



**SUNON®**

FIRST CHOICE GLOBALLY  
Cooling Solutions

# 2025 Q1 Operating Results

SUNONwealth Electric Machine Industry Co., Ltd.

2421.TW / 2421 TT

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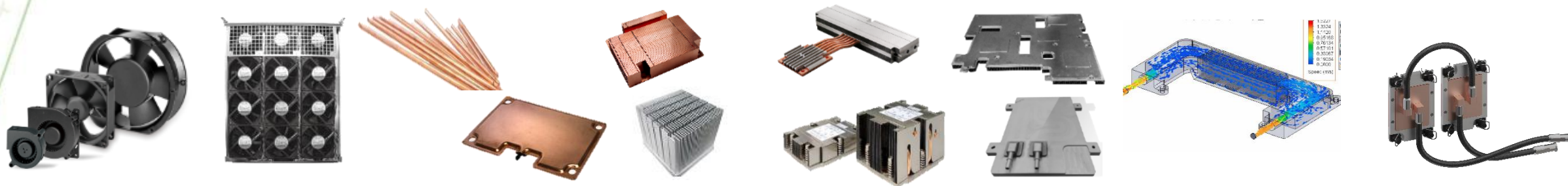
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# SUNON Thermal Everywhere

■ Fan ■ Fan tray ■ Heat Pipe ■ Vapor Chamber ■ Heat Sink ■ Cooling Module ■ Cold Plate ■ Liquid Cooling



5G Base Stations



Networking



electric vehicles



Industry Inverter / Drive



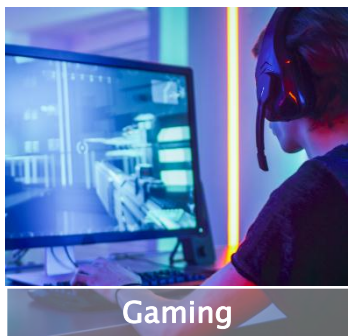
Renewable Energy



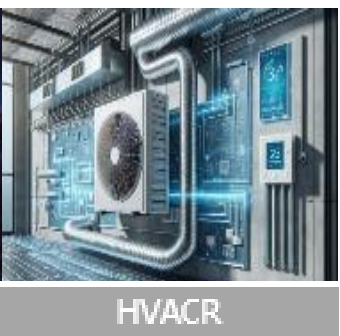
surveillance



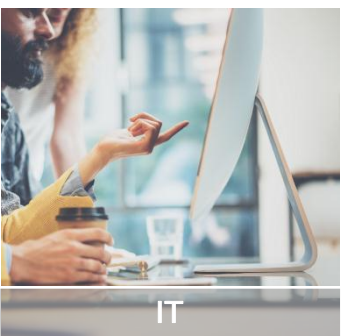
medical



Gaming



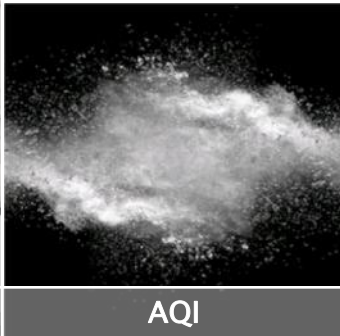
HVACR



IT



Home Appliance



AQI



Air Purifier UVC Solution



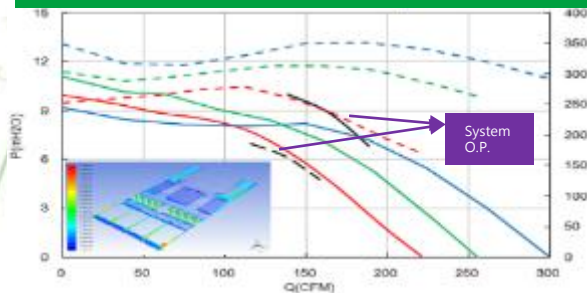
Industrial Ventilation



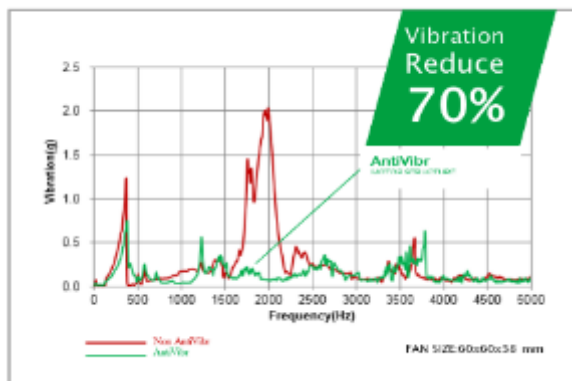
# Thermal Technology Keeps Pace With the Times

Future will be supported by powerful computing capacity and the ultra-speed Internet with high reliability, which tests the effectiveness of thermal solutions. The change in the world stimulates thermal technology to update and advance to be suitable for real-time computing systems' needs. Technological advancement in heat dissipation provides the most effective operating temperature management to achieve excellence.

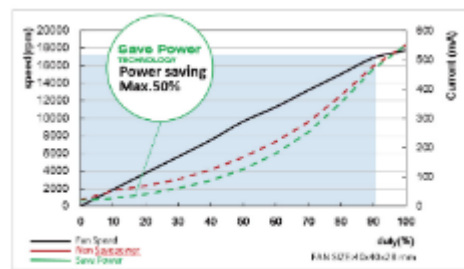
## High Fan Efficiency



## Low Vibration



## Energy Saving

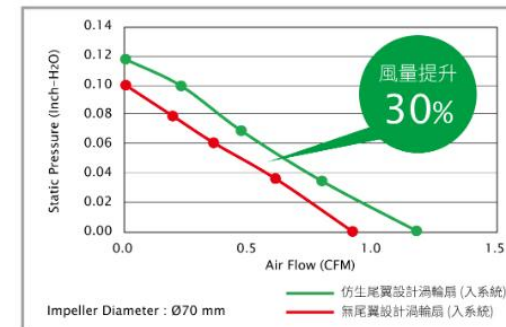
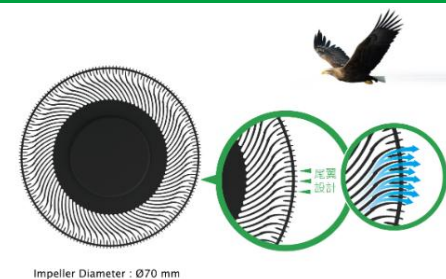


## Reliability

- Salt solution: 0.05 % NaCl + 0.35 % ammonia sulphate (Flow is reduced to 20% of a normal ASTM G85 test)
- Chamber temperature: 35° C
- Test cycles first 35 days: 15 min. spray/fog followed of 45 min. drying. 3 day with Salt solution 2 days demineralized water.
- Test cycles after 35 days: 30 min. spray/fog followed of 30 min. drying. 3 day with Salt solution 2 days demineralized water
- Test duration: 40 days
- Fans are running during the entire test
- Fans are checked once a day
- If Fan stops:
  1. Try to start fan with finger
  2. "Exercise" with pressurized air
  3. "Dry out" Fan in 45° C oven for 24 Hours.

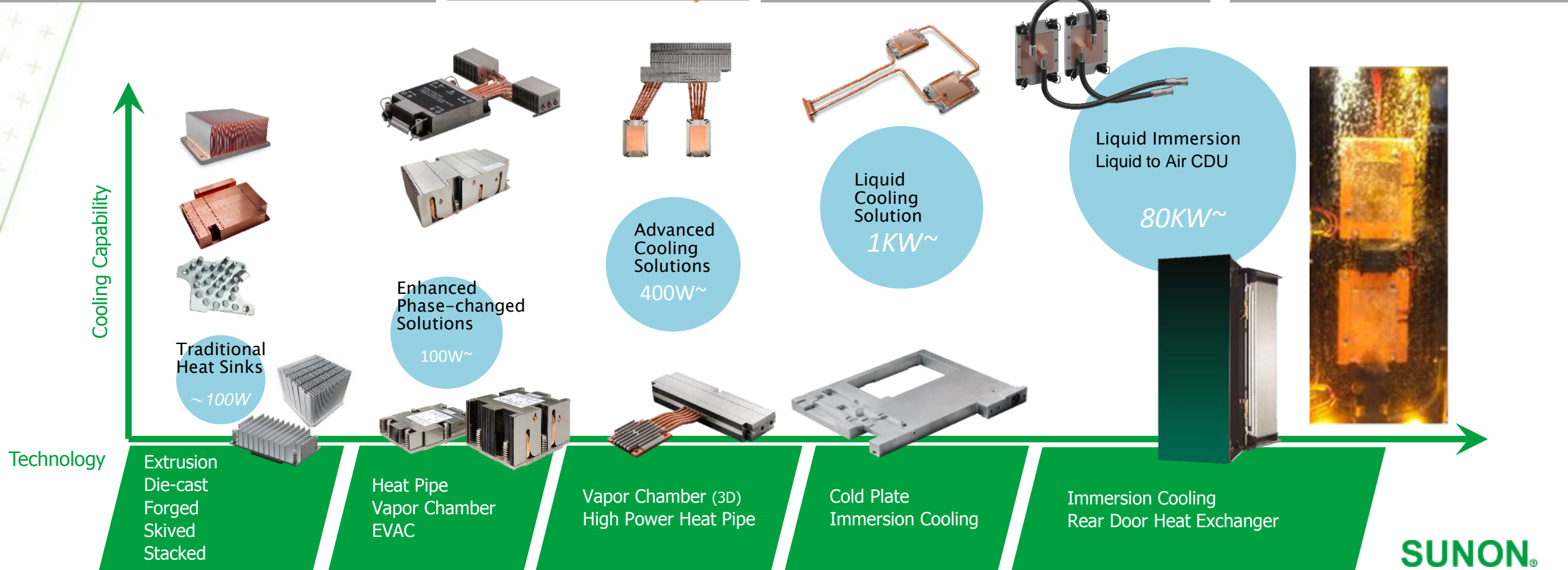
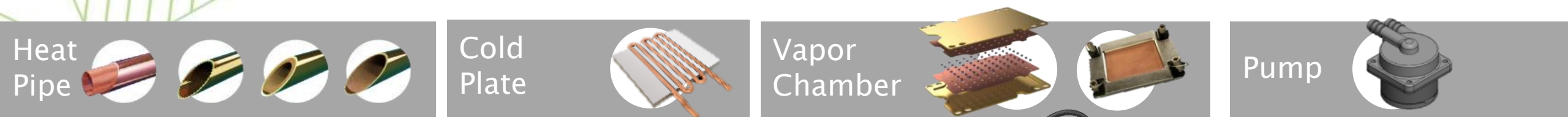


## Bionic Blade Design



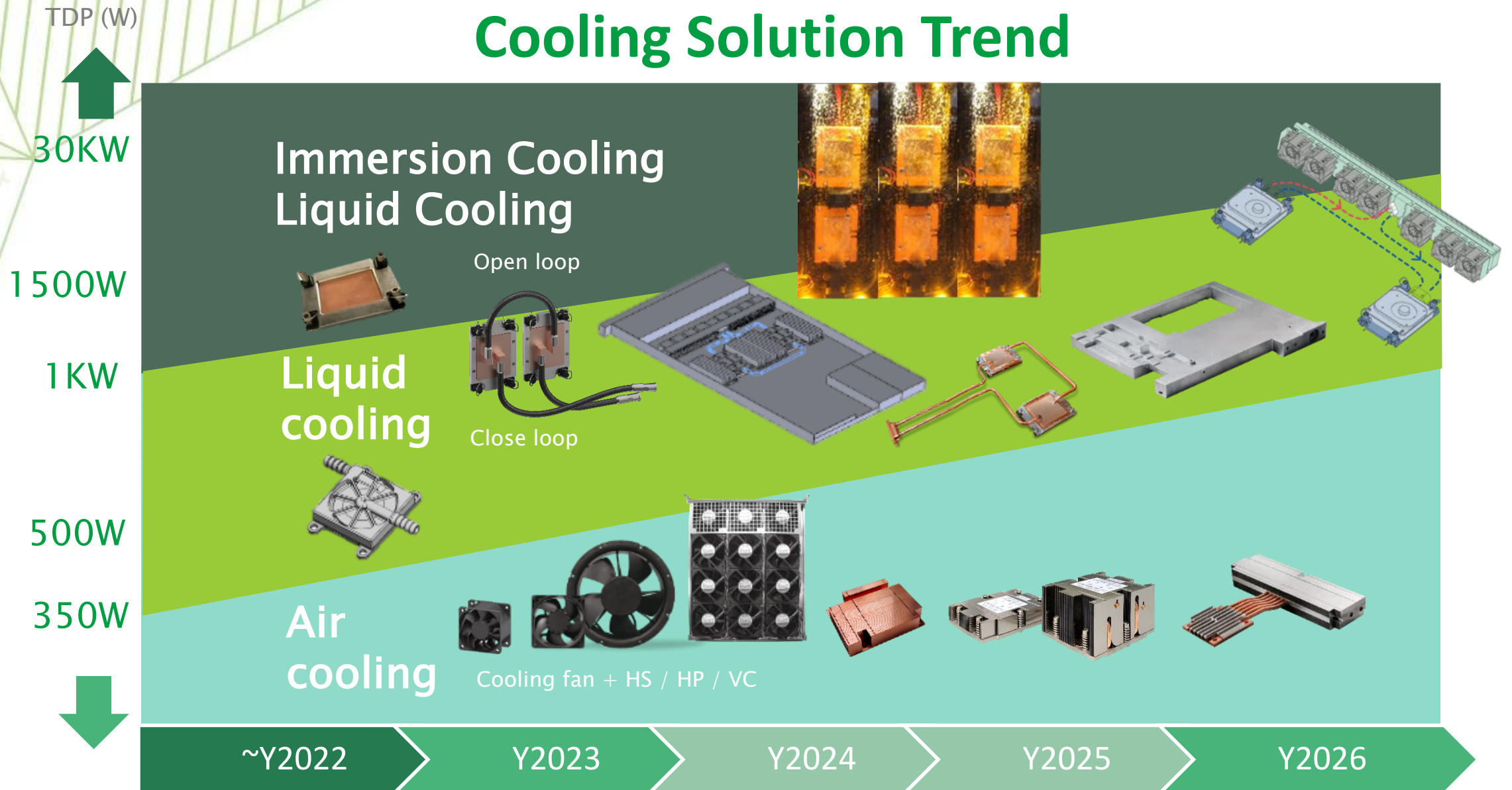
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# More Cooling Options



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# Cooling Solution Trend





# Fan is still the key component for Liquid cooled AI

NVIDIA	Single B200 GB200 NVL72	B200 DGX/HGX	B100 HGX	H200 SXM	H100 SXM
GPU architecture	Blackwell			Hopper	
TDP	1200W	1000W	700W	700W	700W
Cooling	Liquid Cooling	Air Cooling	Air Cooling	Air Cooling	Air Cooling

Estimated # of fans used for GB200 NVL72

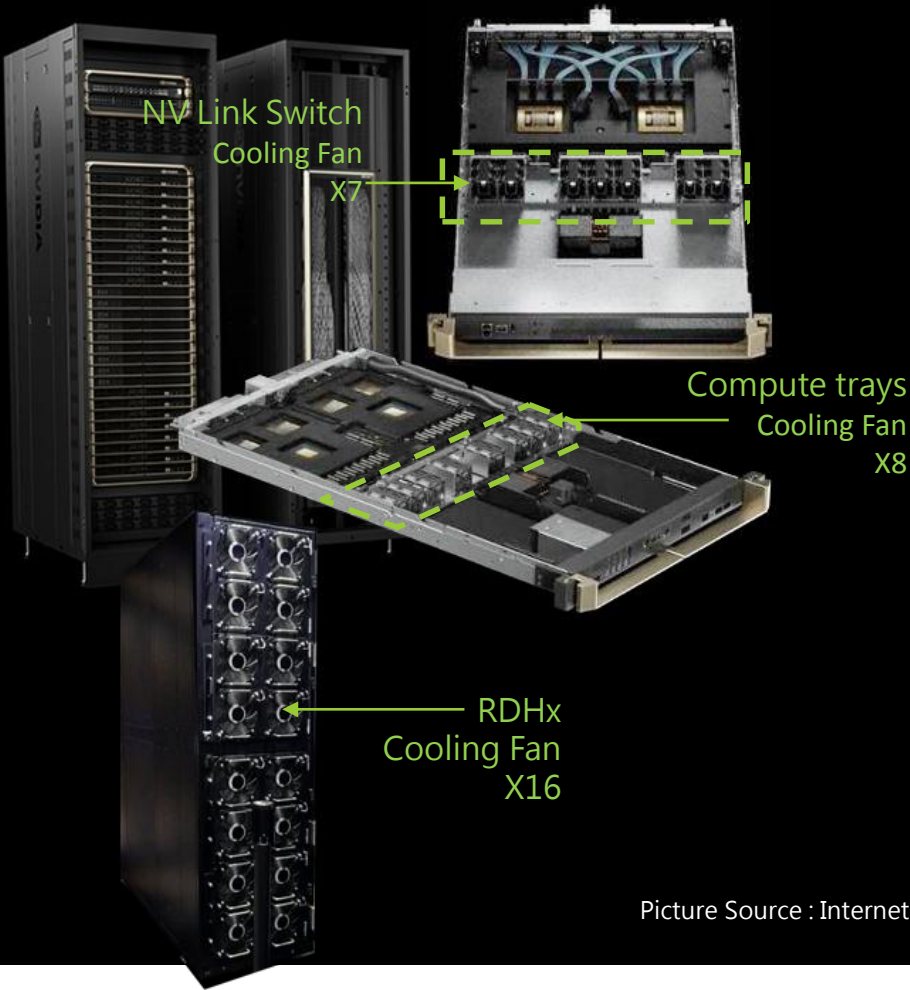
Rack: 4cm dual fan\*8 each tray, total #18 computer trays;

NV Link Switch: 4cm dual fan\*7 each tray, total #9 trays

Power Supplies: at least #50 fans

**In-rack system: Up to #257 cooling fans applied**

**At lease #16 200mm Axial fans installed in RDHx**



Picture Source : Internet

# Data Center Thermal Layout

## Existed Data Center

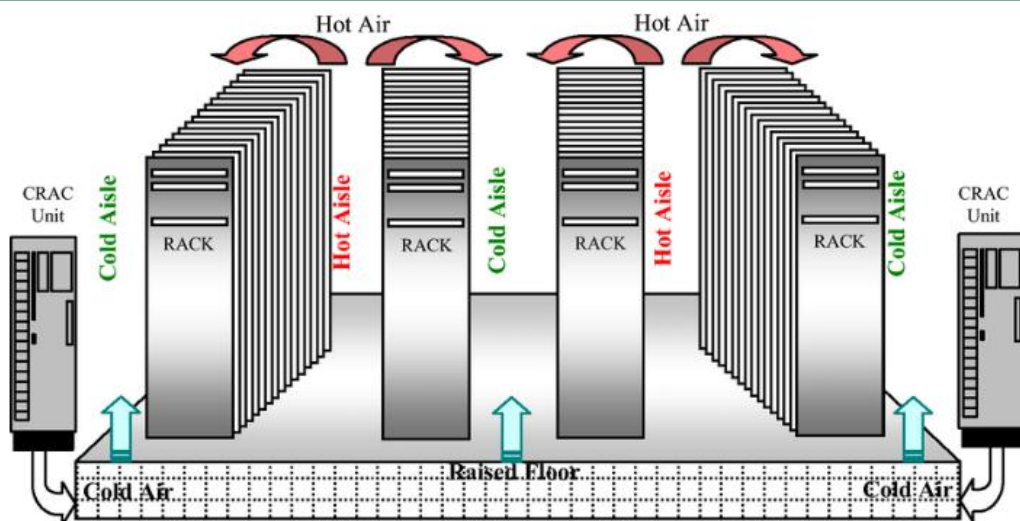
Existed CRAC system (Compute Room Air Conditioner)

Air-cooling

Fan + 3DVC → Hot air

Liquid cooling (Liquid to Air)

Cold Plate → Sidecar/RHDx → Hot air



Layout of racks and CRAC in a data center

## New Data Center

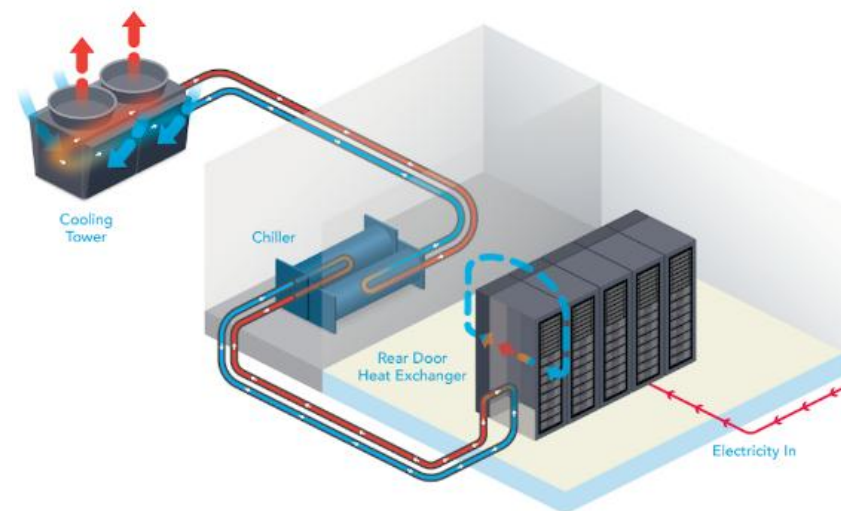
Extra chiller and/or cooling tower

Liquid cooling (Liquid to Liquid)

Cold Plate → Chiller → Hot water

Immersion cooling (Liquid to Liquid)

Boiler/Heatsink → Chiller → Hot liquid



Picture Source : Internet

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# Air Cooling vs. Direct Liquid Cooling

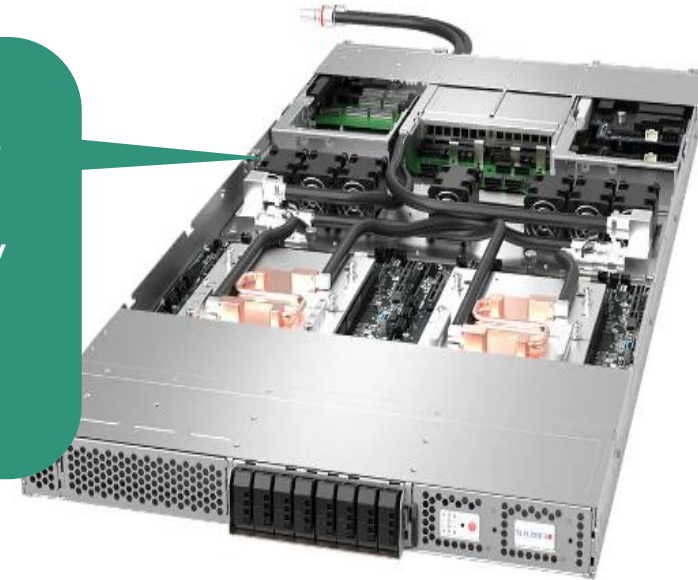
## Air Cooling (Fan + 3DVC)

Refer to MGX platform  
SMCI model ARS-111GL-NHR



## Direct Liquid Cooling (Fan + Cold Plate)

Refer to MGX platform  
SMCI model ARS-111GL-DNHR-LCC



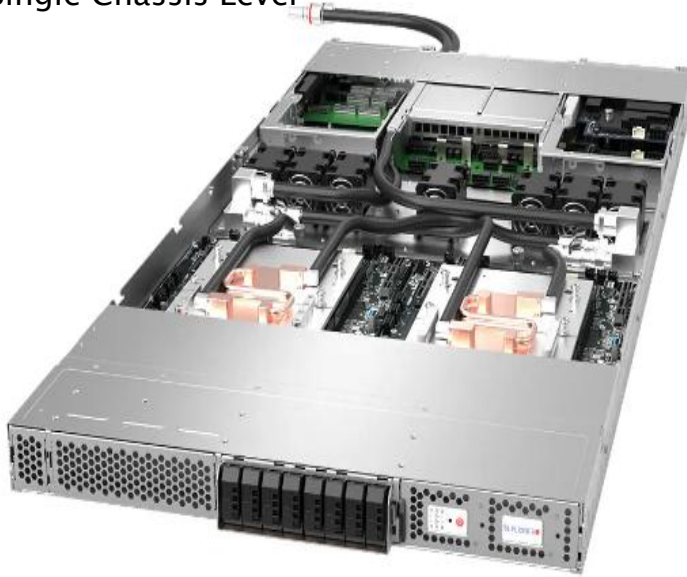
For same chassis layout, fan is must needed key component for thermal solution

# Air Cooling vs. Direct Liquid Cooling

## Direct Liquid Cooling (Fan + Cold Plate)

Refer to MGX platform  
SMCI model GPU ARS-111GL-DNHR-LCC

Single Chassis Level



Picture Source : Internet

## Rear Door Heat Exchanger

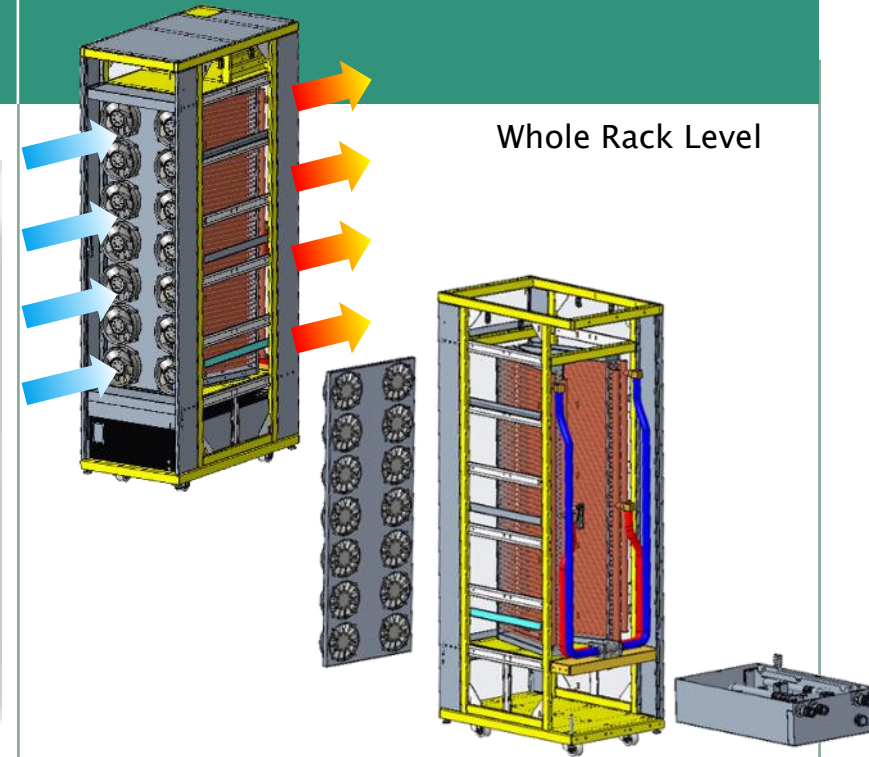
Larger axial fan

Whole Rack Level



## Sidecar

Air Assisted Liquid Cooling  
(Larger axial fan)



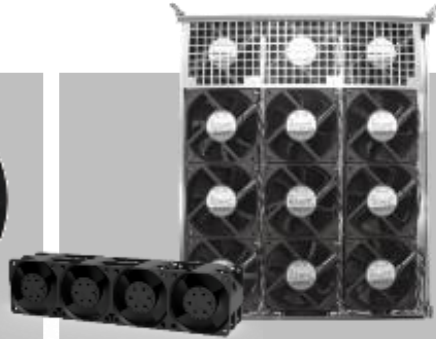
Whole Rack Level

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# SUNON Total Thermal Solutions, One-stop Service



Compact Fans



Fan Tray



Thermal Modules



Large-size Fans



Building Ventilation Fans



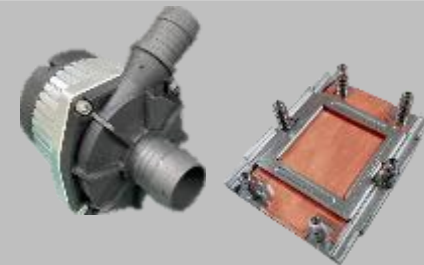
Sidecar CDU / Fan wall



RPU



Two-phase Liquid Cooler



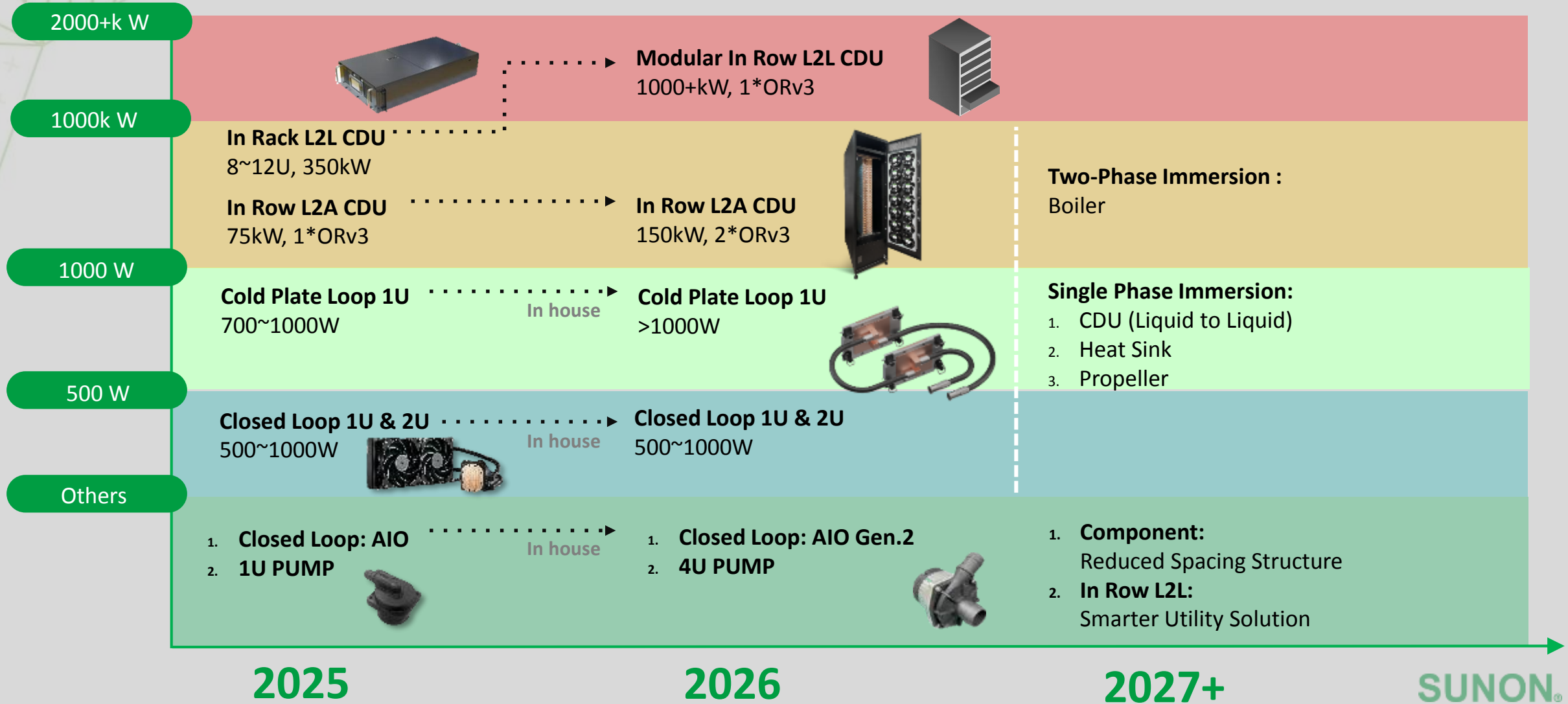
Water pump / Boiler



Liquid-cooled Modules

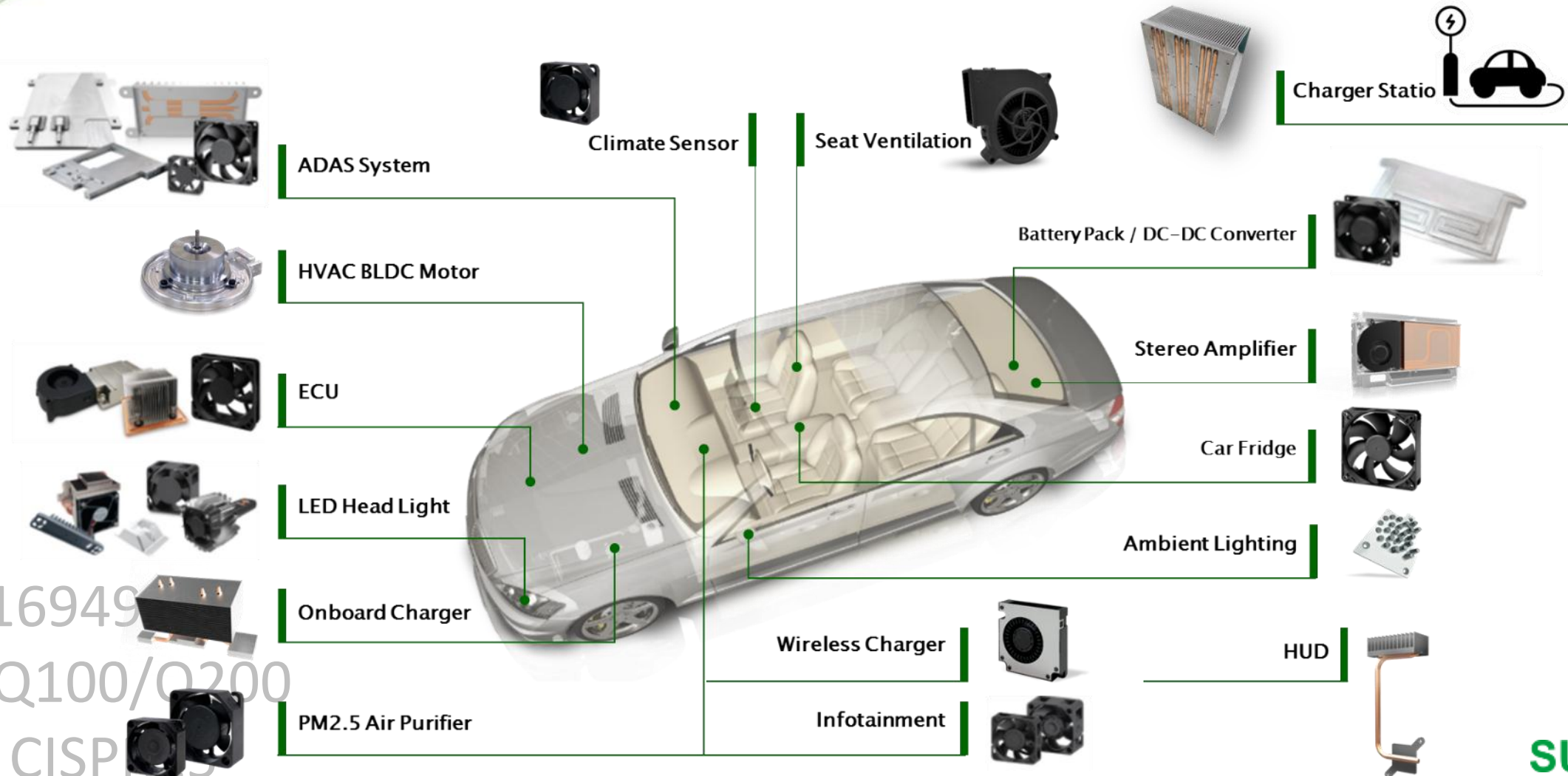


# SUNON Liquid & Immersion Cooling Development



# Electric Vehicles / Auto Cooling Solution

SUNON has more than 20 years of experience in cooling solutions for the automotive industry, and can provide various cooling fans, cooling modules and liquid cooling products that meet the quality standards of the automotive industry



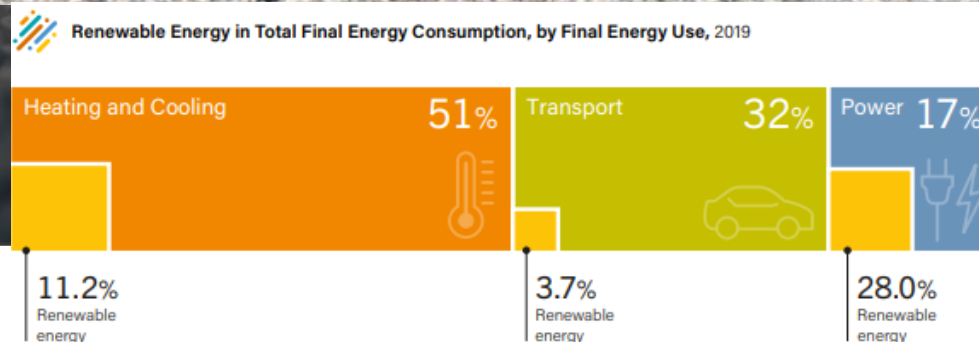
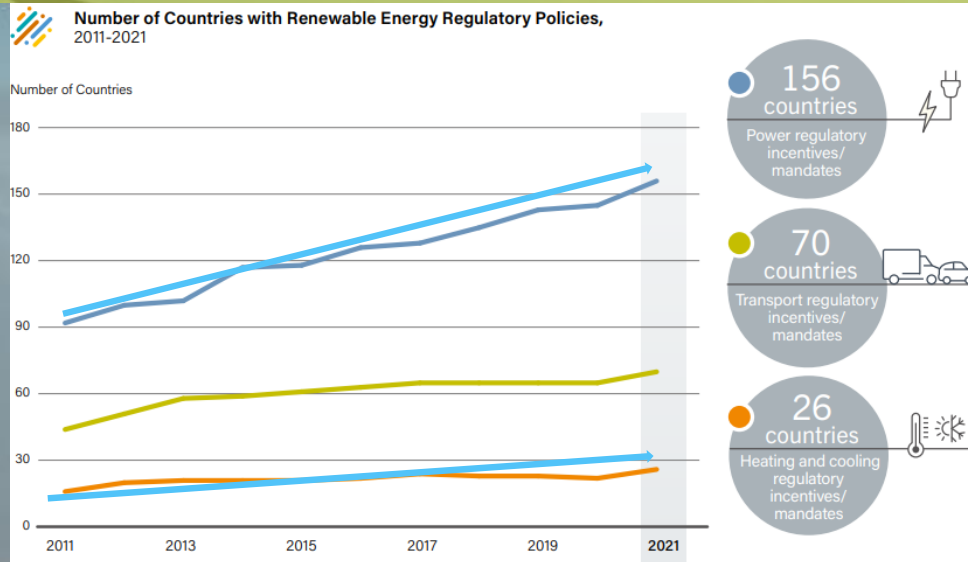
IATF16949  
AEC Q100/Q200  
EMC CISPR11

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# Net zero emissions by 2050

## Energy Transition Energy Transition Business Opportunities

Having an excellent thermal system is the key to stably maintain the operation of energy storage systems. Selecting an optimal thermal solution ensures the operation stability and high system effectiveness, and it also minimizes unnecessary maintenance costs.



Source: <https://reurl.cc/NR85xk>

PV inverters  
Enclosure cabinet equipment  
EV charging systems

Energy storage systems  
Battery containers,  
packs and racks

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# Renewable Energy Cooling Solution

SUNON is an important partner of global high-quality energy system cooling solutions, providing a full range of cooling solutions.

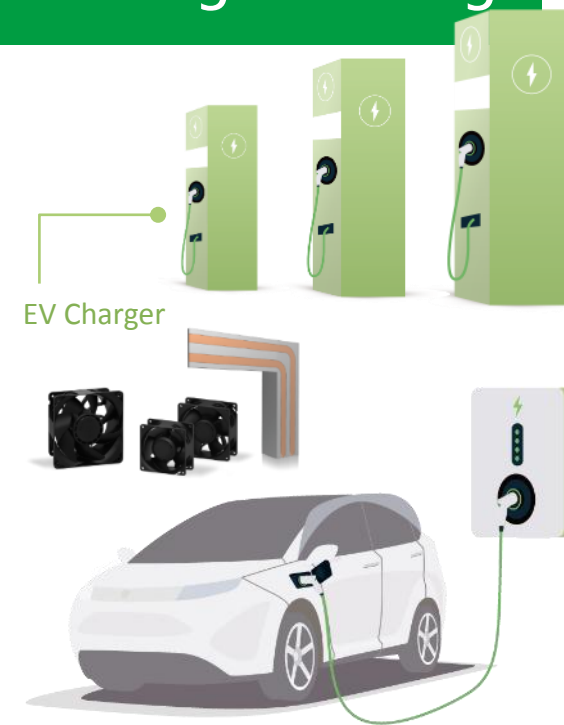
## PV Inverter Cooling



## ESS Cooling



## EV Charger Cooling



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Established  
**1980**



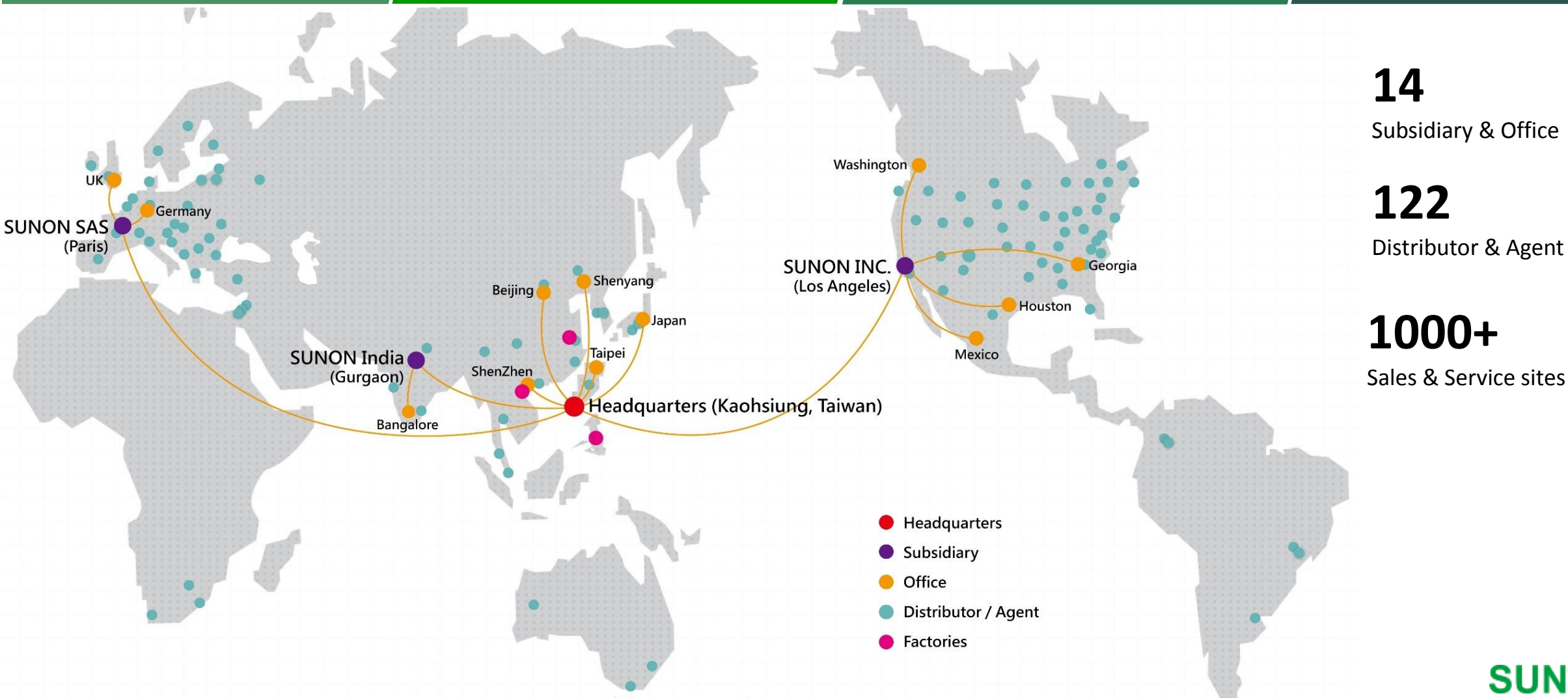
Employees  
**8420**



Turnover (NTD)  
**14.6 B**



Factories  
**5**



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# Sufficient Capability

production bases

Cooling Fans

19 M pcs/ month

Cooling Module

2.68 M pcs/month



Kaohsiung, Taiwan  
1M pcs /month



Beihai, Guangxi  
(A Building 、 B Building)  
Fans 7.2M pcs/month



Beihai, Guangxi  
(C Building)  
Fans 2.7M pcs/month



Kunshan, Jiangsu  
5.3 M pcs/month(FAN)  
2.5 M pcs/month(CM)



Bataan, Philippines  
2.8 M pcs/month  
180 K pcs/month(CM)

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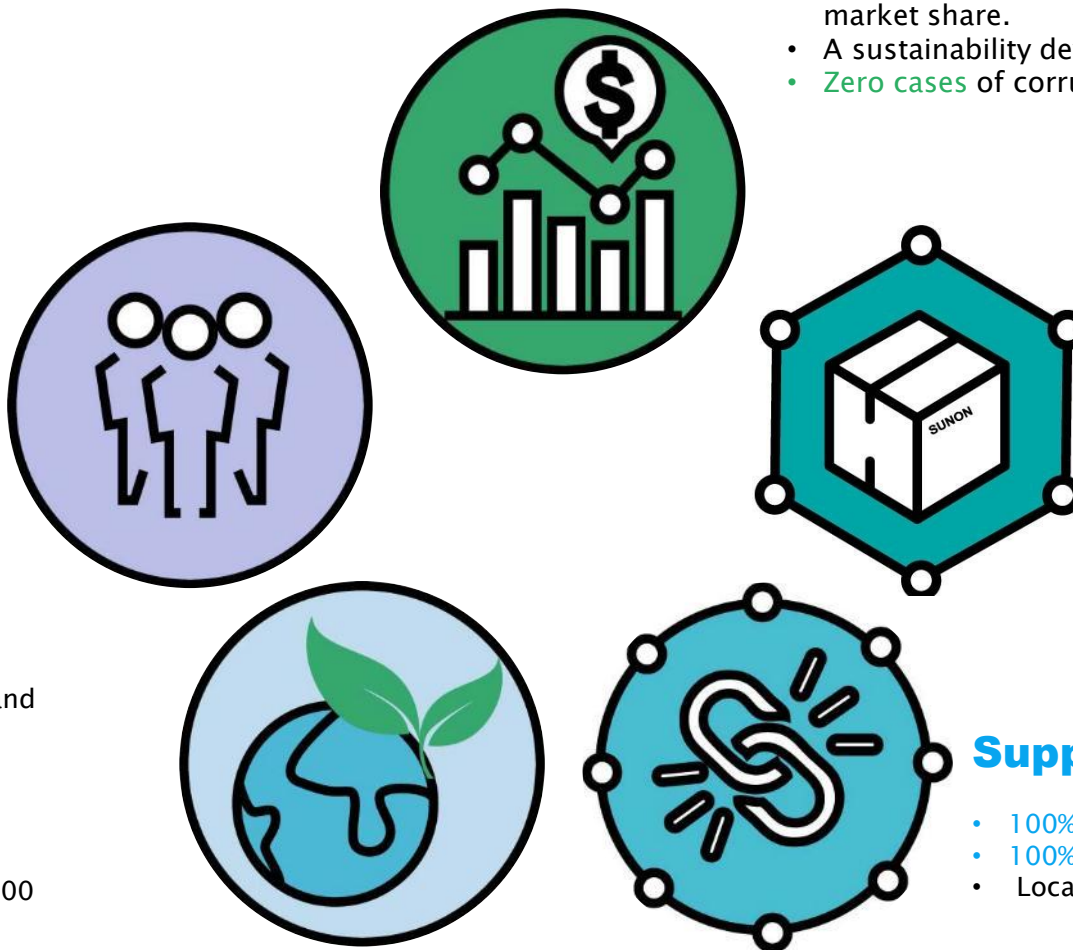
# EGS Performance Highlights

## Society

- Average employee training hours exceeded **48 hours** per year.
- Production bases in Taiwan and China have both passed ISO 45001 certification.
- Provided **care to 9,867 households** in the "Support and Care Campaign" from 2018 to 2023.

## Environment

- Implemented **greenhouse gas inventory across** the entire group, and passed **third-party external verification**.
- The solar power generation of the Guangxing plant has exceeded **680,000 kWh**.
- Continuously passed IECQ QC 080000 certification each year.



## Governance

- Net income reached **1.49 billion NTD**, a 12% increase from 2023.
- The Company ranks among the **top 3 leading brands** in terms of market share.
- A sustainability development committee has been established.
- **Zero cases** of corruption.

## Products

- **Saved 532 million kWh** of electricity with product R&D. Reduced GHG emissions by 260,000 MTCO<sub>2</sub>e.
- **100.0% pass** rate of hazardous substance inspection for three consecutive years from 2021 to 2023.
- Obtained **3,394 invention patents**.

## Supply Chain

- **100%** pass rates for new suppliers audits .
- **100%** pass rates for annual supplier audits.
- Local procurement rates exceed **74%**.

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# Net Zero

Carbon Reduction

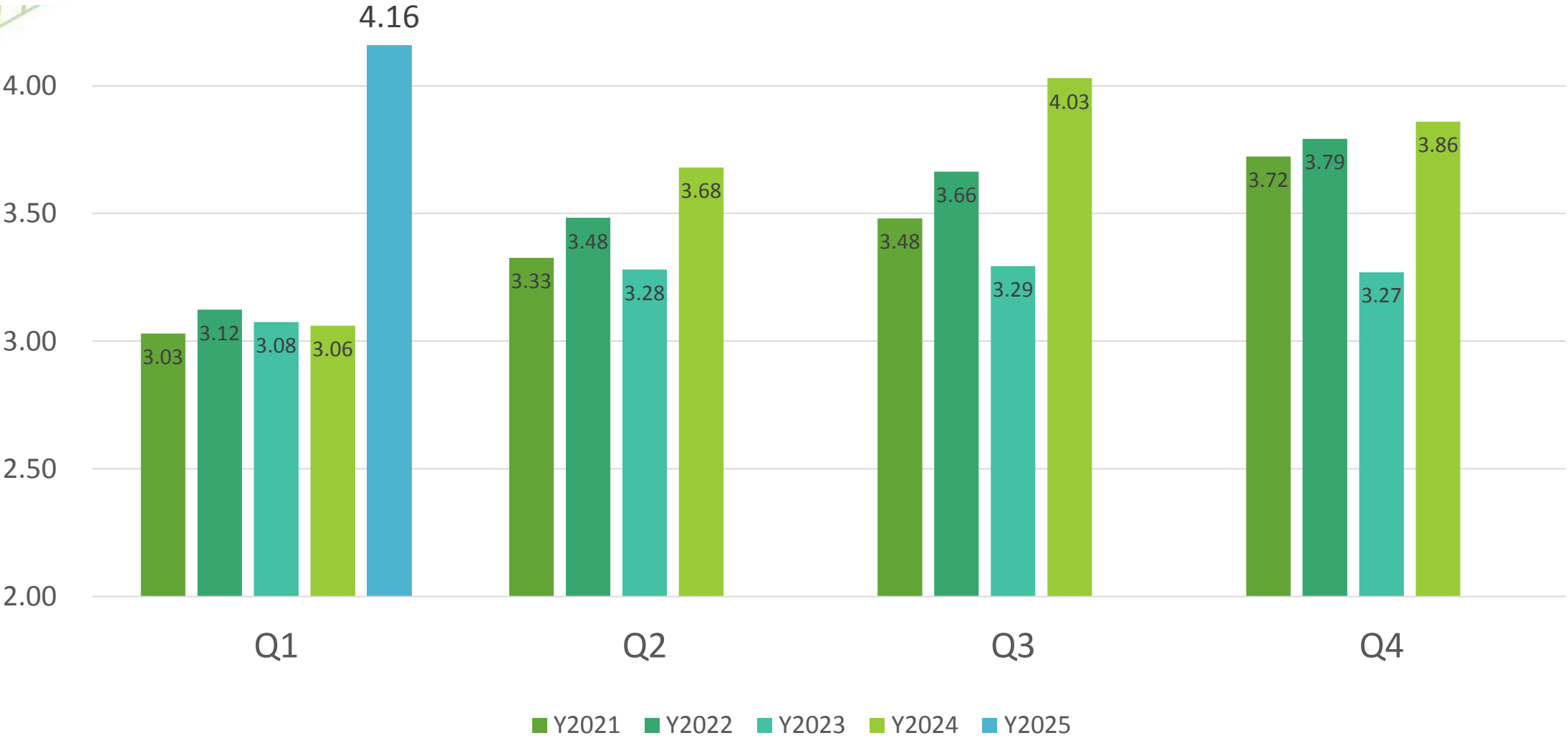
2030  50%  
2050 **NET ZERO**



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# Quarterly Revenue

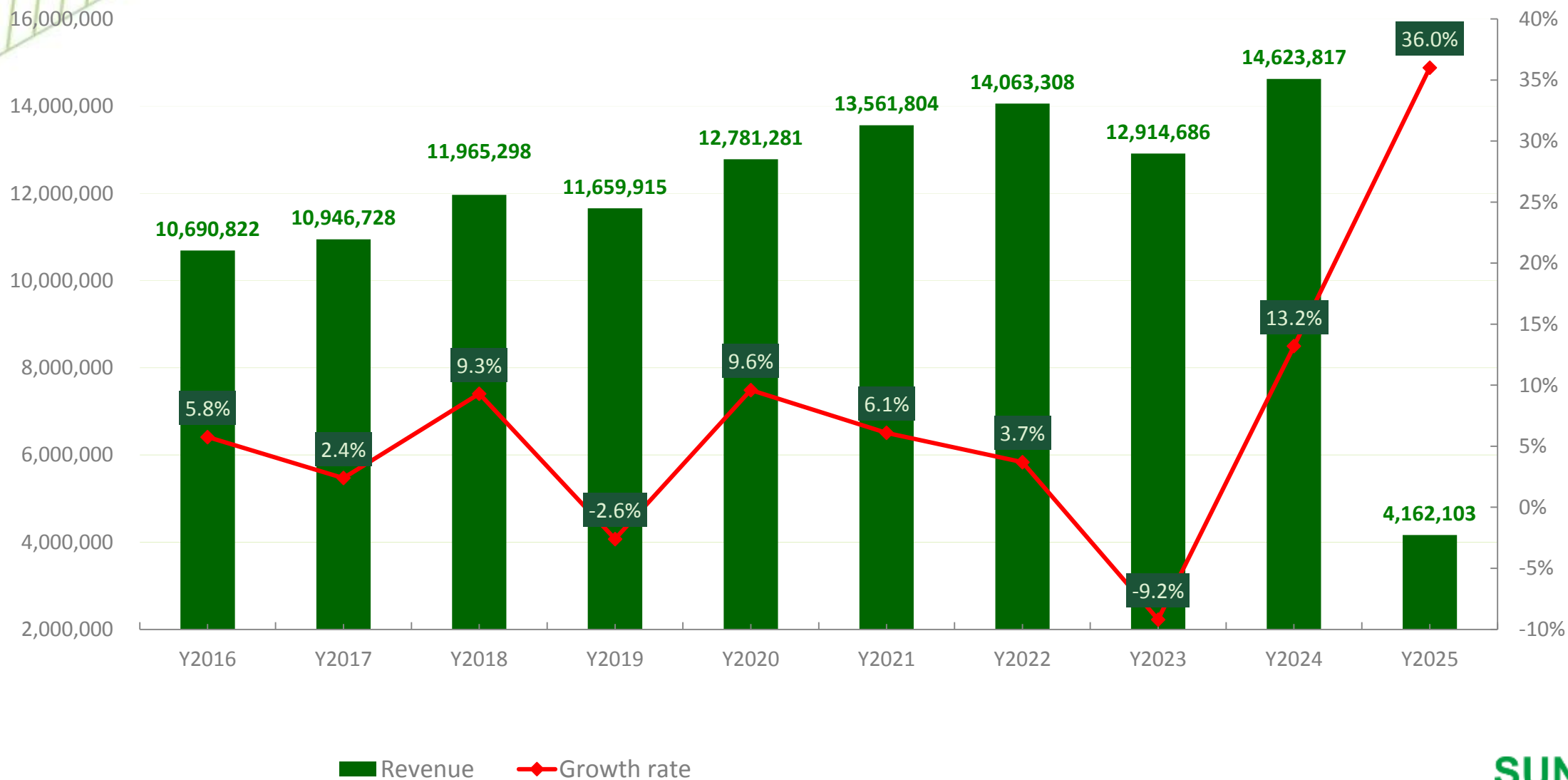
In B. NT





# Revenue Performance

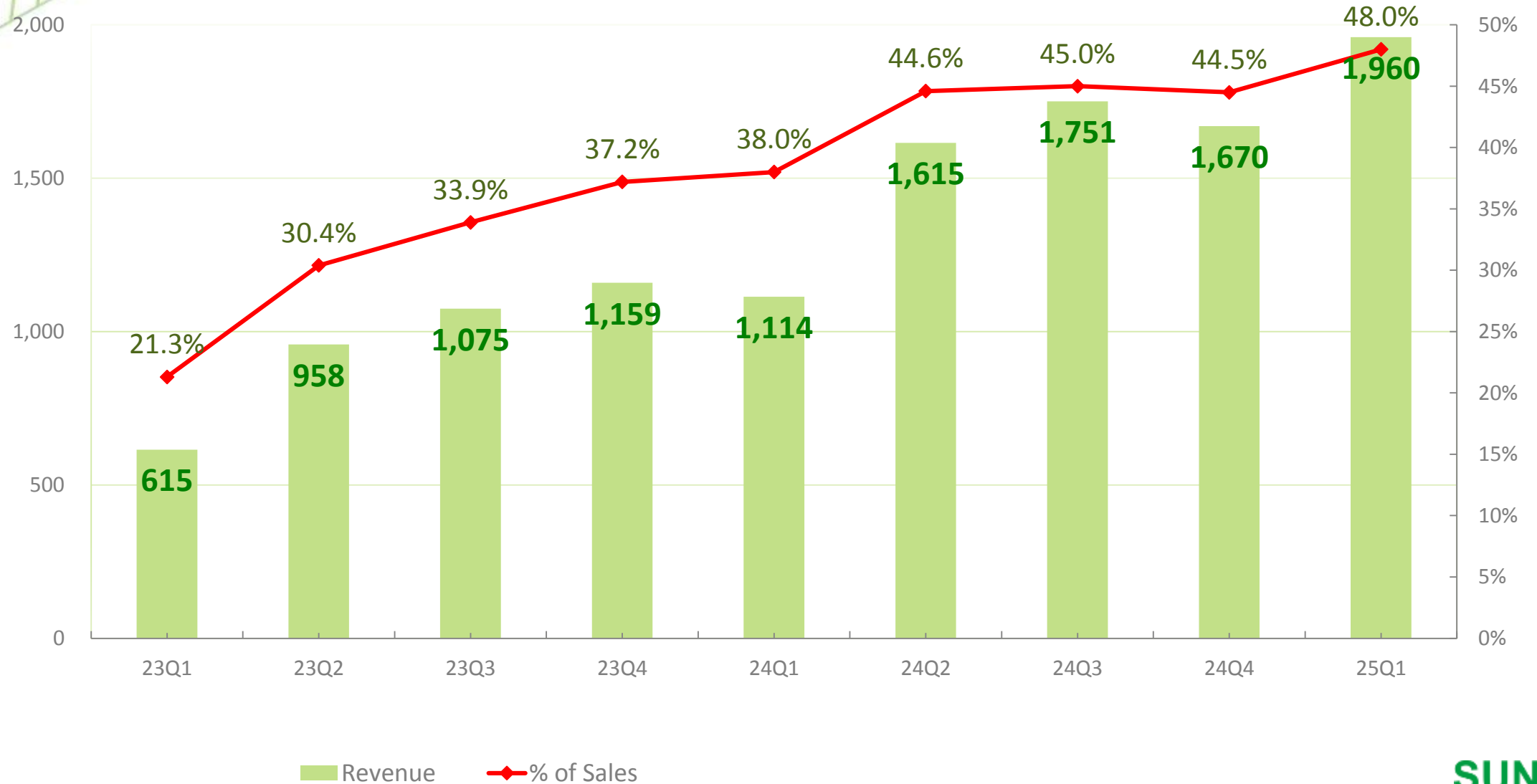
UNIT: NTD (K)



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# Quarterly Revenue in Server

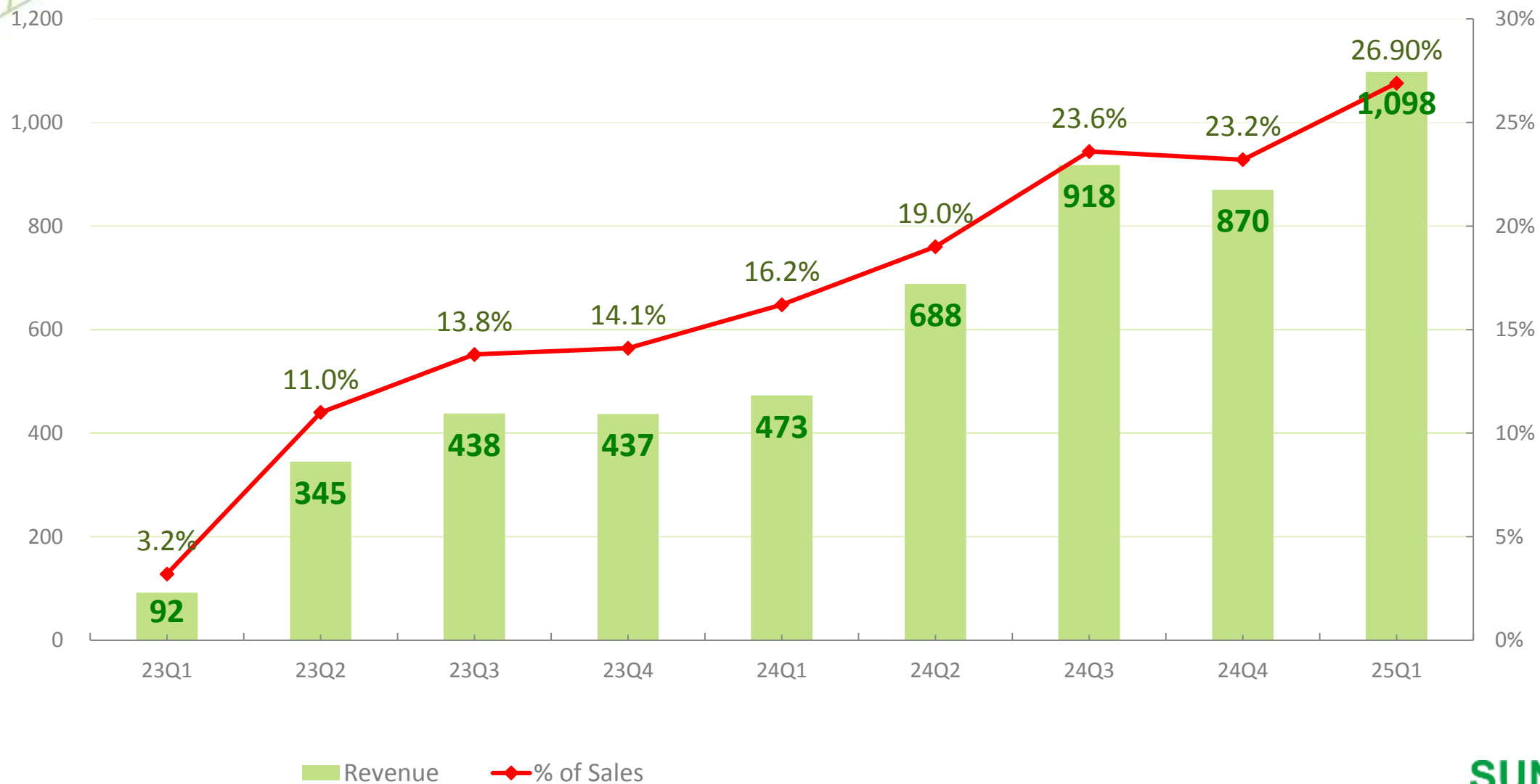
UNIT: NTD (M)



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# Quarterly Revenue in AI Server

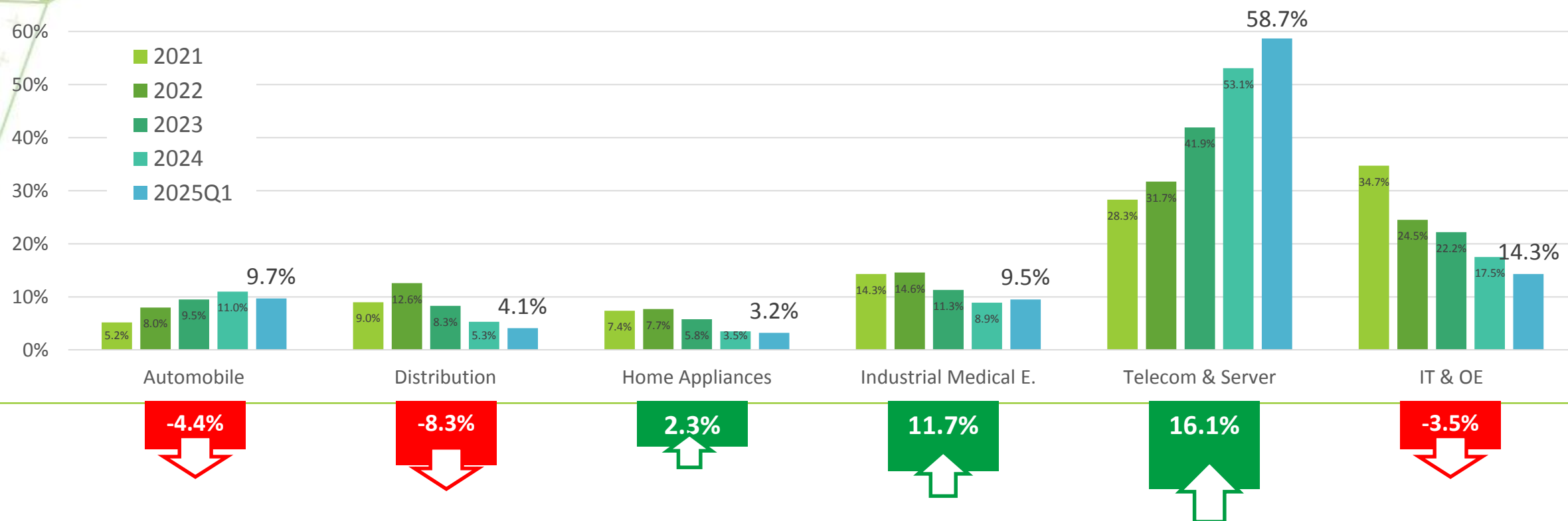
UNIT: NTD (M)



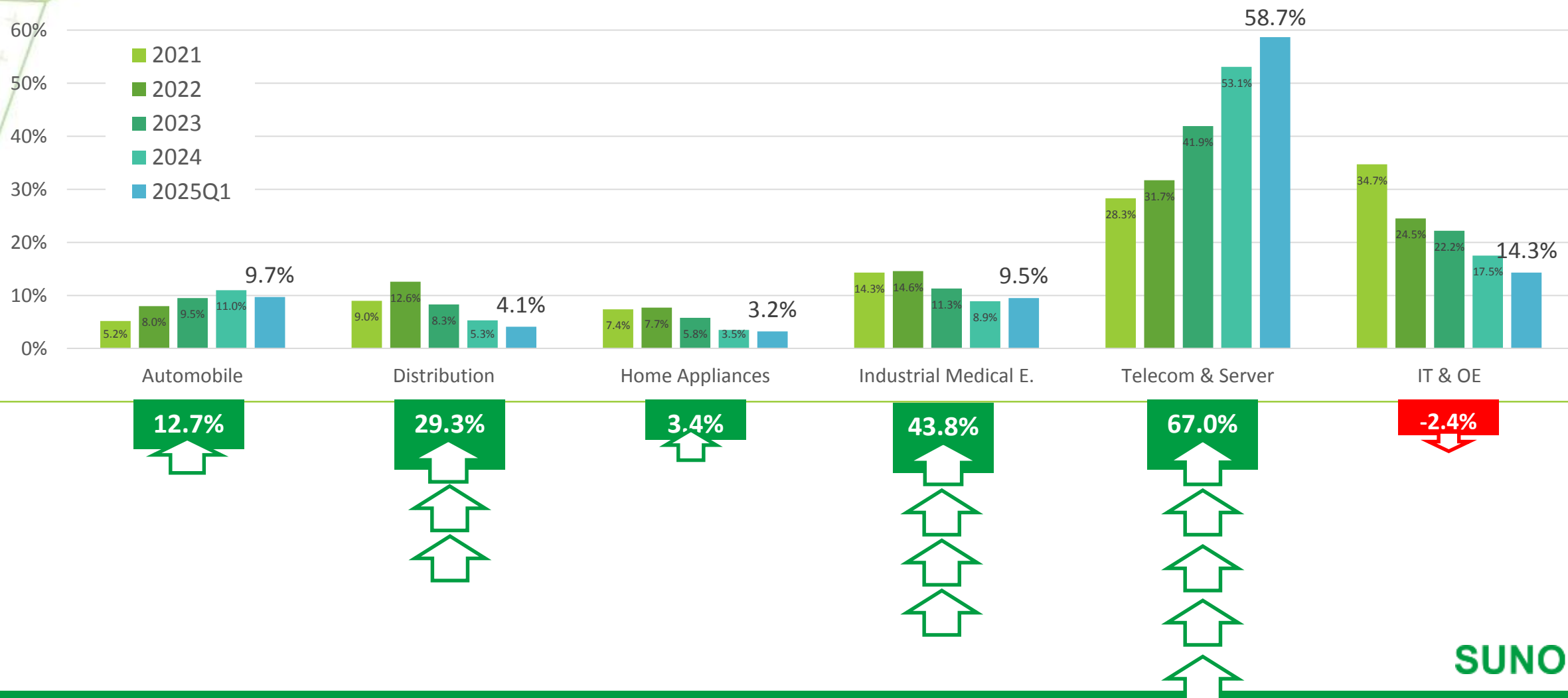
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# Products Application & QoQ Growth

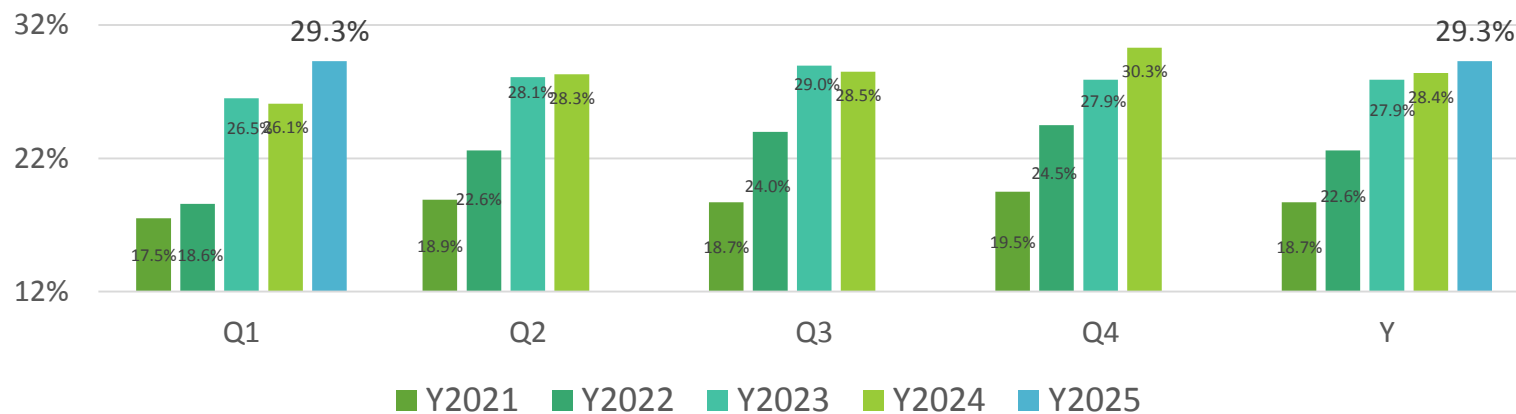


# Products Application & YoY Growth

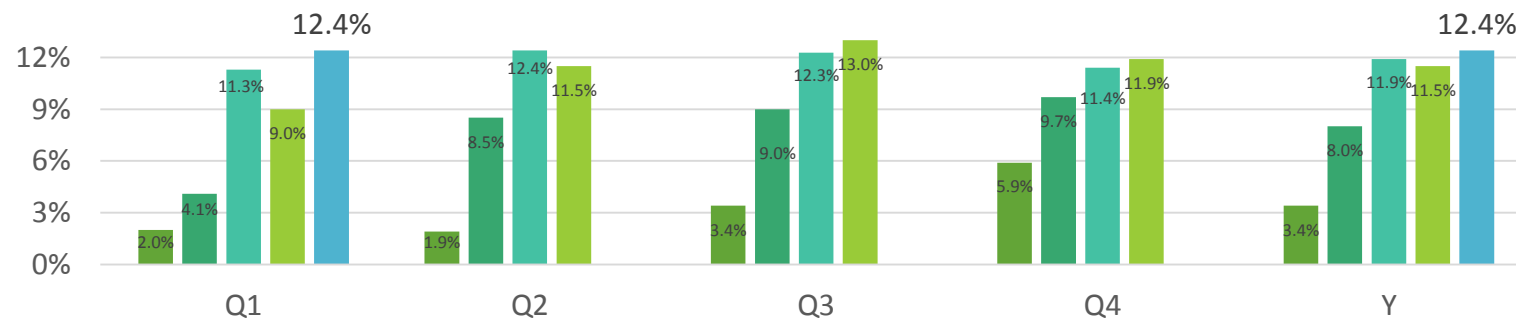


# Profit Margin

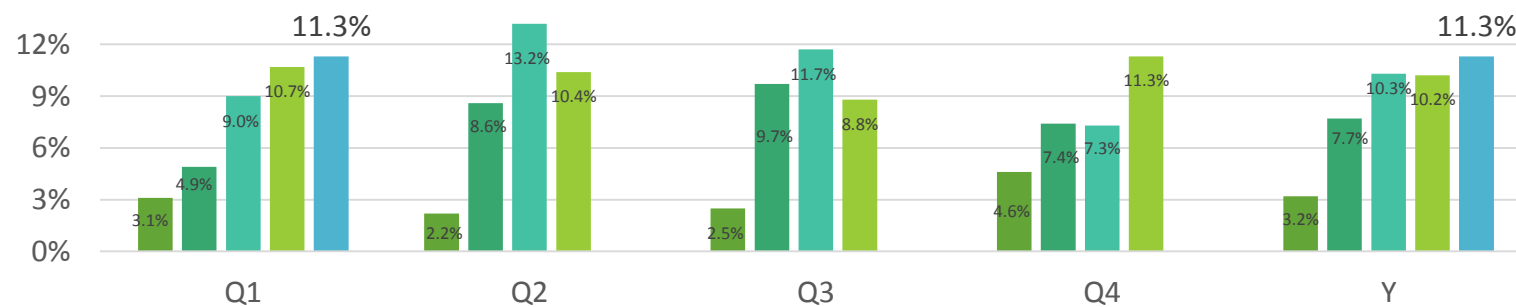
## Gross Margin



## Operating Margin

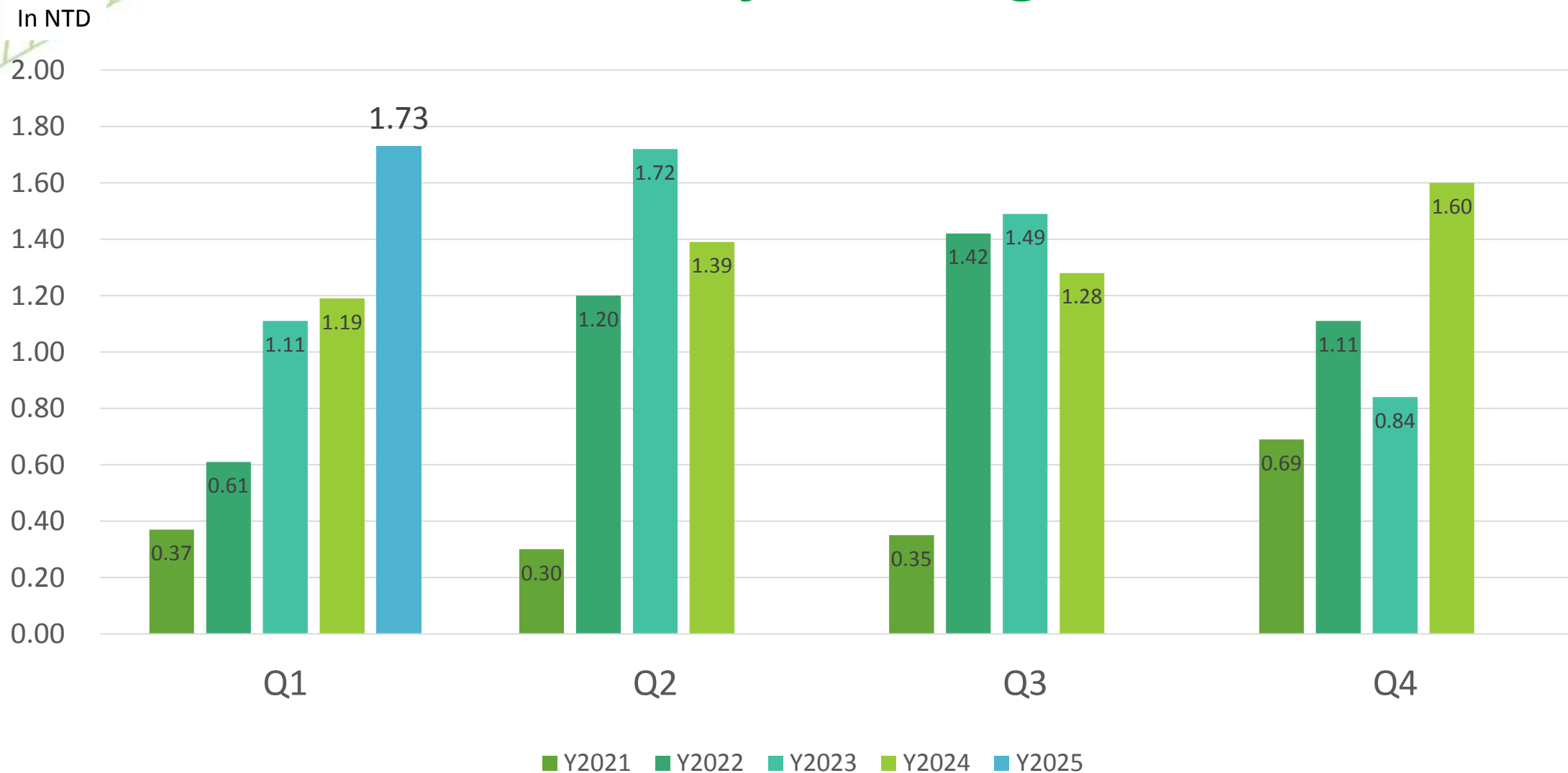


## Net Margin



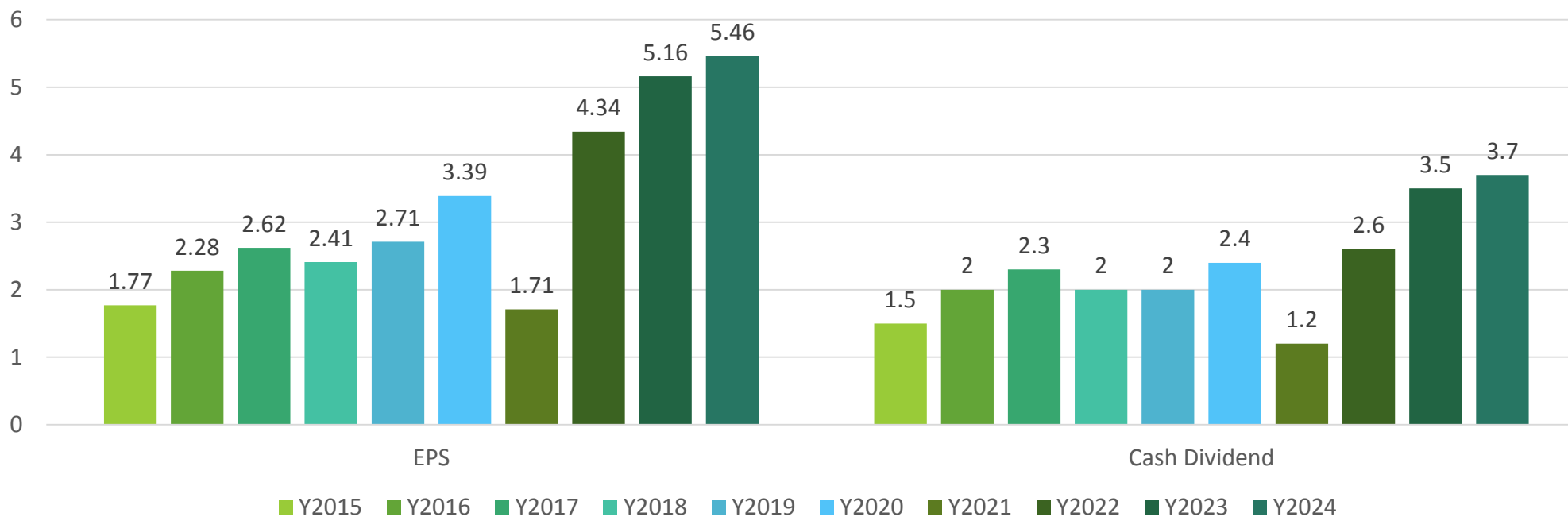


# Quarterly Earning



# Earning & Cash Dividend

UNIT: NTD



	Y2015	Y2016	Y2017	Y2018	Y2019	Y2020	Y2021	Y2022	Y2023	Y2024
Payout Ratio	85%	88%	88%	83%	74%	68%	70%	60%	68%	68%

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# Appendix I

CONSOLIDATED BALANCE SHEETS					
NT\$ M	2024.3.31	2024.12.31	2025.3.31	Change(%)	
				vs. 2024.12.31	vs. 2024.3.31
<b>TOTAL ASSETS</b>	<b>13,292</b>	<b>14,998</b>	<b>15,830</b>	<b>5.5%</b>	<b>19.1%</b>
Cash	4,450	4,678	5,279	12.8%	18.6%
A/R, N/R	3,221	4,103	4,445	8.3%	38.0%
Inventories	2,121	2,181	2,179	-0.1%	2.7%
PP&E	2,208	2,461	2,510	2.0%	13.7%
<b>TOTAL LIABILITIES</b>	<b>5,621</b>	<b>7,078</b>	<b>7,369</b>	<b>4.1%</b>	<b>31.1%</b>
Short-term loans	587	928	1,056	13.8%	79.9%
A/P	2,889	3,435	3,642	6.0%	26.1%
Long-term loans	168	478	432	-9.6%	157.1%
<b>TOTAL EQUITY</b>	<b>7,671</b>	<b>7,920</b>	<b>8,461</b>	<b>6.8%</b>	<b>10.3%</b>
Days sales outstanding	94	90	94		
Days sales of inventory	84	74	68		
Current Ratio	2.07	1.88	1.92		



# Appendix II

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME			
NT\$ M	2024 Q1	2025 Q1	成長率 YOY(%) 2025Q1
OPERATING REVENUES	3,060	4,162	36.0%
GROSS PROFIT	799	1,218	52.4%
OPERATING EXPENSES	-524	-702	34.0%
INCOME FROM OPERATIONS	275	516	87.6%
NON-OPERATING INCOME AND EXPENSES	140	64	-54.3%
INCOME BEFORE INCOME TAX	415	580	39.8%
NET INCOME attribute to owners	326	472	44.8%
EPS (NT\$)	1.19	1.73	
Gross Margin	26.1%	29.3%	
Operating Margin	9.0%	12.4%	
Net Margin(*)	10.7%	11.3%	

(\*)Net Margin=Net Income attribute to owners / Revenue



# Thanks

for Your Attention !



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