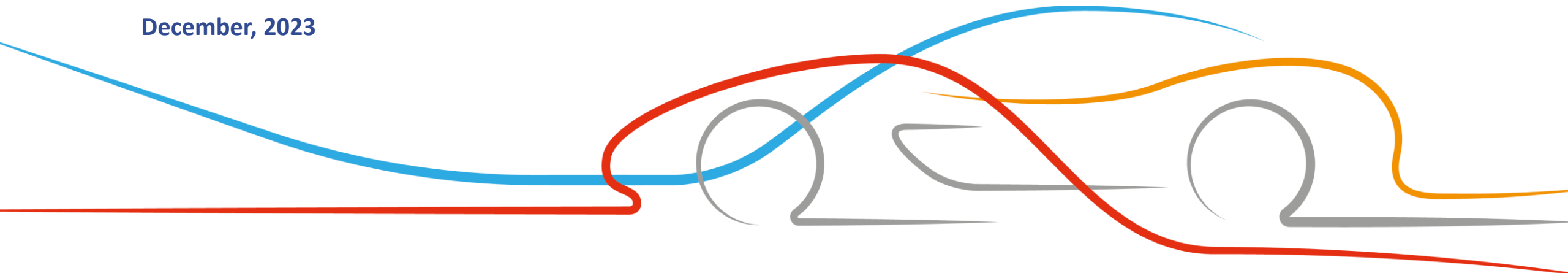


*Telechips*

# IR Presentation 2023

December, 2023

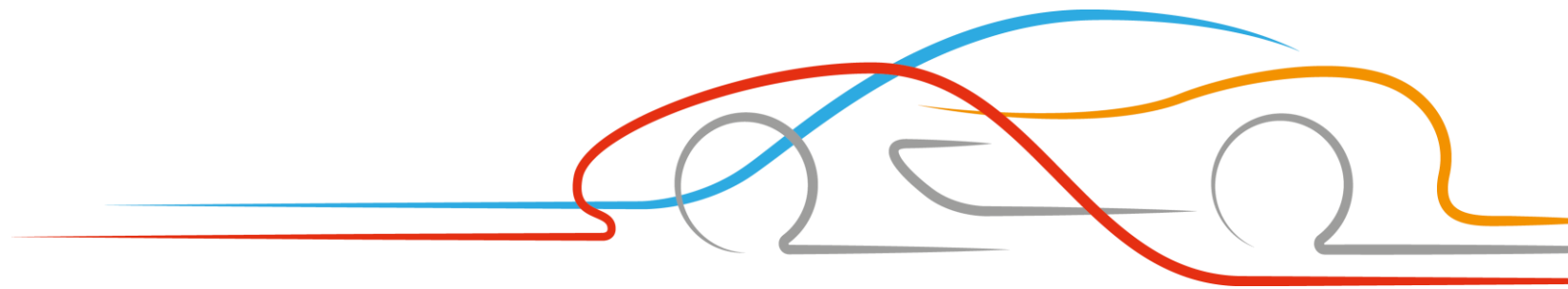




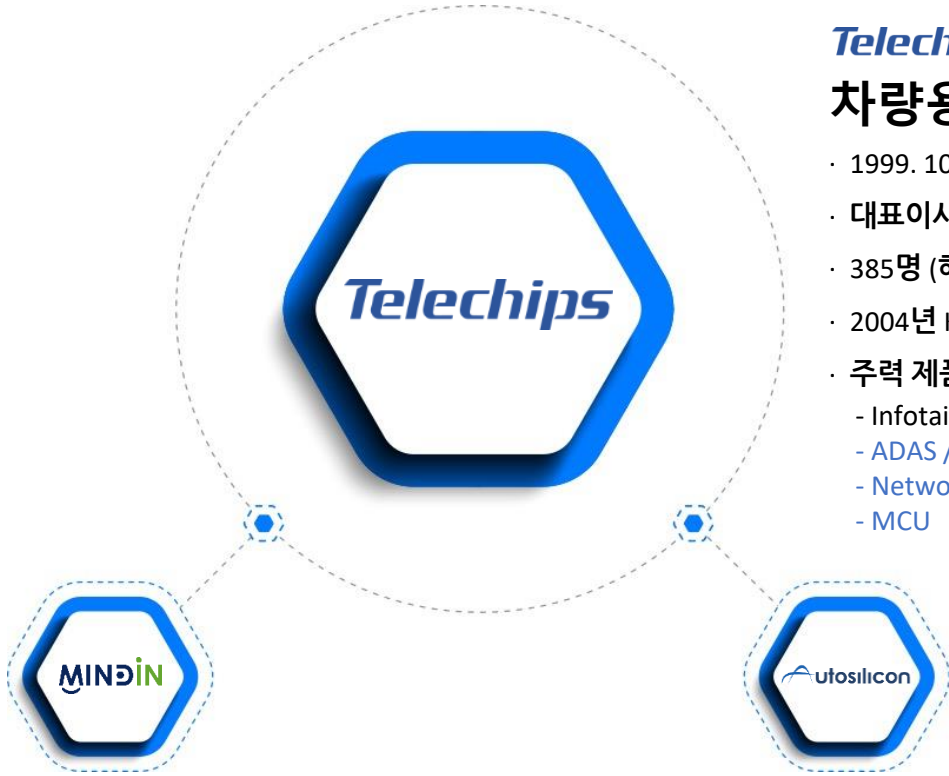
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# 텔레칩스, 대한민국 유일의 글로벌 차량용 종합반도체 기업으로 성장



## Telechips

### 차량용 종합 반도체 기업

- 1999. 10. 29 설립
- 대표이사: 이장규
- 385명 (해외인력 포함)
- 2004년 KOSDAQ 상장
- **주력 제품**
  - Infotainment: IVI, Cluster, Cockpit
  - ADAS / Autonomous Driving (AD)
  - Network Gateway
  - MCU

구분	2022년	2023년 3분기
자본금	1,697억원	2,164억원
총자산	3,102억원	3,385억원
매출	1,504억원	1,466억원(누적)
영업이익	91억원	146억원(누적)

### 차량용 AI 알고리즘

- 텔레칩스 100% 자회사
- 2018년 설립
- 인력 11명
- ADAS 및 자율주행용 AI Algorithm
- 전방 카메라용 물체 인식

### 차량용 배터리 SoC

- 텔레칩스 & 어보브반도체 합작회사
- 2018년 설립
- 인력 50명
- BMS(Battery Management System) for xEV / ESS
- BDS(Battery Diagnosis System) & Algorithm(전세계 최초)
- Battery 진단 (SOH/RUL) 및 폭발 위험성 예측

### Global Network



# 텔레칩스 사업현황 : 글로벌 주요 납품 및 수주 고객 (OEM and Tier1)

## Tier1 Manufacturers


## OEM




# 텔레칩스 사업현황 : 글로벌 주요 납품 자동차 모델

## Korea

### AVN / D-Audio

TCC8931/TCC8971/TCC8022(Dolphin)/TCC8032(D+)

### Car Audio

TCC8001/TCC8002/TCC8010/TCC8001S/TCC8132

### HUD

TCC8022



HUD/AVN  
Ioniq 5/6



HUD  
GENESIS  
GV80



HUD  
GENESIS  
GV70



Safety IC  
GENESIS  
GV60



HUD  
GENESIS  
G80



HUD/AVN  
Palisade



GENESIS  
G70



Casper



Sonata



Grandeur  
(Azera)



Santa Fe

### Safety IC

TCC5110



HUD/AVN  
Ev6



HUD  
K9



HUD/AVN  
K8



Niro EV



Telluride



K3  
(Forte)



Soul Booster



Sorento



Carnival  
(Sedona)



K5  
(Optima)

## Korea / EU

### Cluster

TCC8972  
TCC5110  
Safety IC



Rexton

### AVN

TCC8032  
DOP AVN



NX450h+  
NX350h

TCC8930  
DOP AVN



XF

TCC8031  
TCM3840



Korando  
C300

TCC8931  
TCM3800  
TCM3910



SM7

TCC8801



Range Rover  
Evoque

TCC8801



F-Type Sport

TCC8801



Captiva

TCC8935



Malibu

### Air Purifier

TCC7022



Seltos



Sonet

### Cluster

TCC8032  
TCC5110



Cayenne

### Car Audio

TCC760



New Beetle

TCC8601/TCC8001S



QASHQAI



Logan

DAB+ Module  
TCC3171-i



E-Class

TCC3171-I/TCC8000



A6

TCC3171-i



Golf



Passat

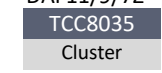
## Japan, China, ASEAN

### AVN / DA / Cluster / HVAC

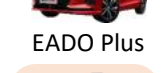
TCC8034  
TCC897x



DAF11/9/7Z



Cluster



Uni-V

TCC8974



MJ118D



VXM-184



瑞迈

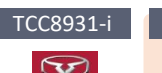
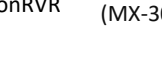


Han 汉

TCC893x



Triton RVR



MAZDA EV  
(MX-30)



X3



E-Star

TCC8034  
HVAC / EV



Hustler



Spacia



LYNK&Co02  
LYNK&Co03

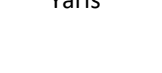


Hozon-V (哪吒V)

TCC8971-i  
TCC3171-i



Yaris



Rocky



H7



Dihao GL

TCC8971+TCC5027/TCC8003/AD55/TCC3171



BALENO



XL6



BREZZA



ERTIGA MC



Celerio



New Alto



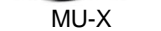
S-Cross

TCC8935

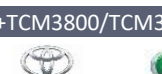


Malibu

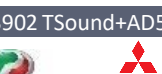
TCC8971+TCM3800/TCM3902 TSound+AD55+TCC5027+TCC8005



MU-X



CAMRY



Aruz



Xpander



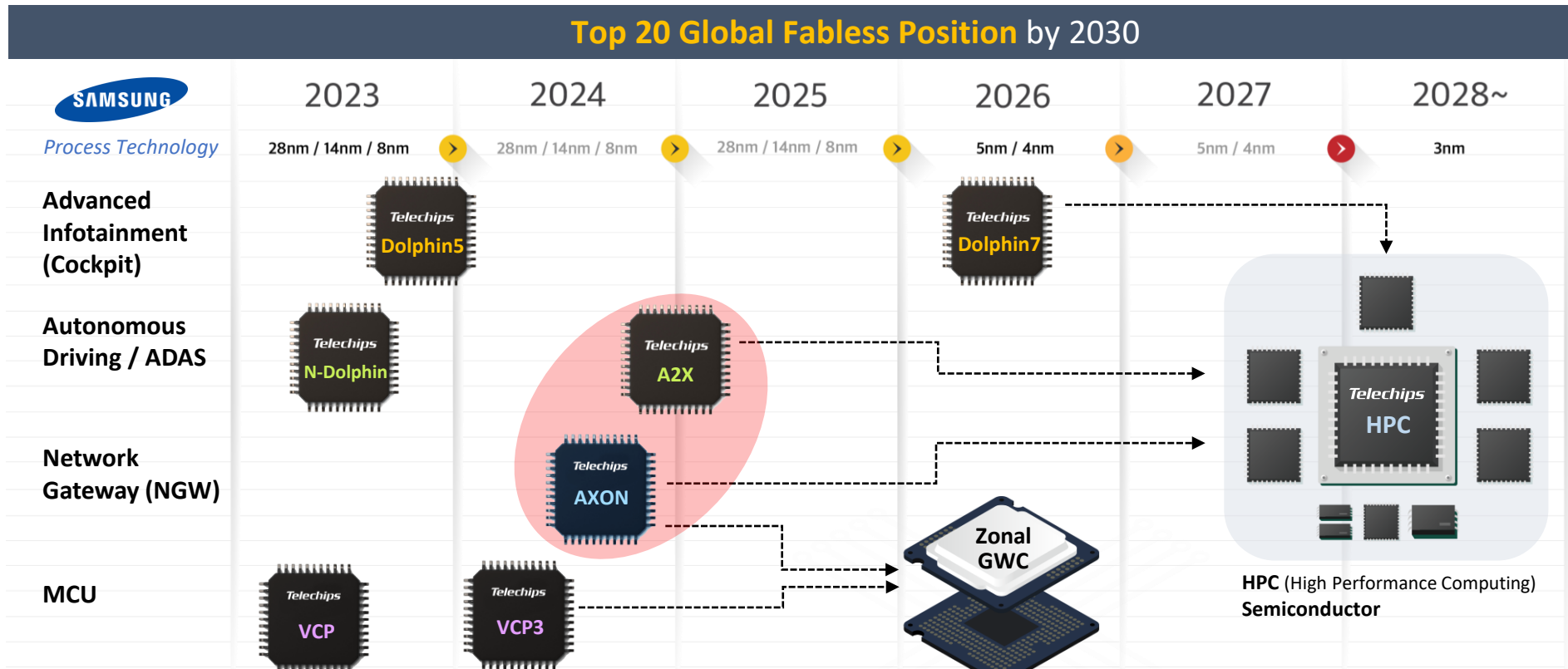
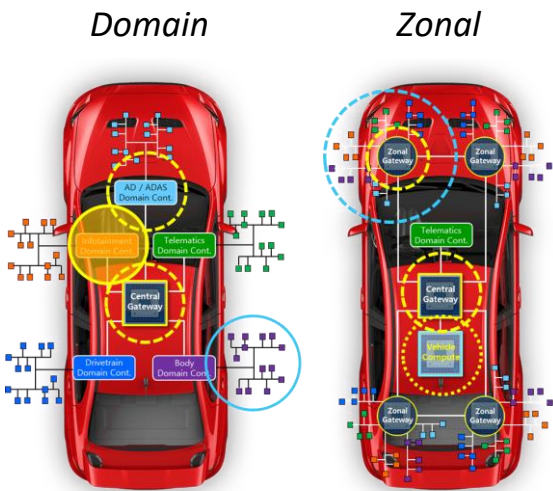
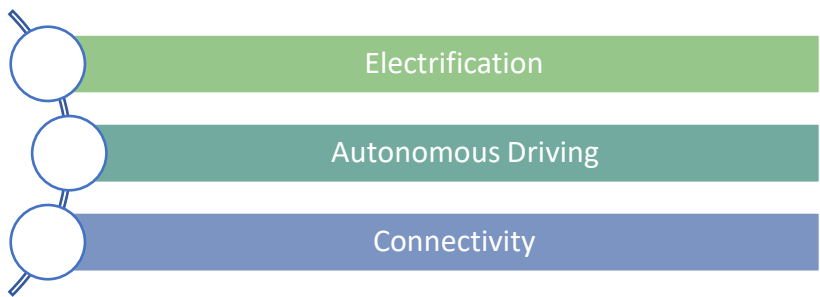
Serena



Datsun Cross



# 인포테인먼트부터 미래 모빌리티 E/E Architecture 핵심 반도체로의 확장

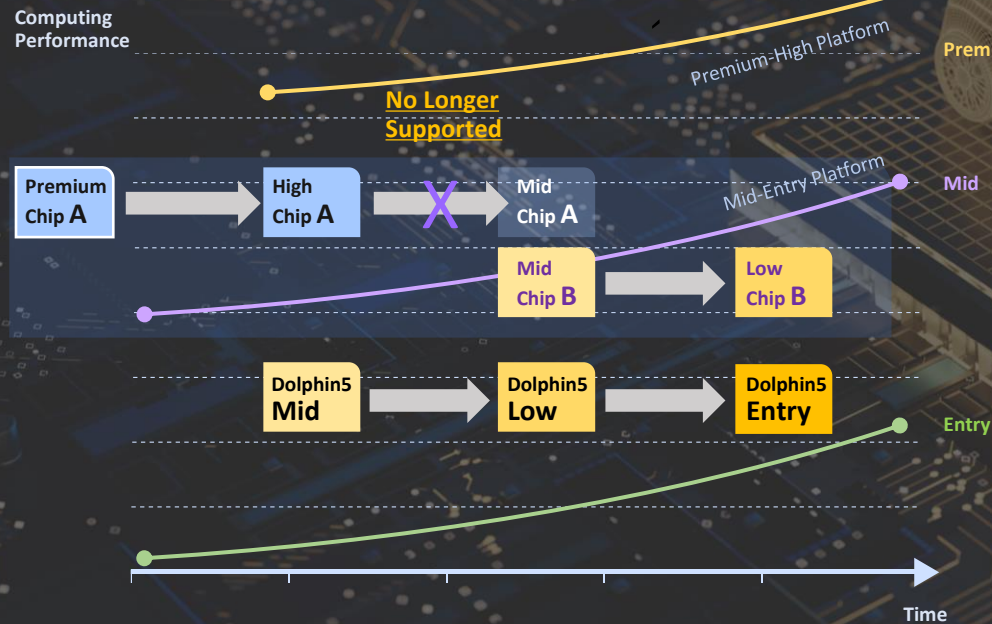


\* ADAS: Advanced Drive Assistance System \* MCU: Micro Control Unit \* Zonal GWC: Zonal Gateway Controller

# 미래 자동차 시장의 변화에도 Mid-Entry Tier Cockpit 시장은 독립적으로 지속 성장

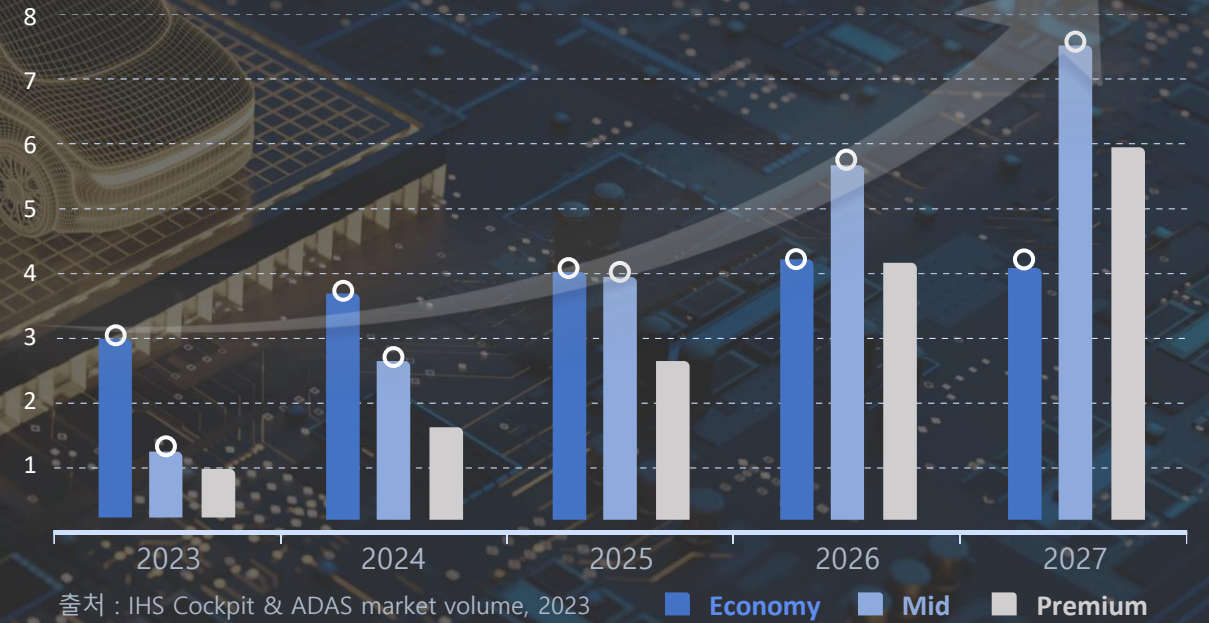
- ✓ 미래 자동차 시장 구조에서도 지속적인 독립영역으로 존재하는 IVI(In-Vehicle Infotainment) Domain
- ✓ 특히, Mid (양산 초기 시점)에서 Entry (양산 말기 시점) Tier는 가격 이슈로 인해 독립 플랫폼으로 지속 전개

## IVI Platform Market Structure



## Cockpit Domain Market Outlook

단위 : Million pcs

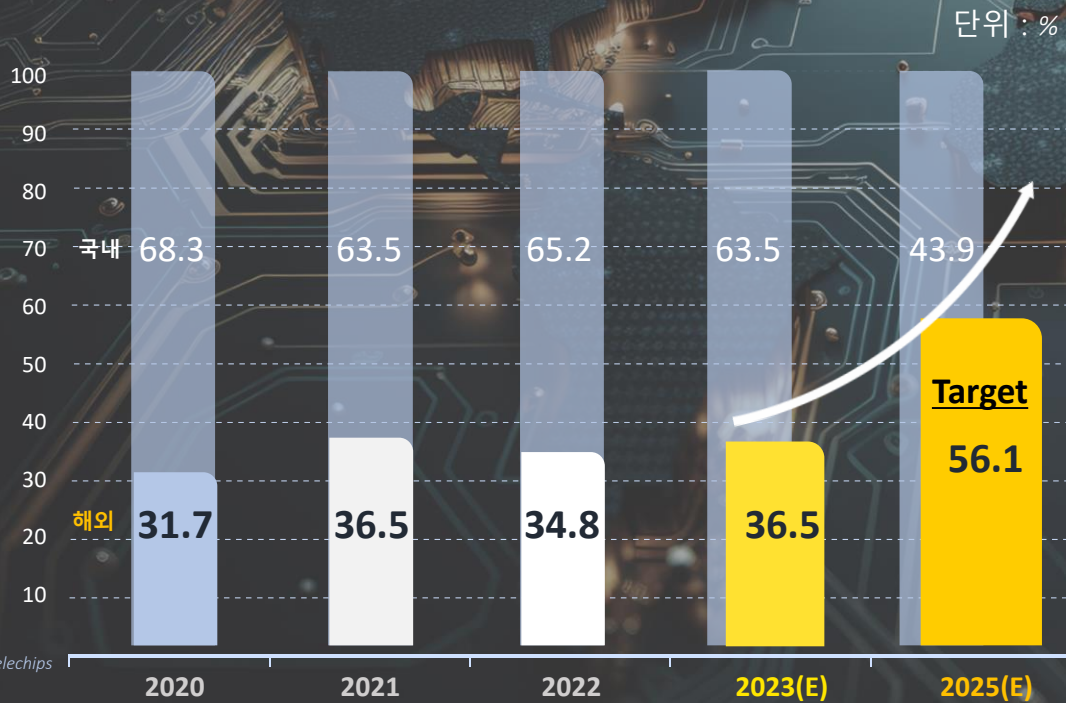




# 지속적인 해외고객사 확대를 통한 성장 동력 확보

- 2020년 이후 꾸준한 일본향 매출 증가로 해외 매출비중 30% 이상 유지
- 2023년 중국 및 동남아향 매출 본격 반영으로 해외 매출비중 상승세
- 2024년 유럽 글로벌OEM 'Digital Cluster', 2025년 유럽 글로벌 Top Tier1 'Cockpit' 양산 시작, 2025년 해외 매출비중 50%↑ 목표

텔레칩스 해외 매출비중



글로벌 마켓 성장 동력 및 목표

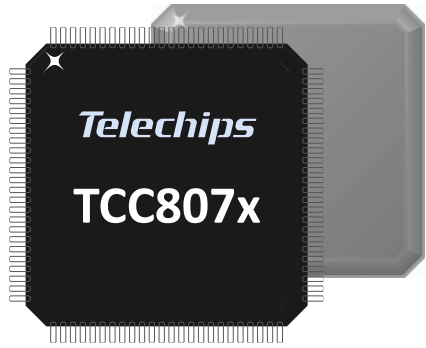


출처 : Telechips



# ADVANCED INFOTAINMENT

# Multi-Purpose Application Processor



# Dolphin5

The Best Automotive Application Processor

## Mid-Low Infotainment/Cockpit Solution

Hypervisor-less, SDR(Software Defined Radio), STR

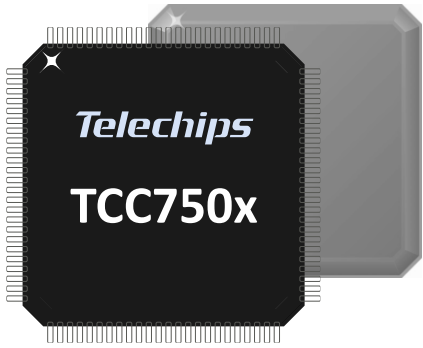
## Embedded ADAS Solution

Powerful Core & Neural Network Processing w/ ultra low power



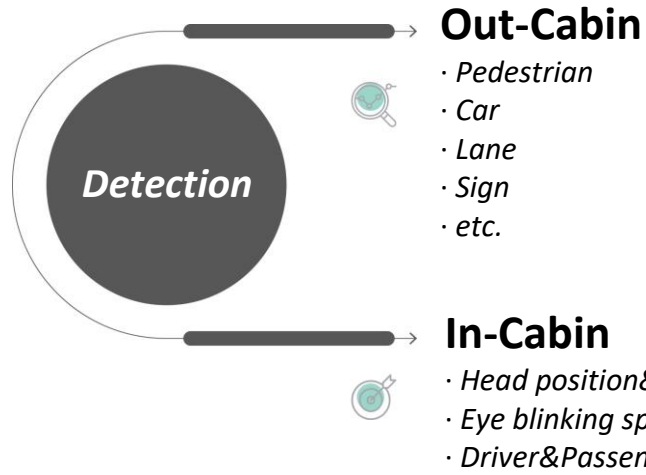
## Infotainment

## ADAS



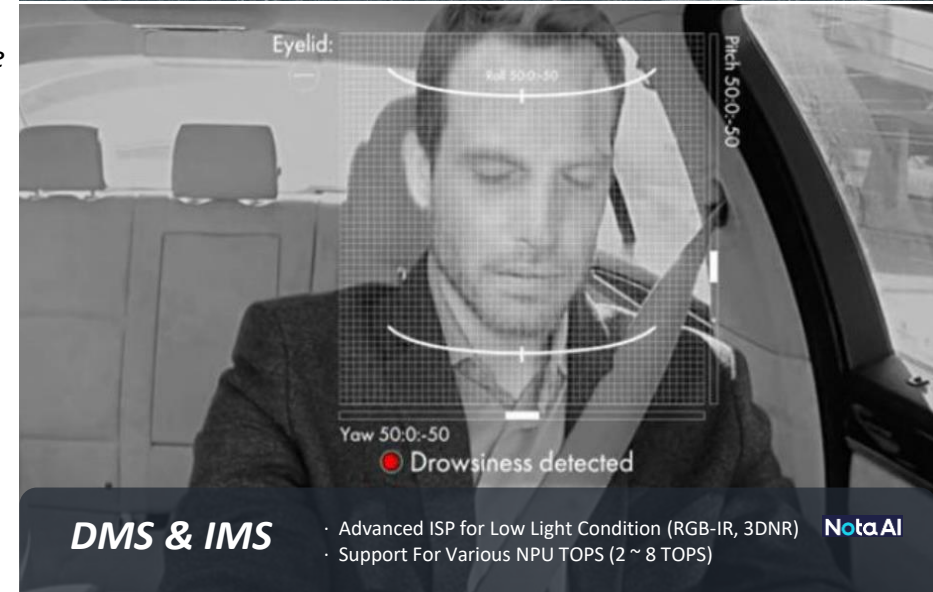
# N-Dolphin

AI Vision Processor

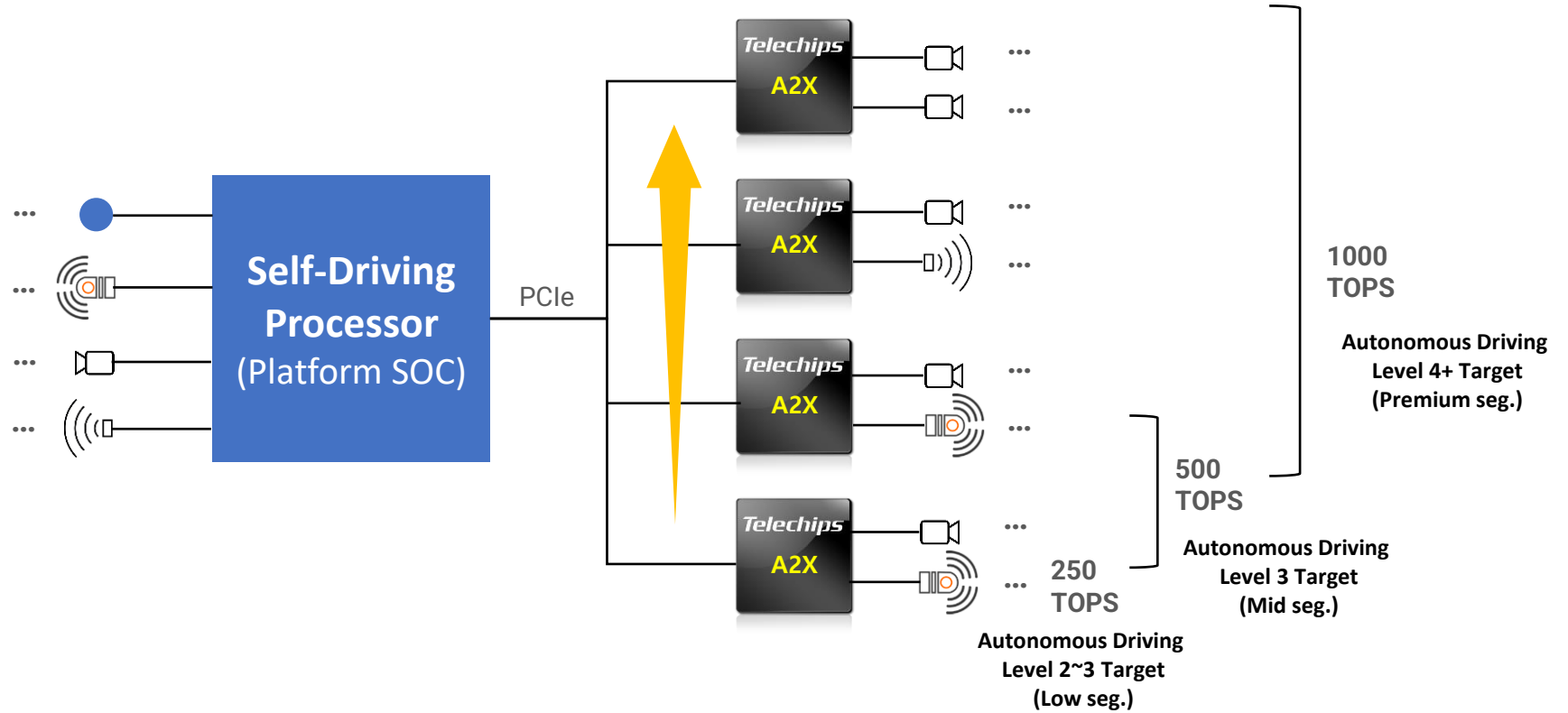


## ✔ For Safety & Convenience

- Increase of Safety Regulations of Countries
- Object detection capability is required in not just **DMS** and **IMS** but also **CMS**



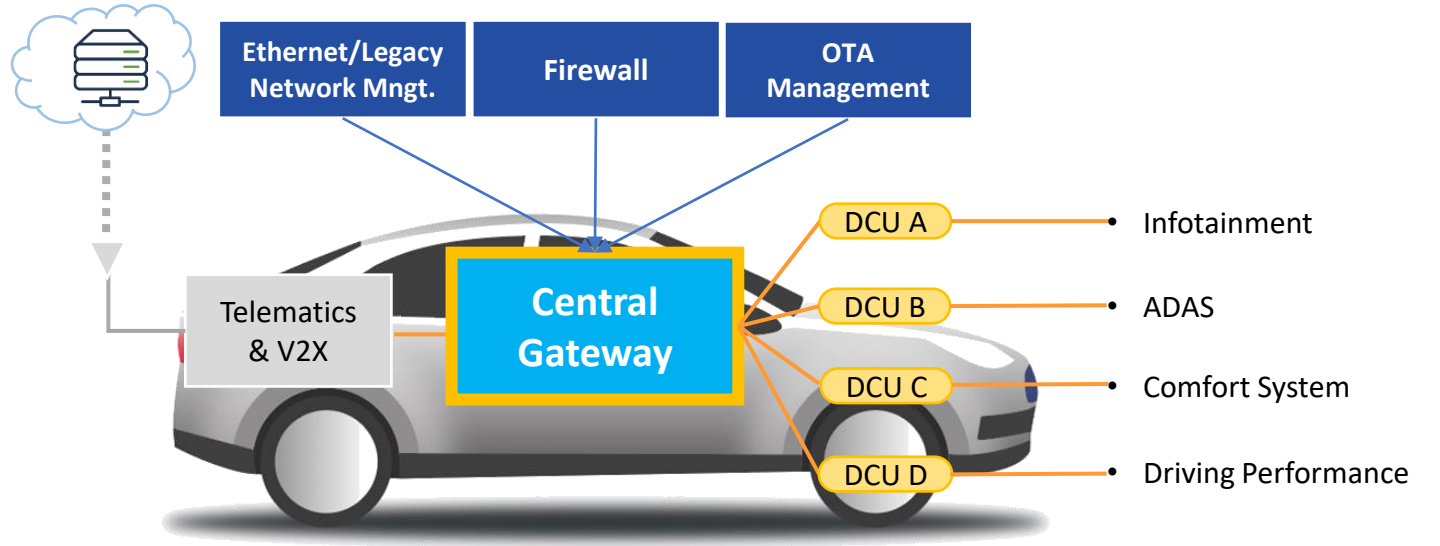
# AUTONOMOUS DRIVING & ADAS | Scalable AI Accelerator



- ✓ Independent of Self-Driving Processor
- ✓ Scalable AI Accelerator
- ✓ Easy Adaptation to Platform SOC



# CONNECTIVITY | Vehicle Network Processor for Central Gateway / Zonal Gateway



## High Speed Networking

*Flexible and High bandwidth  
Ethernet, Legacy Network*

- Multi Giga-ETH Hardware Acceleration (Switching & Routing)
- Legacy Network Acceleration (CAN/LIN)



## High Security

*Enhanced Cyber Security*

- Hardware security modules(HSM) and Advanced Firewall HW engine like Deep Packet Inspection

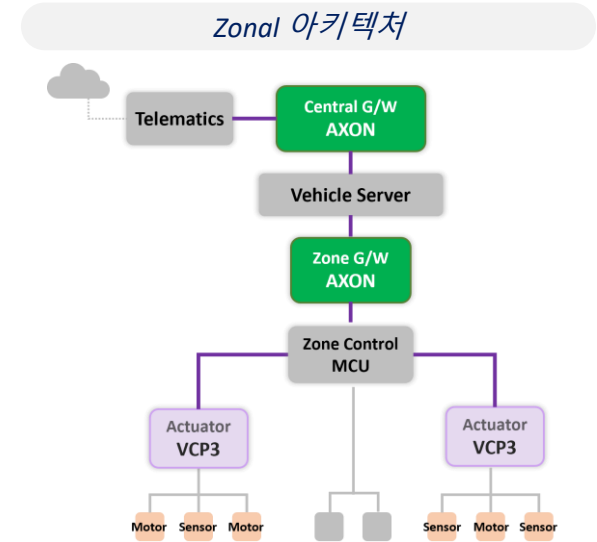
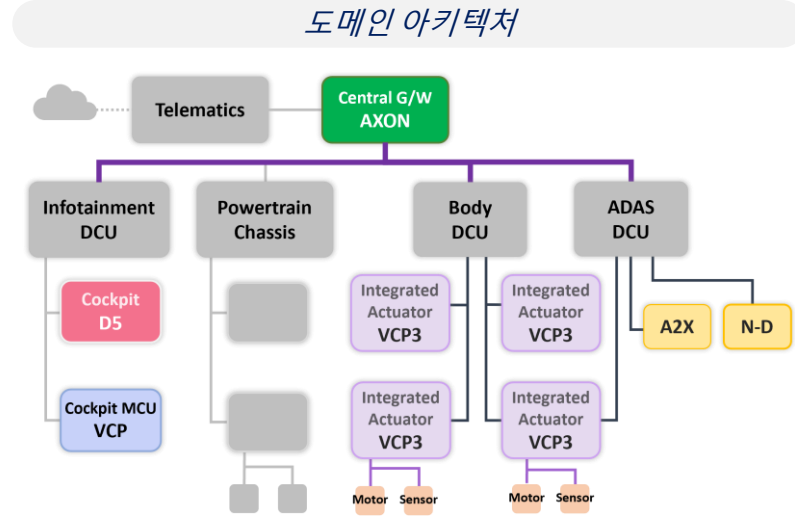
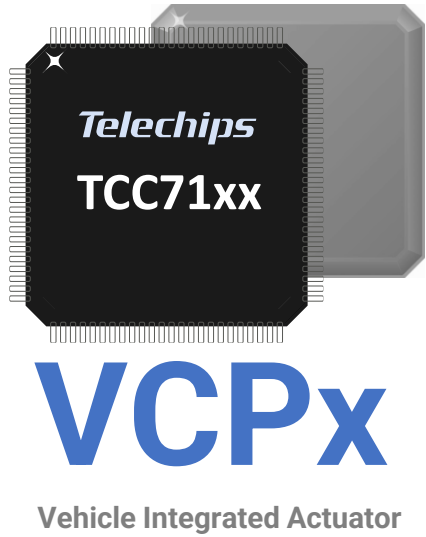


## High Functional Safety

*ISO26262 ASIL-D*

- Dual Core Lock-Step based Safety
- Real-time Processing (legacy network, Safety control)

# E/E ARCHITECTURE | Vehicle Integrated Actuator (MCU)



### Multi Control

*Multiple Motor & Sensor Control*

- Numerous I/F (ADC, PWM, SENT) with Legacy Network
- Control BLDC & BDC simultaneously

### Over-the-Air

*OTA with enhanced security*

- Dedicated HSM memory for enhanced security features
- Giga-ETH with TSN

### High Functional Safety

*ISO26262 ASIL-D*

- Dual Core Lock-Step based Safety
- Real-time Processing (legacy network, Safety control)

### Fabrication

*Samsung 28nm LNF*

- Advanced 28nm process for MCU
- Stable supply with no geopolitical issues

Global OSHW Market Analysis ('22 → '27)



- '22년 기준, 유럽-미주 시장 79%, 아시아-태평양 시장 20%
- '27년 **아시아-태평양 시장의 고속 성장**으로 점유율 역전 (**20% → 70%**)

- 아시아-태평양 시장의 고성장은 중국, 인도, 베트남 등 **인구대국이 주도**
- **스마트 시티 등 IOT 시장 확대에 따른 산업용 시장의 고도 성장 지속**



# TOPST | Total Open-Platform for System development and Training

## OSHW(Opensource Hardware)

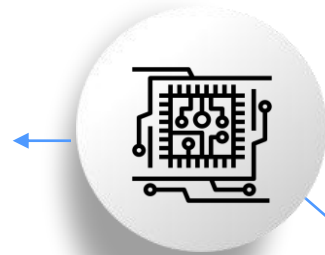
- Easy to use with opensource S/W
- Expandability with multiple boards
- Openness for other chipset makers to bring their own's properties

## Open project (TOPST alliance)

- Inclusive collaboration to create new innovative business models in cutting-edge industrial application areas like drone, robotic, and smart-devices

## Open Community(topst.ai) – `24.1H

- Anyone can freely participate in open community to access all contents and share their own expertise and solutions as a contributor and user.



K-시스템 반도체산업의 개방형 생태계



국내 시장의 외산 반도체 대체,  
해외 시장 동반 진출

## Education



- 인재육성(특성화고~대학)
- 기업교육

※ 서울대, 숭실대, 대구대, 가천대, 한라대, 충북대, 성균관대, 서강대, 영남대 외

## Industry



- 스마트 모빌리티
- 로봇
- IoT
- 헬스케어

## ADAS / AI

**N-Dolphin :** AI Vision Processor For Secure Driving Environment  
**A2X :** Scalable AI Accelerator For Future-Proof Autonomous Driving



## CONNECTIVITY

**AXON :** Vehicle Network Processor For Central Gateway / Zonal Gateway



## INFOTAINMENT / COCKPIT

**Dolphin Series :** The Best Automotive Application Processor For Advanced Infotainment



## E/E ARCHITECTURE

**VCP Series :** Vehicle Integrated Actuator For Future Mobility E/E Architecture



## OPEN PLATFORM

**TOPST :** Total Open-Platform For System Development and Training

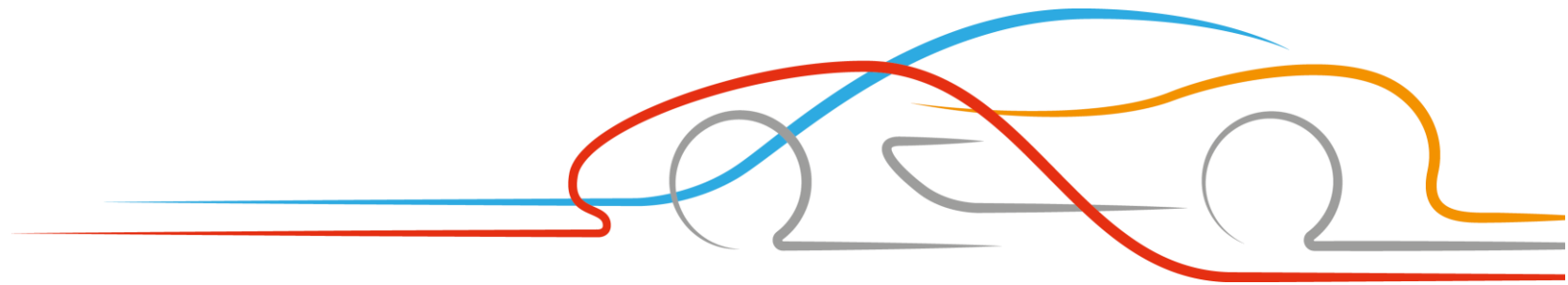


Beyond IVI – A bold Challenge for Future Mobility

미래 모빌리티 기술을 선도하는  
대한민국 유일의 차량용 종합 반도체 기업

**Telechips**

# Appendix





# #-1. 회사 연혁

## Telechips History

### Foundation

- 1999 - (주)텔레칩스 설립
- 2000 - IR52 장영실상 수상 (Caller ID Chip)

Telechips



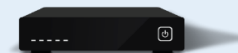
### Consumer Electronics & Automotive

- 2001 - NT Mark 인증 획득
- 세계 최초 MP3 실시간 녹음·재생이 가능한 제품 출시
- 2002 - 수출중소기업인상 수상
- 2004 - 신기술실용화 대통령 표창
- KOSDAQ 상장
- 2005 - 제7회 산업기술혁신 대상 수상
- 세계 최초의 플래시 타입 MP3 플레이어에 대한 PlayForSure 인증 획득
- ISO 9001 및 ISO 14001 인증
- 2007 - 국내 최초 Car Audio용 AP 자동차 OEM 공급 개시
- 2008 - 제1회 반도체의 날 대통령 표창
- 2009 - 세계 최초 Full HD(1080p) 적용 멀티미디어 솔루션 출시
- 2012 - 세계 최초 Android 스마트미디어 플레이어 솔루션 양산
- 2013 - 세계 최초 Operator HDMI Stick 출시



### Intelligent Automotive Solution ( Smart Cockpit / ADAS / AI )

- 2015 - 국내 최초 Car AVN용 AP 자동차 OEM 공급 개시
- 월드클래스 300기업 선정
- 글로벌 전문 후보기업 선정
- 2016 - 2016년 무역의 날 수출 3천만불탑 수상 및 유공자 표창
- 2017 - 국내 최초 북미 대형 방송사업자에 STB용 AP 공급 개시
- 벤처천역기업 수상
- 2018 - 차세대 운전자 보조 기술 통합시스템(Cockpit) 출시
- 인공지능 알고리즘 솔루션 전문기업 (주)마인드인테크 (중속회사) 설립
- 2019 - Cockpit 시스템 자동차 OEM 공급 개시
- 국내 최초 Digital Cluster 솔루션 및 HUD (Head-Up Display) 양산
- 2020 - 국내 최초 AVN & SVM 통합 솔루션 양산
- 2021 - 국내 최초 차량용 MCU 출시



## #-2. 요약 재무제표

### 요약 연결 재무상태표

(단위: 백만원)

구분	2023.3Q	2022	2021	2020
유동자산	131,543	119,729	89,544	85,918
비유동자산	206,995	190,443	117,715	80,118
<b>자산총계</b>	<b>338,538</b>	<b>310,172</b>	<b>207,259</b>	<b>166,036</b>
유동부채	71,781	101,988	41,945	31,033
비유동부채	50,354	38,515	59,037	42,554
<b>부채총계</b>	<b>122,135</b>	<b>140,503</b>	<b>100,982</b>	<b>73,588</b>
자본금	7,572	6,928	6,753	6,753
주식발행초과금	44,414	18,639	12,632	12,632
기타자본구성요소	6,458	15,685	4,444	-981
이익잉여금	157,958	128,418	82,447	74,044
<b>자본총계</b>	<b>216,402</b>	<b>169,670</b>	<b>106,277</b>	<b>92,448</b>

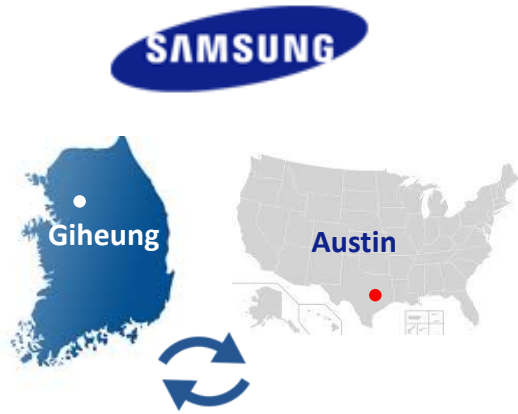
### 요약 연결 손익계산서

(단위: 백만원)

구분	2023.3Q	2022	2021	2020
<b>매출액</b>	<b>146,617</b>	<b>150,404</b>	<b>136,412</b>	<b>100,722</b>
매출원가	84,568	93,836	86,447	66,058
매출총이익	62,048	56,568	49,966	34,664
판매비와관리비	47,482	47,388	41,889	43,139
<b>영업이익</b>	<b>14,566</b>	<b>9,180</b>	<b>8,077</b>	<b>-8,475</b>
법인세차감전 순이익	34,347	47,805	7,933	-8,121
<b>당기순이익</b>	<b>31,358</b>	<b>45,897</b>	<b>7,031</b>	<b>-9,413</b>

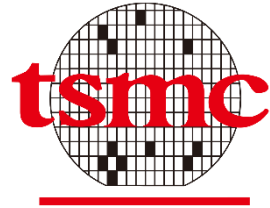
# #-3. Global Production Eco System

## Fab. Supplier Chain (Wafer Purchasing)



Capable of satisfying plant capacity

Application Processor, VCP



Safety IC, etc.

## Assembly



## Test





# #-4. 글로벌 표준 취득 현황

## ISO 9001&14001



## ISO 26262



Functional Safety

## ISO 27001



Cyber Security

## TISAX



## AUTOMOTIVE SPICE



S/W Quality Management Process

Telechips

# #-5. ESG (Environmental, Social and Governance) 현황



EcoVadis

“Silver” rating in 2022

## Environment



- Improvement of energy efficiency through technology or equipment upgrades
- Packaging designed for easy dismantling and recyclability
- Measures to reuse or recycle waste
- ISO14001 certified (at least one operational site)
- Measures or innovative technologies implemented to reduce, recycle or reuse waste

## Labor & Human Rights



- Employee stock ownership plan
- Flexible organization of work available to employees
- Health care coverage of employees in place
- Internal audits on health & safety issues
- Employee health & safety detailed risk assessment
- Regular assessment (at least once a year) of individual performance
- Interactive session with employees regarding working conditions
- Official measures promoting career mobility
- Remuneration process (e.g. salary grid, procedure for salary advancement) communicated to employees

## Ethics



- Implementation of a records retention schedule
- Information security risk assessments performed
- Audits of control procedures to prevent information security breaches
- Awareness training to prevent information security breaches
- Measures to protect third party data from unauthorized access or disclosure
- Audits of control procedures to prevent corruption
- Incident response procedure (IRP) to manage breaches of confidential information

## Sustainable Procurement



- Regular supplier assessment on environmental or social practices
- On-site audits of suppliers on environmental or social issues
- 50-100% of suppliers for which conflict minerals information is available