

**SUNON®** FIRST CHOICE GLOBALLY  
Cooling Solutions

# 2023 Q2 Operating Results

Sunonwealth Electric Machine Industry Co., Ltd.

2421.TW / 2421 TT

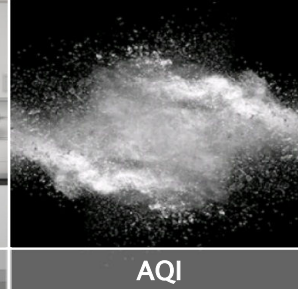
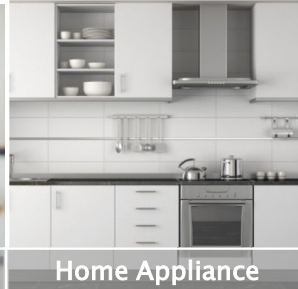
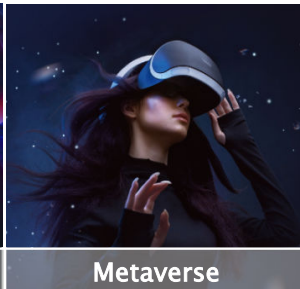
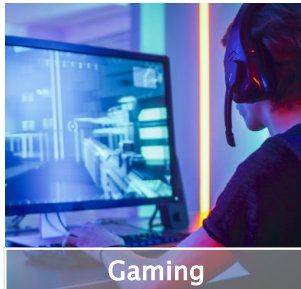
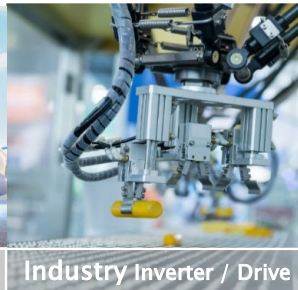
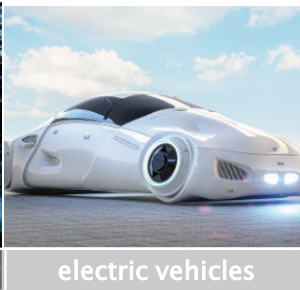
# Safe Harbor Notice

This presentation is based on the information obtained from various sources which the Company believes to be reliable. But at some point in the future, there are a variety of factors which could cause actual results to differ materially from those statements. Therefore, please refer to the information on MOPS website as the main basis if any adjustment has been made.

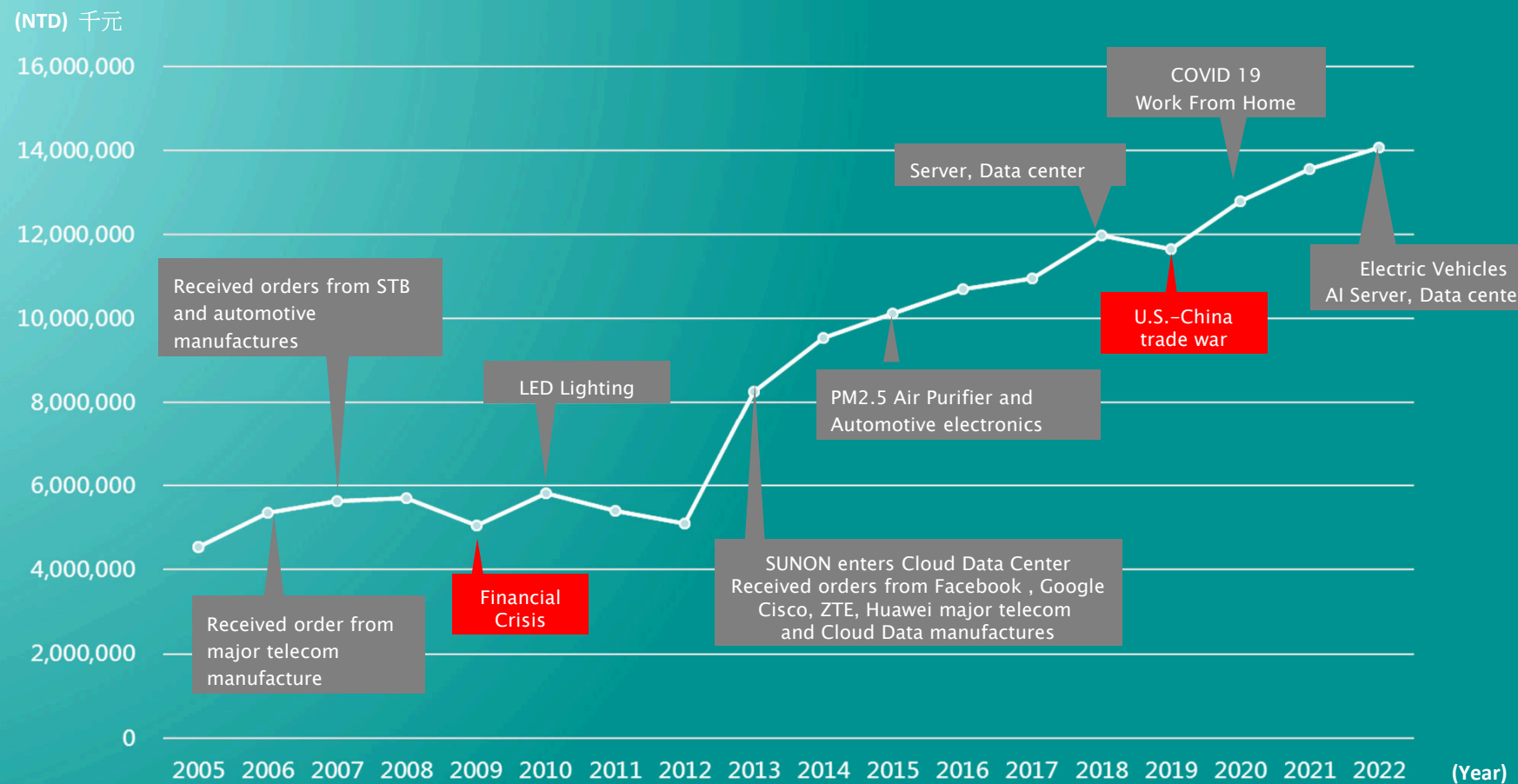
(<http://mops.twse.com.tw/mops/web/index>)

# SUNON Thermal Everywhere

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



# Growth Pattern



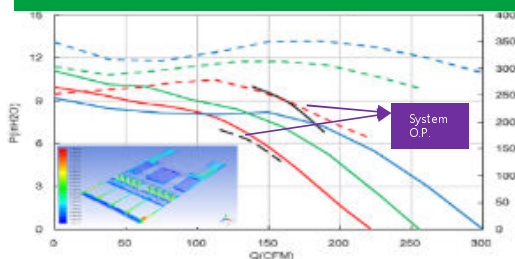
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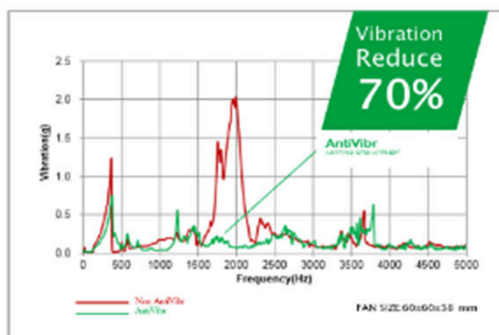
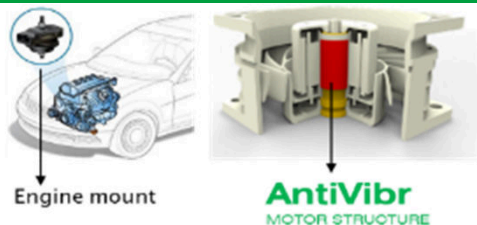
# Thermal Technology Keeps Pace With the Times

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.

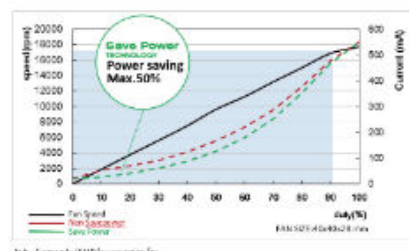
## High Fan Efficiency



## Low Vibration



## Energy Saving

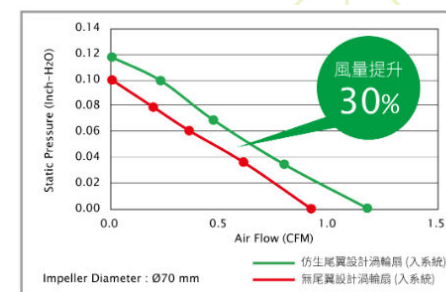
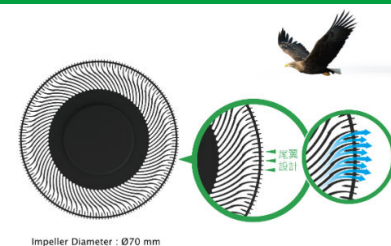


## Reliability

- 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.



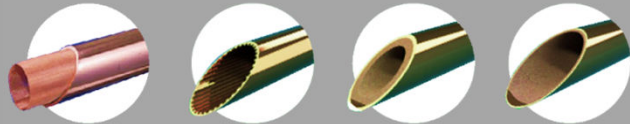
## Bionic Blade Design



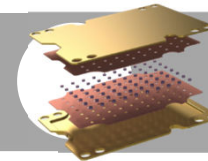
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# More cooling options

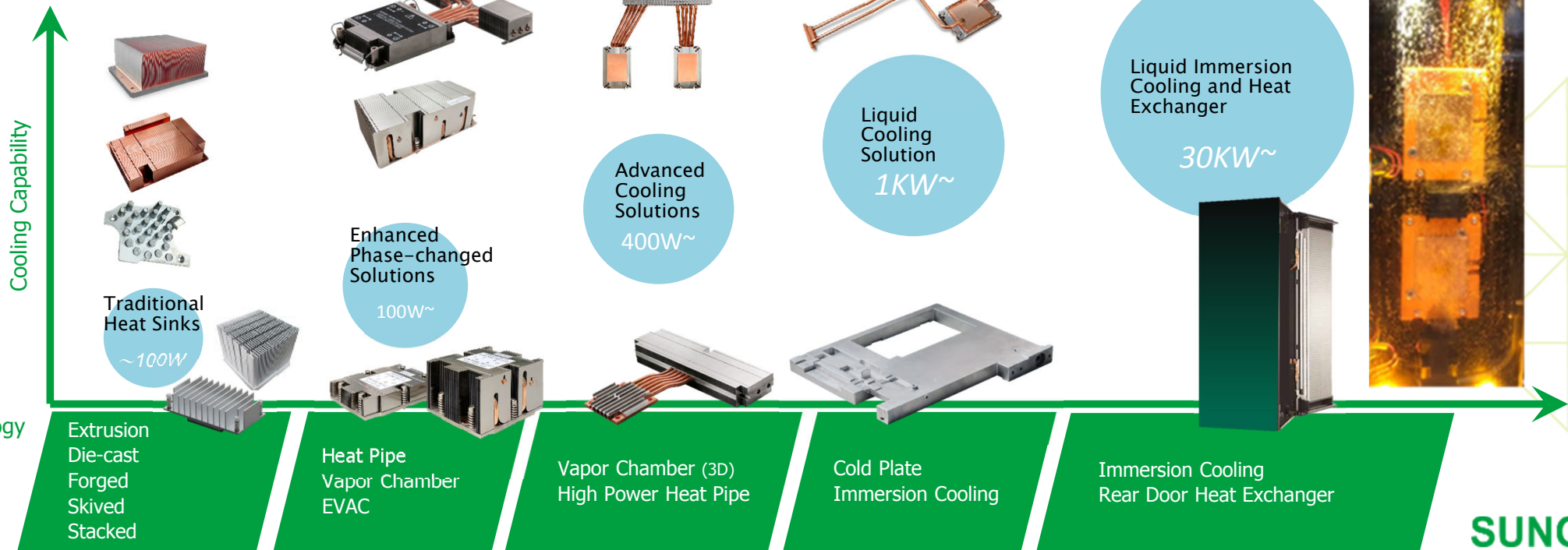
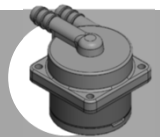
Heat Pipe



Vapor Chamber

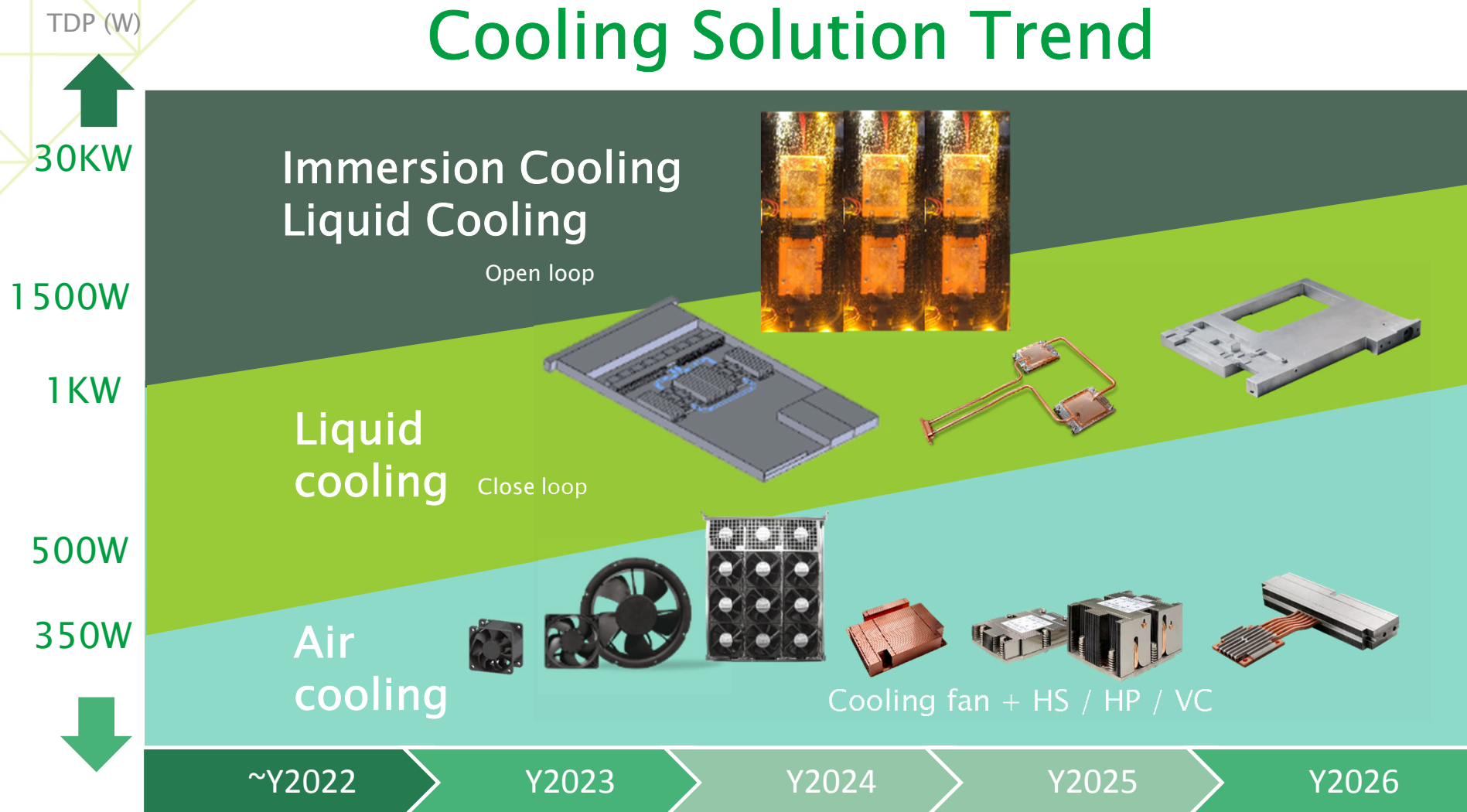


Pump



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# Cooling Solution Trend



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# AI+5G → AI X 5G → Generative AI into daily life

The development of AI technology and the 5G network draw up a blueprint for Artificial Intelligence of Things (IoT). Numerous electronics and applications have been applied to build smart connections and rapidly adopted by various industries and into our daily life, and thus thermal needs are increasingly required.



5G

SERVER

DATA  
CENTER

Vehicle  
Computing

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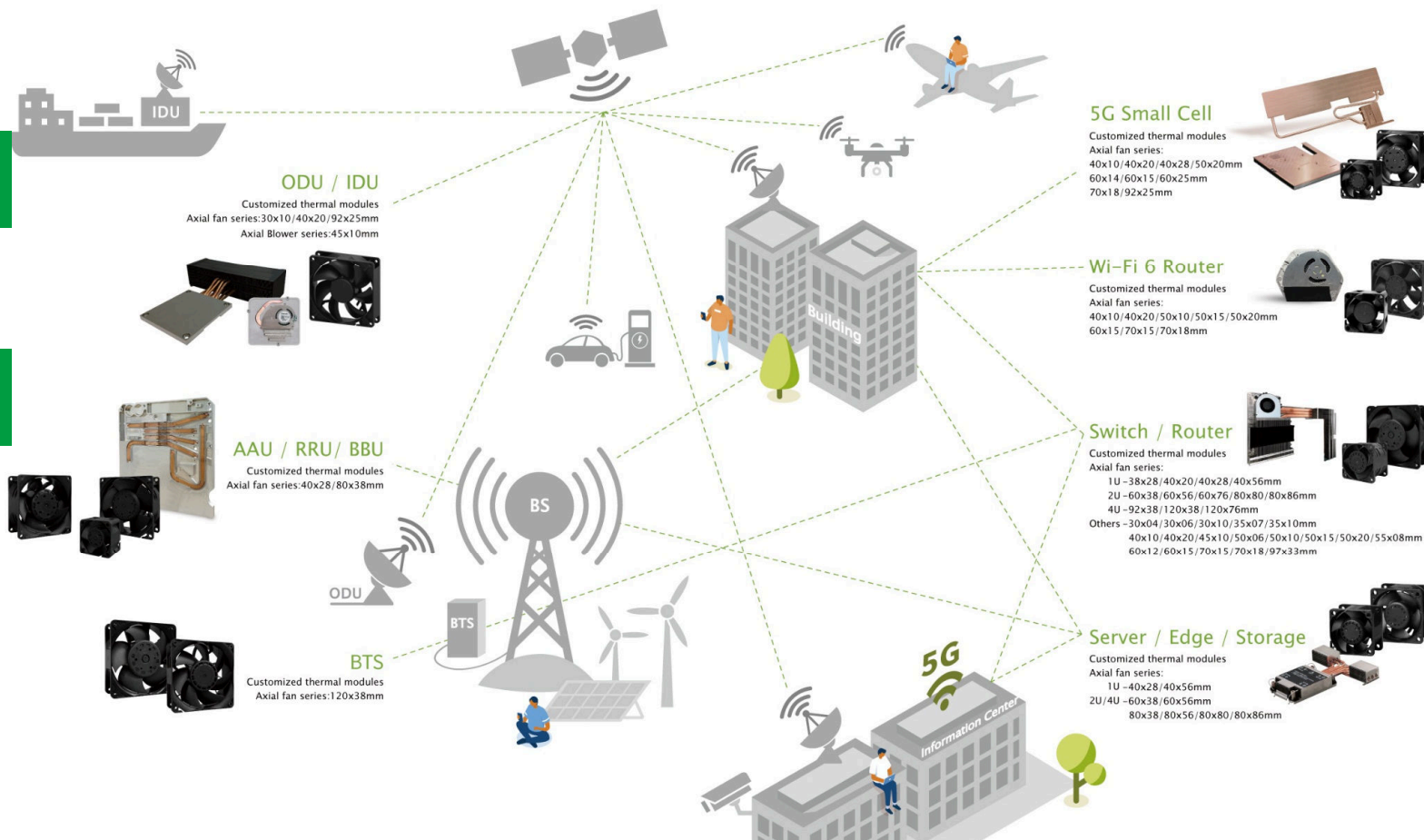
# 5G Cooling Solution

SUNON is one of the top cooling suppliers for 5G servers/AI servers, and can provide cooling fans, cooling modules and liquid cooling systems

## LEOS

Low Earth Orbit Satellite,

## Base Stations



Small Cell

Wi-Fi 6  
Router

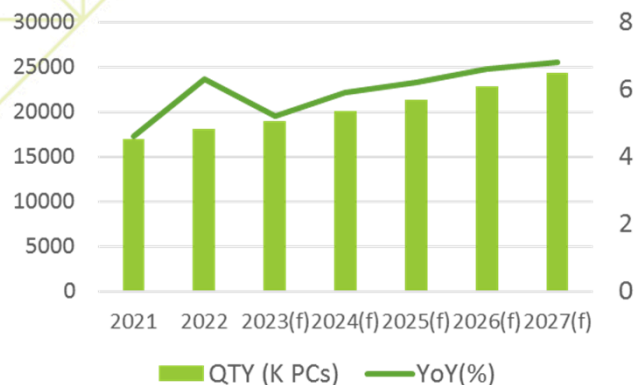
Networking  
Switch / Router

Data Center

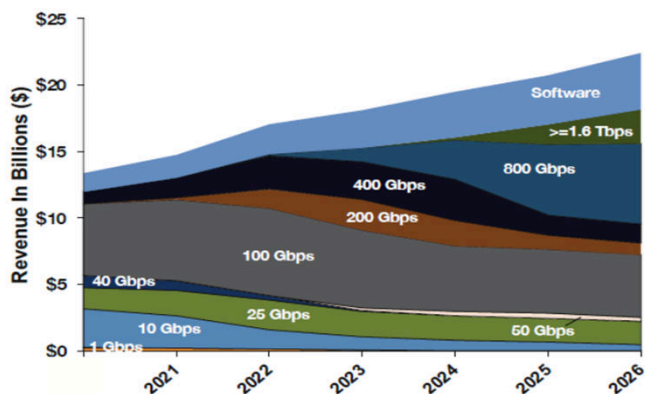
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# Server / Data Center cooling product development

Global server shipment forecast


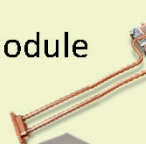



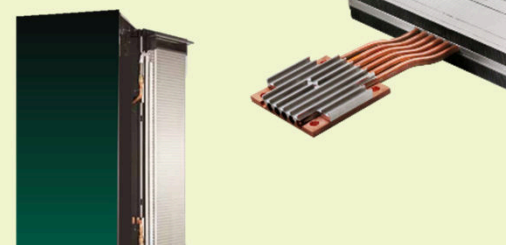


Market Potential by Speed  
Data Center Ethernet Switch Revenue (\$B)



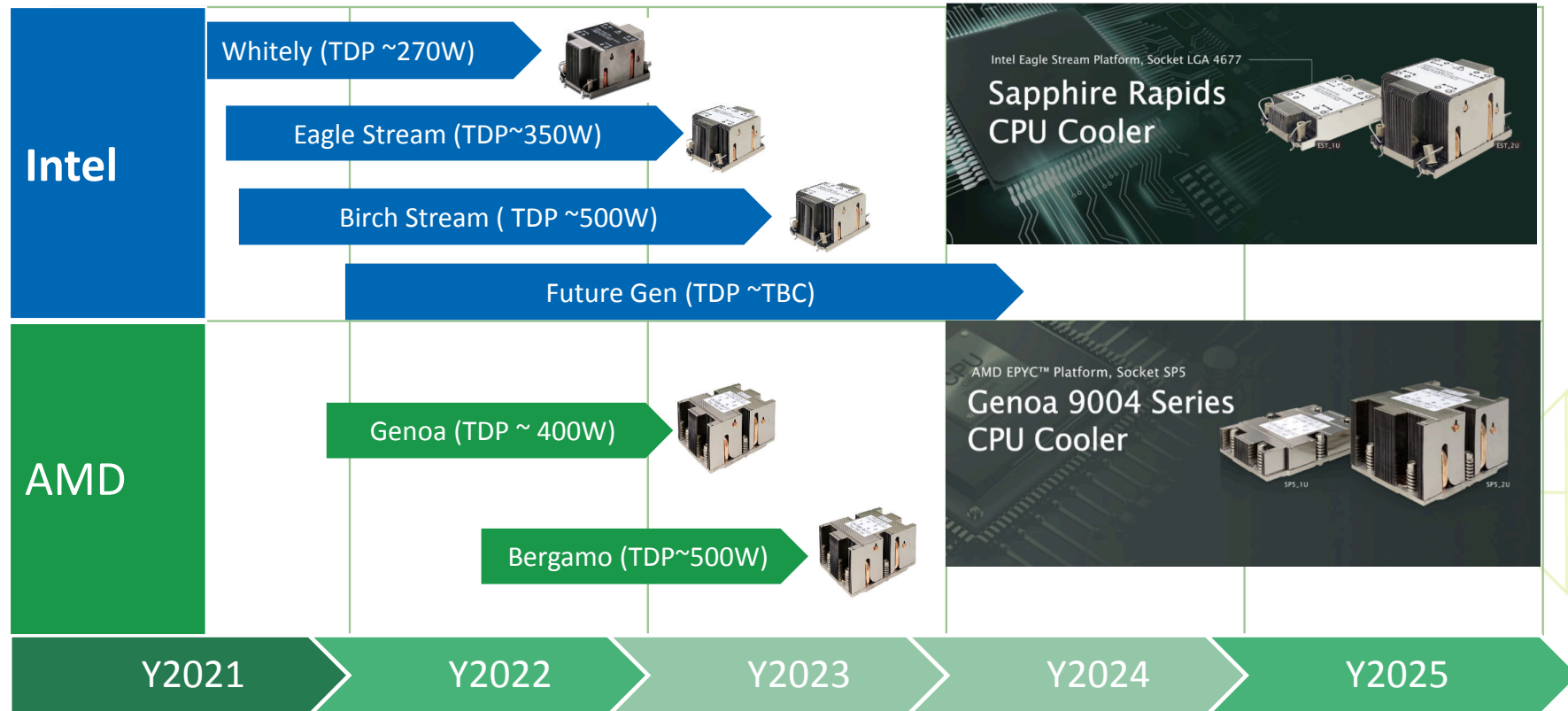
Source: Dell'Oro March 2022 - Long Term Ethernet Switch Forecast  
Note - Initial 800 Gbps shipments will not be using 800 G Ethernet MAC and will be configured mostly as 2x400 Gbps or as 8x100 Gbps

## Thermal solution

	Cooling Fan	Cooling Module
1U	40x40x28mm 40x40x56 mm 	Heat Pipe Cooling Module Vapor Chamber Cooling Module Remote Heatsink 
2U	60x60x38 mm 60x60x56 mm 60x60x76 mm 	Active Cooling Module Heat Exchanger Radiator 
4U UP	80x80x56 mm 80x80x86mm 80x80x80mm 120x120x38mm 120x120x76mm 	

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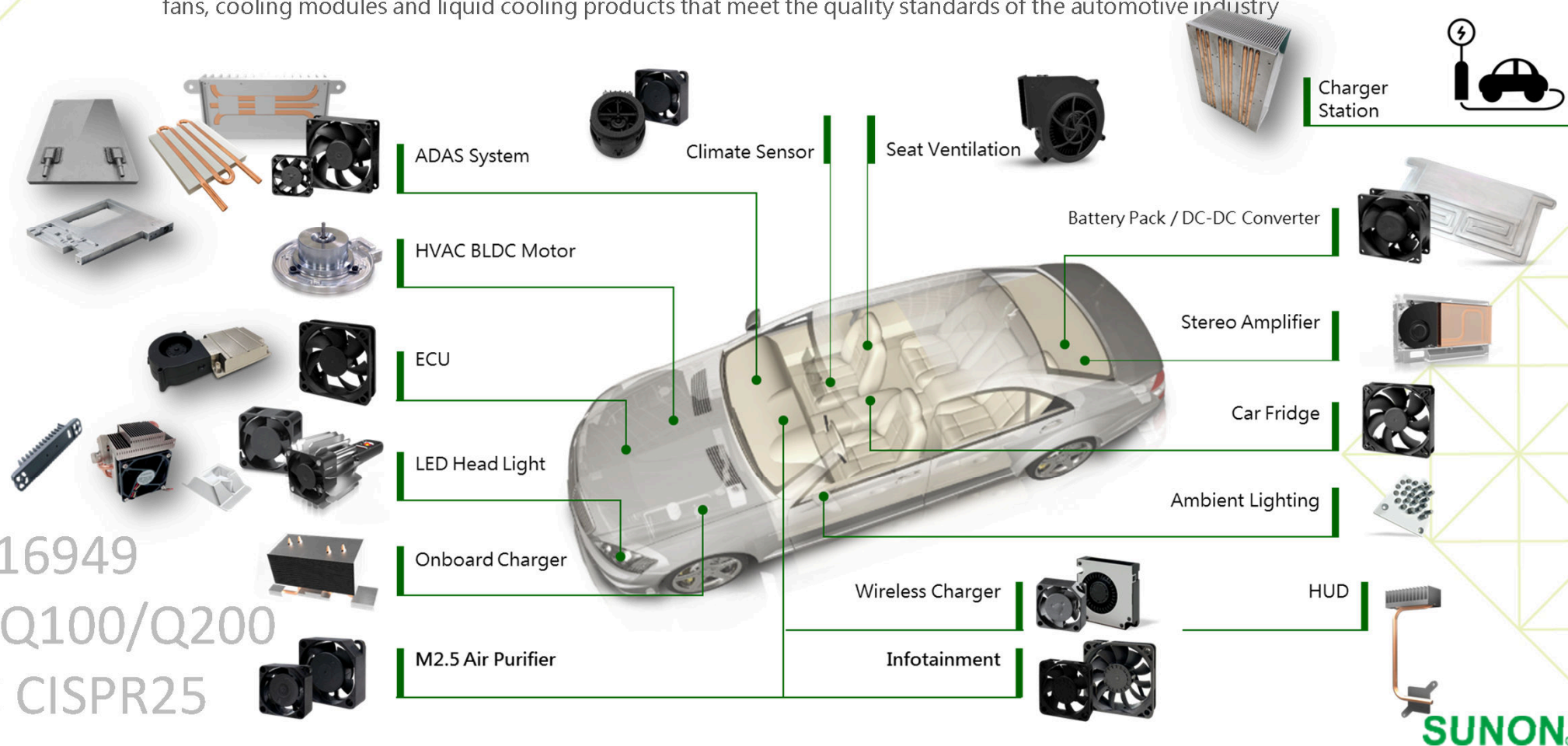
# Product Roadmap for Server CPU Cooler





# 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

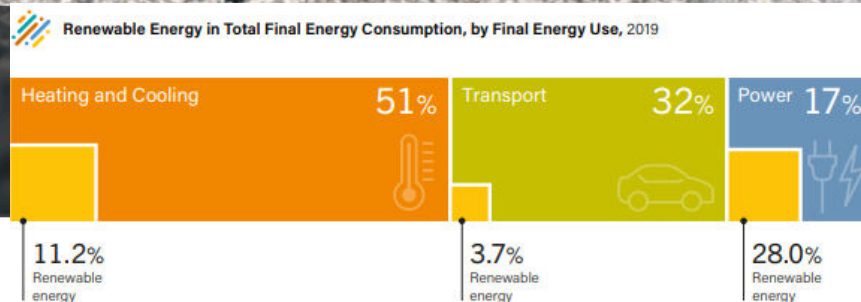
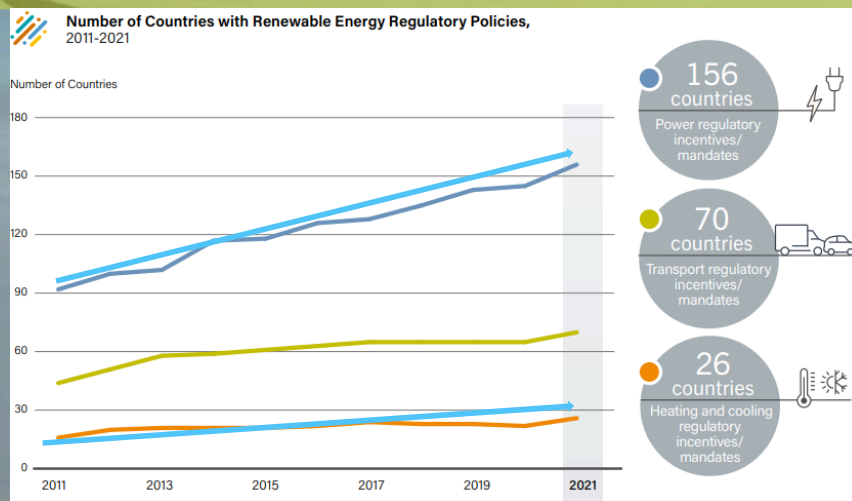


IATF16949  
AEC Q100/Q200  
EMC CISPR25

# 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

9000



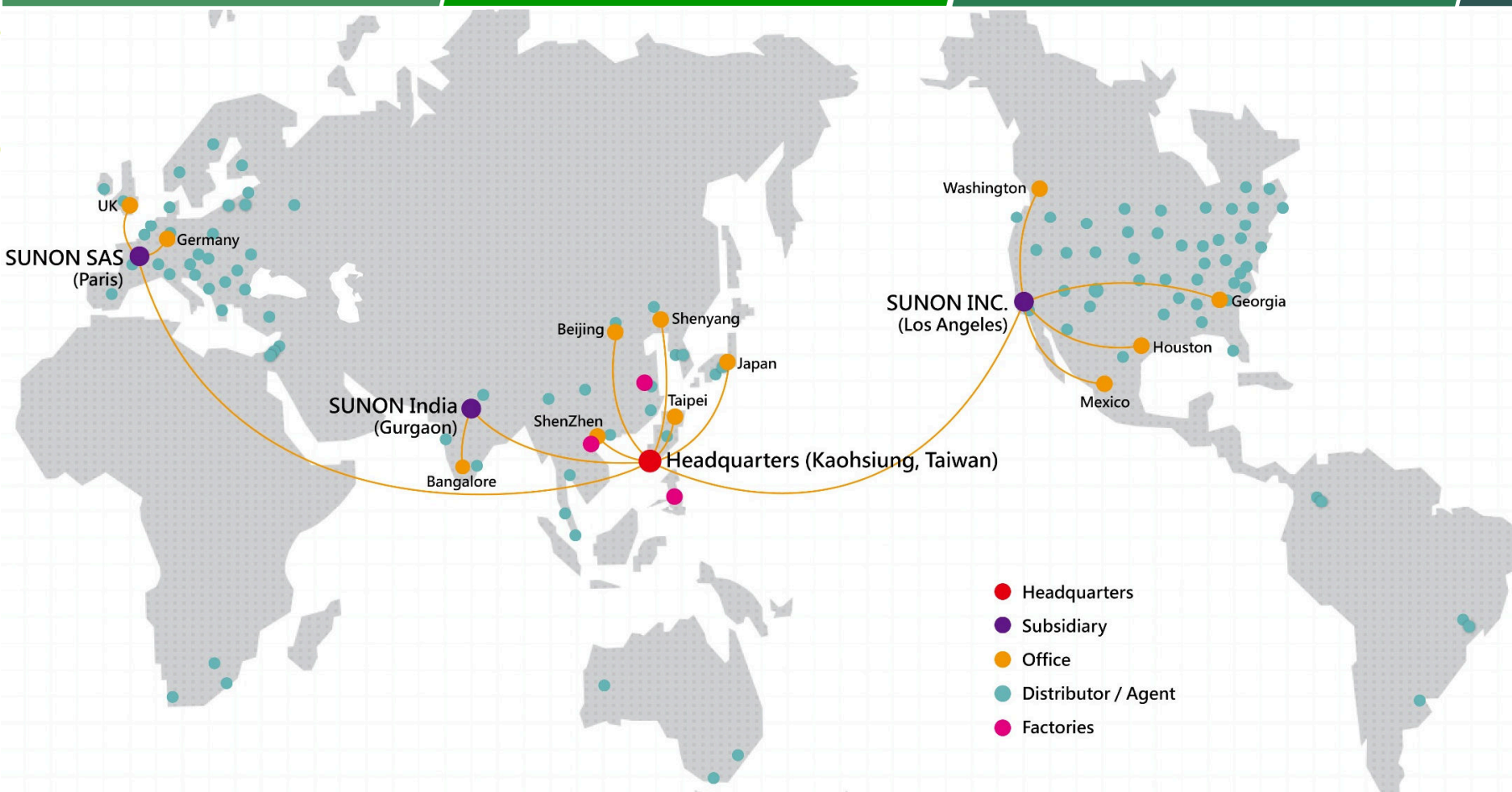
Turnover (USD)

457.94 M



Factories

5



**14**

Subsidiary & Office

**123**

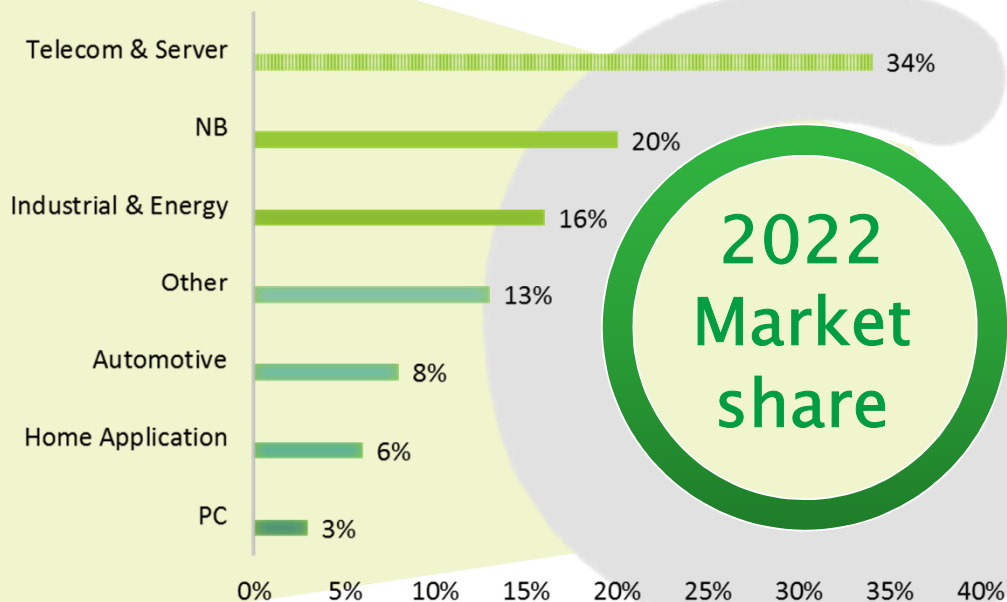
Distributor & Agent

**1000+**

Sales & Service sites

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# Products and Applications



## Fan and Motor

### Air Flow Management

SUNON concentrated on its core motor technology and accumulated various inventions and innovations in this field. We now provide various sizes of motor and fan which featuring higher flexibility, energy-efficiency, lower noise, and longer service life.

## Air / Liquid Cooling Module

### Total Thermal Solution

As a world-renowned cooling leader, we can provide customized and integrated service to our clients easily base on sophisticated experience and innovative technology.

## SUNON Products

## HVLS Fan

### Optimal air Circulation

It features an ultra slim motor and a stylish shape. The patented silent winglet design, energy efficient and high airflow fan creates thermal comfort and healthy environment.

## Air Exchanger

### Total Air Fresh Solution

It implies a demand for craftsmanship and minimalist beauty in German design and creates an all-new experience in clean air quality for the new generation of healthy homes.

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# Sufficient Capability

production bases in 2023  
Cooling Fans

19.4 M pcs/ month

Cooling Module

1.5M pcs/month



Kaohsiung, Taiwan  
1.2M pcs /month



Beihai, Guangxi I  
7.2M pcs/month



Beihai, Guangxi II  
3M pcs/month



Kunshan, Jiangsu  
5M pcs/month(FAN)  
1.5 M pcs/month(CM)



Bataan, Philippines  
3M pcs/month

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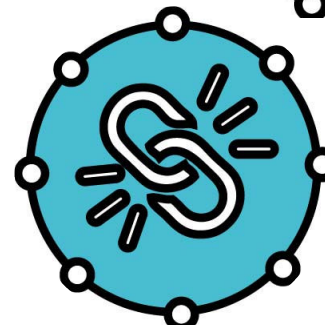
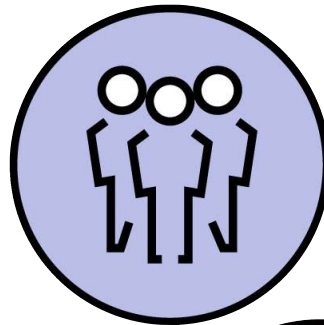
# EGS Performance Highlights

## Society

- Average employee training hours exceeded **66.8 hours** per year.
- Production bases in Taiwan and China have both passed ISO 45001 certification.
- Provided **care to 8,060 households** in the "Support and Care Campaign" from 2018 to 2022.

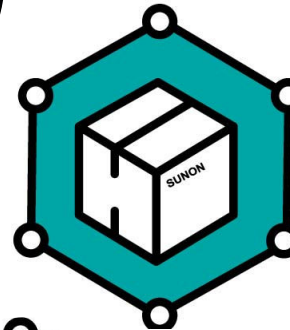
## Environment

- Implemented **greenhouse gas inventory across** the entire group, and passed third-party external verification.
- The solar power generation of the Guangxing plant has exceeded **455,000 kWh**.
- Continuously passed IECQ QC 080000 certification each year.



## Governance

- Consolidated revenue reached **14.063 billion NTD**, a 3.7% increase from 2021.
- The Company ranks among the **top 3 leading brands** in terms of market share.
- **Female directors account for 1/3** of the seats on the board of directors.
- A sustainability development committee has been established.
- **Zero cases** of corruption.



## Products

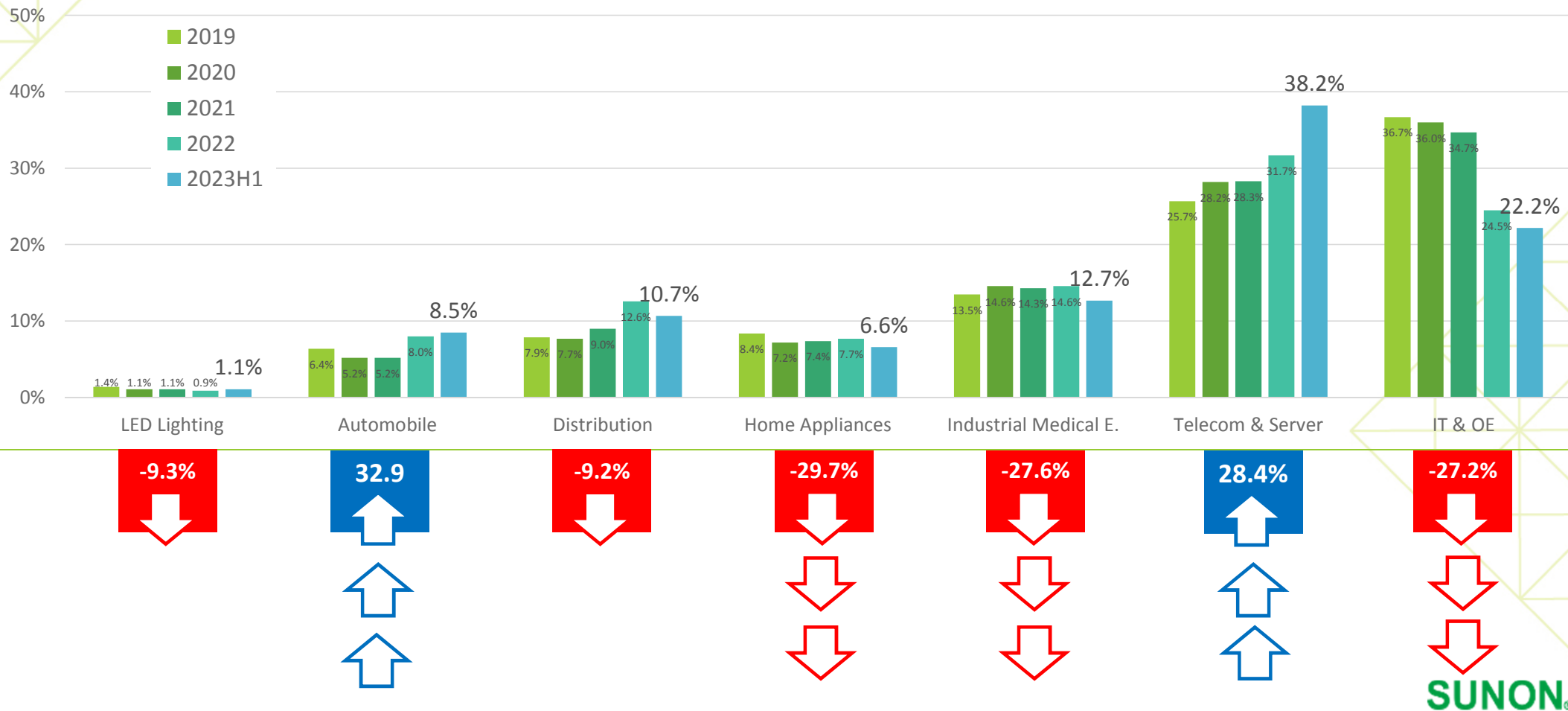
- **Saved 318 million kWh** of electricity with product R&D. Reduced GHG emissions by 160,000 MTCO2e.
- **100.0% pass** rate of hazardous substance inspection for three consecutive years from 2020 to 2022.
- Obtained **3,332 invention patents**.

## Supply Chain

- Implemented audits for new suppliers.
- Conducted annual supplier audits.
- **Local procurement rates exceed 90%.**

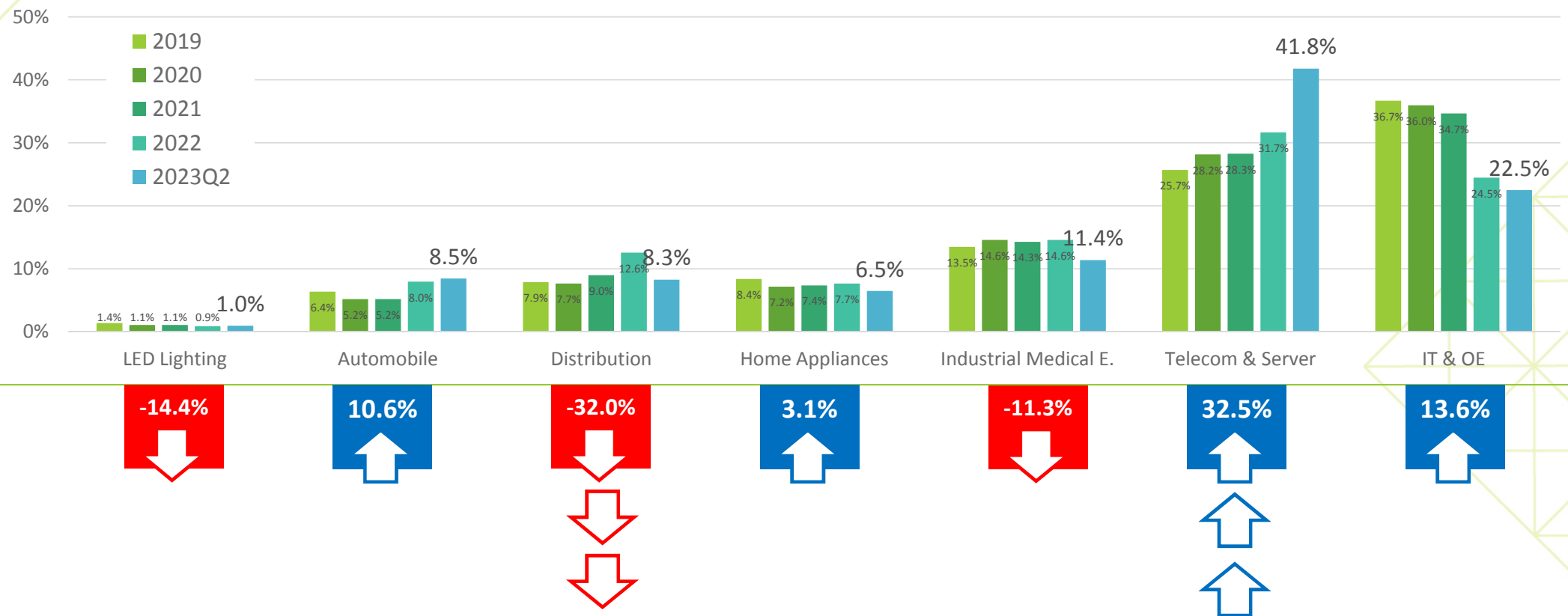
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# Products Application & YOY Growth



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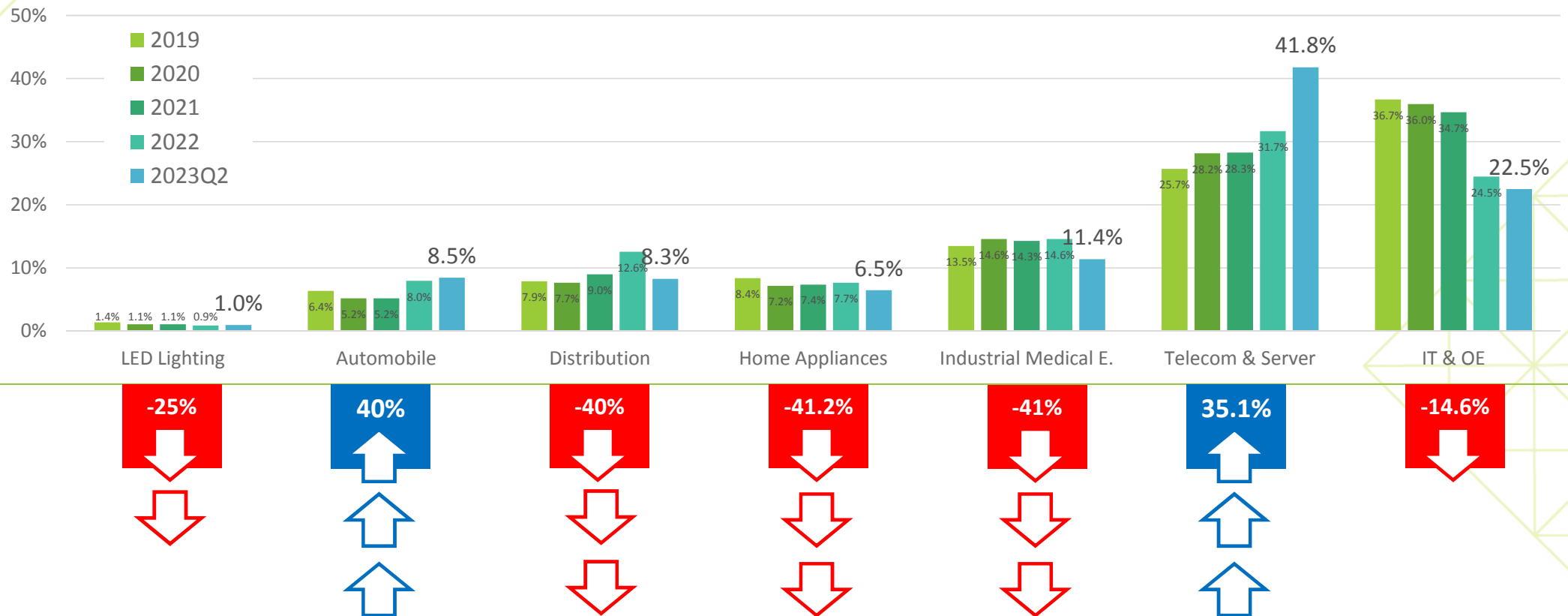
# Products Application & QoQ Growth



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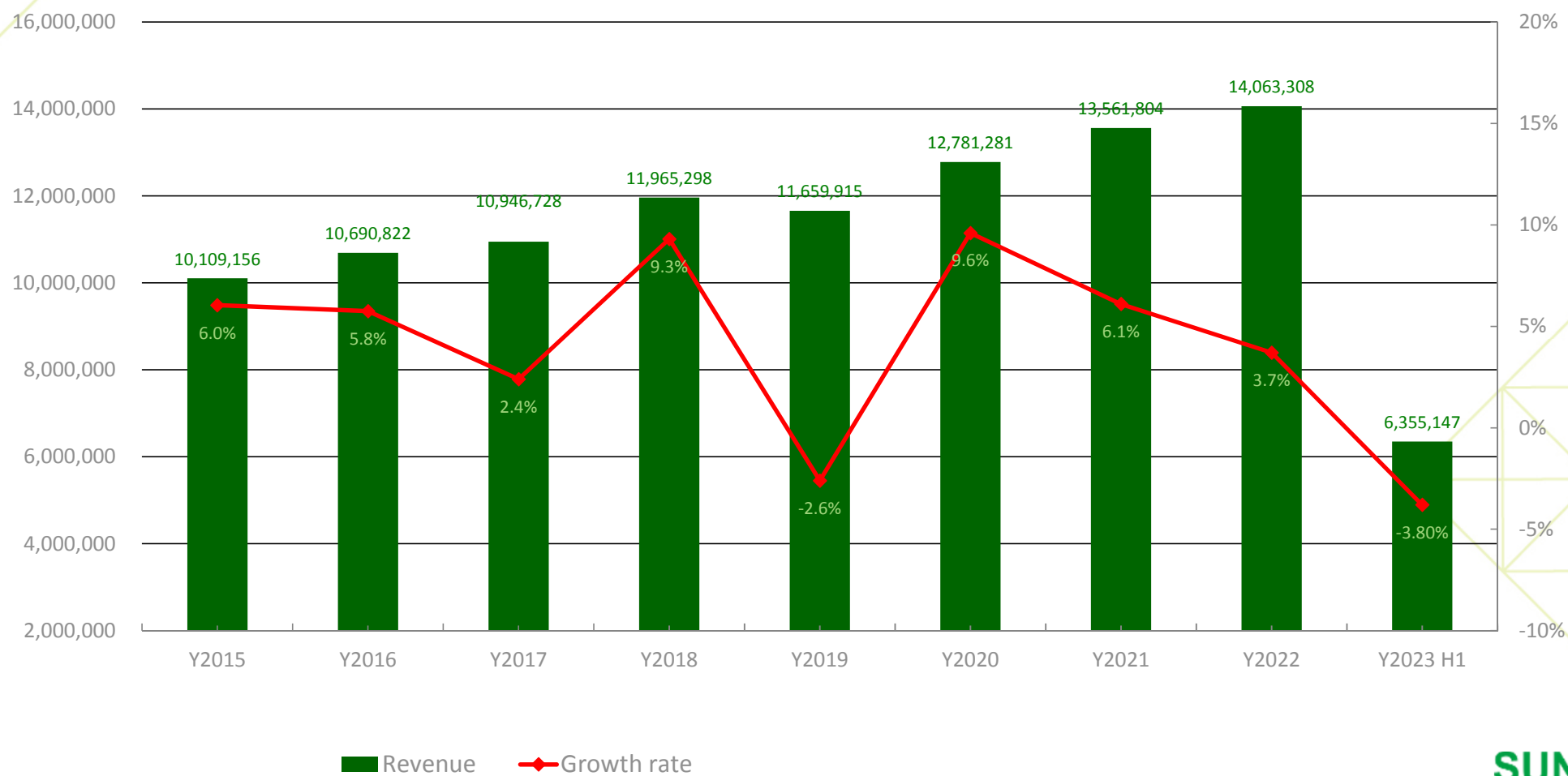
# Products Application & YoY Growth



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# Revenue Performance

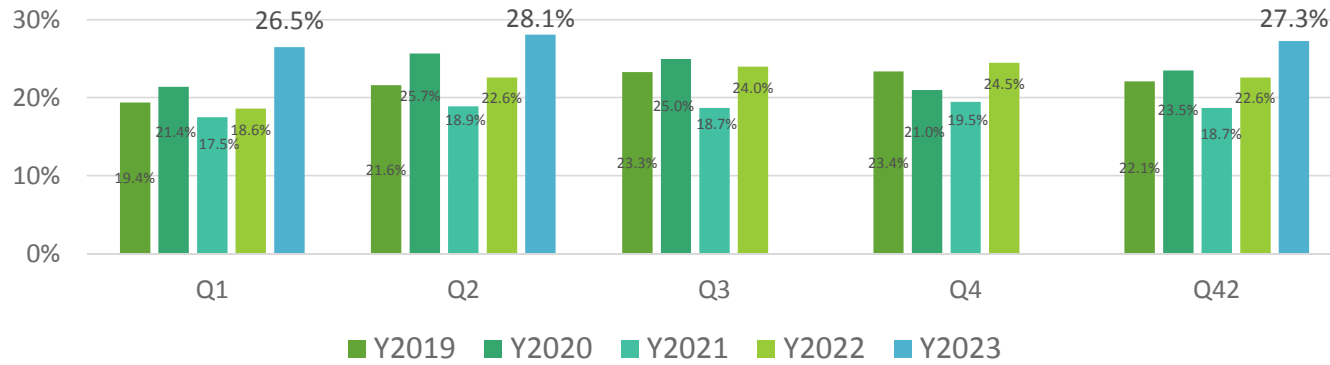
UNIT: NTD (K)



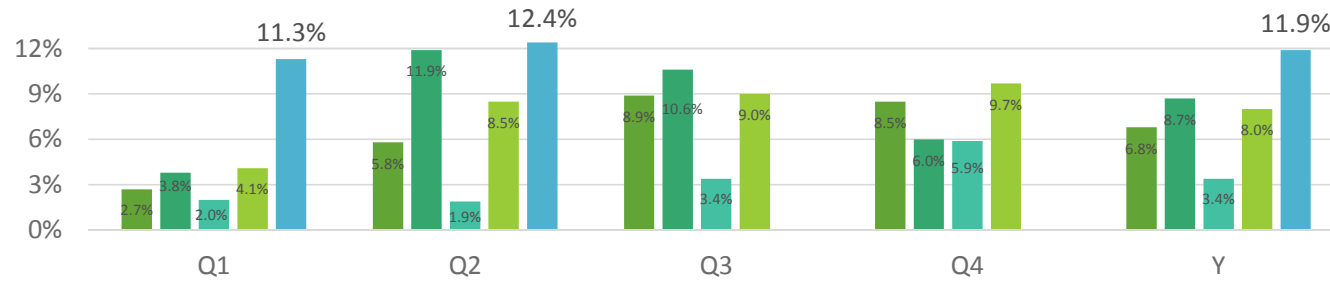
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# Profit Margin

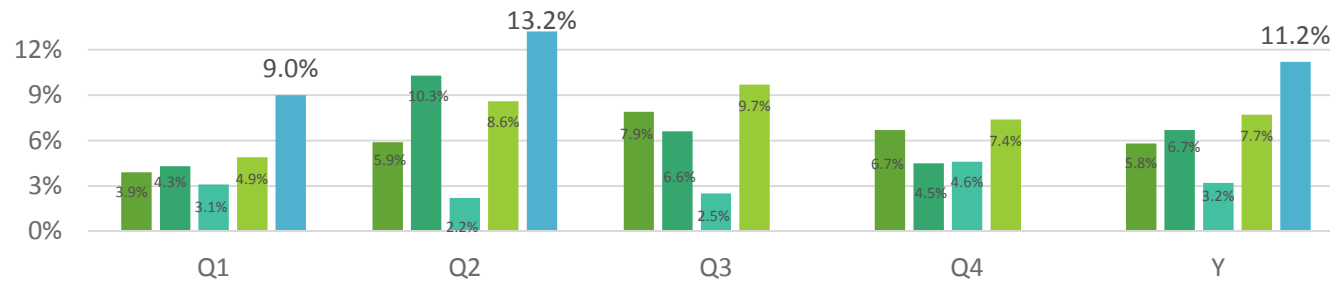
## Gross Margin



## Operating Margin



## Net Margin



# Quarterly Earning

In NTD

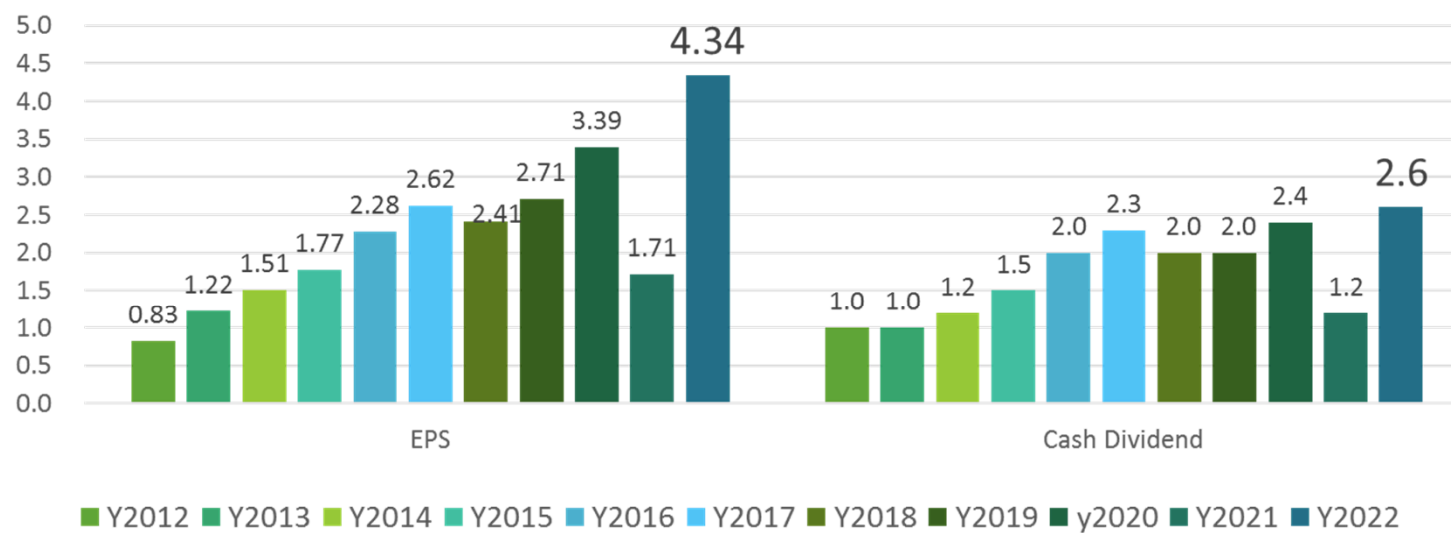


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# Earning & Cash Dividend

UNIT: NTD



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Payout R.	81.97%	79.47%	84.75%	87.72%	87.79%	82.99%	73.80%	70.80%	70.18%	60.00%

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# Appendix I

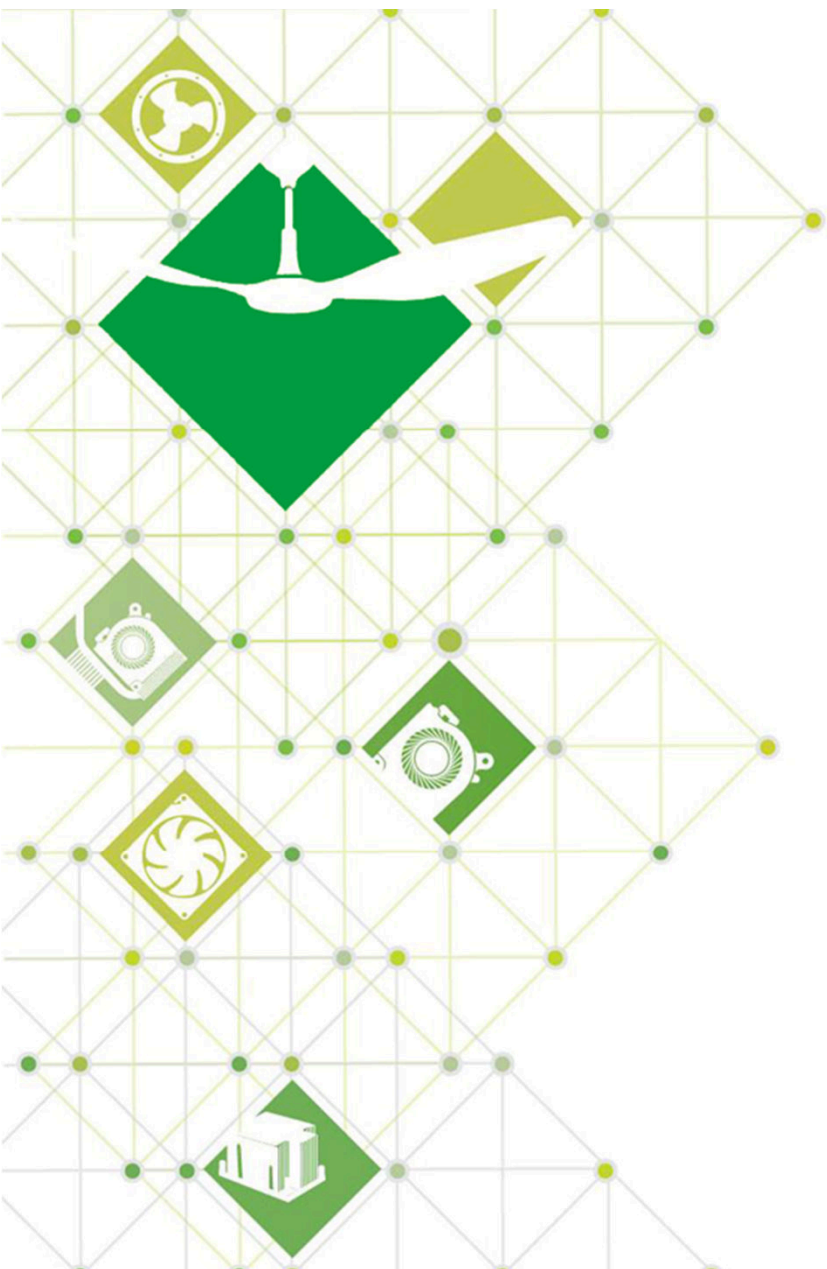
## CONSOLIDATED BALANCE SHEETS

NT\$ M	2020	2021	2022	2022 Q2	2023 Q2	成長率 YOY(%)		
						2021	2022	2023Q1
<b>TOTAL ASSETS</b>	<b>10,419</b>	<b>11,517</b>	<b>12,192</b>	<b>11,504</b>	<b>12,277</b>	<b>10.54%</b>	<b>5.86%</b>	<b>6.72%</b>
Cash	1,575	1,912	2,457	1,866	3,281	21.40%	28.50%	75.83%
A/R, N/R	3,226	3,459	3,414	3,220	3,197	7.22%	-1.30%	-0.71%
Inventories	1,752	2,508	2,651	2,792	2,210	43.15%	5.70%	-20.85%
PP&E	2,106	2,059	2,273	2,164	2,175	-2.23%	10.39%	0.51%
<b>TOTAL LIABILITIES</b>	<b>5,825</b>	<b>7,150</b>	<b>6,989</b>	<b>6,950</b>	<b>6,796</b>	<b>22.75%</b>	<b>-2.25%</b>	<b>-2.22%</b>
Short-term loans	671	1,950	1,288	1,624	776	190.61%	-33.95%	-52.22%
A/P	2,823	2,926	3,179	2,791	2,285	3.65%	8.65%	-18.13%
Long-term loans	520	524	287	578	325	0.77%	-45.23%	-43.77%
<b>TOTAL EQUITY</b>	<b>4,594</b>	<b>4,367</b>	<b>5,203</b>	<b>4,554</b>	<b>5,481</b>	<b>-4.94%</b>	<b>19.14%</b>	<b>20.36%</b>
Days sales outstanding	94	90	89	92	95			
Days sales of inventory	61	70	86	92	96			
Current Ratio	1.4984	1.3448	1.4275	1.3936	1.8577			

# Appendix II

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME								
NT\$ M	2020	2021	2022	2022 H1	2023 H1	Growth YOY(%)		
						2021	2022	2023H1
OPERATING REVENUES	12,781	13,562	14,063	6,606	6,355	6.11%	3.69%	-3.80%
GROSS PROFIT	2,998	2,536	3,171	1,368	1,737	-15.41%	25.04%	26.97%
INCOME FROM OPERATIONS	1,114	464	1,122	425	755	-58.35%	141.81%	77.65%
INCOME BEFORE INCOME TAX	1,088	585	1,426	567	903	-46.23%	143.76%	59.26%
NET INCOME attribute to owners	852	429	1,089	453	710	-49.65%	153.85%	56.73%
EPS (NT\$)	3.39	1.71	4.34	1.81	2.83			
Gross Margin	23.46%	18.70%	22.55%	20.71%	27.33%			
Operating Margin	8.72%	3.42%	7.98%	6.43%	11.88%			
Net Margin(*)	6.67%	3.16%	7.74%	6.86%	11.17%			

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



# Thanks

for Your Attention !



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