

Suprema Inc.

INVESTOR RELATIONS

First Mover in Security and Biometrics

2023 Edition

Disclaimer

Suprema's business results are subject to the K-IFRS (Korea International Financial Reporting Standards) and are reported on a consolidated basis.

The forecasts contained herein are based on the Company's current business environment and strategy. Actual results may differ as a result of various uncertainties, such as future changes of the Company's business environment and strategy.

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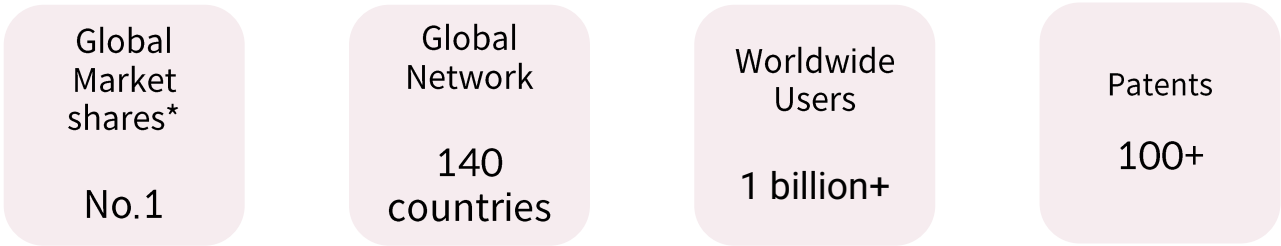
2023 INVESTOR RELATIONS

Company Overview

Global No.1 in AI-Integrated Security

Suprema is the global leader in AI-integrated security solutions with top-notch face and fingerprint recognition technology in physical security markets.

Company Name	Suprema Inc. (236200:KOSDAQ)	Capital	3.6 billion KRW
Incorporated	12/2015 (Before Spin-off, 5/2000)	Outstanding Shares	7,193,273
Executives	Jae Won Lee, Hanchul Kim	R&D Investment	12.8% of sales revenue(2022)
Employees	201 (12/2022)	Address	www.supremainc.com



* #1 in global market shares for biometric access control readers (except the Chinese market) – 2021 OMDIA

Business Division

Two divisions: Integrated Security Systems and Biometric Solutions

Integrated Security Systems: 76% of total sales

Integrated Security Systems

- **BioStar system**

Access control and time & attendance

- **Various Credentials**

Fingerprints, face, card, PIN, mobile cards, etc.



Biometric Solutions

- **BioSign Solution**

Fingerprint algorithm for smartphones

- **Biometric Module**

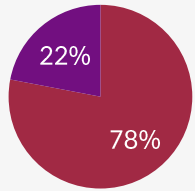
Fingerprint modules, face modules



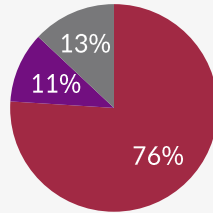
Sales Breakdown

About 78% of Suprema's total sales come from overseas from well diversified exporting regions.

Revenue Breakdown



Overseas Domestic

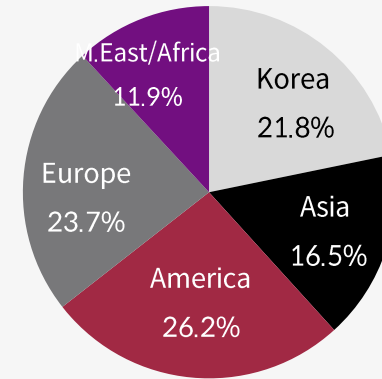


Integrated Security System
Biometric Solutions
others (Installation, Maintenance, etc.)

(Unit: Billions of KRW, consolidated)

	2022	2021	2020
Sales	89.4	72.6	52.8
Integrated Security System	67.5	55.7	42.8
Biometric Solutions	9.9	8.2	8.3
Others(Installation, Maintenance etc.)	11.9	8.7	6.7
Gross Margin	54.6	43.1	34.0
Operating Profits	17.9	16.2	10.6
Earnings before tax	19.5	23.5	9.4
Net Profit	17.9	22.7	9.4

Regional Breakdown



Korea Asia America Europe M.East/Africa

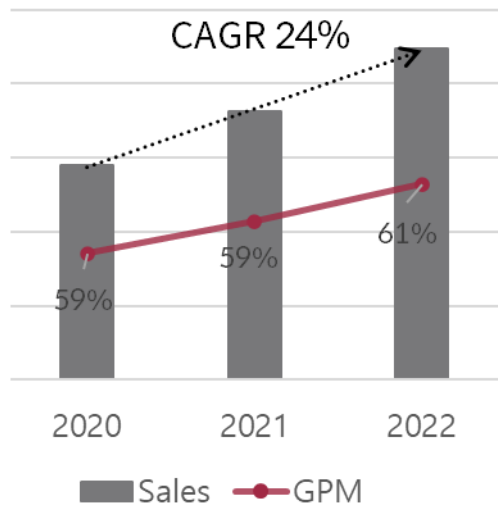
	2022	2021	2020	2019	2018
Korea	21.8%	24.4%	23.5%	14.2%	17.5%
Asia	16.5%	17.8%	18.3%	30.8%	24.0%
America	26.2%	23.1%	24.8%	22.8%	20.6%
Europe	23.7%	24.4%	22.2%	21.3%	23.7%
M.East/Africa	11.9%	10.4%	11.3%	10.8%	14.2%

Core Competitiveness

Suprema boasts 60% Gross Profit and 20% Operating Profit based on brand and technology leadership. Stable finances with 6.6% debt ratio and 994% current ratio.

01. Financial Strength

We have high profitability and financial satability with 61% GPM, 20% OPM and 6.5% debt ratio.



02. Brand Power

Suprema is a reputable brand with a 20 year history, known for high-quality products in the security industry.



03. Technical Leadership

We lead the security market with advanced technology. Face Template on Mobile, Fusion matching skill, NPU application, ISO 27001*, etc.



*ISO27001 (an international standard information protection certification)

As personal information protection laws such as the GDPR in Europe and CCPA in the US are strengthened, information protection regulations are also being strengthened for security products. Suprema is expanding its market share in advanced countries by attaining the most authoritative certifications in the field of information security, such as ISO 27001.

2023 INVESTOR RELATIONS

Business Status

Integrated Security System

Complete hardware and software solutions for access control and workforce management. Offers a full suite of credentials from biometrics to mobile cards.

Hardware



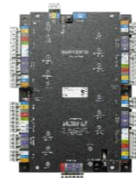
Face



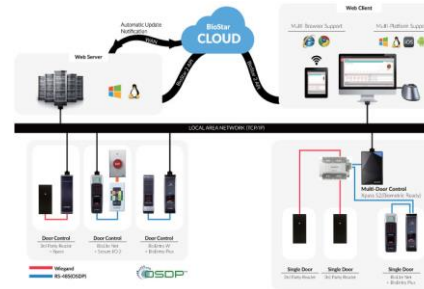
Fingerprint
<Readers>



RFID



Access
Controller
<Panel>



Software Platform



Access Control S/W
Time & Attendance S/W



Mobile App
Mobile Access Card

Credentials



Fingerprint



Face



Card



PIN

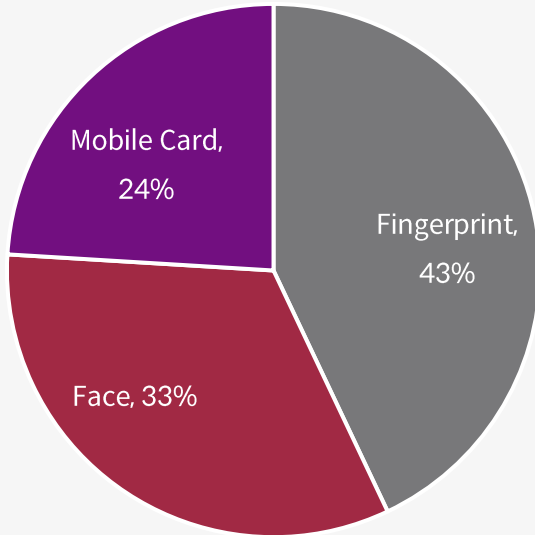


Mobile Access Card

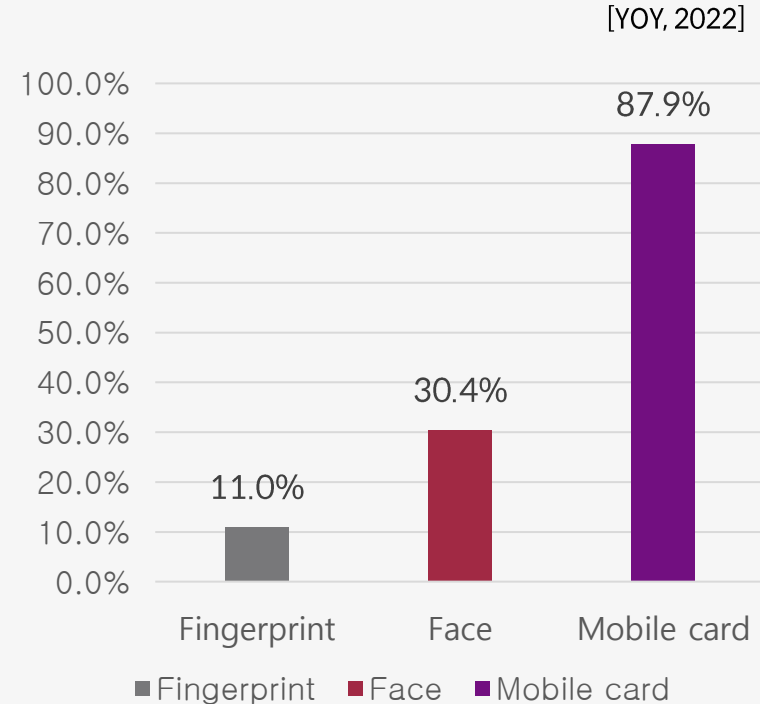
Sales by Credentials

Rapid adoption of contactless authentication like facial recognition and mobile cards following the pandemic, replacing traditionally popular fingerprints.

■ Sales by Credential Type

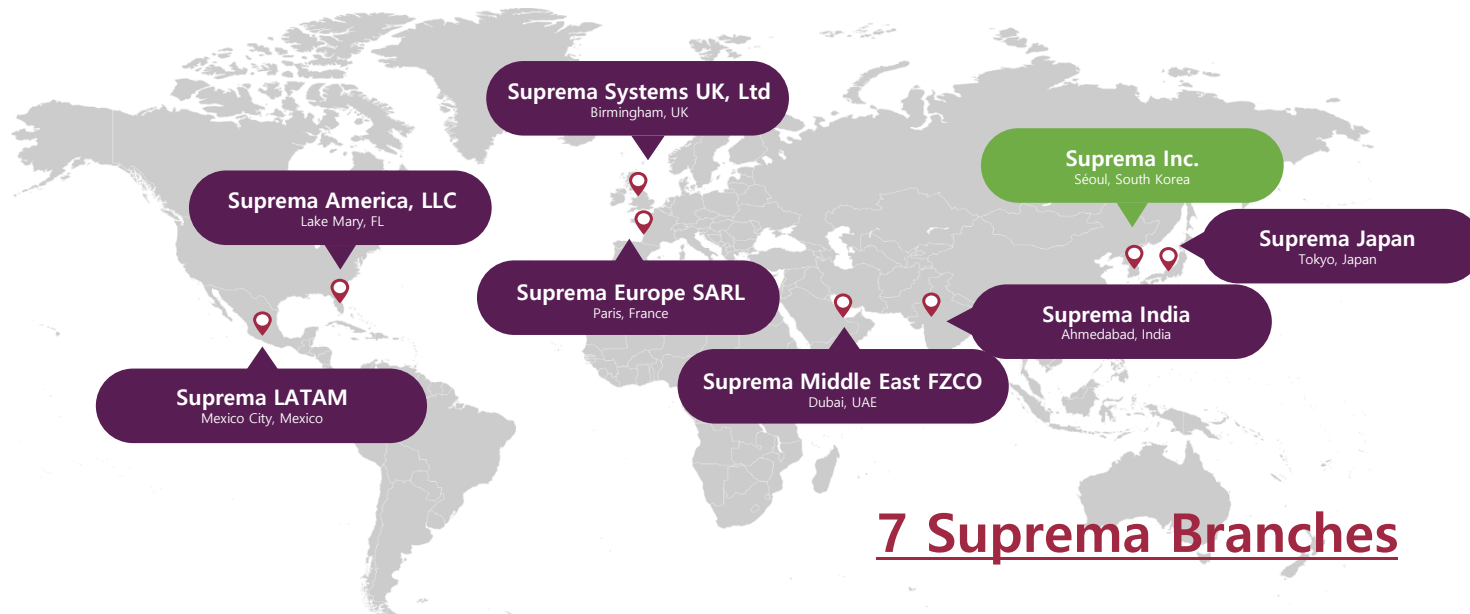


■ Sales Growth Rate by Credential Type



Global Business

Suprema's global business is expanding through 217 partners and 7 branches worldwide, especially in Europe and America.



7 Suprema Branches

Key References : Data Centers

Suprema has the biggest share of a rapidly growing global data center security markets. World's No.1 and No.2 data center companies chose Suprema's technology.



EQUINIX



DIGITAL REALTY



Key References

Suprema products are selected to protect critical areas of public and private enterprises including global Big Techs and national oil factories.

GLOBAL SNS ENTERPRISE



ADNOC (UAE Petrol Co.)



KNPC (Kuwait Petrol Co.)



Italian Embassy, Bolivia



NGCP (Philippines Electricity Generator)



BOSCH, Turkey

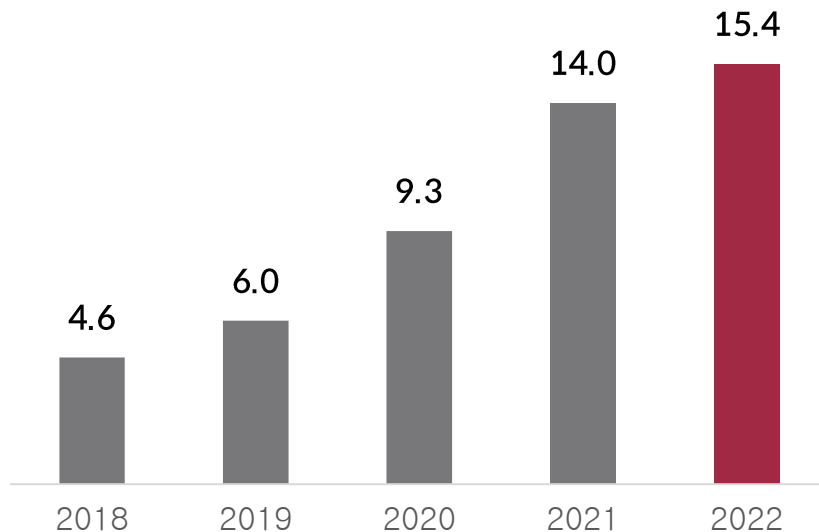


Domestic Business

Domestic business represents CAGR of 35% for five years, led by the growth of public procurement and system integration projects.

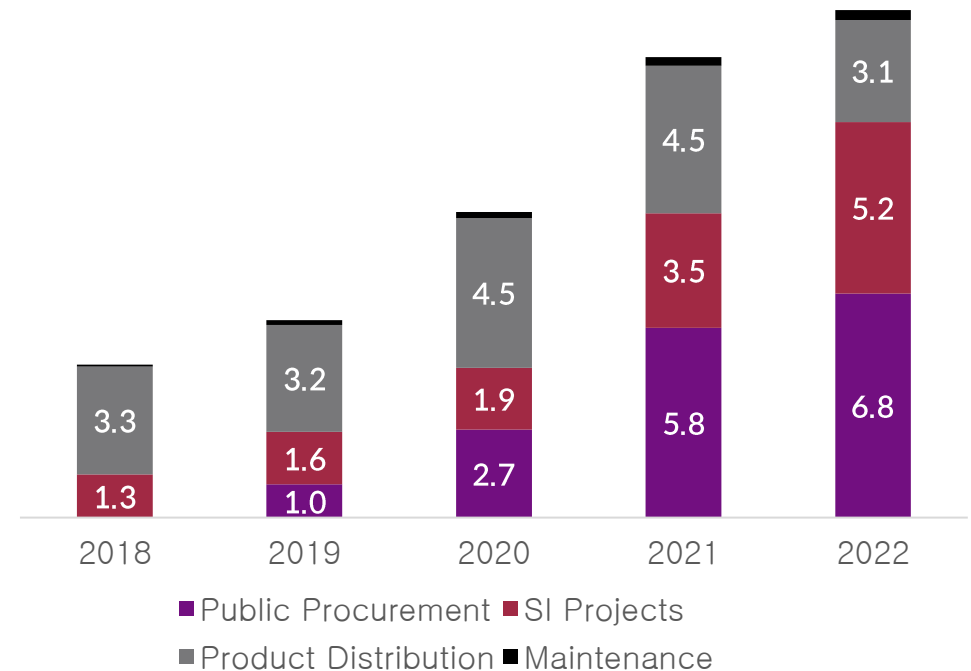
Domestic Sales of Integrated Security Systems

(Units: Billions of KRW)



Sales Breakdown

(Units: Billions of KRW)



Public Procurement Business

Suprema dominates domestic public procurement market with 30% market share in access control.

Korea South East Power Co., Ltd.



Osong BioHealth Science Technopolis



Sejong Government Complex



Korea Western Power Co., Ltd.



System Integration Projects

Domestic business has evolved from simple product distribution to awarding enterprise-scale system integration projects.

Hyundai Motor Namyang R&D Center



Kakao Pango Alpha Dome Headquarters



Samsung Engineering Plant

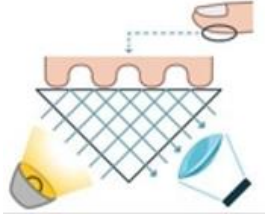
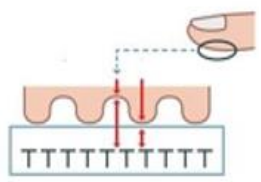



Kumho Petrochemical



BioSign (Fingerprint algorithm for smartphones)

Suprema's unrivaled FOD (Fingerprint on Display) technology led to exclusively supply to Qualcomm's ultrasonic fingerprint sensor.

Optical Sensor	Capacitive Sensor	Ultrasonic Sensor
		
<p>Collect fingerprint ridges based on the shadows of reflected light by shooting light sources.</p>	<p>Measure the difference in capacitance based on fingerprint ridges.</p>	<p>The method of fingerprint recognition involves emitting ultrasonic waves, measuring the time it takes for them to return, and measuring the height difference of the fingerprint.</p>
<p>Under display</p>	<p>On display</p>	<p>Under display</p>

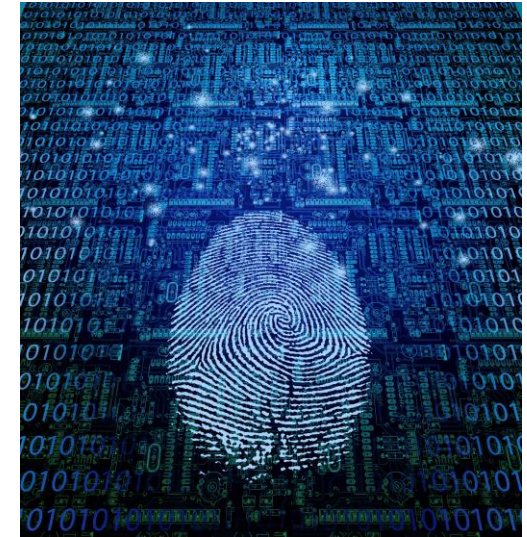
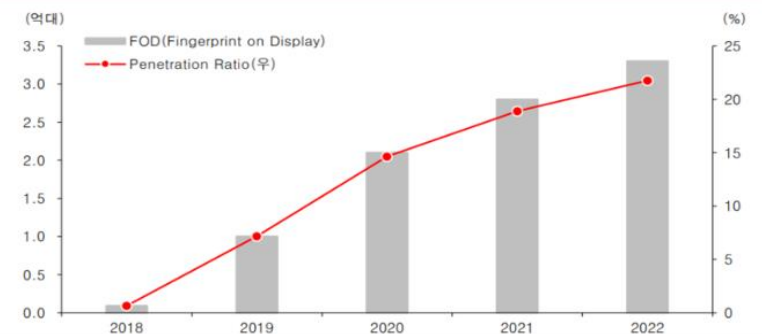


도표 7 디스플레이 지문인식(FOD) 출하량 및 침투율 전망



자료: IHS, 유진투자증권

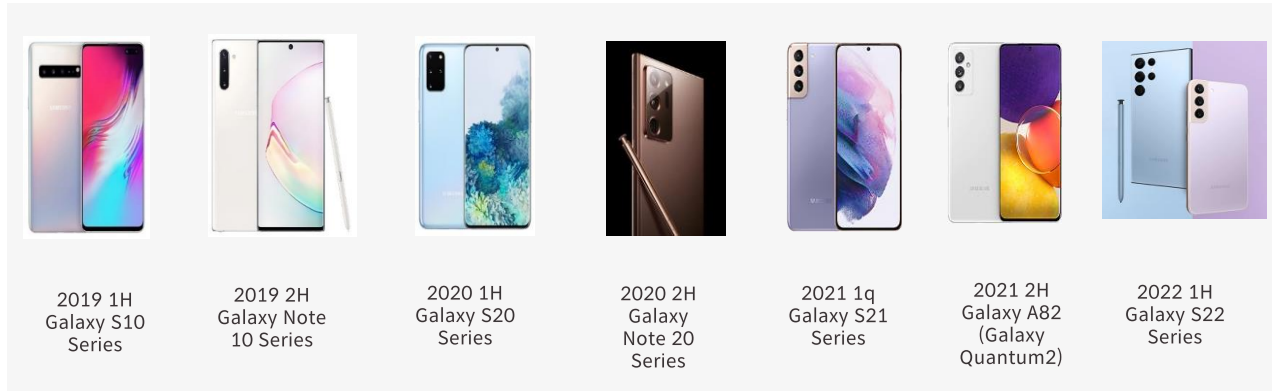
Market Conditions

- FOD module shipments and penetration rate to increase
- Expect more license sales for algorithm on Galaxy S23
- can be applied to more Galaxy A models due to cheaper OLED panels
- Ultrasonic sensors can be applied to flip and foldable phones

BioSign

Suprema's fingerprint algorithm was applied to Samsung's mainstream smartphones (Galaxy S and A series), over 220 million devices so far.

The BioSign 4.0 algorithm is also supplied to Samsung's latest phone series, the Galaxy S23



Smartphone Fingerprint Sensor Eco-System

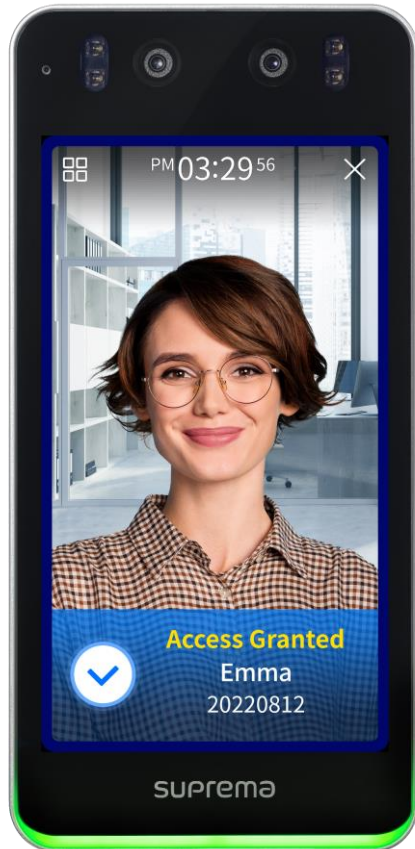
ALGORITHM	SENSOR	PACKAGING	HANDSET

2023 INVESTOR RELATIONS

Highlights

New Product : BIOSTATION 3

Suprema's new cutting-edge product BioStation 3 will lead the company's business in 2023, driven by rising demand for contactless face recognition.



Superior Design

- Thin & compact like a cellphone
- Superior design

Technological Competitiveness

- Applied AI deep-learning technology
- The best authentication performance (with NPU)
- The fastest speed & highest accuracy
- Face Template on Mobile*

*Face Template on Mobile: Users can store and manage their personal authentication information on their own mobile phones, rather than on the company's database. (Independently developed)

Market Leader

- Intercom system
- 100% contactless authentication (Face, QR code, mobile card, RFID card)

Price competitiveness

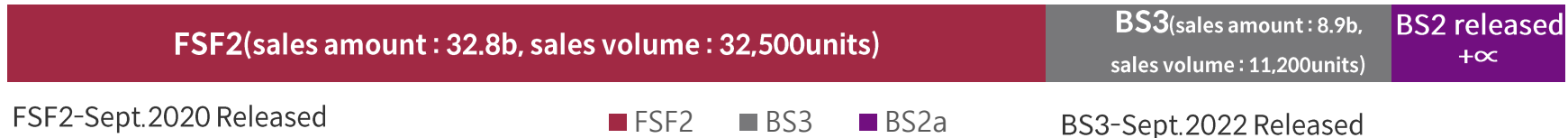
- Reasonable price (Price reduced by more than 20% compared to FSF2)



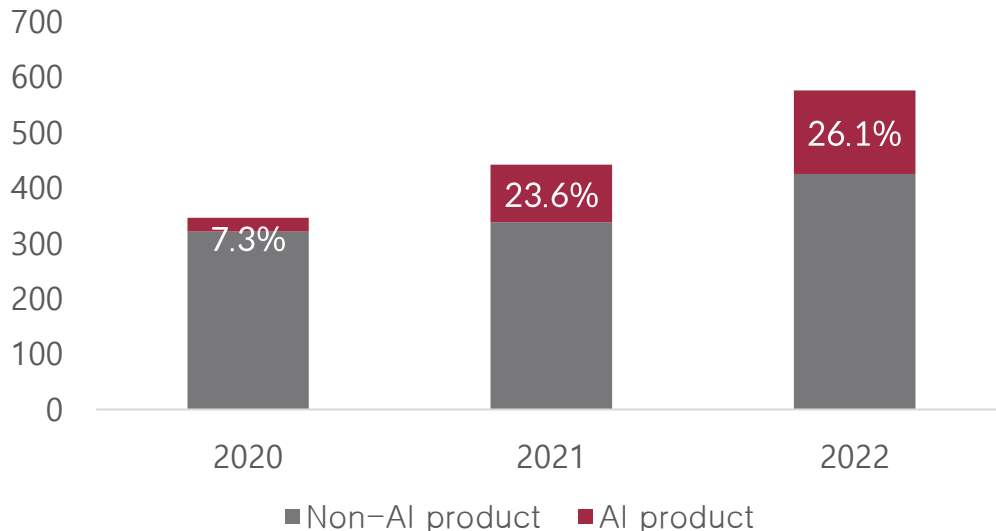
Successful company in commercializing AI technology

Suprema has been selling products with AI technology applied since September 2020. The cumulative sales of AI-applied products amount to 40 billion KRW, leading the latest trends in the access control product market

AI technology-applied products(40 billion won)



Proportion of AI product sales



BioStation 2a



World's First deep-learning based fingerprint algorithm

Suprema, No1. in the Middle East market

Suprema ranked number one in the Middle East market. The recent construction of Neom City has led to an expansion of the market size in the Middle East. Based on a high market share and recognition in the Middle East market, we are currently designing several projects in Neom City using our AI products.

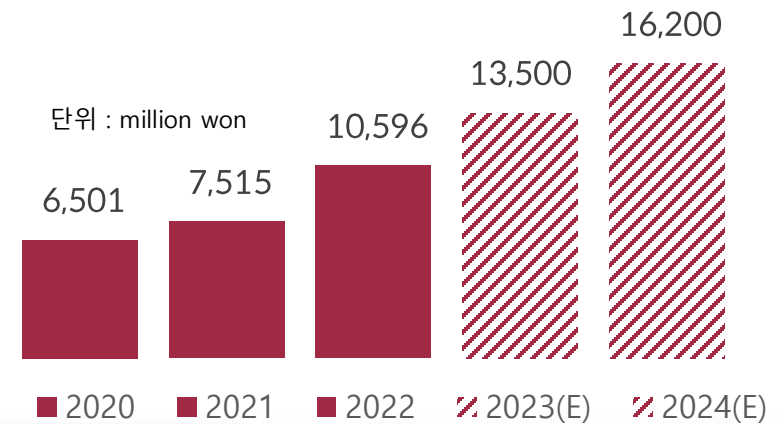
EMEA market share no1. (2021 Omdia)

MS2.5 Market Shares for Access Control Biometric Readers

Europe, the Middle East & Africa 2019 & 2020 - \$ Revenue

	Company name	2019 share	2020 share
1	Suprema	21.8%	21.6%
2	IDEMIA	18.0%	18.1%
3	ZKTeco	14.8%	15.7%
4	Iris ID Systems Inc.	5.3%	5.5%
=	Anviz Global	5.7%	5.5%
6	FingerTec	4.9%	4.5%
7	Hitachi	2.7%	3.0%
8	ievo Ltd	3.0%	2.7%
9	Herta Security	1.9%	2.2%
10	Allegion	2.1%	2.1%
	Others	19.8%	19.1%
2019 market size:		\$66.7 million	
2020 market size:		\$57.6 million	

Performance & prospects of Middle East



Neom Hospital (large hospital for Saudi royalty and VIPs)
CST, BioStar2, XP2 installation scheduled



Pearl Qatar residential complex
BioStar2, XP2 installed



Neom Villa (house for Neom city manager)
Designing based on our AI product, 'BS2a'

CLUe & surge in Japan

CLUe, a cutting-edge self-developed access authentication service, operates through cloud-based systems, utilizing Kakao and Naver QR authentication without the need for a local server. In two months, 300 businesses adopted it, boosting our Japanese sales.

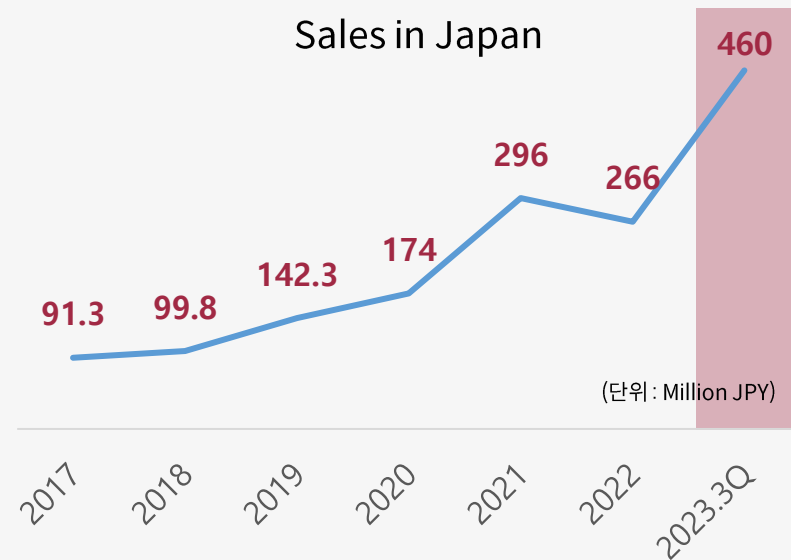
Service Flow



- Membership management service provider (fitness, office sharing etc.)
- Subscription service model.(¥5,000 per month)
- Significant improvement in performance in the Japanese market.
- PoC with Verkada and Brivo is underway.



Sales in Japan



Growing Demand for Data Center Security Systems

Data Center Revenue Increasing in Integrated Security Systems Business. Anticipating Demand Growth with Expansion of Data Centers through AI Integration.

Data center expansion with increased AI application



DESIGN > BUILD/CONSTRUCTION

AI and Cloud Workloads Drive Data Center Demand

A new report by JLL predicts data center supply imbalance will last at least through 2024 as AI and edge computing adoption increase.

Artificial intelligence workloads and continued cloud adoption are fueling explosive demand for data centers, leading to a shortage of colocation space and rising prices, a new report by JLL shows.

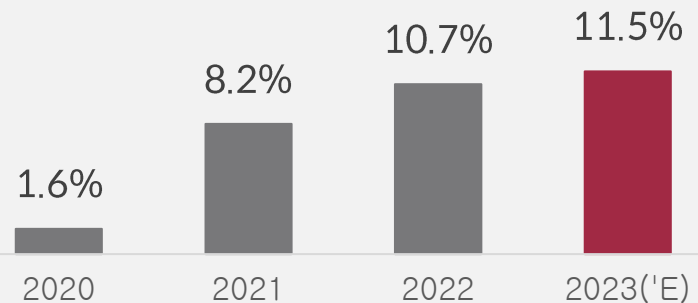


- Anticipating Demand Growth with Expansion of Data Centers through AI Integration.
- The expenditure on AI infrastructure is projected to reach a scale of \$42.25 billion by 2029. Over the next 6 years, a 44% growth is anticipated (by Data Bridge Market Research)

Growing data center-focused revenue.

Data center revenue as a percentage of total revenue

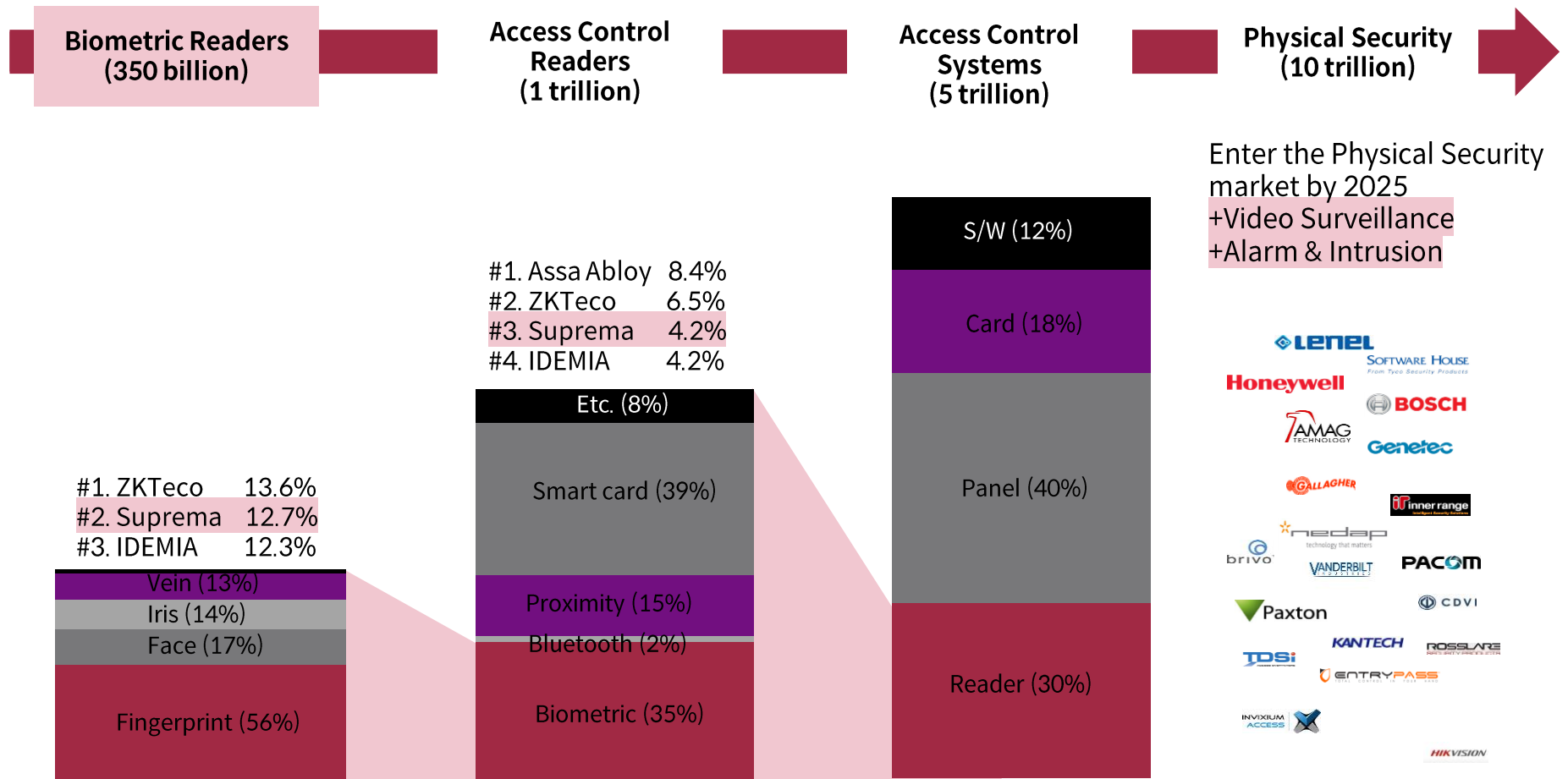
(Data center revenue/Integrated security system revenue)



- Our data center-oriented revenue has been consistently increasing
- fingerprint recognition products in the security sector (2021)
- RF card products for general management areas (2022)
- AI facial recognition products (2023)
- Completed FSF2 supply to Z Holdings data center in Japan in 2023.

Growth Vision : Integrated Security System

Suprema has risen to world's 3rd largest access control reader company from a biometric specialist. We will move forward to a bigger market of access control systems and physical security.



* Market share: 2021 Omdia

2023 INVESTOR RELATIONS

APPENDIX

2023.3Q Performance

2023.3Q Earnings(Cumulative)

(Unit: Millions of KRW)	2023.3Q	2022.3Q	YOY
Sales	64,418	63,876	0.8%
Integrated Security System	49,350	48,645	1.4%
Biometric Solutions	7,496	7,005	7.0%
Others (install, maintenance etc.)	7,572	8,226	-8.0%
Gross Margin	39,815	38,802	2.6%
GPM	61.8%	60.7%	1.1%p
SG&A	31,882	27,216	17.1%
Operating Profits	7,933	11,586	-31.5%
OPM	12.3%	18.1%	-5.8%p
Earnings Before Tax	16,034	21,193	-24.3%
Net Profit	14,821	18,633	-20.5%

* Reasons for decrease in performance

■ Operating profits :

Decrease in operating profit margin due to increase in selling expenses. Salary(▲1.3b), Payment commission(▲1.0b), R&D expense(▲0.7b), Cost of overseas market development(▲0.5b), Advertising expense (▲0.3b) etc.

2023.3Q Earnings

(Unit: Millions of KRW)	2023.3Q	2022.3Q	YOY
Sales	21,041	21,614	-2.7%
Integrated Security System	16,566	16,209	2.2%
Biometric Solutions	2,534	2,387	6.2%
Others (install, maintenance etc.)	1,941	3,018	-35.7%
Gross Margin	13,624	13,543	0.6%
GPM	64.7%	62.7%	2.0%p
SG&A	10,046	9,277	8.3%
Operating Profits	3,577	4,266	-16.2%
OPM	17.0%	19.7%	-2.7%p
Earnings Before Tax	6,001	10,517	-42.9%
Net Profit	5,555	8,521	-34.8%

* Decrease in Other Revenue:

Reduction in contract revenue from SI projects due to a decline in domestic business orders.

2022 Performance

2022 Earnings(Consolidated)

(Unit: Millions of KRW)	2022	2021	YOY
Sales	89,397	72,572	23.2%
Integrated Security System	67,537	55,200	22.3%
Biometric Solutions	9,918	8,187	21.1%
Others (install, maintenance etc.)	11,942	9,184	30.0%
Gross Margin	54,568	43,142	26.5%
GPM	61.0%	59.5%	1.5%p
SG&A	36,709	26,910	36.4%
Operating Profits	17,859	16,232	10.0%
OPM	19.9%	22.4%	-2.4%p
Earnings Before Tax	19,464	23,527	-17.2%
Net Profit	17,868	22,651	-21.1%

* Reasons for increase in performance

■ Sales :

- increases market share by supplying quantities competitors cannot deliver during global raw material shortage,
- increase in revenue from large project sales
- positive impact of currency appreciation

2022 Earnings(Separate)

(Unit: Millions of KRW)	2022	2021	YOY
Sales	85,574	67,798	26.2%
Integrated Security System	63,223	50,426	25.4%
Biometric Solutions	9,918	8,187	21.1%
Others (install, maintenance etc.)	12,434	9,185	35.4%
Gross Margin	50,113	39,179	27.9%
GPM	58.6%	57.8%	0.8%p
SG&A	30,604	22,906	33.6%
Operating Profits	19,509	16,273	19.9%
OPM	22.8%	24.0%	-1.2%p
Earnings Before Tax	21,587	23,716	-9.0%
Net Profit	19,438	22,931	-15.2%

■ Operating profits :

- Decrease in operating profit margin due to increase in selling expenses.
- Payment commission(▲2.2b), R&D expense(▲2b), salary(▲1.3b)
- Cost of overseas market development(▲2.2b)

■ Net Profit:

- Financial asset valuation gains/losses (▼5b)
- Financial asset disposals gains/losses(▲1.1b)
- Virtual currency disposal gains/losses(▼0.8b)

Balance Sheet

(Unit: Millions of KRW)	CONSOLIDATED				
	2018	2019	2020	2021	2022
Current assets	82,152	88,272	80,209	82,708	116,545
Cash and cash equivalents	12,444	15,603	32,284	33,513	34,291
Liquid financial assets	50,616	48,391	26,050	21,647	47,439
Trade receivables	8,223	10,099	7,339	12,402	13,796
Inventories	9,303	12,726	12,520	15,145	21,019
Non-current assets	33,739	60,282	73,625	93,034	77,243
Non-current financial assets	21,846	45,977	55,374	73,676	58,787
Fixed assets	5,429	5,401	8,827	10,063	10,598
Intangible assets	4,876	6,954	7,757	9,295	7,858
Total assets	115,891	148,554	153,834	175,742	193,787
Current liabilities	6,481	11,374	7,200	8,835	11,724
Non-current liabilities	763	785	773	841	264
Total liabilities	7,245	12,160	7,973	9,677	11,987
Registered capital	3,540	3,597	3,597	3,597	3,597
Other paid-in capital	73,244	76,262	76,262	76,262	76,262
Other components of equity	241	-1,018	-628	-3,075	-5,209
Retained earnings	31,597	57,553	66,630	89,281	107,148
Total equities	108,646	136,394	145,861	166,065	181,799

	SEPARATE				
	2018	2019	2020	2021	2022
	81,764	87,984	78,910	81,946	111,793
	12,209	14,940	30,307	31,253	28,981
	50,566	48,338	25,807	22,723	45,697
	8,236	11,069	9,613	13,822	17,670
	9,198	12,129	11,347	14,148	19,445
	33,958	61,021	75,325	94,422	84,333
	21,986	46,649	56,476	75,560	67,221
	5,416	5,388	8,801	9,567	9,791
	4,876	6,954	7,757	9,295	7,321
	115,721	149,005	154,235	176,368	196,126
	6,261	11,145	6,827	8,378	11,290
	763	785	773	859	282
	7,025	11,931	7,600	9,237	11,572
	3,540	3,597	3,597	3,597	3,597
	73,244	76,262	76,262	76,262	76,262
	306	-974	-640	-3,074	-5,090
	31,606	58,189	67,415	90,346	109,784
	108,696	137,074	146,634	167,131	184,554

Income Statement

CONSOLIDATED

(Unit: Millions of KRW)	2018		2019		2020		2021		2022	
Revenue	52,757		72,131		57,770		72,572		89,397	
COGS	24,155	45.78%	25,633	35.54%	23,781	41.17%	29,430	40.6%	34,829	39.0%
Gross profits	28,603	54.22%	46,497	64.46%	33,989	58.83%	43,142	59.4%	54,568	61.0%
SG&A	16,417	31.12%	21,932	30.41%	23,353	40.42%	26,910	37.1%	36,709	41.1%
Operating profits	12,186	23.10%	24,565	34.06%	10,636	18.41%	16,232	22.4%	17,859	20.0%
Financial income	3,289	6.23%	5,111	7.09%	4,817	8.34%	7,820	10.8%	6,371	7.1%
Financial expenses	604	1.15%	779	1.08%	5,275	9.13%	768	1.1%	4,487	5.0%
Other income	1,379	2.61%	790	1.10%	805	1.39%	1,105	1.5%	3,910	4.4%
Other expenses	4,125	7.82%	763	1.06%	1,626	2.81%	862	1.2%	4,189	4.7%
Profit before tax	12,125	22.98%	28,924	40.10%	9,356	16.20%	23,527	32.4%	19,464	21.8%
Tax	726	1.38%	2,982	4.13%	-67	-0.12%	876	1.2%	1,596	1.8%
Net income	11,399	21.61%	25,942	35.97%	9,423	16.31%	22,651	31.2%	17,868	20.0%
EPS (KRW)	1,608		3,650		1,317		3,172		2,563	

SEPERATE

Revenue	52,145		71,353		55,440		67,798		85,574	
COGS	23,977	45.45%	24,978	34.63%	24,168	41.83%	28,619	42.2%	35,462	41.4%
Gross profits	28,168	53.39%	46,375	64.29%	31,272	54.13%	39,179	57.8%	50,112	58.6%
SG&A	16,129	30.57%	21,223	29.42%	20,044	34.70%	22,906	33.8%	30,604	35.8%
Operating profits	12,039	22.82%	25,152	34.87%	11,228	19.44%	16,273	24.0%	19,509	22.8%
Financial income	3,289	6.23%	5,111	7.09%	4,817	8.34%	7,832	11.6%	6,402	7.5%
Financial expenses	604	1.15%	775	1.07%	5,249	9.09%	635	0.9%	4,487	5.2%
Other income	1,346	2.55%	785	1.09%	721	1.25%	1,067	1.6%	3,982	4.7%
Other expenses	4,205	7.97%	717	0.99%	2,141	3.71%	821	1.2%	3,729	4.4%
Profit before tax	11,866	22.49%	29,556	40.98%	9,376	16.23%	23,716	35.0%	21,587	25.2%
Tax	631	1.20%	2,973	4.12%	-196	-0.34%	785	1.2%	2,149	2.5%
Net income	11,235	21.30%	26,583	36.85%	9,572	16.57%	22,931	33.8%	19,438	22.7%
EPS (KRW)	1,587		3,740		1,338		3,211		2,789	

Thank you!

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