

Gudeng Precision Industrial Co. Ltd

家登精密工業股份有限公司



2024.9

Partner with **H.E.A.R.T.** , Grow with **P.A.S.S.I.ON.**

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Safe Harbor Notice



This presentation includes forward-looking statements. Forward-looking statements refer to statement that address activities, events or developments that Gudeng Precision expects or anticipates will or may occur in the future (including but not limited to projections, targets, estimates, market share, total addressable market (TAM) and business plans).

Gudeng's forward-looking statements are subject to significant risks and uncertainties and actual results may differ materially from those contained in the forward-looking statements. Gudeng does not undertake any obligation to publicly update any forward-looking statement to reflect events or circumstances after the date on which any such statement is made or to reflect the occurrence of unanticipated events.



Gudeng Company Overview



Gudeng Aerospace Inc.

Gudeng Inc./ TSS Holdings

Gudeng Headquarter
Gudeng Venture Capital
Fuxing Factory

Gudeng
Japan Inc.

Korea Office

Gudeng
Chongqing
Factory

Shanghai

Gudeng
Kunshan
Factory

Gudeng
Shanghai Trade

Gudeng
Equipment

Gudeng Tree Valley Factory

Zhongli

Hsinchu

Taipei

WeSolutions

Tainan

Kaohsiang

JYR Aviation Component

► Established : Mar. 20th , 1998

► Employee : 1100 up

► Capital : US\$ **30** million

► **2020** Group Revenue : US\$ **83** million

► **2021** Group Revenue : US\$ **104** million

► **2022** Group Revenue : US\$ **150** million

► **2023** Group Revenue : US\$ **162** million (13% growth)

► **2024 Jan to Jul** Group Revenue : US\$ **120** million
(37%growth)

Semiconductor

- Mask Handling Solutions
- Wafer Handling Solutions
- Equipment
- Other Service

Aerospace

- Hydraulic Cylinders
- Heat Conduction Tubes
- Dynamic Balancing Motor
- Thermal Conductivity
Bead



Gudeng Expansion Plan



Gudeng

Kurume Factory
Semiconductor & Aerospace
Finish by Q1 2026



Kunshan & Chongqing Factory
Semiconductor
Kunshan Factory II
Semiconductor
Finish by October 2024



Tree Valley Factory I
Semiconductor & Aerospace
Tree Valley Factory II
Semiconductor & Aerospace
Start production in March 2025



ST Science Park Factory
Semiconductor & Aerospace
Finish by 2028

● **Gudeng**
● **Major Client**

TSMC
Fab20(P1~P4)

TSMC
Fab18(P1~P8)

TSMC
Fab23(P1~P2)

TSMC
Fab22(P1~P3)

Fuxing Factory
Semiconductor
WeSolutions Headquarter
RD/ Production for Cooling
Finish by April 2025
Longfu Factory I & II
Semiconductor & Aerospace
Start by Q2 2025



Gudeng US
Storage/ FAE
Since January 2024

Huatan Factory
New business
Finish by End of 2026



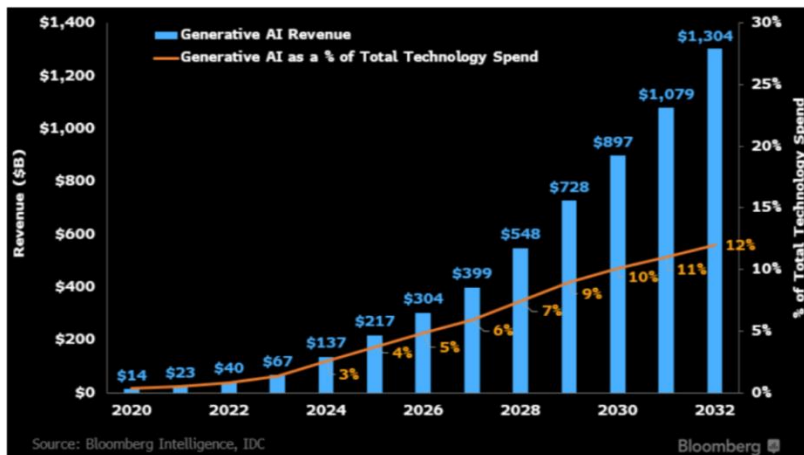


Semiconductor Industry Outlook



With expansion of generative AI, it has directly promoted demand in the high-performance computing (HPC) market. As the 3nm process has begun mass production, the 2nm process is scheduled to be put into use in 2025 and the advanced technology of CoWoS, these advanced technologies provide a solid technical foundation for generative AI and other high-speed computing applications.

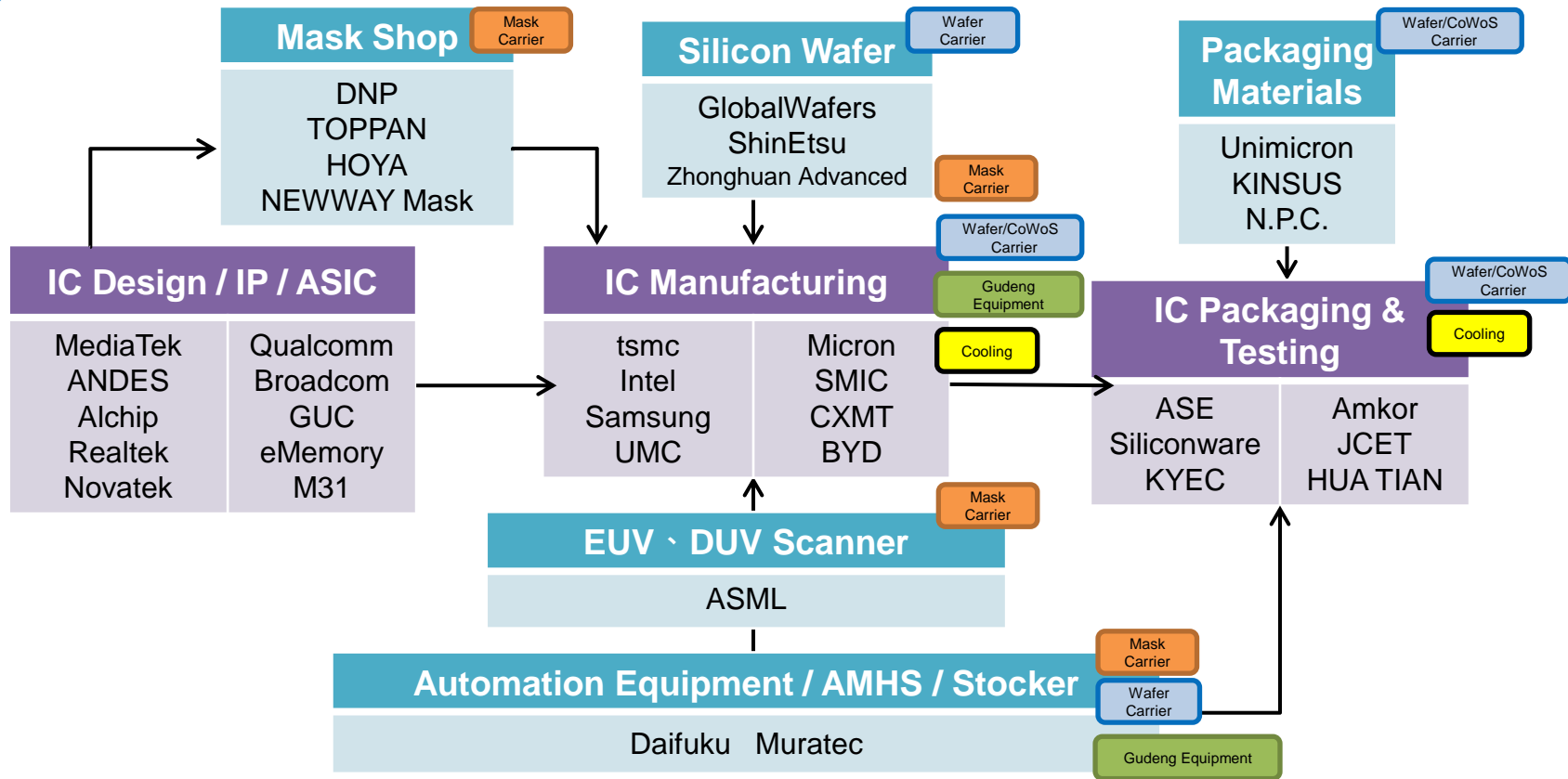
According to the forecast of SEMI, revenue of the semiconductor market will show double-digit growth in 2024. This is mainly due to the continued demand for technology in generative AI, CoWos and other high-speed computing applications. On top of that, significant market growth also comes from advanced processes and 3D packaging.



Source: SEMI 、Bloomberg Intelligence



Semiconductor Supply Chain





- Communication
- Automotive
- Consumer Electronics
- National Defense
- PC/NB

Semiconductor Production Process

Product Design

IC Design

- Circuit Design
- Engineering Test

Mask Maker

Front End

Foundry

- Materials Fab
- Wafer Bank

Back End

Packaging

- Wafer Bumping
- Wafer Probing

Final Test

Board Assembly

Board Assembly

Board Testing

- Module, Board Assembly & Test

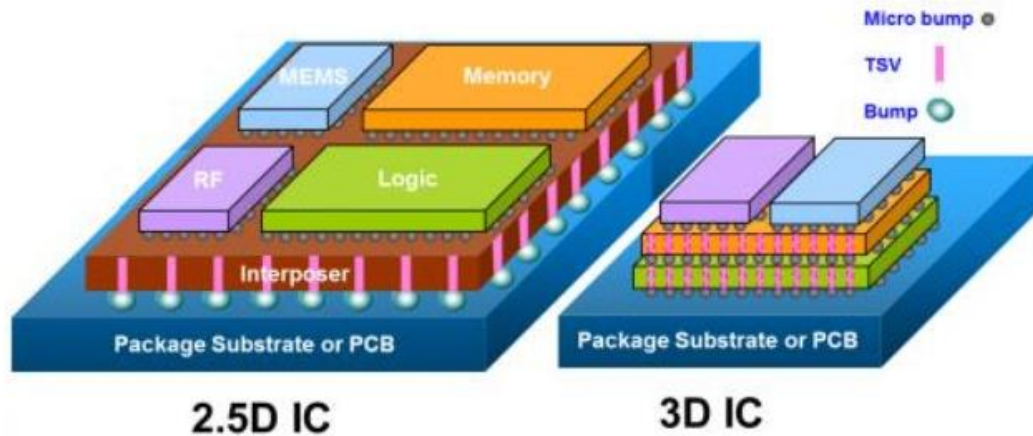




CoWoS Package

CoW stands for Chip-on-Wafer, meaning chip stacking. WoS stands for Wafer-on-Substrate meaning wafer staking on substrate. CoWoS simply means staking up chips then encapsulate on substrate. With CoWoS, it can reduce the space chips needed as well as power consumption and cost.

Advance package is considered as an important techniques to extend the lifespan of Moore's Law. It can increase the density of transistor and utilize the powerful and efficient computing power. Currently, the target customers are those with 7 nm process and below, like Apple, NVIDIA, and AMD. With that being said, the demand of CoWoS will have almost doubled growth.





CoWoS Package Product Line

300 FOUP/FOSB

Film Frame FOUP

Film Frame
FOUP

2023

8"/12"

wafer processing
transport

Tape frame
FOUP

2025

SEMI
E185

300*300

wafer processing
transport

IC

Substrate

Full Panel
Shipper

2024

510*515

Horizontal Panel
shipping box

Quarter Panel FOUP

2021

2025

SEMI E62 (door)
E47.1 (shell)
E57 (KC)

243*241

300*300

¼ Panel product transport

Panel FOUP

410/450 Glass
Shipping Box

2025

Raw material
shipping box

Full Panel FOUP

SEMI E181

2025

2023

2022

600*600

510*515

510*510

Panel processing transport

IC Tray FOUP

SEMI E185

SEMI E47
SEMI E62

2017

2025

Tape Frame FOUP

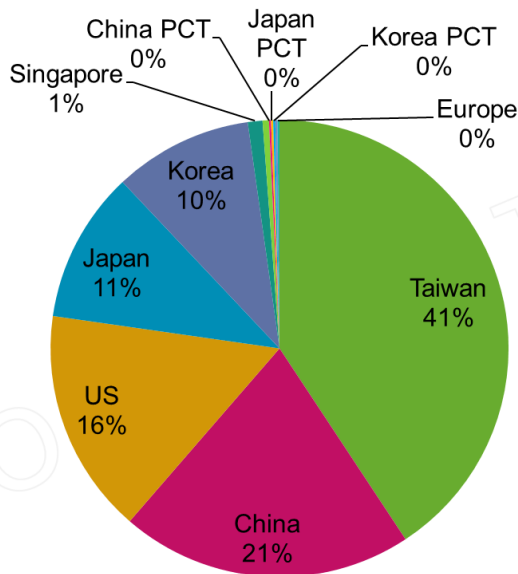
Tray FOUP

Tray & Magazine

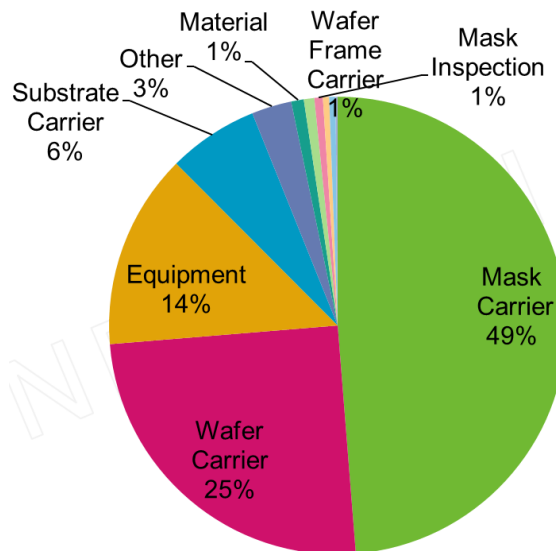
IC product transport



Location



Product



*As of July 2024, obtain **652** patent and continue to build a high-tech patent layout*

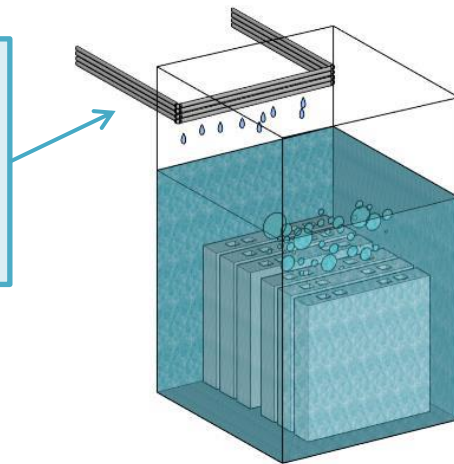


Immersion Cooling

Immersion Cooling is to immerse the object in a non-conductive cooling liquid, and directly transfer the heat generated by the operation of electronic parts to the cooling liquid. Two-phase immersion cooling is the process of using low boiling point cooling, so as it achieves gasification, the gas-phase cooling liquid is condensed into liquid through a low-temperature metal pipeline above the cooling system and dripped back into the cooling liquid tank.

Compared with the traditional air cooling method, immersion cooling has many advantages, including higher heat dissipation efficiency and lower energy consumption. This technology can effectively meet the requirements of high-intensity calculation and operation.

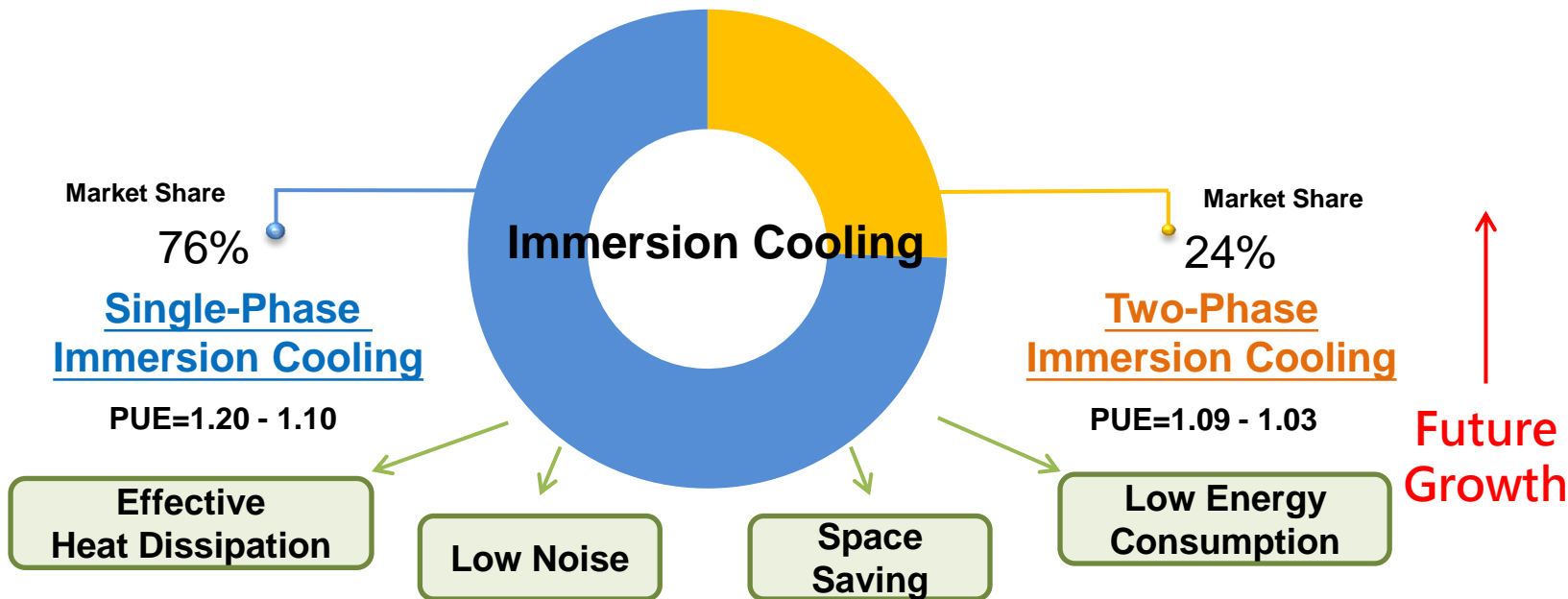
The vaporized cooling liquid is condensed into liquid after contacting the condenser and drips back into the tank.



As server generates heat, it evaporates cooling liquid into gas.



Immersion Cooling



Taiwan has complete advanced cooling technology in the world. About 90% of data center servers are supplied by manufacturers in Taiwan Province, and We Solutions cooperates with partners to jointly serve the AI market.



Two Phase Immersion Cooling Rack Cabinet

PUE 1.09 ~1.03

The closer PUE is to 1, the better power use, that is, all the power is used for computing

Automated Data Center

Provide safe operating environment, reduce costs, and ensure operating efficiency

High Technological Threshold

High evaporative liquid requires complete airtight system and high-precision automation equipment.

Real-time monitoring system

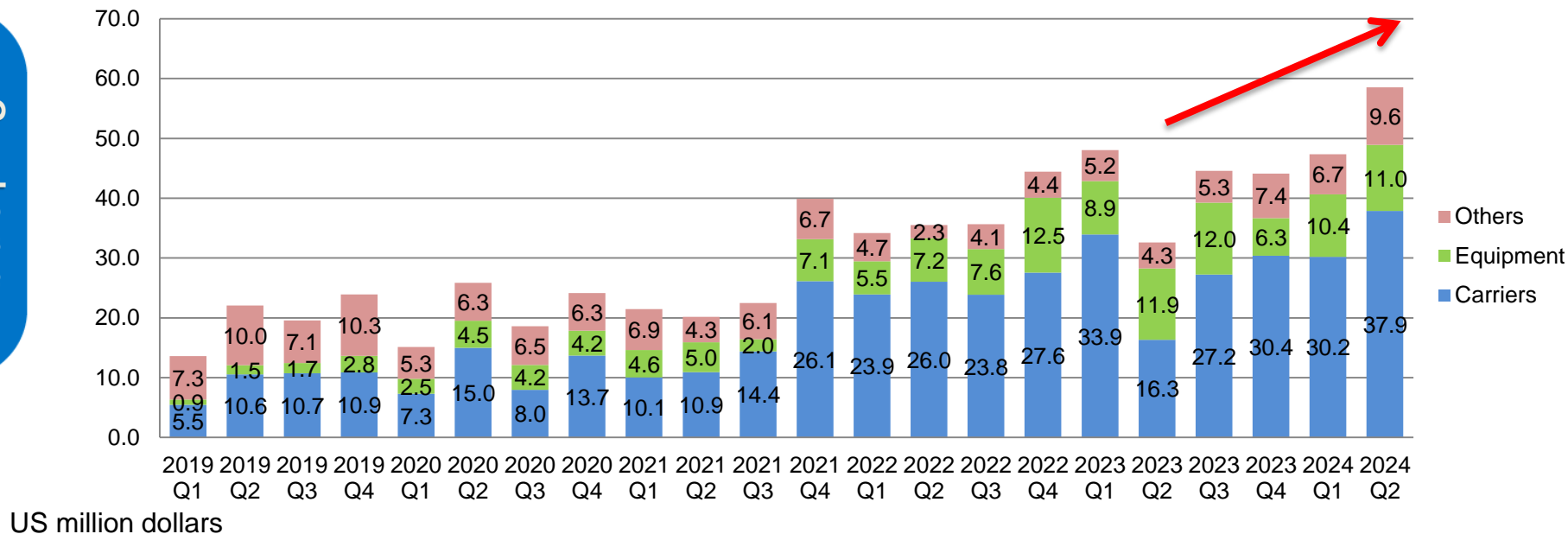
Monitor internal temperature, pressure, etc., adjust coolant flow, and provide real-time alarms



Gudeng Group Revenue (Quarterly)



Consolidated Revenue

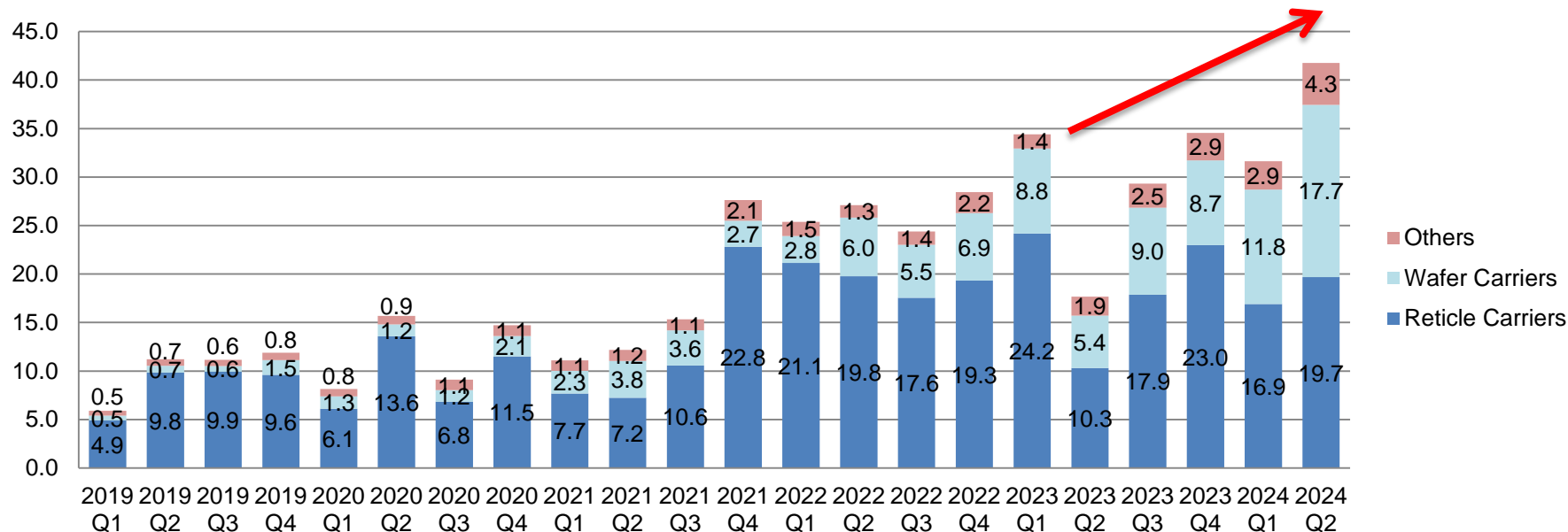




Gudeng Revenue (Quarterly)



Core Business Revenue



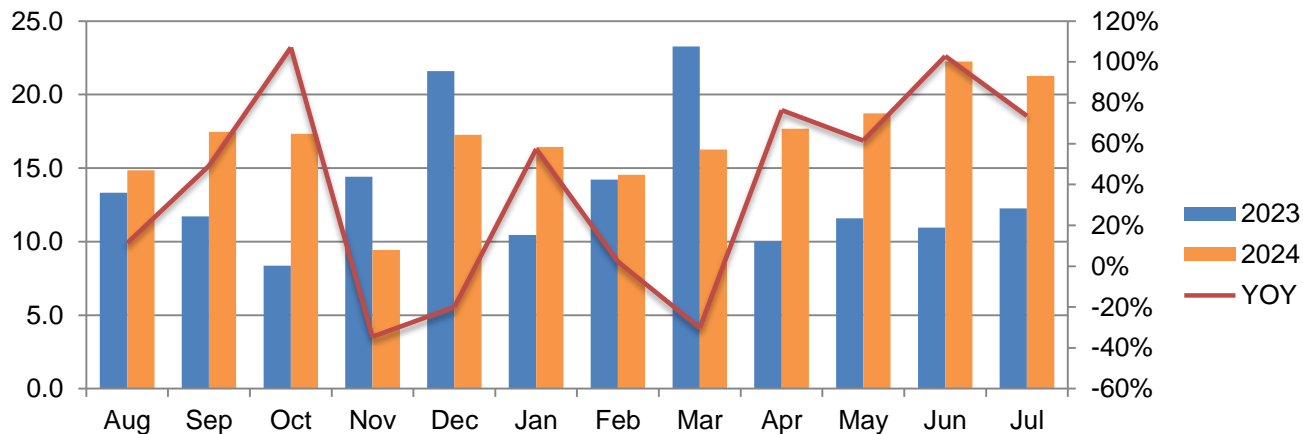
US million dollars



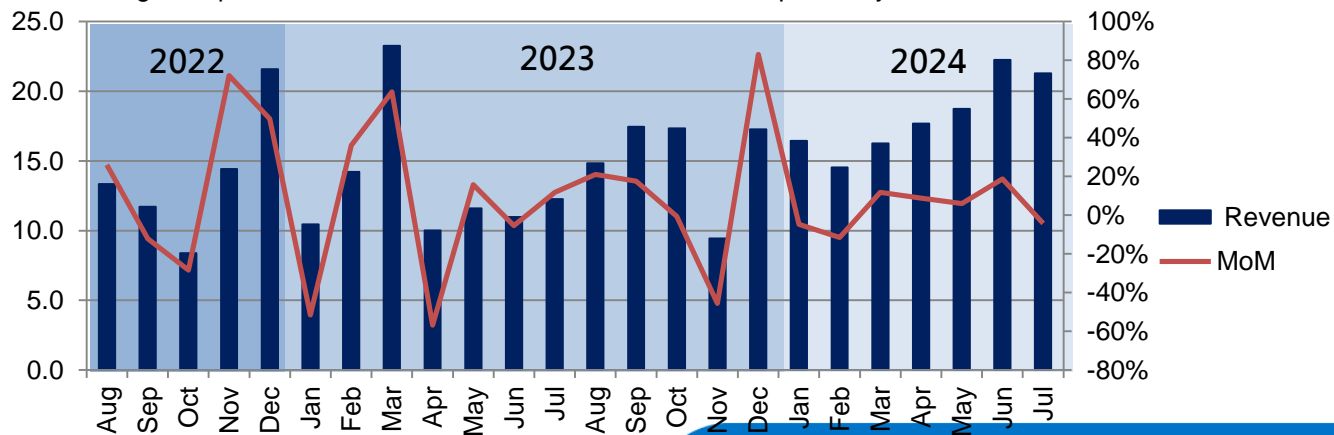
Gudeng Revenue



Gudeng Revenue
YoY Trend



Gudeng Revenue
MoM Trend



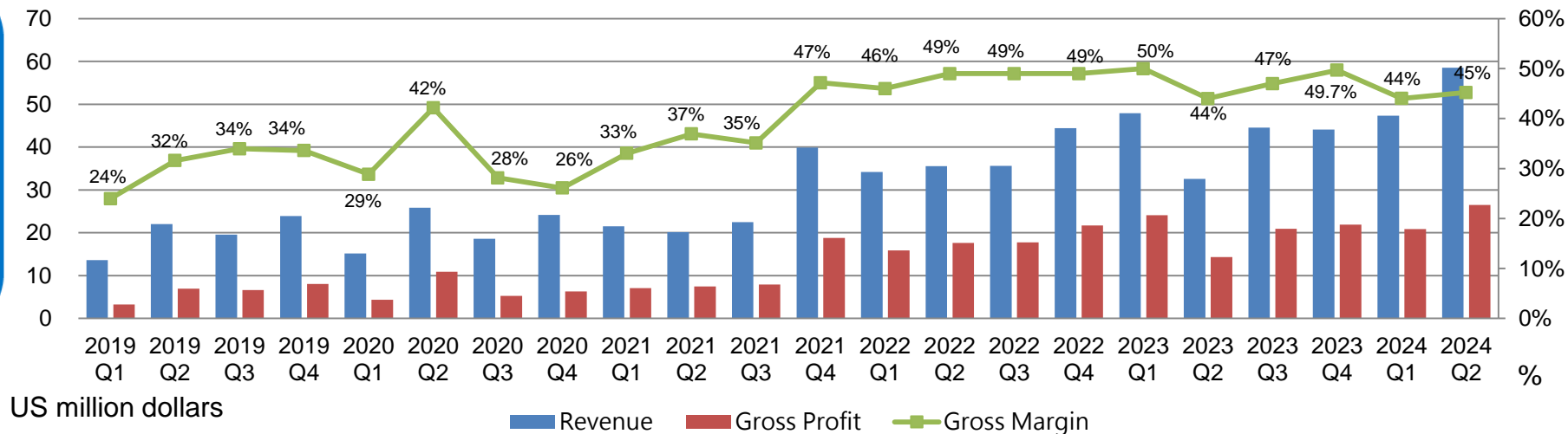
US million dollar



Gudeng Gross Margin (Quarterly)



Gudeng Quarterly Gross Margin



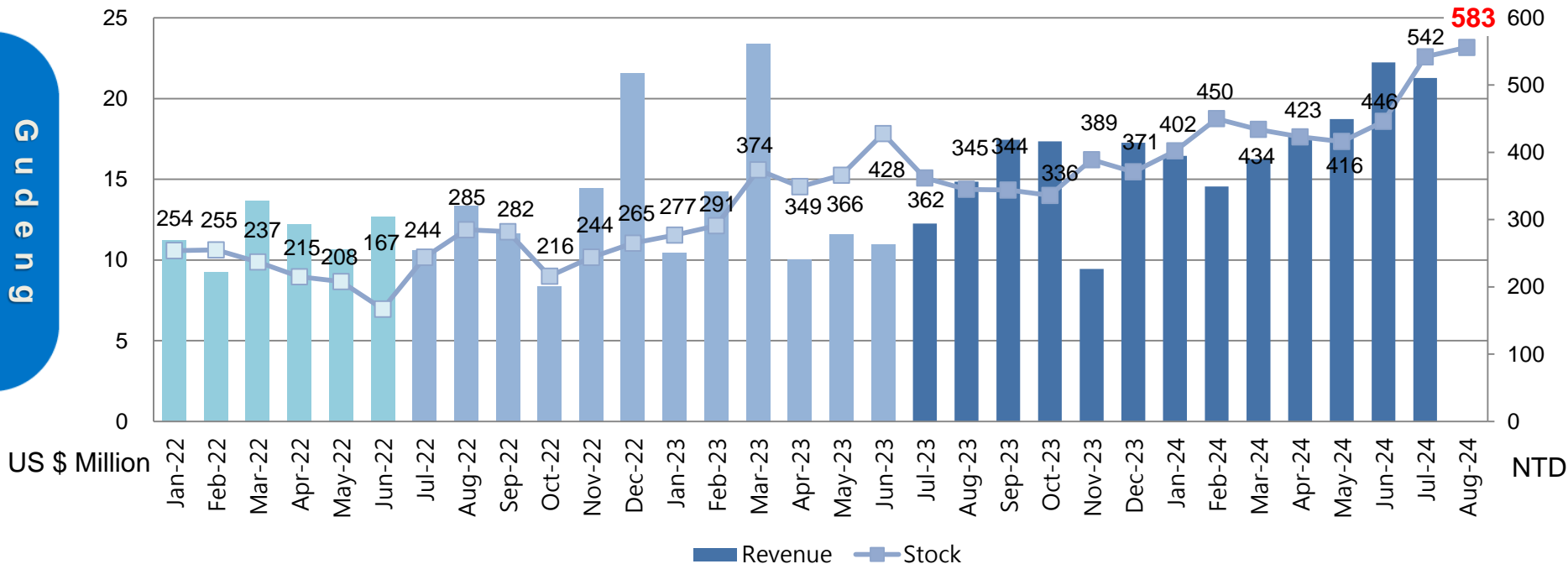


Gudeng(3680) Stock Price Trend



Revenue/Stock

Gudeng





Gudeng Expense and Margin Ratio



US Dollar	2024						2023		
	Q1	YoY%	Q2	YoY%	Total	YoY%	Q1	Q2	Total
Revenue	47,347,467	-1%	58,538,767	80%	105,886,233	31%	48,036,100	32,598,867	80,634,967
Cost	26,504,133	11%	32,057,900	74%	58,562,033	38%	23,905,600	18,446,100	42,351,700
Gross Margin	20,843,333	-14%	26,480,833	87%	47,324,167	24%	24,130,500	14,152,767	38,283,267
OER	28%		23%		25%		20%	33%	25%
EPS	2.24		3.00		5.24		3.94	1.68	5.6

Expense:

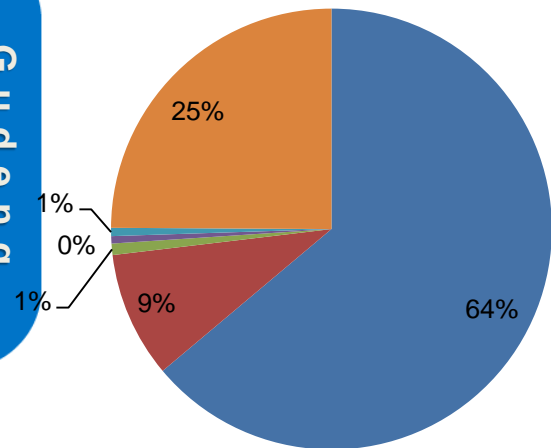
- 2024 Q2 Gudeng Equipment had capital increased, resulted increasing operating expenses and operating costs.
- To meet growth demands, M&A and related expenses have increased
- Due to demand from Greater China, the cost of import and export had increased.
- To increase production capacity, had purchase molds, machines and equipment, which depreciation had increased.
- Machine from Gudeng Equipment need to be adjusted, therefore temporary expense had happened and will be returned by Q4 2024.



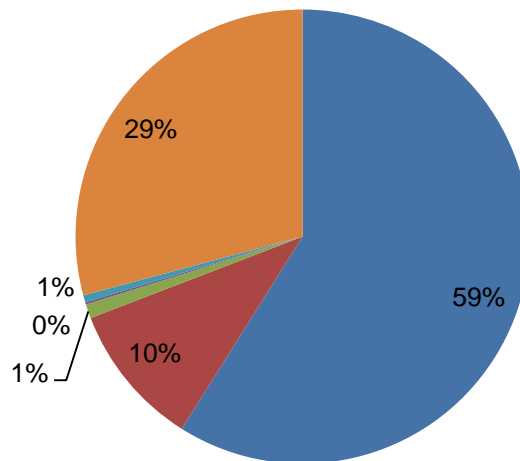
Gudeng Revenue Regional Distribution



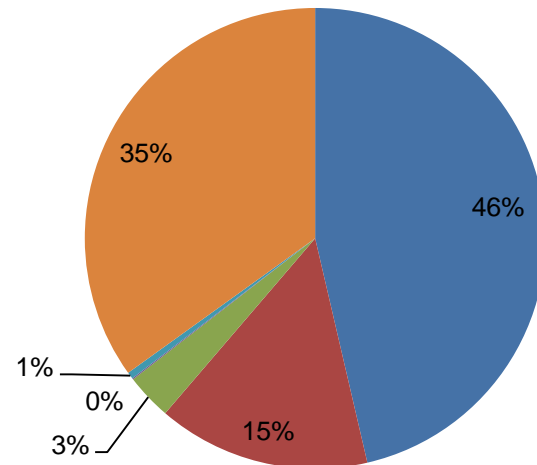
2022



2023



2024



■ Taiwan ■ US ■ Asia ■ Other ■ Europe ■ China



Distribution of Gudeng's Customers



Logic/Power Foundry&IDM.



PCB/OSTA (Outsourced Semiconductor Assembly and Test)

Memory Foundry&IDM.



Reticle /Mask

Equipment





Local Supply Chain Alliance



“Integrated service provider of innovative critical material technology”
Build Taiwan Semiconductor Team

Gudeng
3680

Global Semiconductor
Carrier solution

Gudeng
Equipment
6953

EUV stoker and
inspection equipment

Gudeng Holding
45.44%

Symtek
6438

Advanced system
equipment storage and
positioning system

Gudeng Holding
8.55%

Asia Neo
4542

CoWoS Carrier
Cleaning equipment

Gudeng Holding
8.29%

Microprogram
7721

EUV precision
sensing instrument

Ecosystem Total Solution

Create a flexible and efficient
service platform

Ultra-high cleanliness
and clean room
filter material

GreenFiltex
6823

Key material for
advanced process and
packaging

Nytex

Key component of
EUV yield improvement

Yeedex
7556

Precision process
environmental control

ChyiDing

Micro pollution
prevention and control

Santa
Phoenix



Gudeng Growth Blueprint-Highlights



Gudeng



Co-Creation



2024 ~

Wafer Carrier Solutions

The market share of our series of wafer carrier is rising worldwide.



2026 ~

Aerospace Pioneer

Constantly expand customer base and challenge doubling revenue growth this year.



2024 ~

EUV Pod

With the continuous expansion of advanced process, related demand is growing.

2025 Q3 ~

CoWoS Carrier

Our complete solution of CoWoS and back-end 3D package leads the world.



2025 Q3 ~

New Technique

Continue to develop new technologies and expand new markets.





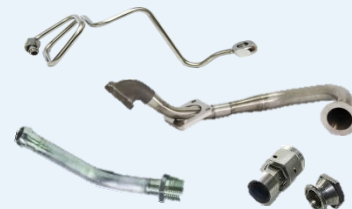
Major Customers & Products



Manufacturing Conducting Tubes, Check Valves, Fasteners, as well as Machining parts, supporting the assemble of engines for GE



Providing different metal materials of Conducting Tubes, with in-house Chemical Processes, and Special Welding



Origin

High Barriers to Entry
High Gross Margin
Precision Machining



Not only Sheet Metals parts, Machining parts, and Tube Connectors, but also providing Plastic Injection



Expert in 3 ~ 5axis of milling and turning · manufacturing hydraulic components, such as Cylinders, Differentials, Shafts, Piston and Rods





Aerospace Strategy Roadmap



Flight Control Hydraulic Parts

**Metal
Precise Machining**



Sales / Warehouse



**Gudeng
Aerospace**

**Gudeng
Precision**

**Airplane Cabin & MRO
Components**

Plastic Injection



**Gudeng
Aerospace
USA**

**JYR
Aviation**

Tubing & Special Process

**Tube Bending & Welding &
NADCAPs**





Gudeng Sustainability Performance



2023 Reduce
33% of Carbon
Emissions

2023 Reduce
54% of Water Usage

2023 Reduce
21% of Industrial Waste



Homemade **Eco-Friendly Pallets**
Transport Cases

Salary Increase Rate **7~9%**
better than industry

Employees charity
participating **382** times

Stipends reached **651** students



12 Industry-University Cooperation Items



2023 Revenue
US\$162 million

2023 EPS
10.24 NTD

RBA
Platinum Certification

27TH

National Quality Awards



Verification
TIPS A-Class 、ISO22301 、ISO20400

ESG Report



2024/9/2

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Gudeng Overall Performance



Revenue Growth :

US\$ 32million in 2019, US\$ 145 million in 2022, US\$ 162 million in 2023. As of July 2024, revenue is about US\$ 127 million , YOY 37%

Steadily Gross Profit Margin :

Over 20% in 2018, 49% in 2022, 48% in 2023, 45% as of July 2024

Growth in EPS :

0.27 in 2018, 3.25 in 2019, 11.12 in 2022, 10.24 in 2023, 5.24 in Q2 2024

Increasing Market Share :

Reticle carriers 70% worldwide, EUV Pod 85% worldwide, FOUP qualified by major customers, and 50% up of the customers in Greater China region apply Gudeng as the baseline

Prospect and Strategy

2024

- ◆ Increasing market share in Wafer Carrier, which bring growth in revenue
- ◆ Focus on advance process and become the main supplier for key customers
- ◆ FOSB had gradually been verified and become the main focus of Gudeng Wafer Carrier
- ◆ Continuing expanding factories, quickly responds to demands and supply locally

2025

- ◆ With development of CoWoS, shipment of Panel FOUP have steadily increased
- ◆ Improving cooling technology and stabilizing production processes
- ◆ Strong revenue contribution from FOSB
- ◆ As released of Hi-NA EUV, customer base of EUV Pod have expanded
- ◆ Gudeng Total solution lead the market, group challenge higher revenue

2026

- ◆ Key components completed verification and get long-term order from customers.
- ◆ Expending special process to complete Aerospace Roadmap
- ◆ Strong revenue growth from CoWoS
- ◆ Revenue contribution from Hi-NA EUV Pod
- ◆ Continuing focus on high-revenue markets and M&A





Thank You

www.gudeng.com