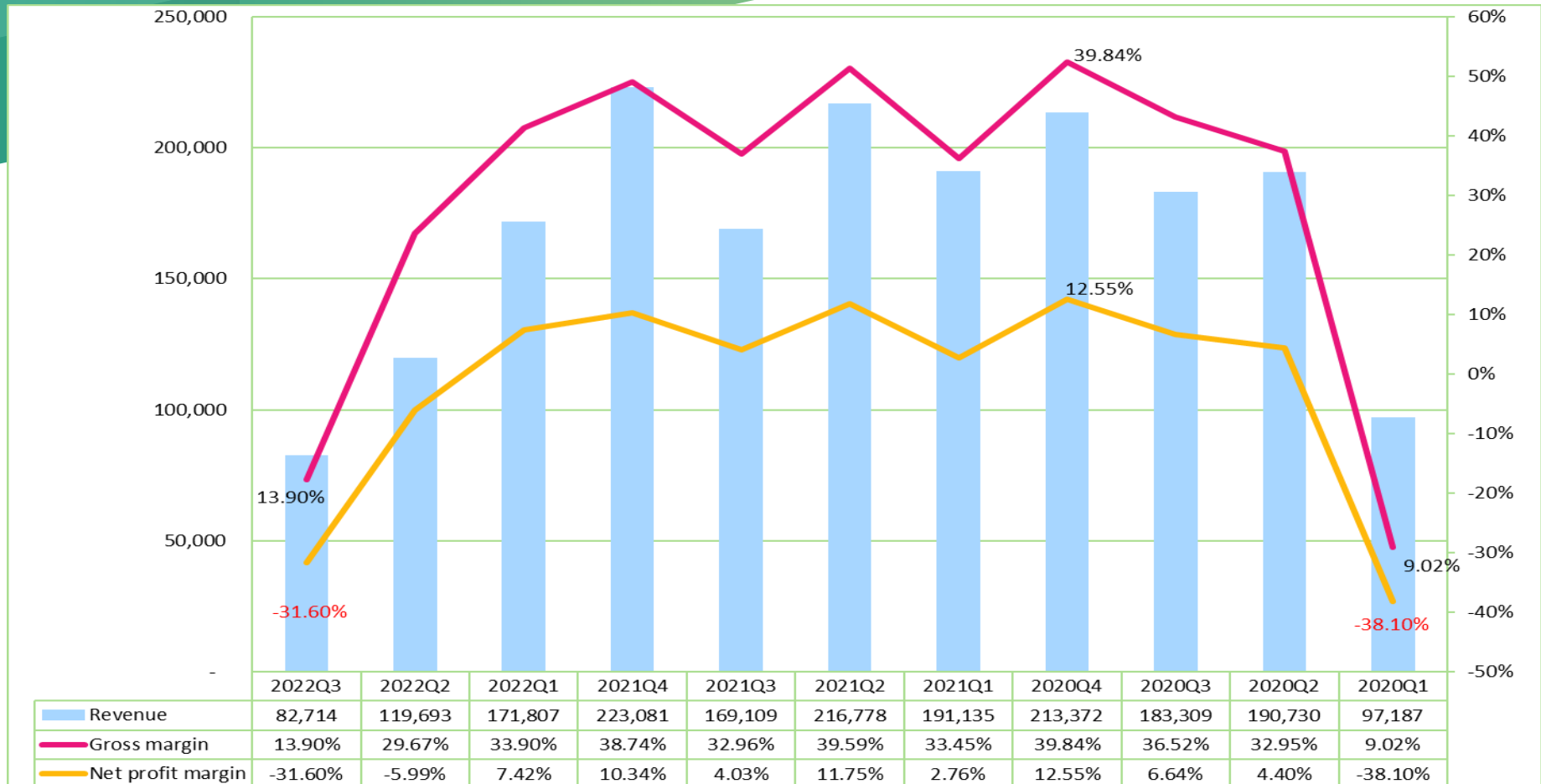
2021~Q3 Consolidated income statement

Unit in NT\$ Million

項目	2022.~3Q	2021.~3Q	YoY%	2021
operating revenue	374	577	(35)	800
Gross Profit	105	205	(49)	292
operating expenses	126	168	(25)	231
Operating Profit	(21)	38	(155)	61
non-operating revenue and expenses	21	9	133	45
Pre-Tax Income	-	47	(100)	106
income tax expense	(24)	(40)	(40)	(64)
Net Income	(24)	7	(442)	41
Gross margin(%)	28.1	35.6		36.5
Net profit margin(%)	(6.4)	1.2		5.2
Earnings Per Share _(Dollar)	(0.3)	0.09		0.52

Revenue 、 Gross margin & Net profit margin

Unit in NT\$ Million



Non-operating income

Unit NT\$1000

項目	2022Q3	2021Q3	2021
Interest & Financial income	17,089	14,883	18,700
Rental income	4,159	3,832	6,846
Government subsidy income	3,366	166	4,058
Foreign currency exchange benefit	2,936	(158)	368
Gain on disposal of assets	1,257	834	44,286*
Interest expense	(4,898)	(10,627)	(13,033)
Other expenses	(3,009)	246	(16,149)
Non-operating income	20,900	9,176	45,076

- ◆ In 2021, NT\$47.47 million will be recognized as disposal benefits in the factory building in Zhejiang, China.
- ◆ In July 2022, signed a plant acquisition contract with the government of Anji County, Zhejiang Province, China. The total contract price is about NT\$186 million, and the estimated disposal benefit is NT\$55.34 million; the actual disposal benefit has yet to be confirmed related costs and taxes.

Q3 22' Consolidated Cash Flow

Unit in NT\$ Million

	2022 ended September 30	2021 ended September 30
Cash provided by (used in) operating activities	131	139
Cash provided by (used in) investing activities	(68)	4
Cash provided by (used in) financing activities	(76)	(194)
Effects of exchange rate change on cash	16	(14)
Net increase (decrease) in cash and cash equivalents	3	(64)
Cash and cash equivalents at beginning of year	723	673
Cash and cash equivalents at end of year	726	\$609

- ◆ The increase in investment financial assets is about NT\$230 million and the advance receipts for the disposal of the plant are about NT\$150 million.
- ◆ Private placement issued share capital of NT\$28 million, repaid bank loans of NT\$73.39 million, and issued cash dividends of NT\$79.14 million.

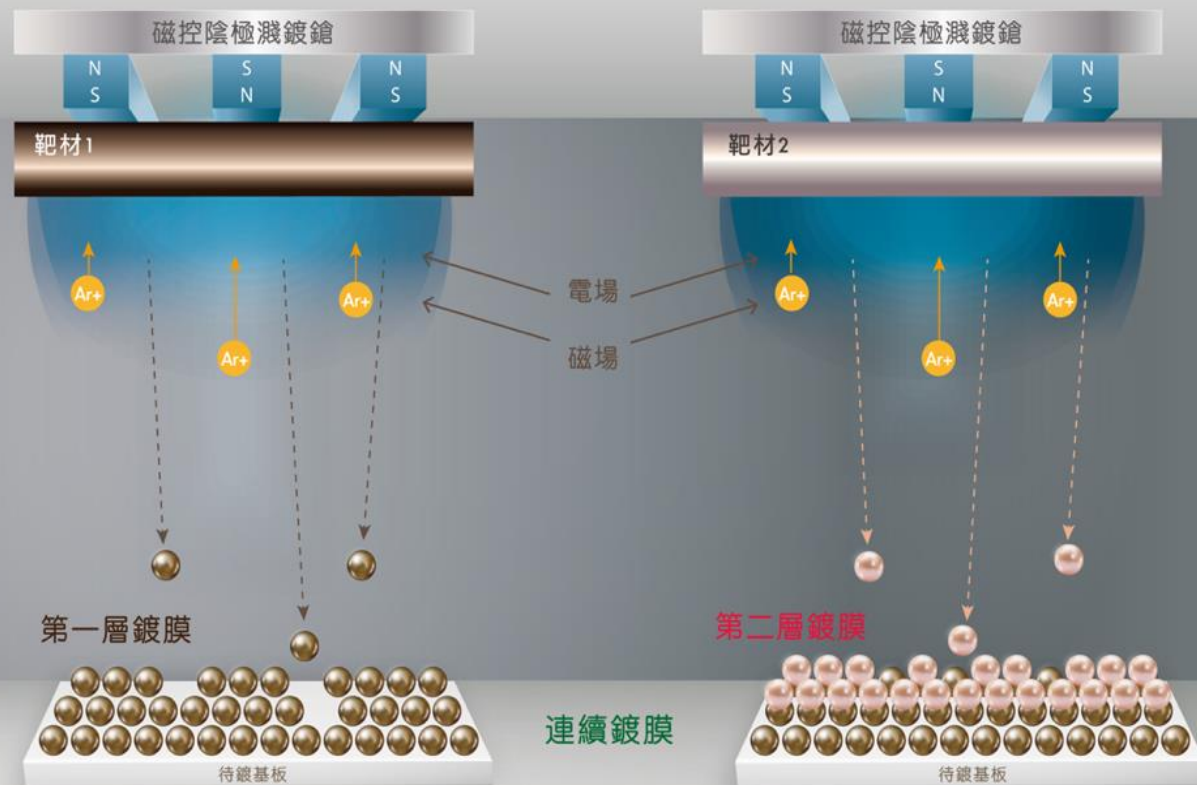
Market & Applications

Sputtering principle

Using In-Line sputter, in a vacuum environment, microscopic particles of the target are ejected from its surface and formed a thin layer, after the material is itself bombarded by energetic particles of inert gas.

Argon ion of ionized plasma hit the target at high speed

microscopic particles of the target hit by argon ion and deposition on the substrate



Technical Applications

Applications	Products
<ul style="list-style-type: none">• Functional coating<ul style="list-style-type: none">- EMI / AF• Appearance coating<ul style="list-style-type: none">- metal & optical coating- substrates : metal / plastic / glass / polyimide film / ceramics- performances metal texture of multi- gradation variable-color film	<ul style="list-style-type: none">• EMI processing and appearance tremens on NB products• Surface treatment of alloy wheels• Mobile & tablet back cover• Car interior and exterior trim• Finishing components of intelligent appliances• Other 3C products

About JING CHENG



- In November 2021, Paragon acquired 10% of the issued shares of Jing Cheng Materials Co., Ltd.(JCM) in cash.
- In August 2022, the board of directors of Paragon decided to acquire 66% of the shares of JCM, and JCM's shareholders obtained 1,600,000 private shares issued by Paragon.
- JCM will introduce domestic and foreign technical personnel and silicon carbide crystal growth equipment in 2022. Develop silicon carbide (products in Taiwan and strive to supply high-quality and high-stability materials for advanced fields such as high-power semiconductors, new energy vehicles, fast charging piles and 5G communications.
- Now it has 3 silicon carbide production lines, which will be expanded to 10 production lines by the end of March 2023. JCM provides 6-inch silicon carbide (SiC) wafers.

Application of SiC

Applications of Silicon Carbide

SiC can be used in applications across **Autos, Industrials, Renewables** etc.

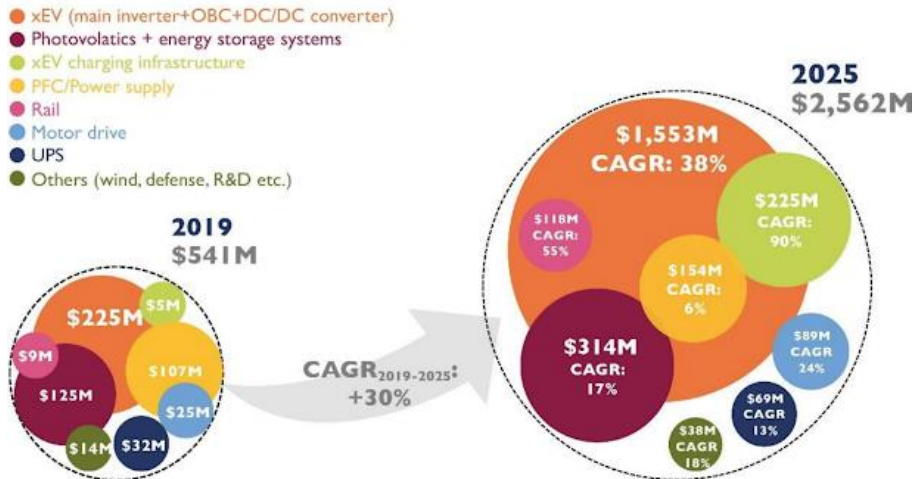
 Automotive	EV Inverter	<ul style="list-style-type: none"> SiC will be used in the main inverter (main source of power semi content in an EV) for longer range, lower weight, smaller battery and less insulation Positive payoff in premium EVs with bigger batteries (bigger impact and more able to absorb costs); premium cars to adopt SiC in 2020+; mass market 2025+ Infineon awarded the first design win with its [Hybrid drive SiC]; ramp up in 2020; STM providing SiC for Tesla Model 3 inverter
	EV Onboard Charger	<ul style="list-style-type: none"> Per Infineon, onboard chargers will be the first application for SiC inside a car Infineon is ramping its SiC diode design win in an on-board charger this year; its first design win with a discrete SiC trench MOSFET to ramp up in 2019 Usage of SiC helps in reducing charging times; also saves costs related to space
	EV Charging Station	<ul style="list-style-type: none"> Higher energy efficiency of chargers for SiC (350kW vs 150kW) reduces charging time (from 16mins to 7mins, respectively) Governments support shift to EV/PHEV to achieve carbon goals driving SiC TAM
 Renewables	Photovoltaic/ Wind	<ul style="list-style-type: none"> SiC cost/benefit has reached a tipping point for broad adoption in solar inverters (form factor cost benefit); Infineon collaborating with SMA Backed by strong demand in China and Asia; per Rohm, 2 SiC inverters used for 650V/1200V SiC-SBD and 4-7 for 650V/1200V MOS SiC can be used for generating 50HZ frequency in wind turbine (Si based IGBT is used currently)
 Power Supply	Datacentre	<ul style="list-style-type: none"> Rohm believes that using SiC for the power supply for datacenters suggests further potential to reduce costs in relation to cooling systems Rohm also stated that 2 SiC modules can be used for 650V SiC-SBD and 4-6 for 650V MOS
 Industrial	Factory Automation	<ul style="list-style-type: none"> We see future growth in factory automation (drives/belts/etc.); 2-14 SiC modules expected for 650V/1200V SiC-SBD; 1-12 for 650V/1200V/1700V MOSFET Industrial power semis generally have 1,200V SiC and next voltage class will be 1,700V — requires better performance (scope for SiC adoption)
 CommTech	5G Switching Area	<ul style="list-style-type: none"> Rohm believes SiC may be used in 5G MHz switching, though GaN-on-SiC could be more relevant than SiC (i.e. for base station power amplifier)

Properties of SiC

Silicon carbide (SiC) has the characteristics of high power, high temperature resistance, high voltage resistance, high conversion efficiency, and fast heat dissipation. It can be applied to higher-level high-voltage power components (Power) and high-frequency communication components (RF). The future market will be high growing up.

2019-2025 power SiC market forecast split by application

(Source: Power SiC: Materials, Devices and Applications 2020 report, Yole Développement, 2020)



功率器件	GaN on Si	高頻、中低壓
	SiC	高壓、高功率
	Si	< 300V
射頻器件	GaN	300V~600V
	SiC	> 600V
	GaAs	中低功率
	GaN on SiC	高功率

資料來源：IEK

製圖：MoneyDJ

SiC wafer process introduction



粉料合成

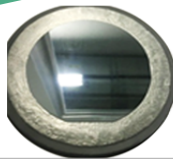
Crucible/Insulation Design

Source Powder Mixing

Source Powder Loading

Synthesis Recipe

SiC Powder Post-Process



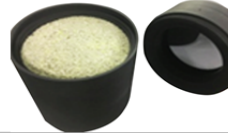
籽晶處理

Block Layer Coating

Holder Treatment

Seed Crystal Fasten

Final Cleanup



晶體生長

Crucible/Insulation Design

SiC Powder Loading

Poly-type Control

Synthesis Recipe

Size Enlargement

Micro-Pipe Closure

Defect Control



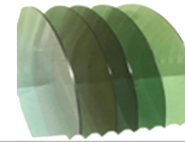
晶錠退火

Crucible/Insulation Design

Ingot Loading

Annealing Recipe

Graphite-Felt Arrangement



晶片加工

Crystal Orientation

Surface Grinding

Cylindrical Grinding

Major/Minor Flat

Multiple Wire Slicing

Chamfering

Rough/Fine Grinding

CMP

Cleaning & Packaging

Future Strategies

Operation prospect in 2022

■ Market

- The reduction in NB demand caused the inventory to be too high.
- The impact of high inflation, war and China's epidemic control on NB supply and demand.
- ESG policies are becoming more and more active in introducing environmentally friendly processes.

■ Product

- EMI is still affected by inventory adjustments in 2023.
- Global Recession Affects New Product Development Times.
- Silicon carbide (SiC) wafer production capacity construction and product verification

■ Technology

- Developing product of automotive upholstery by alliance with customers.
〈 Both appearance and functionality 〉
- Developing PVD technology of special application.
- Silicon carbide (SiC) crystal growth technology and process capability.

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