# Second Quarter FY 2023 Quarterly Update

Infineon Technologies AG
Investor Relations

# Infineon at a glance

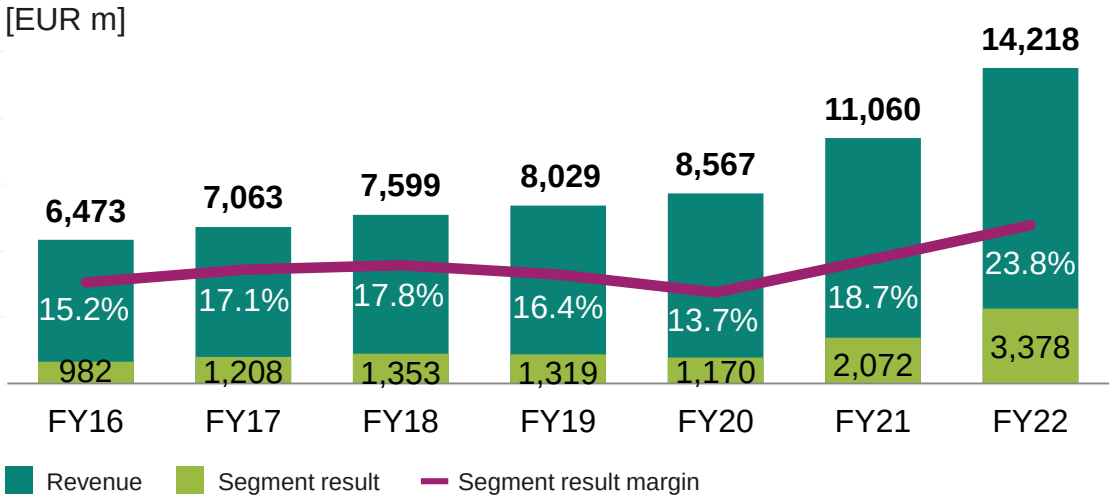
## Addressing long-term high-growth trends

**Energy**
**green and efficient**

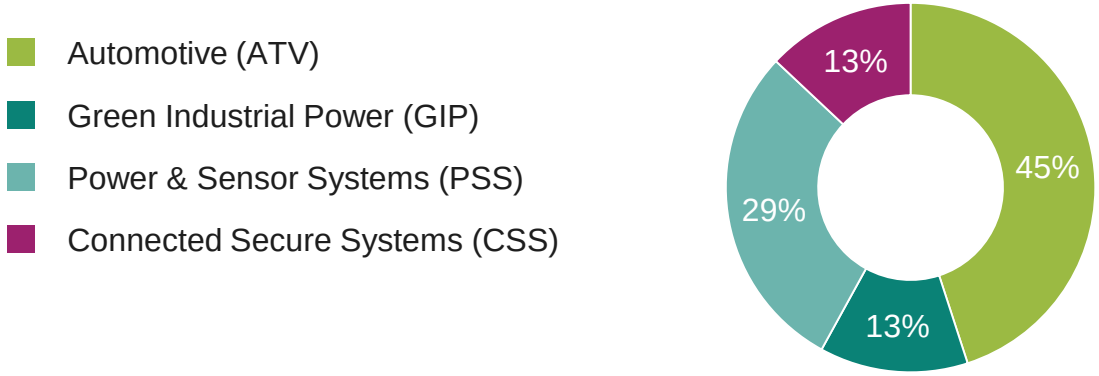
**Mobility**
**clean and safe**

**IoT**
**smart and secure**

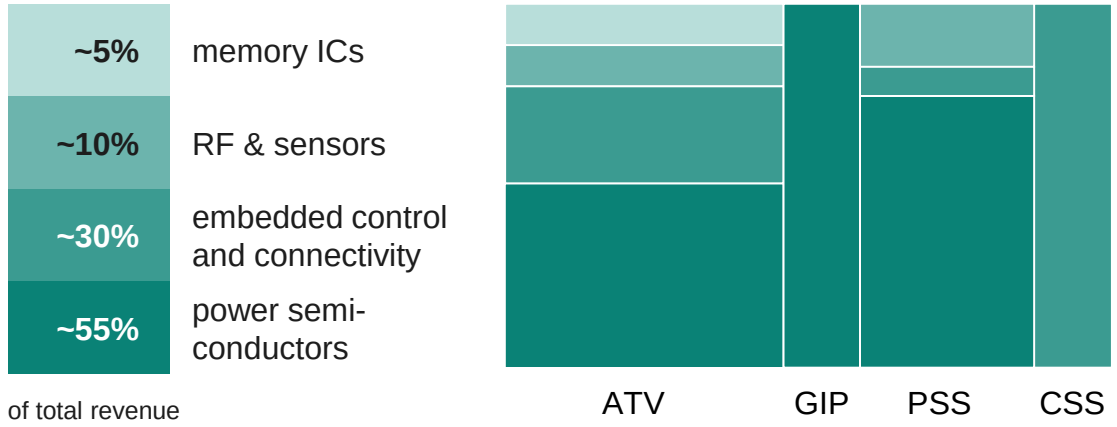
## Financials




## FY22 revenue by segment



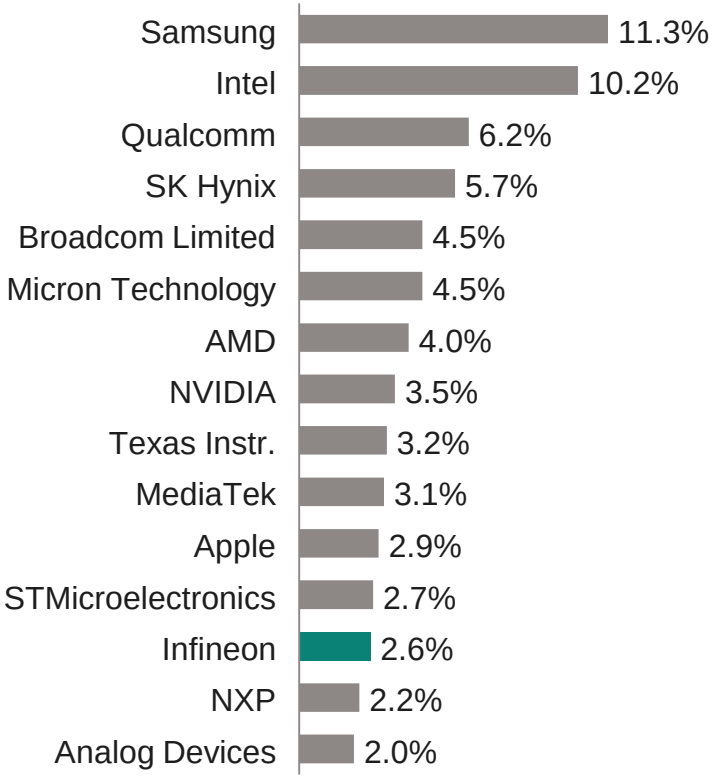

## FY22 revenue by product category



# Infineon is a global player, clear #1 in power semiconductors, and ranked #5 in the overall microcontroller market

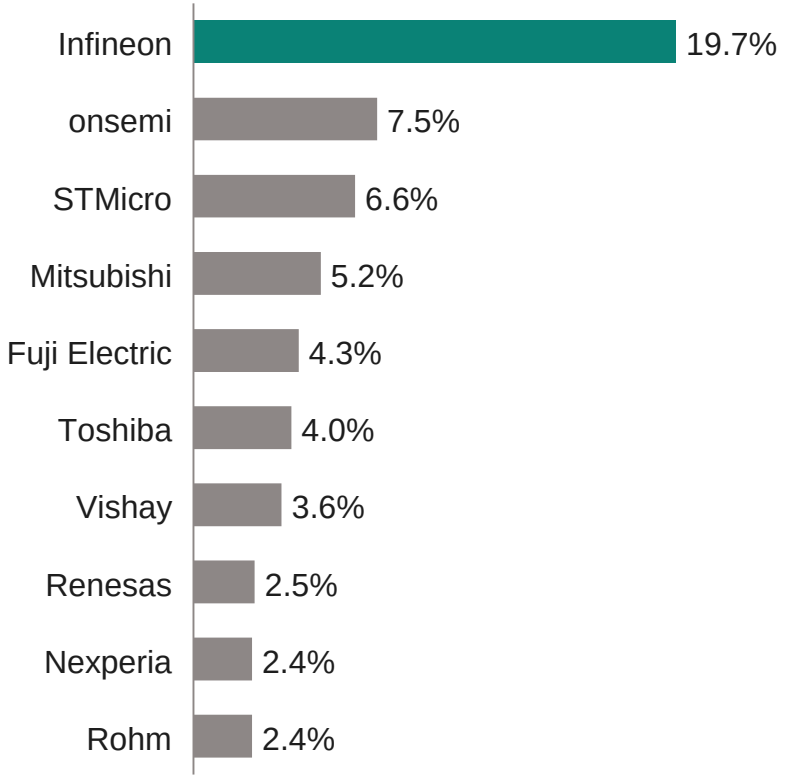
## Semiconductor suppliers

2022 total market: USD 596bn[1]



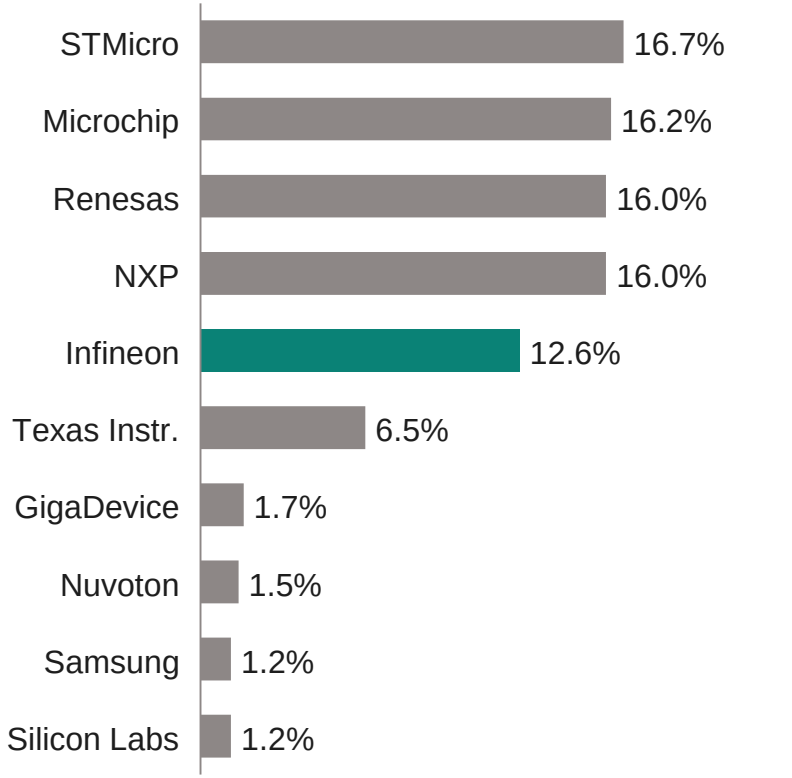

## Power discretes and modules

2021 total market: USD 27.5bn[2]




## MCU suppliers

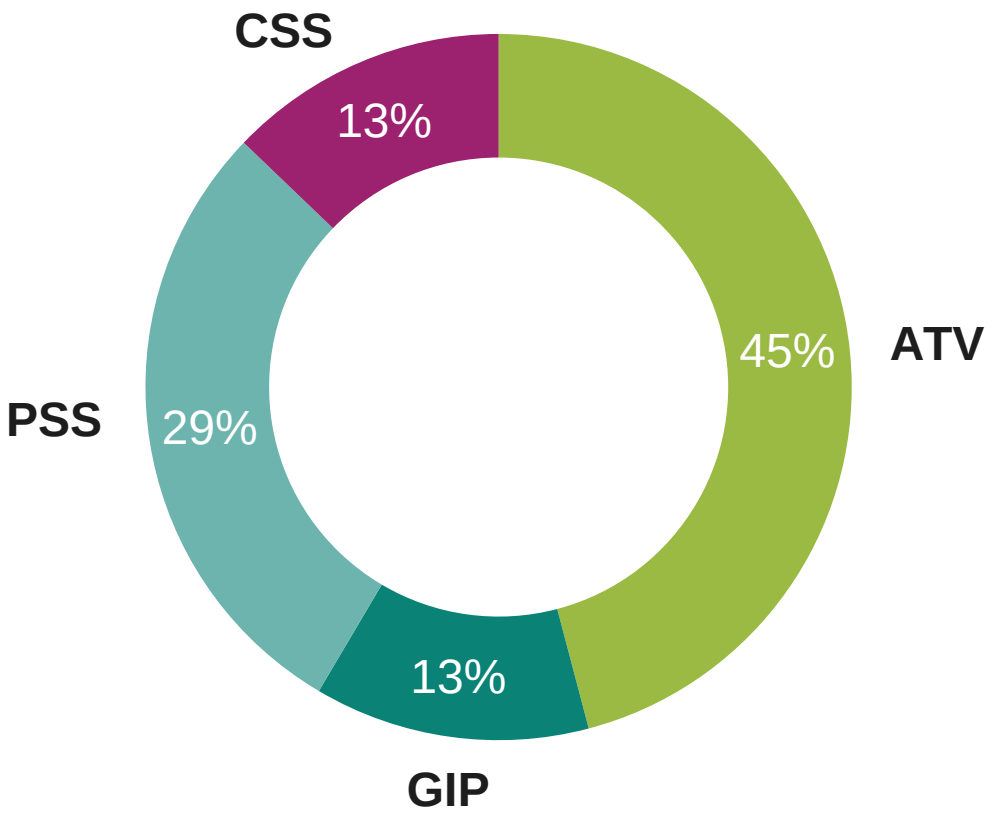
2022 total market: USD 27.9bn[1]

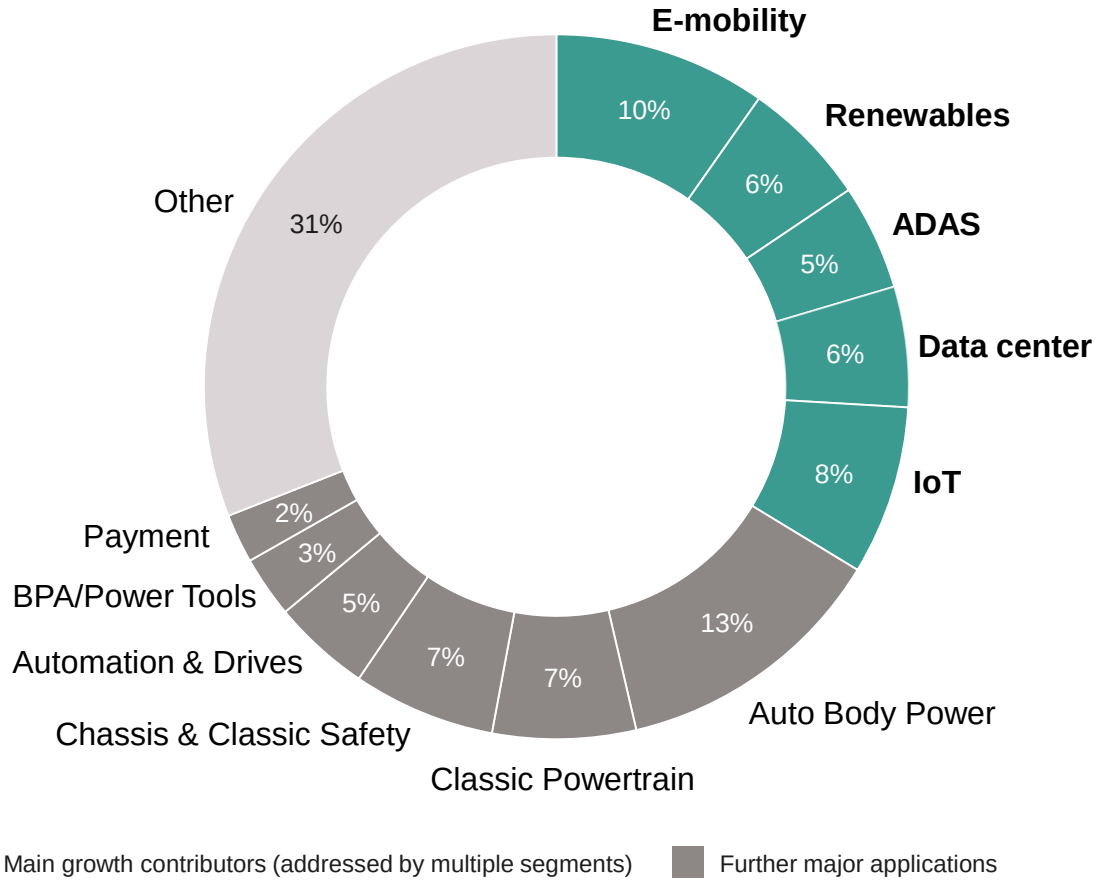



[1] Based on or includes research from Omdia: *Annual 2001-2022 Semiconductor Market Share Competitive Landscaping Tool – 4Q22.* March 2023.
[2] Based on or includes research from Omdia: *Power Semiconductor Market Share Database – 2021 – Final V2.* October 2022.
Results are not an endorsement of Infineon Technologies AG. Any reliance on these results is at the third party's own risk.

# Well-balanced portfolio among segments and key applications, highest growth coming from Decarbonization and Digitalization

## FY22 revenue of €14,218m by segment and key application



# Undisputed power systems leadership mastering all three key materials

- Reliable multi sourcing of raw materials
- World-scale fabs

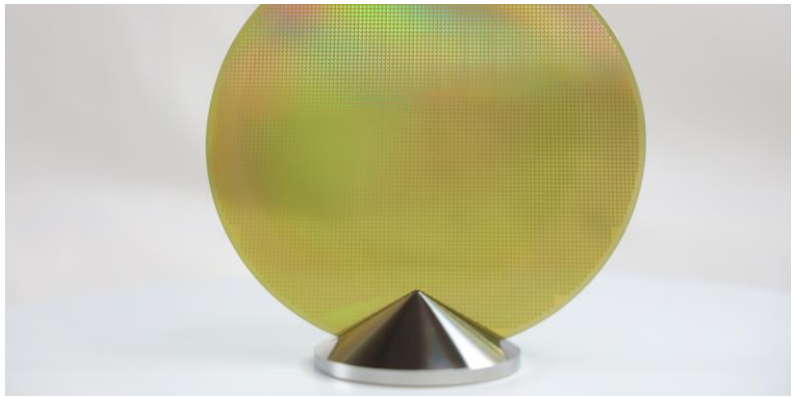
**Controller** | **Driver IC** | **Power switch** (Si/SiC/GaN)

**Software + Algorithms**

- Application understanding
- Packaging know-how and hybridization competence

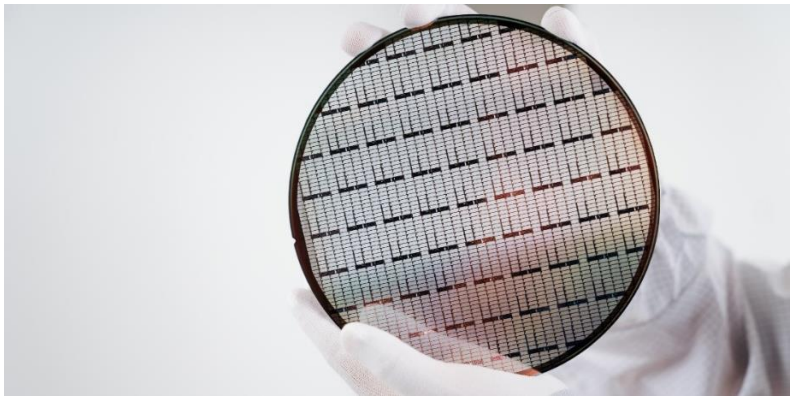
## Leadership in Power Systems across all materials and technologies

### Silicon
Diode – MOSFET – IGBT – Driver – Controller



### Silicon carbide
Diode – MOSFET

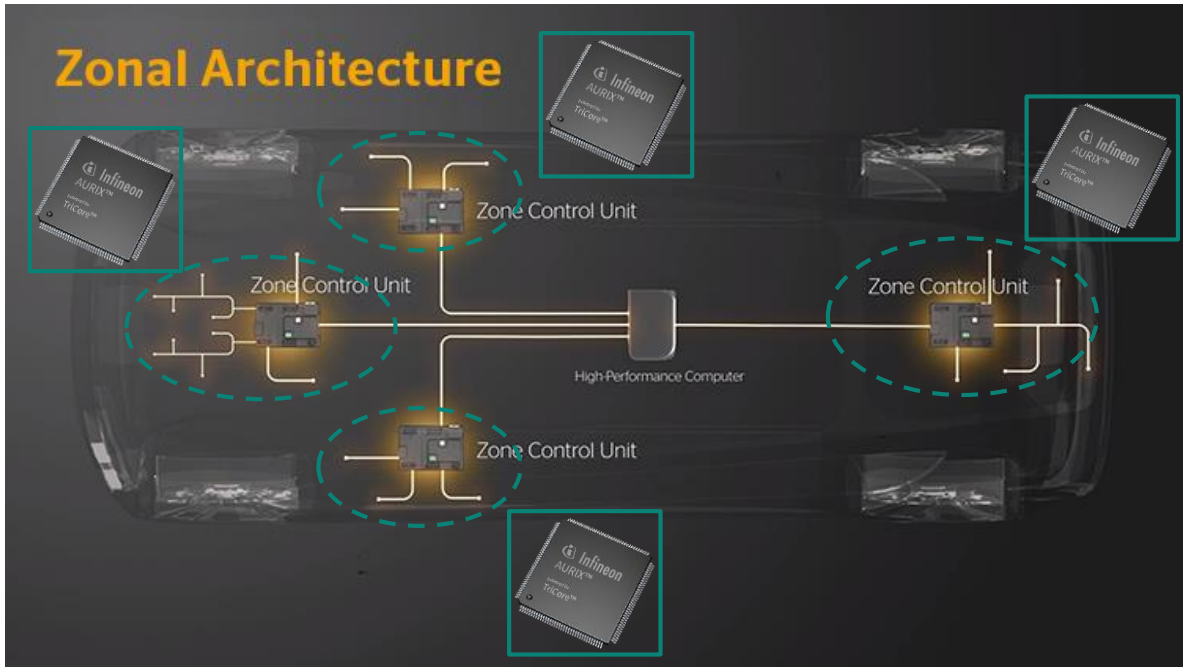
### Gallium nitride
HEMT – Driver



# Infineon and Continental to cooperate in the development of server-based vehicle E/E (electrical/electronic) architectures

## Continental using Infineon's AURIX™ TC4x MCU for its zonal platform

- Organized and efficient E/E architecture with central high-performance computers (HPC) and a few, powerful zone control units (ZCU) instead of up to a 100+ individual control units
- The AURIX™ TC4x was designed for usage in ZCUs and as support unit in HPCs
- Architecture allows essential software programs to be almost constantly on stand-by
- State-of-the-art cybersecurity functions, developed according to the ISO/SAE 21434-certified process
- RRAM (Resistive Random Access Memory) technology allows performance expansion, power consumption reduction, and cost improvement


- In the E/E architecture of the future, a ZCU bundles all electronic and electrical connections in a local section of the vehicle
- Bundling the software components centrally will thereby increase cybersecurity and updatability

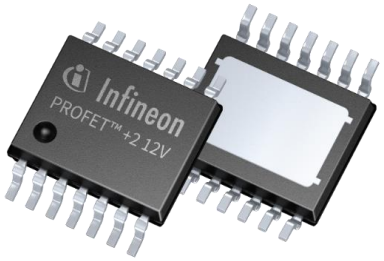
# Infineon awarded for BYD's new E/E architecture based on zonal platform

## Design-win for three zones

- New E/E architecture enabling efficient MCU setup and smart power distribution

- MCU: TRAVEO™ 2G
  (2 MB to 8 MB on-chip memory)


- Intelligent power devices (IPDs):
  PROFET™ +2 high-side switch




**Superior solution by combining MCU and IPD for new zonal E/E architecture**


» P2S solution levering combined Infineon product advantages

# Infineon and Delta to cooperate on EVs; joint innovation lab to be set up in Taiwan

- Infineon and Delta Electronics, Inc. are expanding their long-term cooperation from industrial to automotive applications
- Joint innovation activities to provide more efficient and higher-density solutions for the fast-growing market of EVs
- The agreement covers a wide range of components such as high-voltage and low-voltage discretes and modules as well as MCUs to be used in EV drivetrain applications such as traction inverters, DC-DC converters and on-board chargers
- In addition, both parties agreed to set up a joint innovation lab for automotive applications. The Delta-Infineon Automotive Innovation Center will be co-managed by both companies
- Over the past 25 years Delta and Infineon have successfully collaborated in the area of industrial products

# Decarbonization and digitalization are accelerating structural growth of Infineon's target markets

**Decarbonization** **Digitalization**

**Infineon serving all target markets as leader in Power Systems and IoT**

Supported by …

From product thinking to system understanding

P2S

Software capability

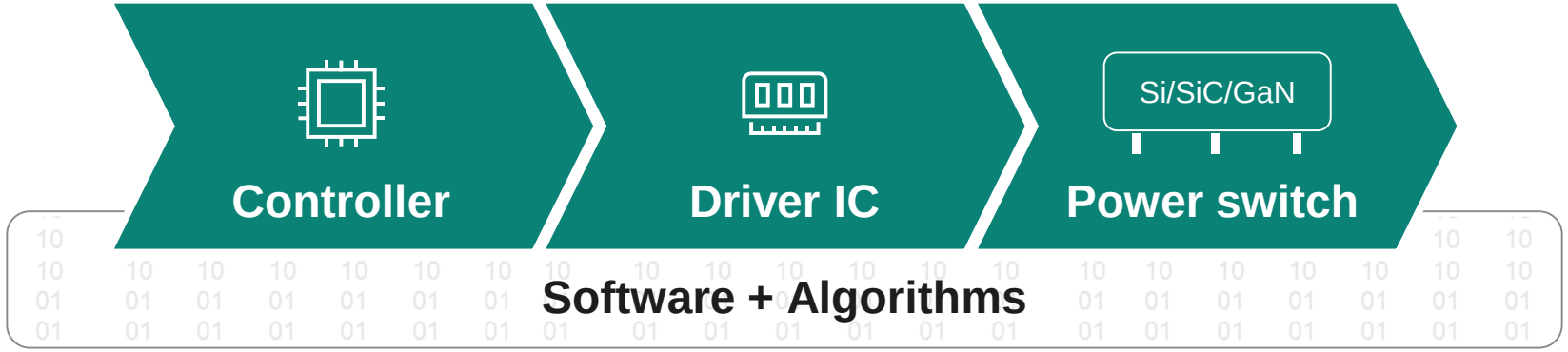
Digital marketing and sales
Eye-level strategic partnerships

# Leader in power systems: Infineon enabling decarbonization by delivering maximum value to customers with holistic system approach

## Electric vehicle
Inverter – BMS – OBC – DC/DC

## Solar inverter
DC/DC – DC/AC

## Server power
AC/DC – DC/DC – PoL – Power stage




PoL (point of load): PMIC + Driver IC + MOSFETs | Power stage: Driver IC + MOSFETs

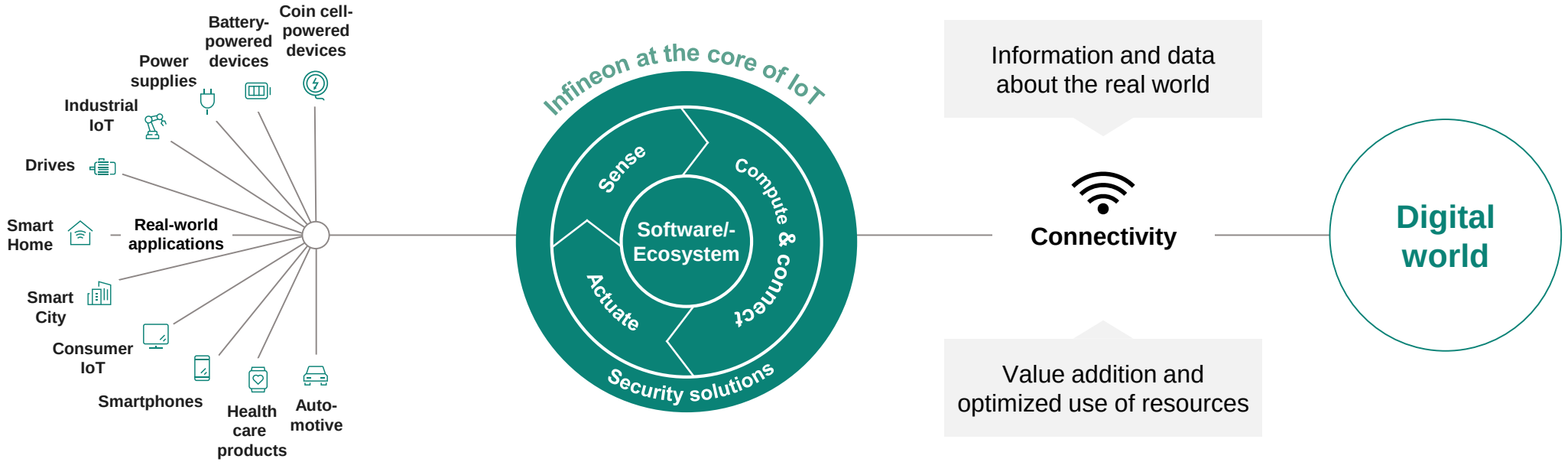
# Infineon at the core of IoT – Driving digitalization by serving strongly growing multi-application markets

## Consumer IoT

## Industrial IoT

## Automotive IoT

**Products:** MCU – Connectivity (Wi-Fi, BLE, NFC) – Sensors – Security – Power supply & switches



# Upgraded Target Operating Model: Committing to more ambitious financial goals and being the sustainability leader

## Target Operating Model
through cycle

| | | Previously |
|---|---|---|
| Revenue growth | **>10%** | 9%+ |
| Segment Result Margin | **25%** | 19% |
| Adj. Free Cash Flow Margin[1] | **10-15%** | Invest-to-sales 13% |

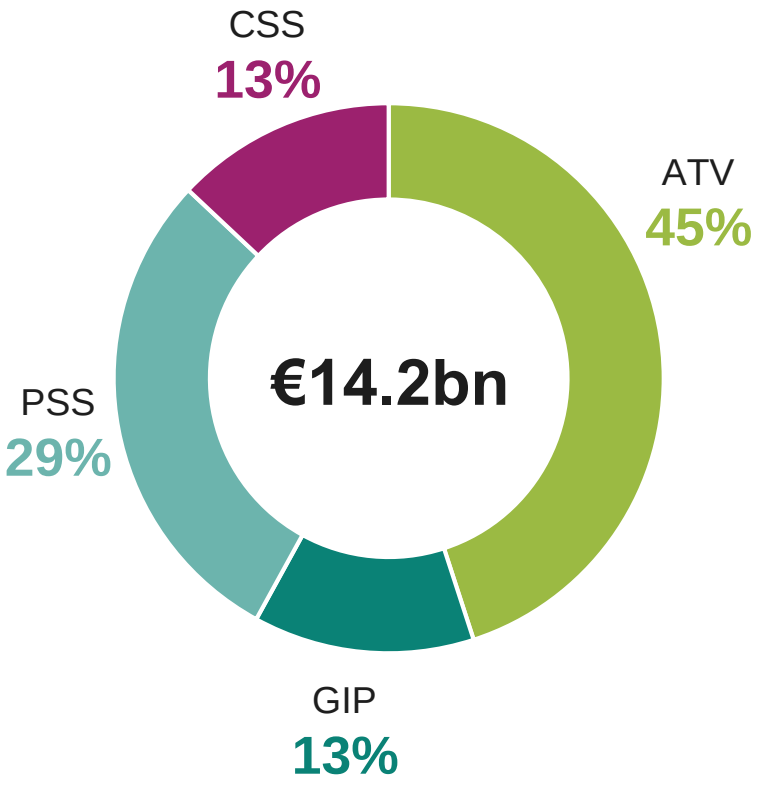
**Sustainability leader**
$CO_2$ neutrality 2030

[1] Excluding major frontend buildings

# Double-digit growth ahead – five key applications account for ~60% of growth; well-diversified divisional split

FY22

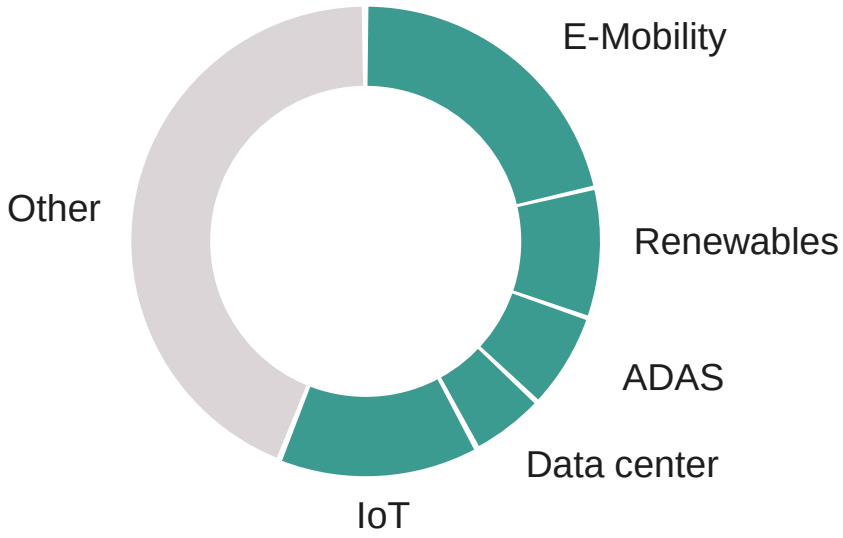
## Revenue by division




**>10%**
CAGR

FY22-27e

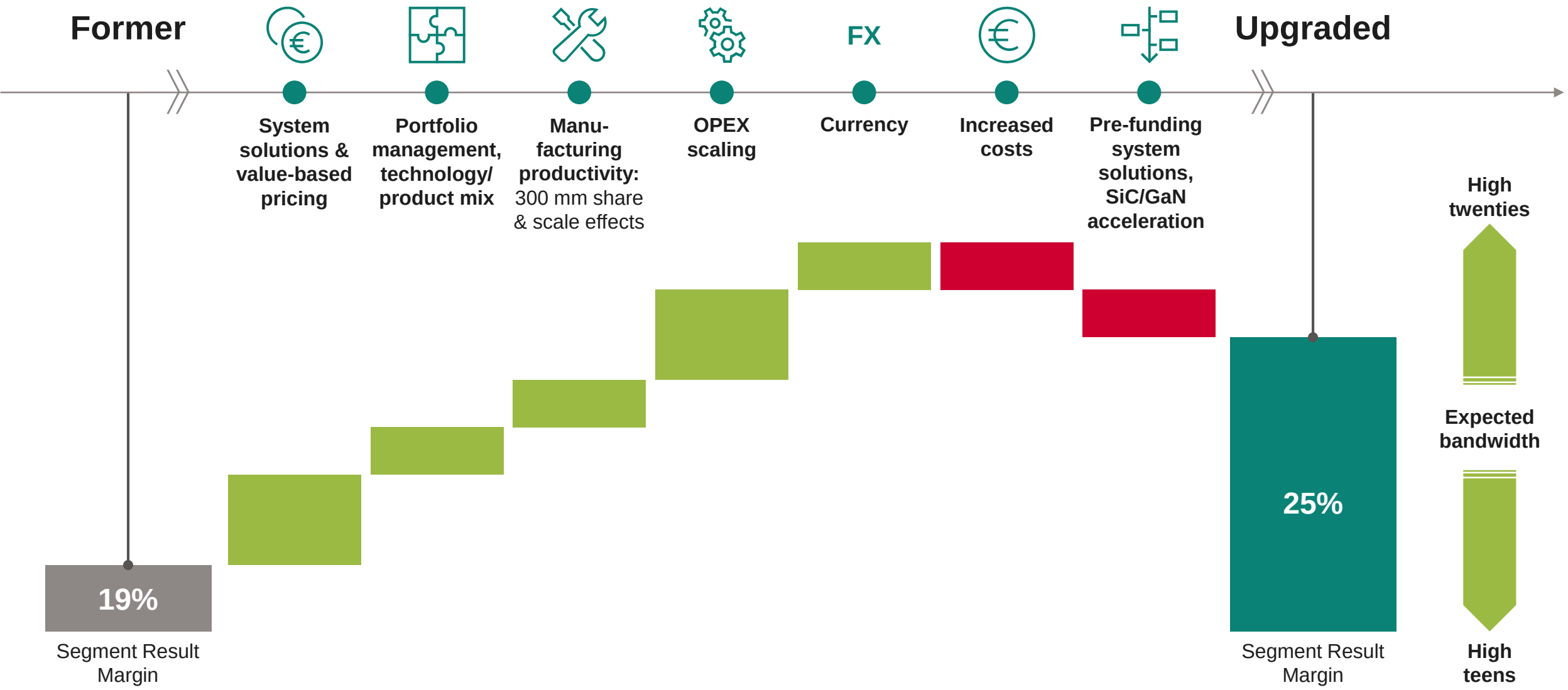
## Revenue growth contribution by driver



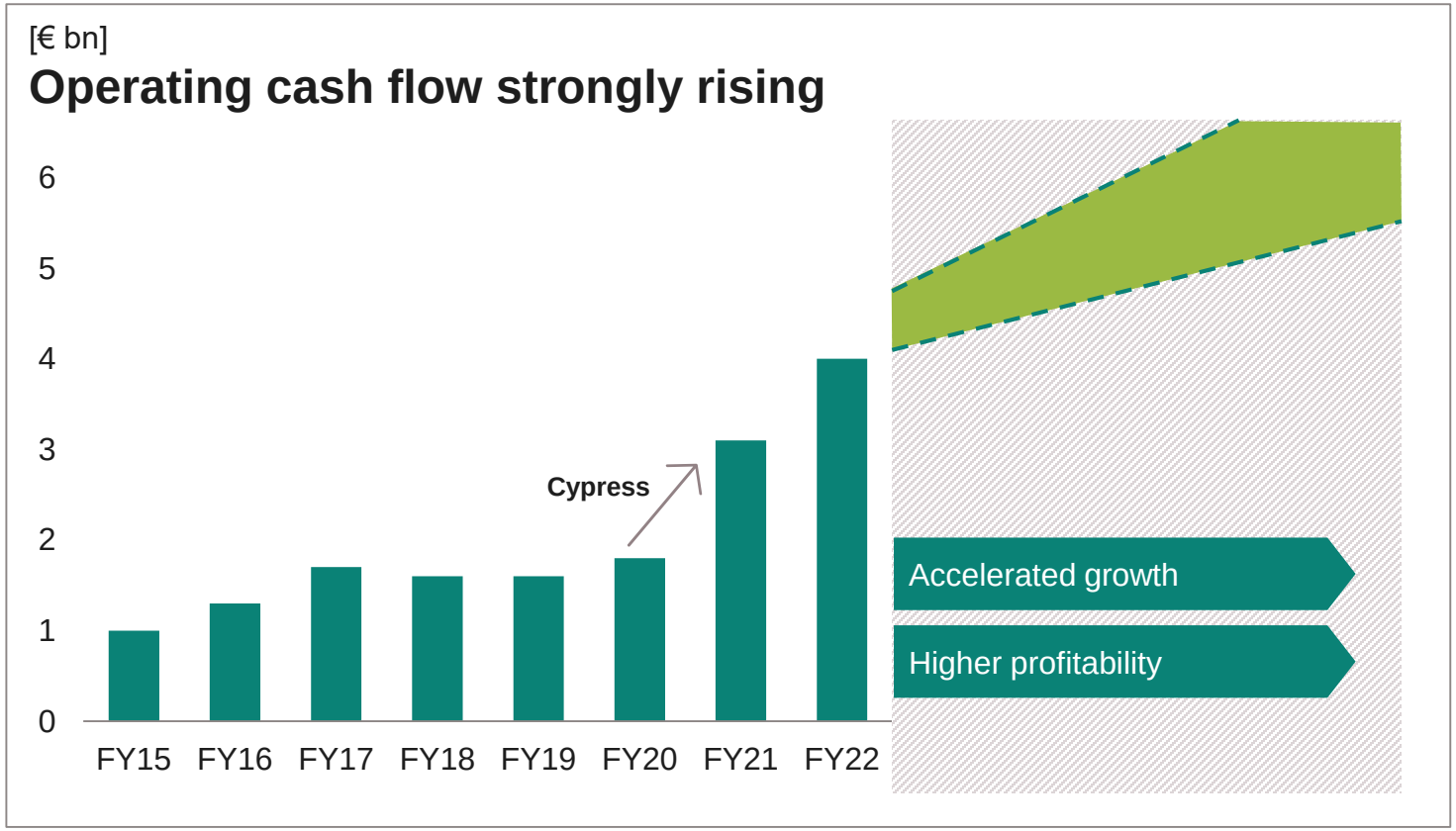

## Through cycle growth rates by division

| ATV | GIP | PSS | CSS |
|---|---|---|---|
| >10% | >10% | ~10% | ~10% |

# Upgraded Target Operating Model:
# Significant margin expansion through the cycle



# Free Cash Flow generation increasing over the cycle, driven by profitable growth and better asset efficiency




- Accretive investments into high organic growth
- Operating cash flow expected to outgrow investments
- Differentiated in-house manufacturing complemented by ~40% outsourcing share over time
- FY23-27: ~€3.5bn cum. investments into major frontend buildings

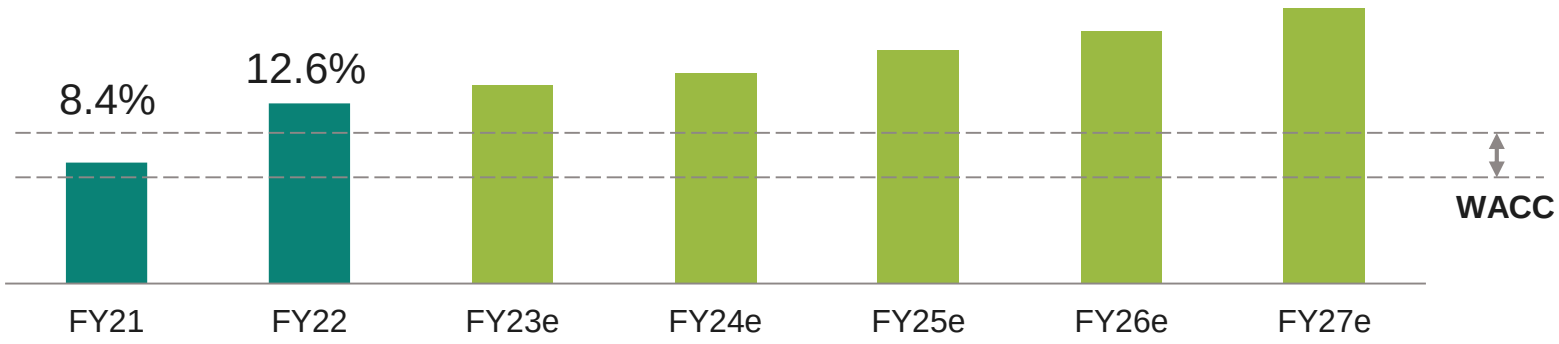
**Adj. Free Cash Flow target: 10-15% of sales, excl. major frontend buildings**

# Putting it all together – Upgraded Target Operating Model leads to superior value creation

## Target Operating Model
through cycle

| | |
|---|---|
| Revenue growth | **>10%** |
| Segment Result Margin | **25%** |
| Adj. Free Cash Flow Margin[1] | **10-15%** |

**Reported RoCE to reach 2x cost-of-capital level**




[1] Excluding major frontend buildings

# Outlook for Q3 FY23 and FY23

| | Outlook Q3 FY23[1] | Outlook FY23[1] |
|---|---|---|
| Revenue | ~€4.0bn | €16.2bn +/-€300m |
| Adj. Gross Margin | | ~47% |
| Segment Result Margin | ~26% | ~27% |
| FCF/adj. FCF | | ~€1.1bn/~€1.8bn |
| Investments | | ~€3.0bn |
| D&A | | ~€1.8bn[2] |

[1] Based on an assumed average exchange rate of $1.10 for €1.00
[2] Including the amortization of around 450 million Euros from purchase price allocations

# ESG:
# Targets and achievements

# Our 2030 carbon neutrality goal is aligned with the Paris Climate Agreement's 1.5 °C target

## $CO_2$ burden[1]

3 million tons of $CO_2$ equivalents

Ratio

**~1:33**

## $CO_2$ savings[2]

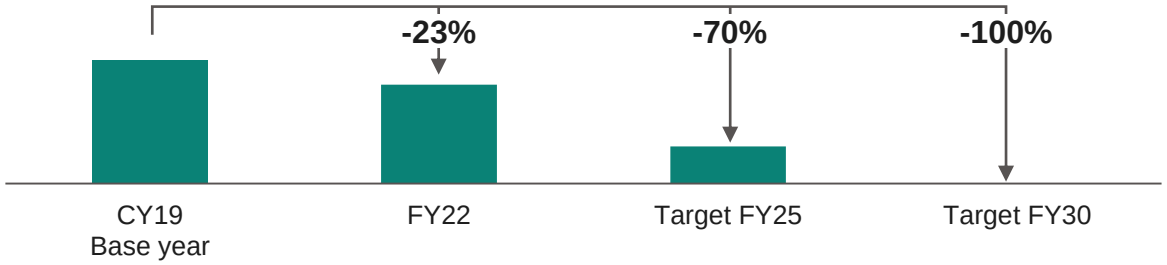
~100 million tons of $CO_2$ equivalents

### On the road to carbon neutrality[3] we achieved significant milestones by

- Using green electricity in Europe and North America
- Completing abatement system in Kulim

### Infineon's $CO_2$ target[3] by 2025 and 2030

Net $CO_2$ emissions in million tons of $CO_2$ equivalents




Net ecological benefit: **$CO_2$ emissions reduction of more than 97 million tons**

[1, 2, 3] For further explanation see "ESG footnotes" in the appendix

# External recognitions confirm our engagement in contributing to a sustainable society

| | Rating/Score | Scale | Date |
|---|---|---|---|
| MSCI ESG | AA | CCC to AAA | 05/2022 |
| CDP | A- climate scoring<br>B water scoring | F to A | 12/2022 |
| Ecovadis | 99th percentile “Platinum” award | 0 to 100 | 02/2022 |
| Dow Jones Sustainability™ Index | 83 Dow Jones Sustainability™ World and Europe Index listing | 0 to 100 | 11/2022 |
| Ethibel Sustainability Index “Excellence Europe” | Index member | – | 05/2020 |
| ISS ESG Corporate Rating | B-<br>Prime Status | D- to A+ | 01/2021 |
| FTSE4Good Index | Index member | – | 03/2022 |
| Euronext Vigeo Eurozone 120 Index<br>Euronext Vigeo Europe 120 Index | Indices member | – | 05/2021 |
| Sustainalytics | Top ESG performer | – | 01/2022 |

# Infineon’s wide bandgap strategy

# 30% market share target in SiC by end of decade underpinned by significant capacity expansion

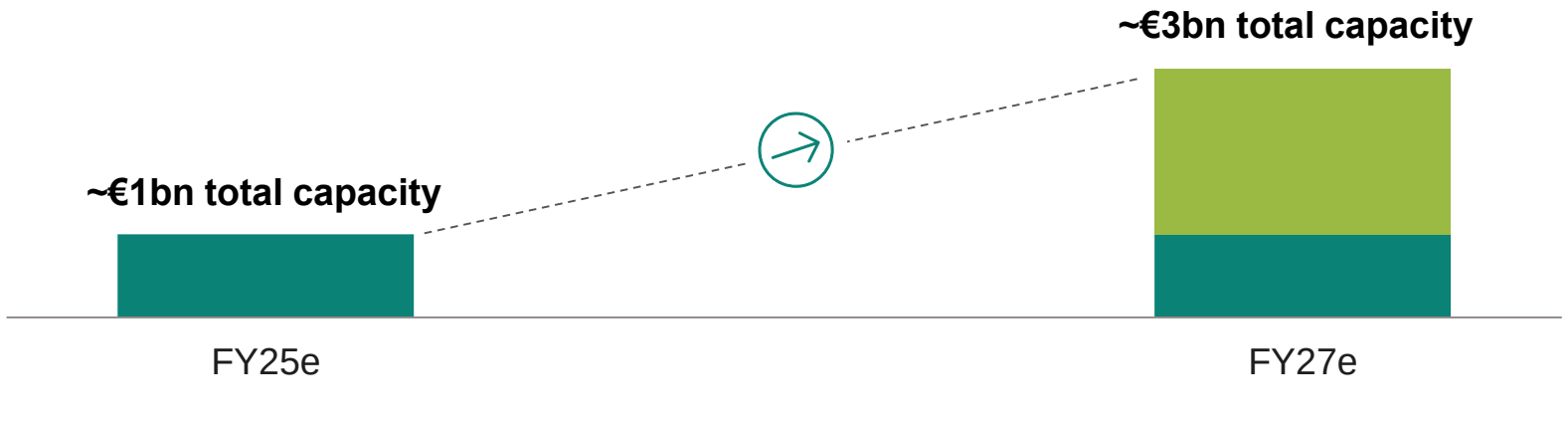
## Villach

**10x**
Increase by 2027 vs. today

## Kulim

## Infineon is well positioned for strong SiC market growth

Steep ramp enables market share gains



# SiC momentum further accelerating: Significant new design-wins in auto, continuous leadership in industrial applications

## Most recent automotive SiC design-wins

STELLANTIS · FIAT · CHRYSLER · RAM

**US OEM**

GENESIS

- In addition, ~20 OEMs and ~10 Tier-1s already won

## Most recent industrial SiC design-wins

alpitronic

Bloomenergy

DELTA

solaredge

- More than **3,600 active customers** being served

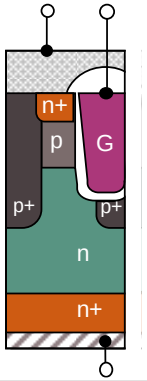
# With its comprehensive SiC strategy Infineon is mastering all key success factors

## SiC raw material supply

- 4 qualified SiC wafer and boule suppliers – more to come
- Cold Split technology increases productivity, especially in 8 inch

## Superior trench technology

- 1 – 2 generations ahead of competition
- 30% more chips per wafer than planar




## Packaging portfolio

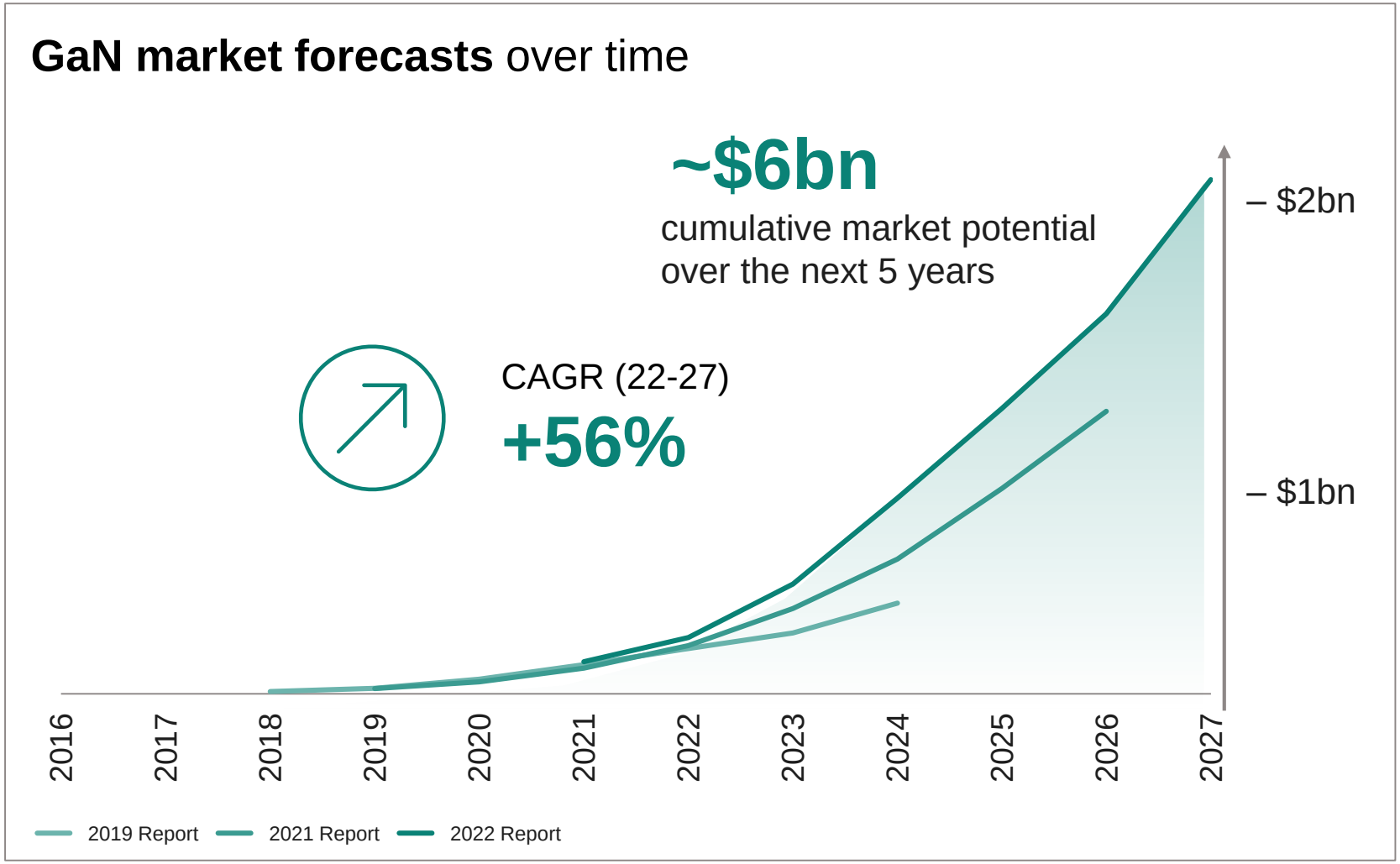
- Best-in-class in-house packaging solutions
- New .XT technology for highest power density

## Deep system understanding

- Decades of experience in automotive and industrial power
- Broadest portfolio: Off-the-shelf plus customized solutions

P2S

# GaN market accelerating, driven by key power applications




- Superior switching performance results in **higher efficiency** and **lower system cost**
- Applications with **tipping point** reached or in sight

Charger, adapter

Server (high voltage)

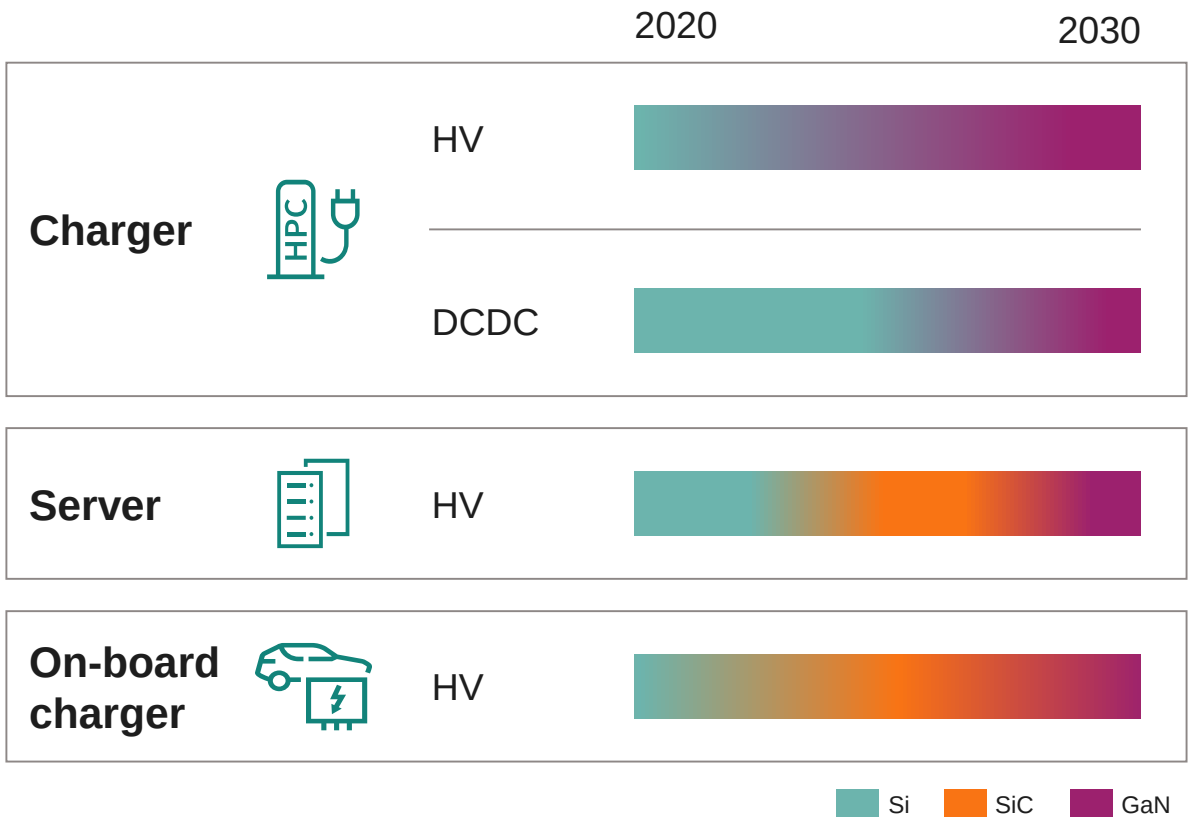
Residential solar

On-board charger

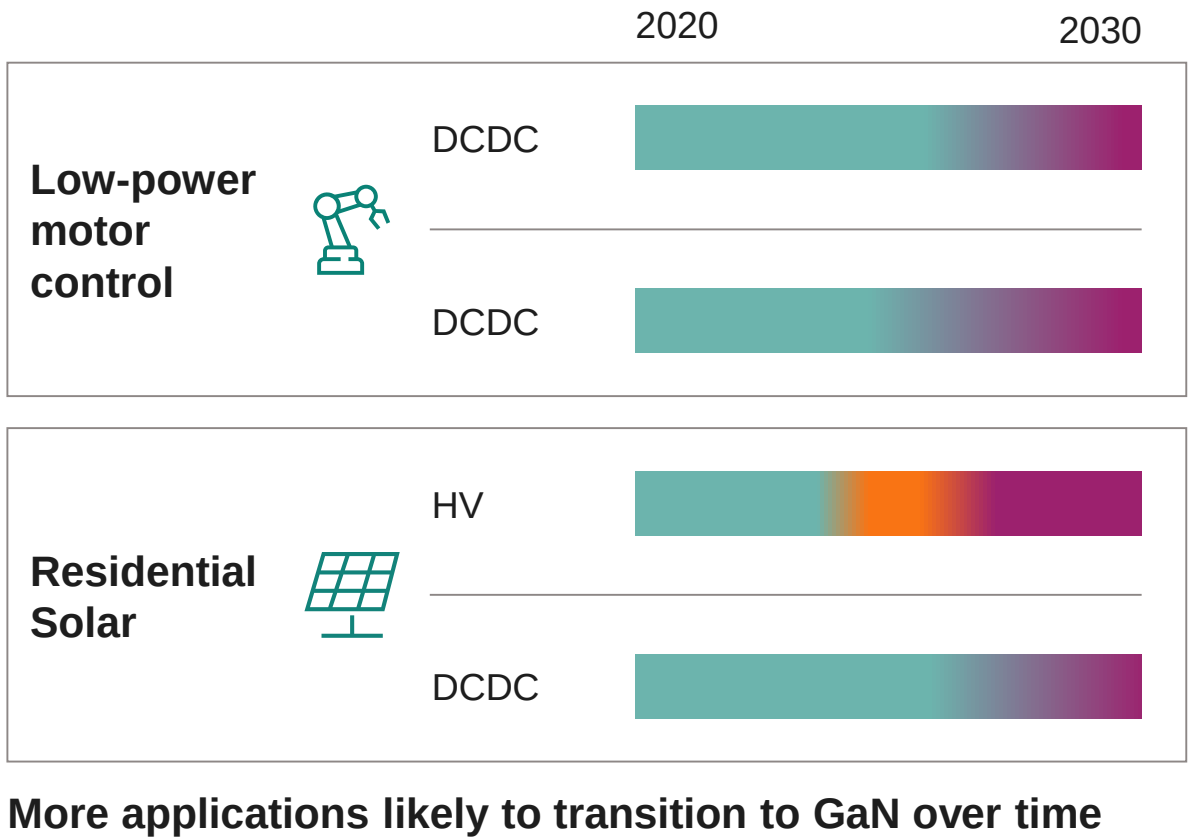
Yole: Power GaN Report 2022 & Compound Semiconductor Market Monitor-Module I Q4 2022.

# GaN expected to be the preferred technology in multiple core applications by 2030, different transition paths shaping up

## GaN tipping point reached/in sight




## GaN transition coming up




**More applications likely to transition to GaN over time**

**Strong position to offer all relevant power semiconductor technologies creates clear customer benefits**

# GaN Systems: a leading GaN player across application understanding, product portfolio, customer access and IP

## Key facts

**Founded: 2008**
**HQ:** Ottawa, CAN
Privately held

**Employees:** >200
**R&D:** CAN, US, TW, JP
**Sales:** 6 locations globally

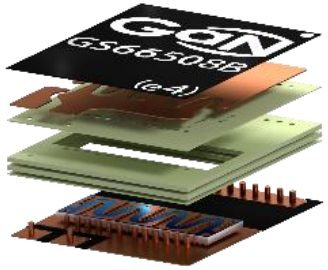
**Business model:**
fabless developer of GaN power devices for power conversion

**Patents:**
**library** focused on package
& device-package interaction/metal stacks

**Application focus:**
server/telecom, automotive, industrial, consumer

**Current revenues:**
low/mid double-digit USD m

## Broad lineup of devices and packages, featuring fully embedded power die packaging



**Top-side cooling:** Hard Switching Applications

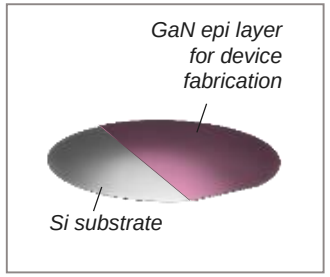
**Bottom-side cooling:** Lower Power Designs

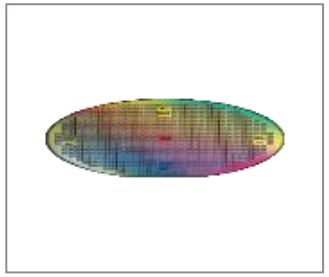
**PDFN:** Cost-Effective Solutions

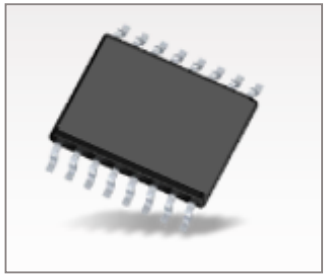
**Die:** Optimized For Wire Bonding

# Joining forces and adding complementary strengths creates a winning formula for the GaN market

GaN fabrication starts with fully commoditized Silicon (Si) wafers





**Substrates** | **Epitaxy** | **Frontend Technology** | **Packaging** | **Product Portfolio** | **Application understanding** | **Customer access**






Infineon + GaN Systems

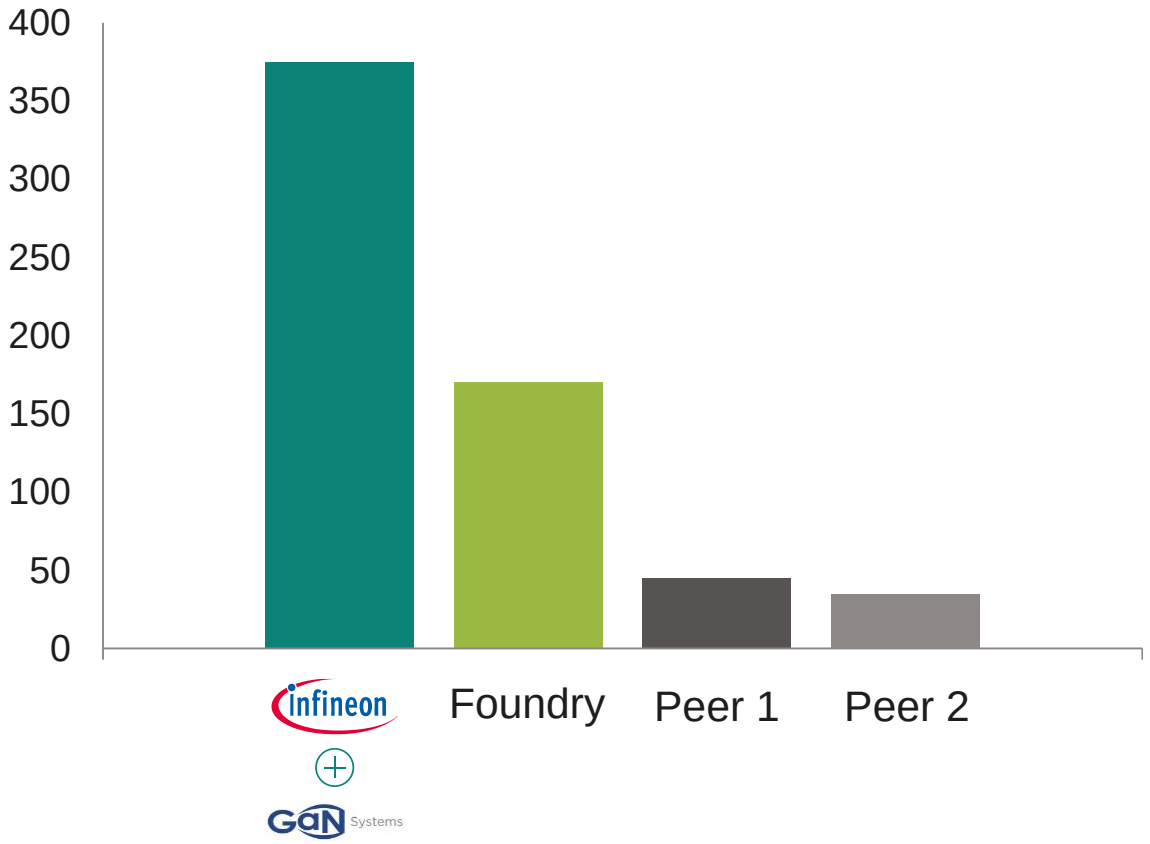
- Strong **IP portfolio**
- Dual-site **in-house** manufacturing (Villach, Kulim 3 *in construction*) **in transition to 8“**
- **Foundry** partnerships

- Full **system** offering, fast track to **GaN-specific topologies**
- High-volume standard and GaN-specific, low-parasitic packages
- **Monolithic integration** roadmap

- Broad **application** coverage to significantly accelerate roadmap
- Excellent **access** to lead customers, incl. automotive

# Combined platform features leading GaN IP and the industry's strongest R&D force, to speed up time-to-market

## No. of patent families in GaN power




**Combined team**
of **~450** GaN experts

**Combined R&D**
budget high double-digit **USD m p.a.**

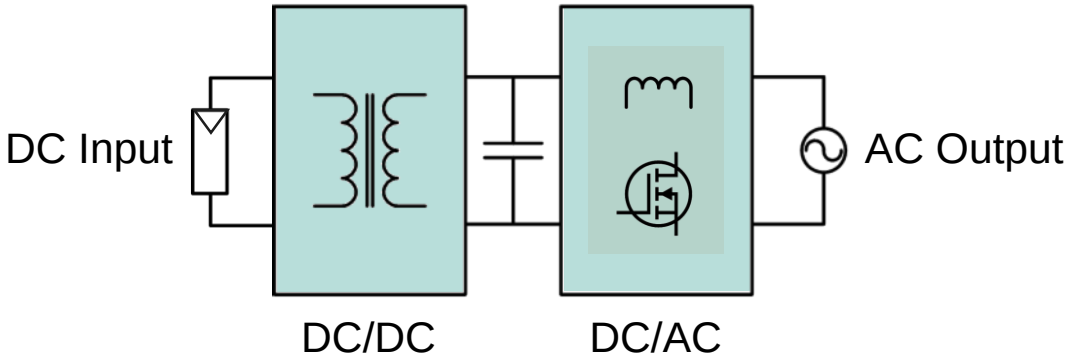
Leverage ability to scale learnings
and **significantly accelerate roadmap**
for shorter time-to-market

**Source:** Infineon analysis

# Best-in-class application know-how is critical to creating completely new and improved systems

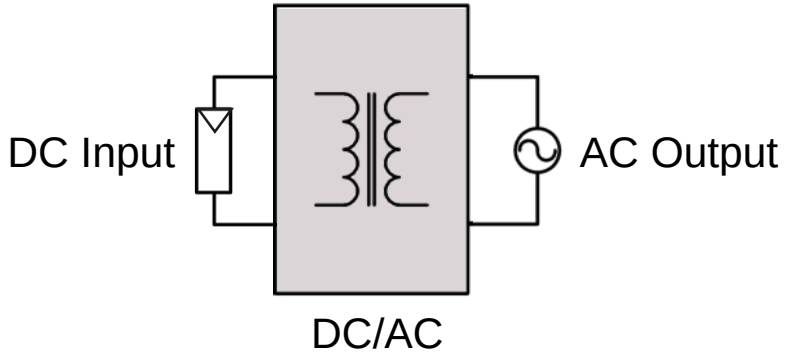
## **Example:** Different topologies for a Solar inverter

**Si** **Two Stages**




VS

**GaN** **Single Stage**




- ✓ Higher power density and therefore smaller
- ✓ Higher efficiency
- ✓ Reduced complexity/system cost

**But: System redesign required**

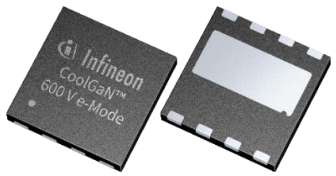
# Strong engagement with market-shaping customers will support GaN market leadership

**2x**
available GaN products

**>2,000 active GaN customers** being served in Infineon focus applications

**>2x design opportunity pipeline** (GaN power) in focus applications of **>€3bn**

Becoming one of the **leading GaN** semiconductor companies





Charger/Adapter in consumer electronics

Industrial/Renewables

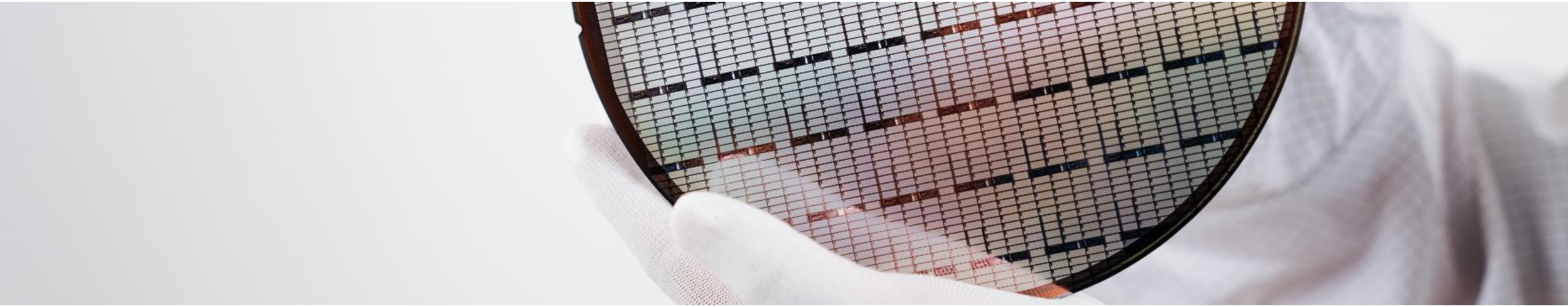
Automotive

... growing with **market-shaping** OEMs and distributors

... creating high **financial value** through revenue and cost **synergies**

... and adding to Infineon's **global leadership in Power Systems** across Si, SiC, GaN

# GaN Systems acquisition positions Infineon to be a leading GaN player



## Leading IP & strongest R&D force

**Leading patent portfolio**
for GaN – >350 patent families

**~450 strong GaN team**
high double-digit USD m GaN R&D p.a.

**Best-in-class application under-standing**
incl. automotive

## Leveraging foundry + IDM advantages

**We own**
key IP and all frontend process steps

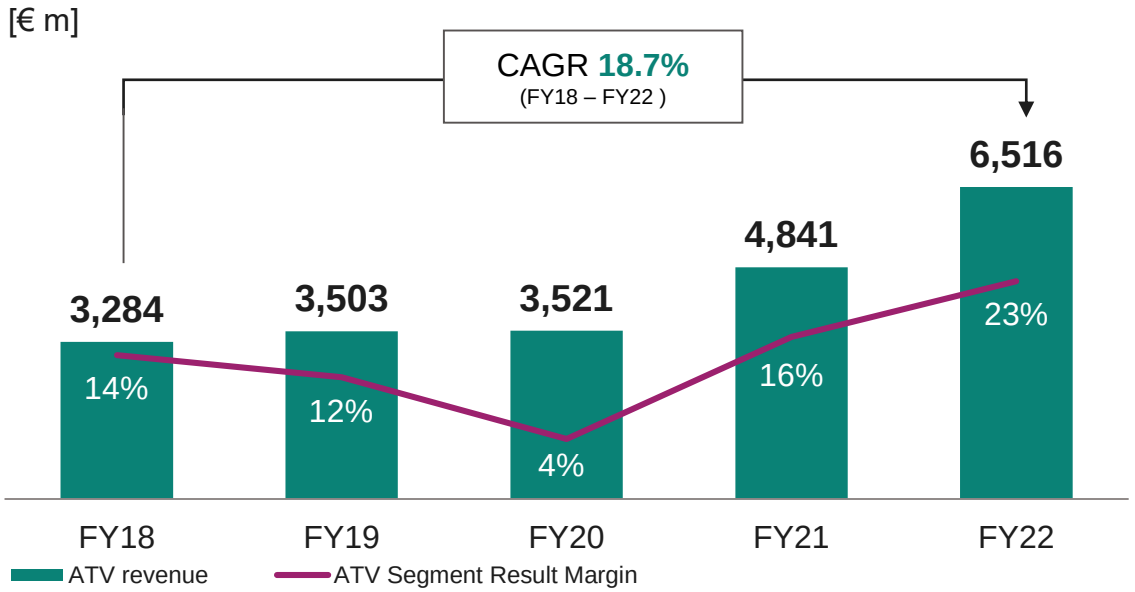
**We combine**
foundry partner-ships and dual-site in-house production, ready for 8”

**We target**
a leading market position

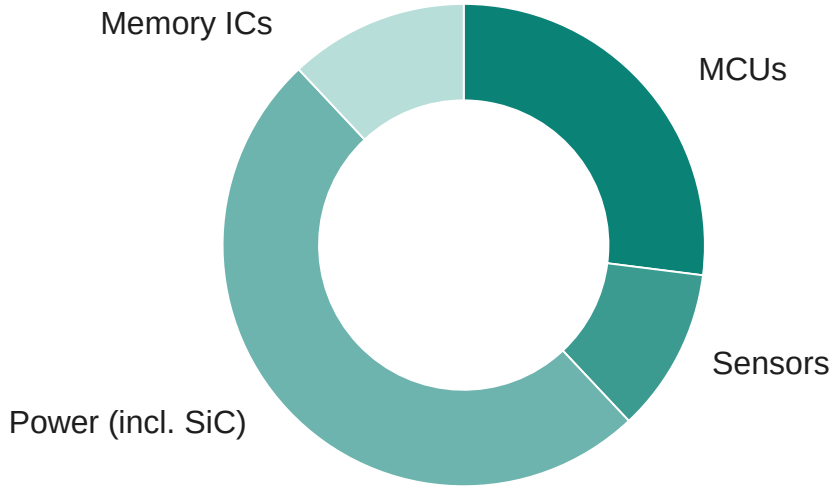
# Automotive

# ATV at a glance

## ATV revenue and Segment Result Margin




## FY22 revenue split by product group




## Key customers

APTIV · Astemo · BOSCH · Continental · DENSO
HYUNDAI MOTOR GROUP · Valeo · veoneer · vitesco TECHNOLOGIES · ZF

# Automotive semiconductor market expected to continue its growth journey

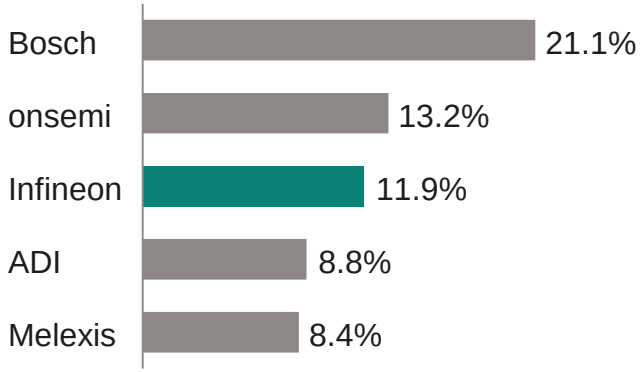
| Applications | Market Outlook for CY23 |
|---|---|
| Automotive | → <br>– Ongoing risks of demand perturbations due to<br>  – Macroeconomic slowdown<br>  – Weaker consumer confidence<br>– However, demand overhang and OEM order backlog should stabilize car production<br>– Semiconductor shortage expected to ease further leading to more balanced demand/supply condition |
| e-mobility | ↗ <br>– Positive Momentum for xEVs expected to continue: Consumer demand, more non-premium models, build-up of battery capacities, denser charging infrastructure, regulations and incentives<br>– More normalized pricing environment could increase BEV production and semi content growth<br>– New incentive programs in China<br>– Price reduction by OEMs |
| Autonomous driving | ↗ <br>– Growth of L1, L2 and L2+ expected to continue<br>– L3 shipments will grow from a rather small base supported by additional L3 model launches<br>– First small-scale commercial robotaxi projects in operation; roll-out in more and more cities |

# Infineon's top market position is built on system competence based on an industry-leading product portfolio

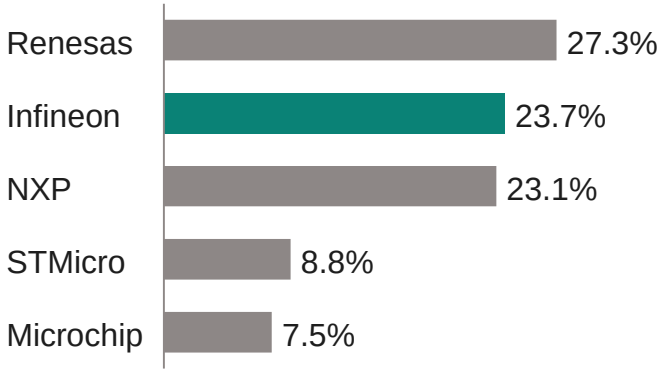
## Automotive semiconductors (2022 total market: $59.4bn; +27.4% y-y)


- Total market grew by 27.4% y-y, reaching all-time-high of $59.4bn; market growth clearly supported by content-per-car growth
- #1 in power semiconductors due to high exposure in xEV
- #2 in MCUs for the first time ever, driven by outstanding success in AURIX™ design-win momentum
- Undisputed #1 in automotive NOR Flash memory ICs

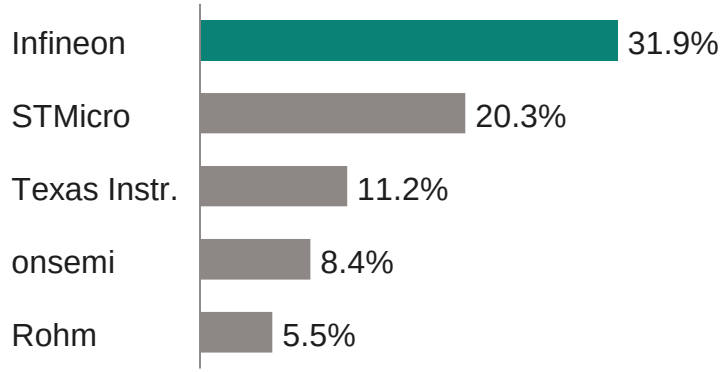
## Sensors




## MCUs



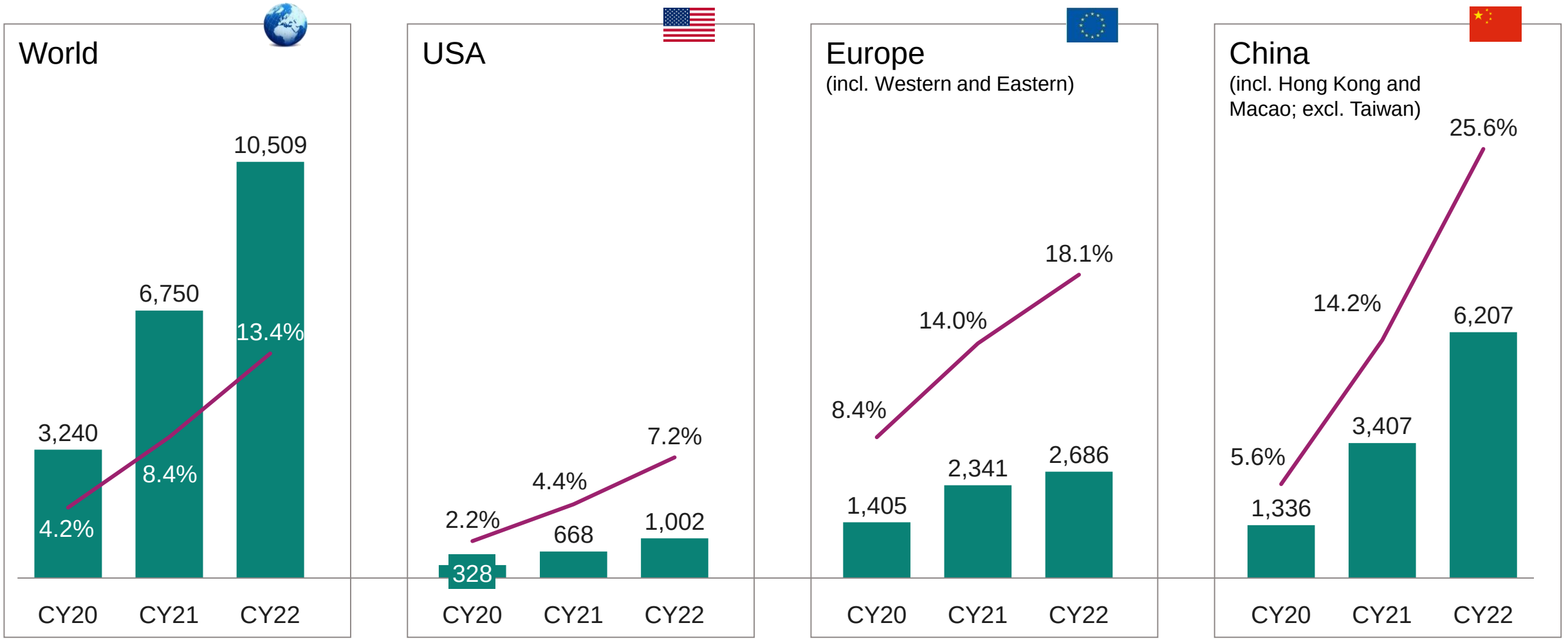

## Power semiconductors




TechInsights (formerly Strategy Analytics): *Automotive Semiconductor Vendor Market Shares*. March 2023.

# Electromobility

# In CY22, xEV (PHEV + BEV) sales crossed the 10m mark driven by China with unit growth of 82% y-y; global monthly run rate now >1m

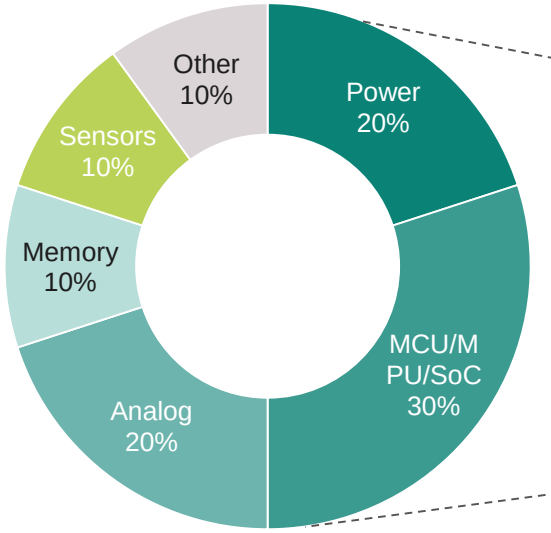



In units k — Penetration

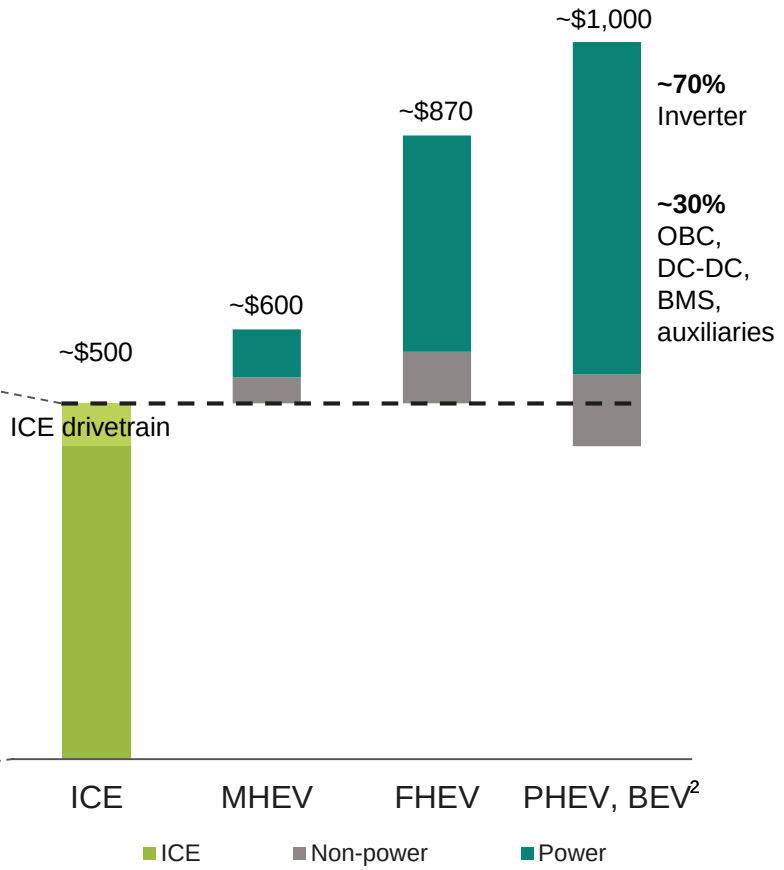
Based on or includes content supplied by S&P Global Mobility. January 2023; EV Volumes. January 2023.

# Infineon addresses 100% of power semiconductors for all drivetrains; BEV semi content expected to grow from ~$1,000 to ~$1,500 by 2028

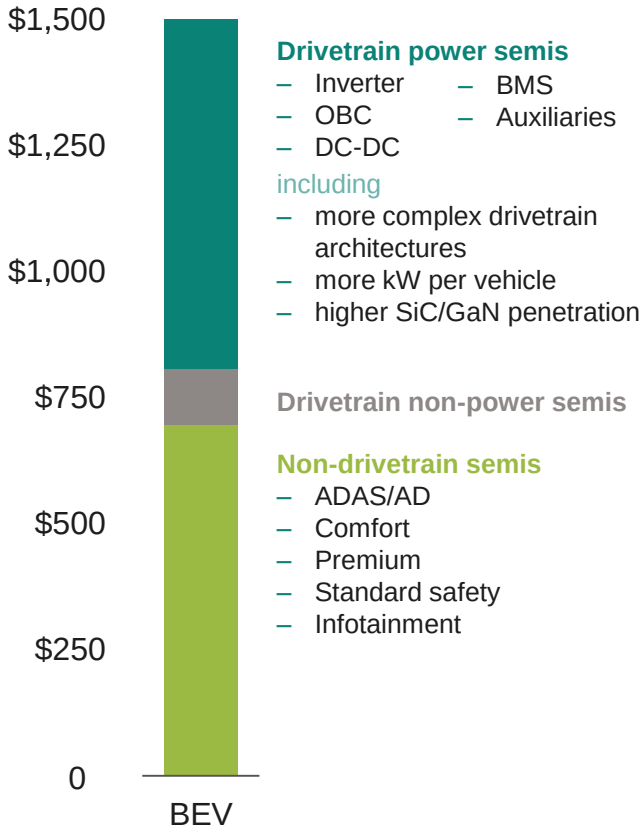
## 2022 ICE semi content by product[1]




## 2022 average vehicle semi content[1]



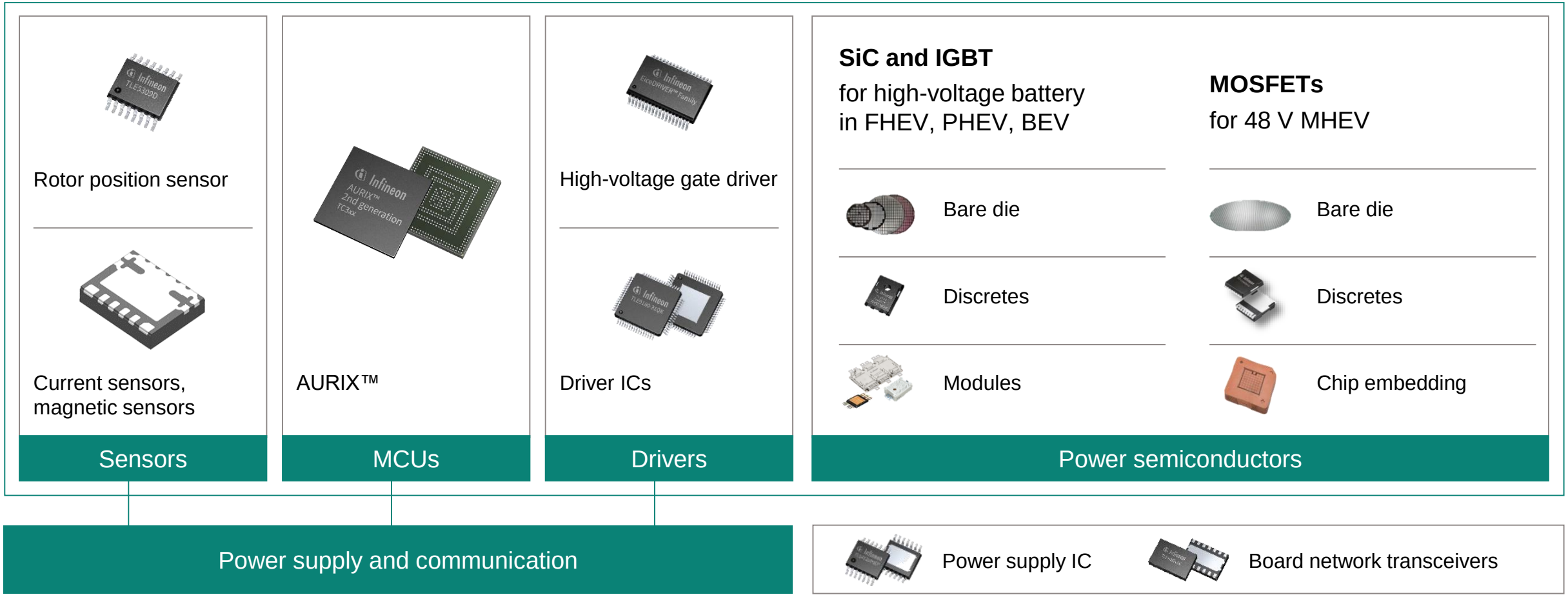

## 2028 BEV semi content scenario




[1] Based on TechInsights: *Automotive Semiconductor Demand Forecast 2019 - 2029*. March 2023; Infineon. "power" includes voltage regulators, ADCs and ASICs.
[2] Due to missing ICE engine in BEV the weighted incremental semiconductor content for PHEV and BEV starts below the "~$500" line.

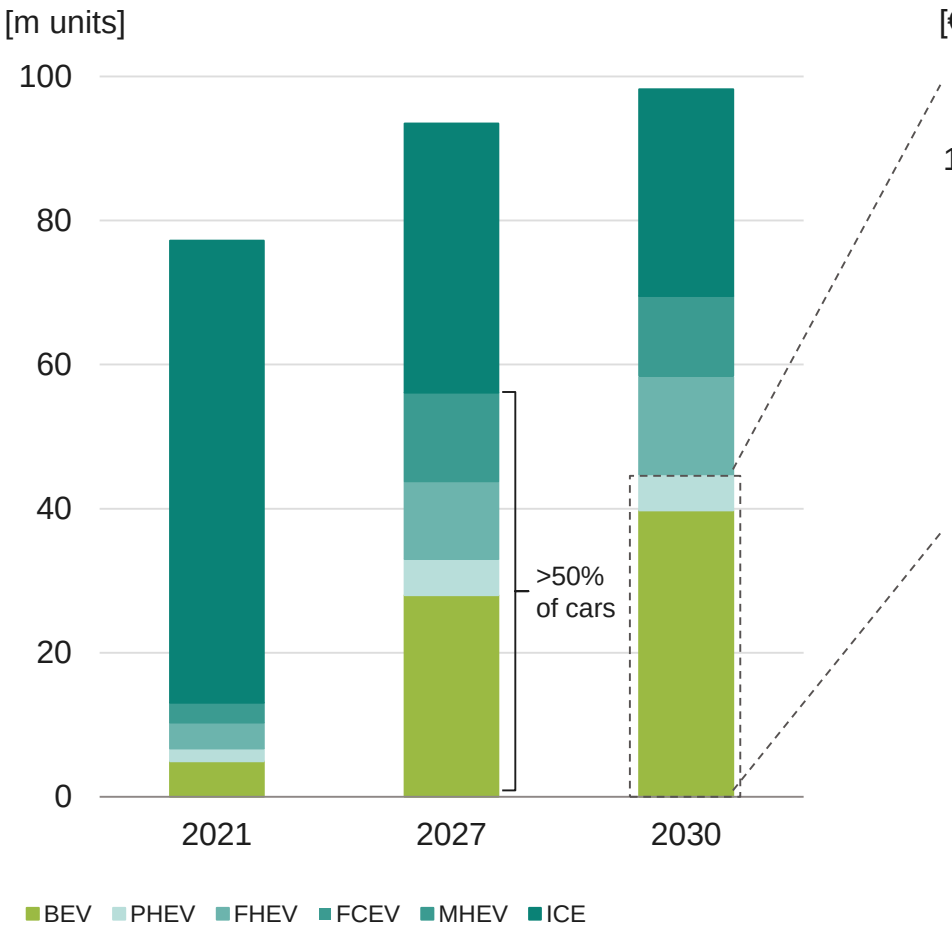
# Infineon offers the most comprehensive system solutions addressing all xEV segments: pure EVs and all types of hybrids

## Infineon offers a full portfolio for the control loop of an electric car

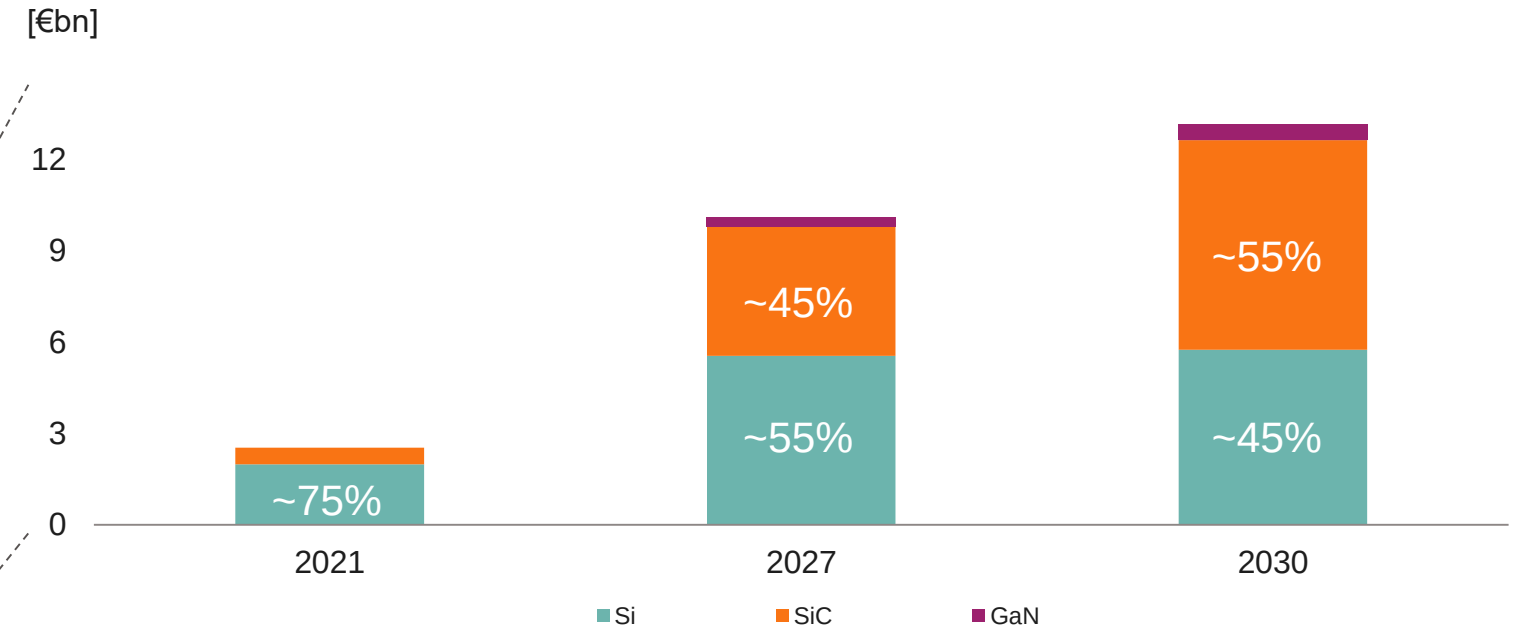


# In 5 years, every second car will be fully or partially electrified; SiC to take lead over silicon in the 2027-2030 period

## Car production by fuel type




## xEV drivetrain power semiconductor TAM by technology




- By mid-2022, global BEV + PHEV penetration reached 12.4%, led by China (26.5%) and followed by Europe (15.8%) and the US (6.8%)
- Inverter, OBC, and DC-DC are the three main power semiconductor applications in drivetrains for BEVs and PHEVs; 48 V MOSFETs and DC-DC are the key applications in MHEVs
- By 2030, SiC will own the lion share; GaN to gain traction in OBC/DC-DC

Based on or includes content supplied by S&P Global Mobility. September 2022; Infineon

# Around 20 design-wins in SiC across all auto applications: traction inverter, OBC, DC-DC

## World's leading IGBT supplier


Volkswagen


German Luxury OEM


Renault


Mini


Cadillac


SAIC


Nissan


NIO


Hyundai (front axle)


Genesis (front axle)


2 EU OEMs


US OEM

## Latest CoolSiC™ design-wins including traction inverter, OBC, DC-DC


Stellantis


Hyundai


Xpeng


SAIC


Li Auto


Changan


Hozon


Zeekr


Japanese OEM


4 US OEMs


2 EU Tier 1s


2 Chinese Tier 1s

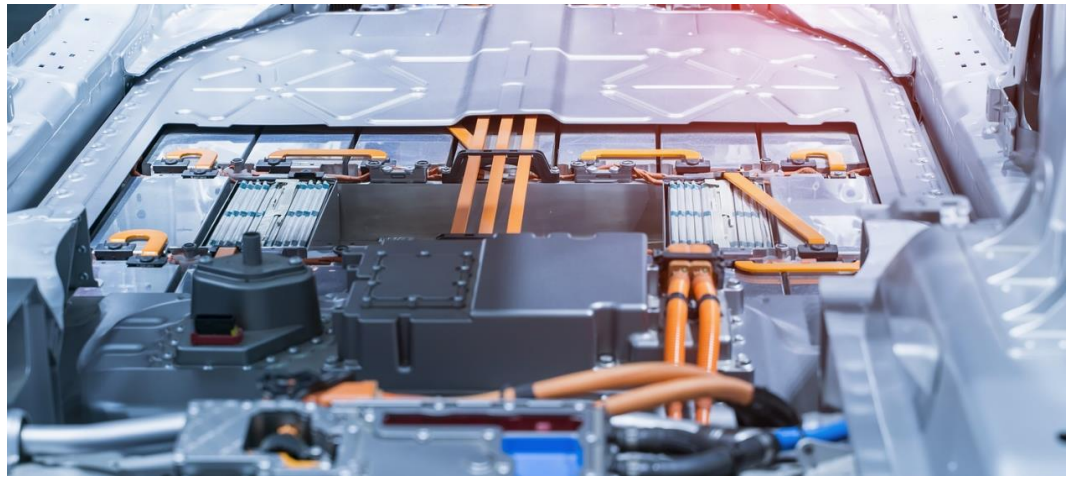

6 Distribution partners


Genesis

# Rapid execution of our BMS strategy showing great success

## Infineon's comprehensive BMS portfolio

| | |
|---|---|
| PMIC | Wireless communications ICs |
| Transceiver | Battery monitoring ICs |
| MCU | |
| F-RAM | |
| Power switch | |
| Pressure sensor | |
| Gas sensor | |
| Current sensor | |



Auxiliaries for thermal management (e.g., fan, pump etc.)

| | | |
|---|---|---|
| MOSFET | Motor control IC | Security IC |

## Selected balancing IC customers

High-volume OEM

Premium car OEM

NETA Auto

Chinese bus OEM

Japanese OEM

**BMS BoM of ~ €100 per vehicle**

# Automated Driving

# The new 28nm CMOS radar from Infineon enables autonomous truck driving for L4 truck platforms

## Design-win details

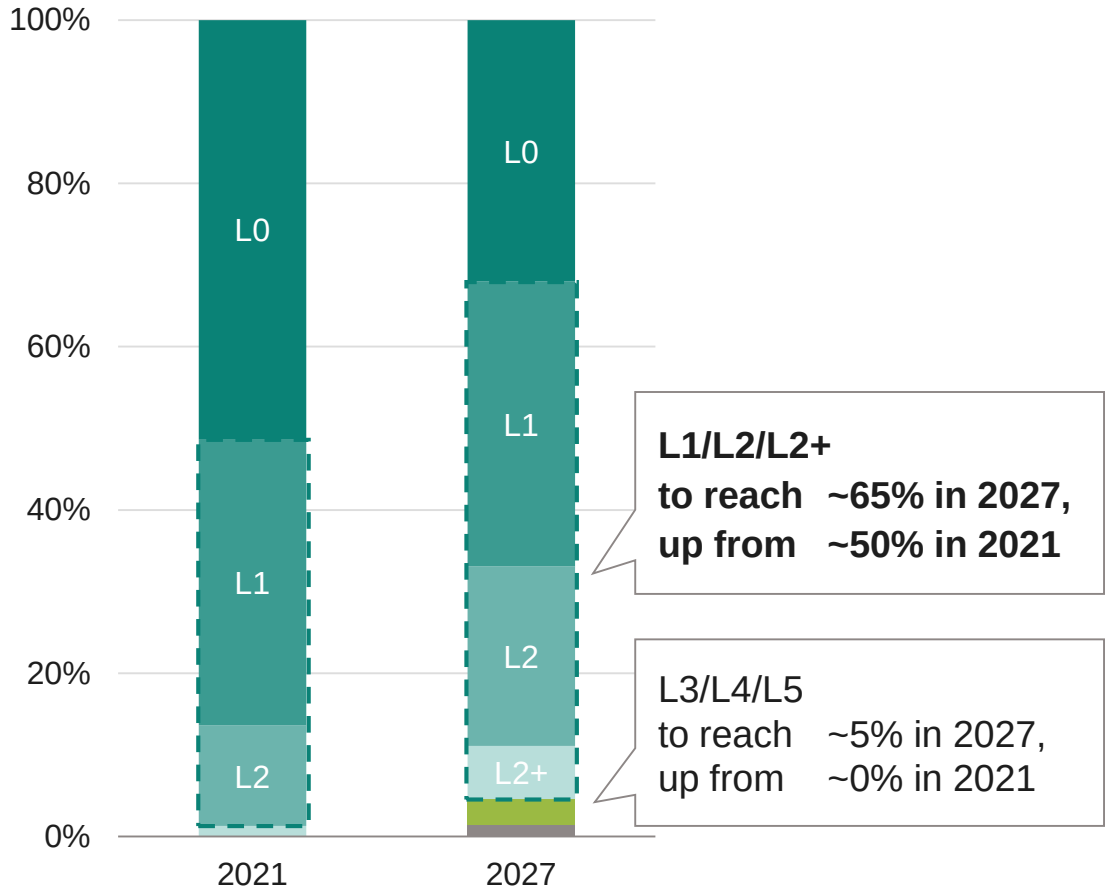
- 4D imaging radar for autonomous driving truck platform
- Infineon’s highest-resolution radar sensor ICs enable the next level of autonomous driving
- Triple-digit million € design-win over lifetime


## Key product information

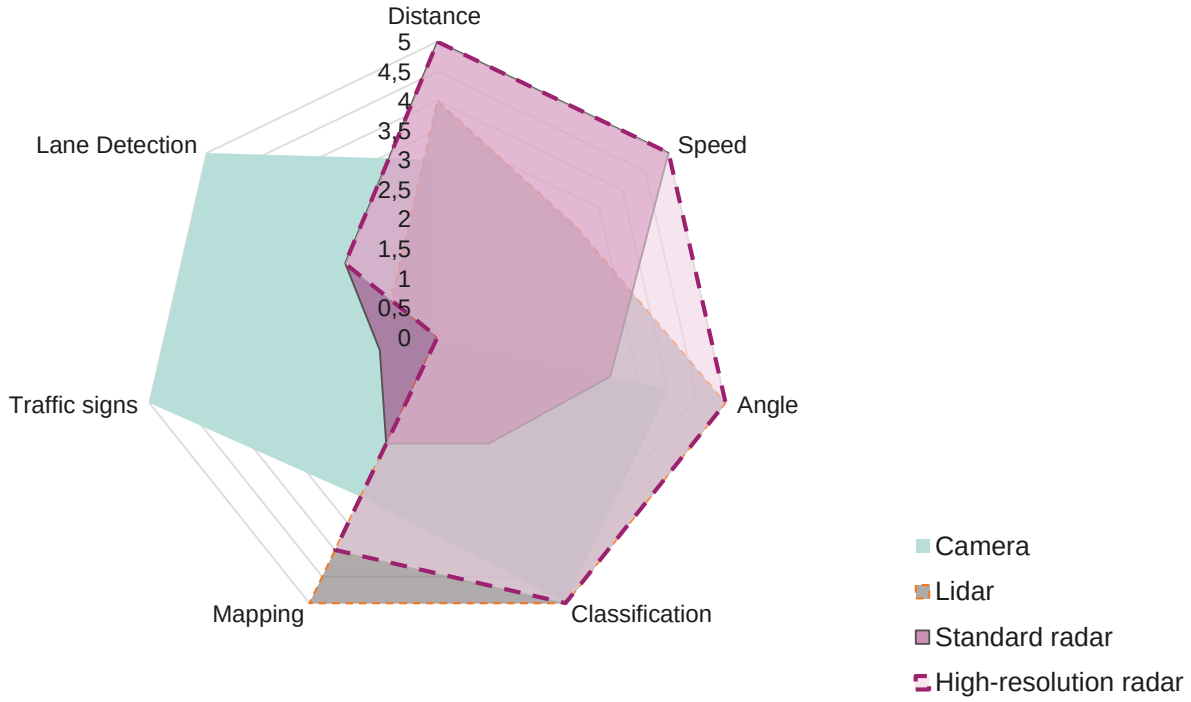
- CMOS 28 nm CTRX radar sensor family
- 76 GHz – 81 GHz MMIC
- Best-in-class RF performance
- Zero-defect quality enables dependable systems
- Scalability and cascadability enable radar solutions for all SAE levels

# Growth of L1/L2/L2+ is the main driver of ADAS semiconductor content until 2027

## Car production by degree of automation (SAE level)




## Radar is essential to meet decisive requirements of ADAS/AD




- Standard radar is **the** technology to detect distance and speed
- High-resolution radar significantly improves angle and classification

Market research companies; Infineon

# The number of radar systems is expected to grow by 24% annually, driven by new applications and increasing penetration

## Today

Total: **55m systems**

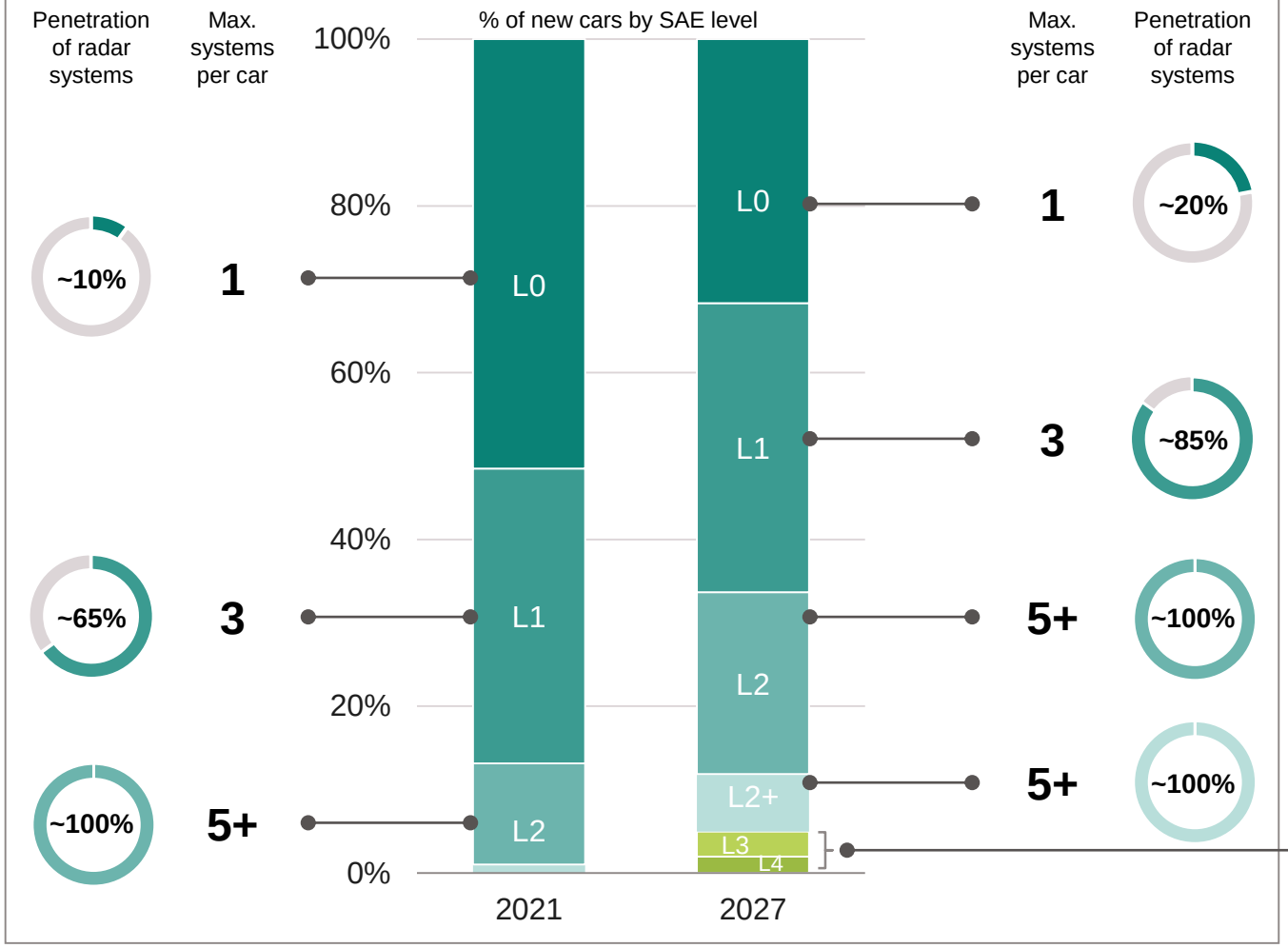
- AEB
- 3m systems

- AEB
- Low-speed ACC
- Blind spot detection
- 21m systems

- AEB
- High-speed ACC
- Blind spot detection
- 26m systems

Market research companies; Infineon

## Penetration of radar systems per SAE level




## Future

Total: **200m systems; $CAGR_{(21-27)}$ = 24%**

- AEB
- 8m systems; CAGR(21-27) = 18%

- AEB
- ACC
- Blind spot detection
- 70m systems; CAGR(21-27) = 22%

- AEB
- High-speed ACC
- Vulnerable road users detection
- 70m systems; CAGR(21-27) = 18%

- In addition to L2: lane change assist
- 30m systems; CAGR(21-27) = 38%

- 24m systems; CAGR(21-27) = 133%

# User experience meets electrical/electronic (E/E) architecture

**Software-defined car**

- E/E architecture
- MCUs
- Sensors
- Actuators

**Digital cockpit**

- MEMS sensor technology
  - MEMS microphones

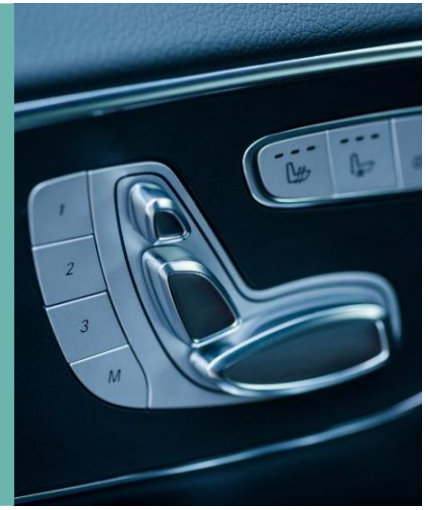
**Premium**

- Matrix light

**Car of the future**

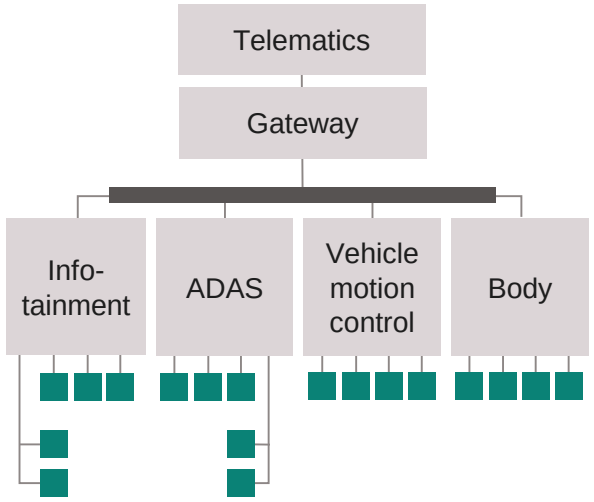
**Comfort**

- Motor control ICs
  - MOSFETs

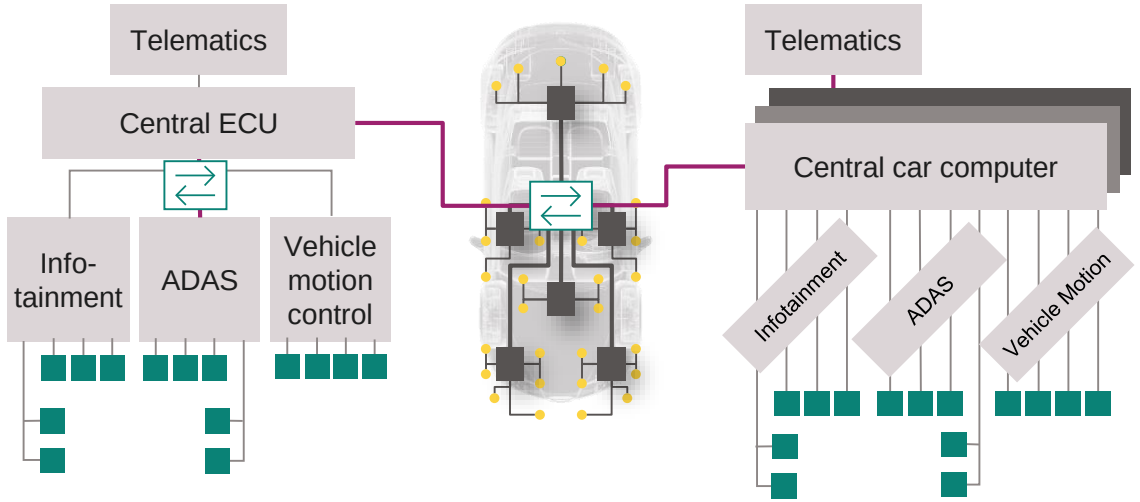


# Software-defined cars will become a reality through architectural transformation; Infineon's MCUs to win big here

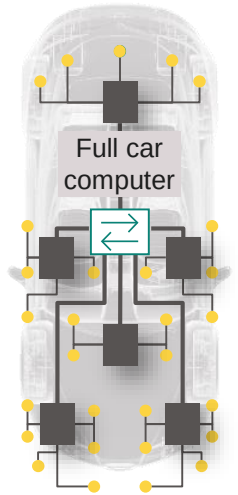
## Domain architecture




## Mixed domain/zone architecture




## Full car computer




ECU incl. Infineon MCU  smart sensor/smart actuator incl. Infineon MCU

**New E/E architectures offer benefits of**

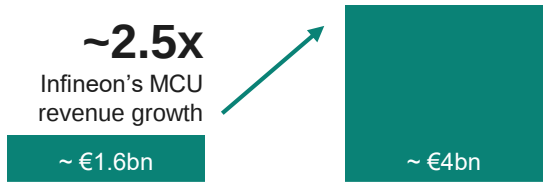
- Hierarchical software
- Fail-operational power distribution
- Optimized power management
- Reduced wiring harnesses

**... leading to**

- More smart actuators
- More smart sensors
- Higher redundancy
- Dependable electronics

**... further fueling Infineon's MCU growth**

**~2.5x**
Infineon's MCU revenue growth



# Game changing innovations from Infineon are defining the digital cockpit of tomorrow

**Augmented head-up display based on MEMS mirrors**


**Internal and external MEMS microphones**


**Example #1:** Active noise cancellation

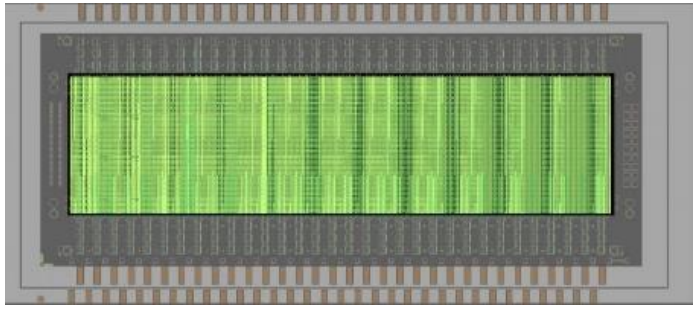
**Example #2:** Emergency vehicle detection

# Industry-leading, premium lighting technology offers enhanced user experience on the road

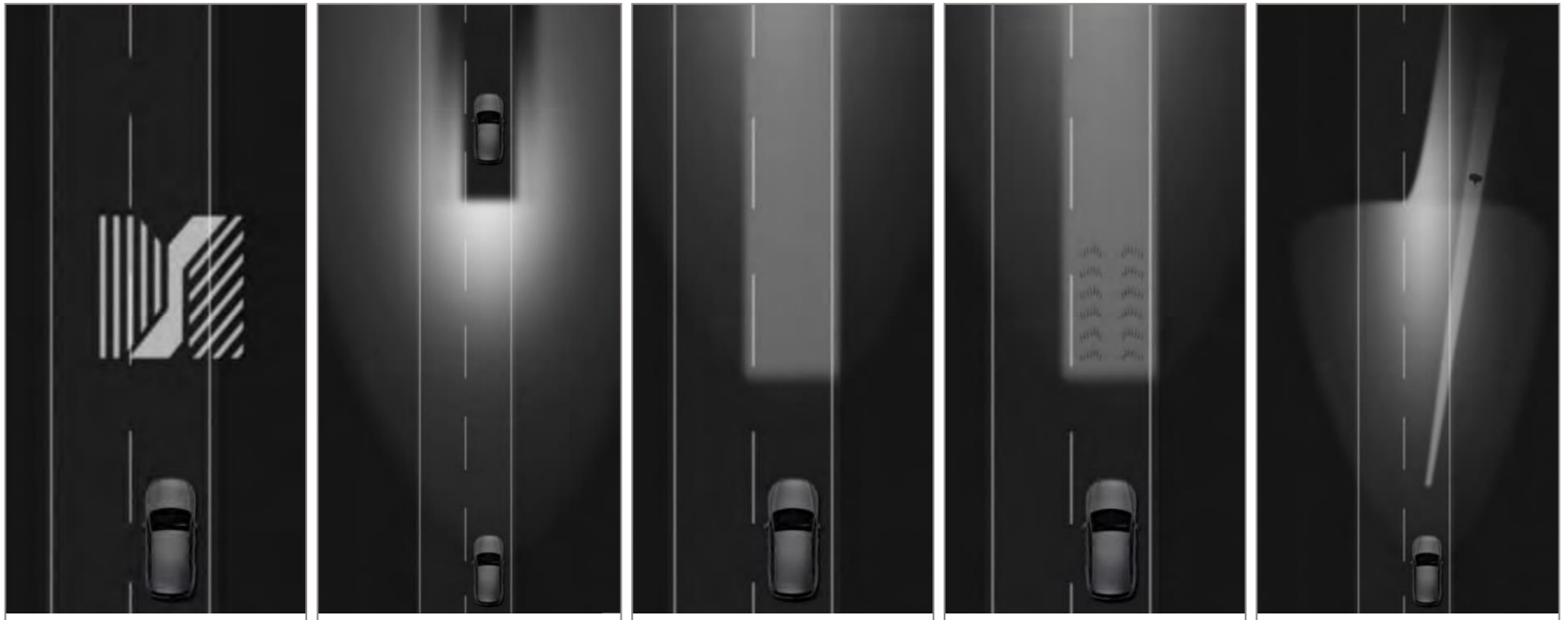
## Key facts

- Infineon driver IC controls each of the 16K µLEDs individually with outstanding luminous intensity
- Lead customer: EU premium OEM (“Best light ever!”)
- Start of production: early 2023

Nichia high-definition micro-pixel light source (HD µPLS)



Courtesy: Nichia



| Advanced coming/ leaving home | Glarefree high beam | Lane light | Orientation light | Marking light |
|---|---|---|---|---|

» **Advantages:** Enhanced driving experience, higher safety, more energy efficient

Courtesy: Audi AG

# Infineon's suite of motor control ICs lead the way to address fast-growing comfort features

- Comfort features making further inroads into cars; e.g., seats in a mid-range car feature about seven motors today
- Up to ~€80 semiconductor BoM per vehicle for comfort features
- Infineon's leading suite of motor control ICs fits ideally for all comfort applications

## Infineon's suite of motor control Ics

- MCU
- Bridge IC
- MOSFET
- Software
- PMIC
- Driver IC
- SBC

## Application examples

- Power Door
- Power Lift Gate
- Brake booster
- Electric power steering
- Electric parking brake
- HVAC blower
- Sunroof
- Side mirror

## On average ~7 motors per seat

- Seat
- Heated Ventilated Seat
- Power Folding Seat
- Seat masssage

# Green Industrial Power

# Effective 1 April 2023, Industrial Power Control (IPC) has become Green Industrial Power (GIP)

Emphasizes our contribution to **decarbonization, electrification and energy efficiency**

Sets a mark for the **paradigm shift** towards rapid growth and highly dynamic applications

Fosters **pride** and engages **external stakeholders**

~~IPC~~

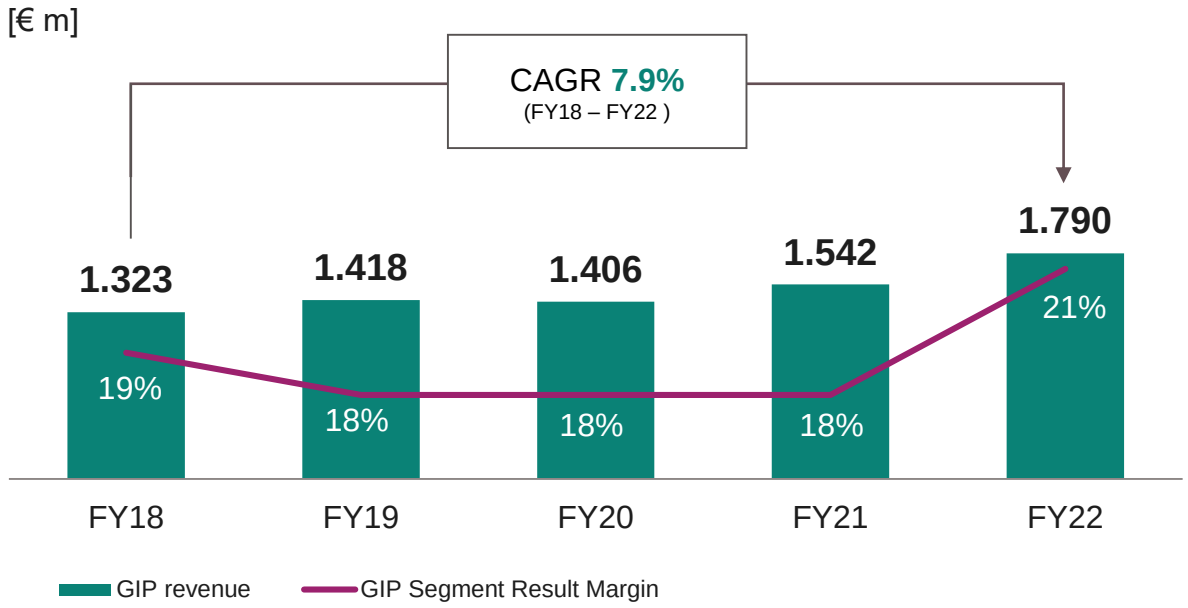
GIP

Green Industrial Power

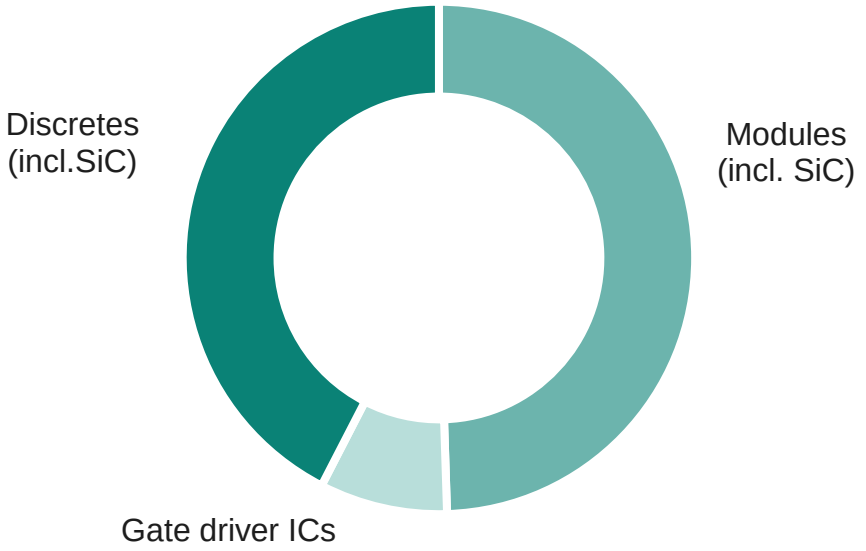
**We are committed to serve all industrial applications and customers as trusted partner**

# GIP at a glance

## GIP revenue and Segment Result Margin




## FY22 revenue split by product group




## Key customers

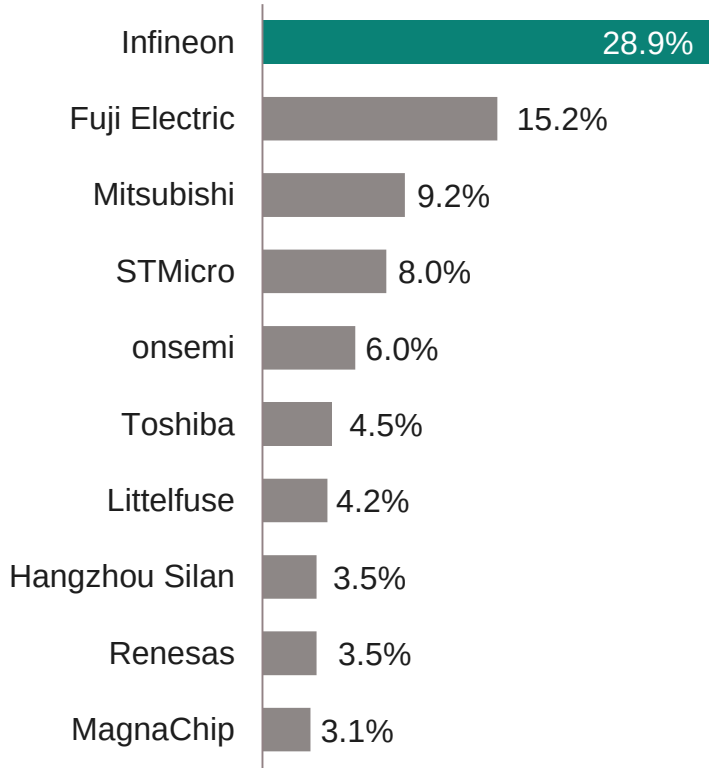
ABB, ALSTOM, 中国中车 CRRC, GOLDWIND, INOVANCE, LG, Midea, OMRON, Rockwell Automation, Schneider Electric, SEMIKRON DANFOSS, SIEMENS, SMA, SUNGROW, Vestas, YASKAWA

# Despite weak macro sentiment, GIP market outlook remains positive. Strong demand in decarbonization related applications

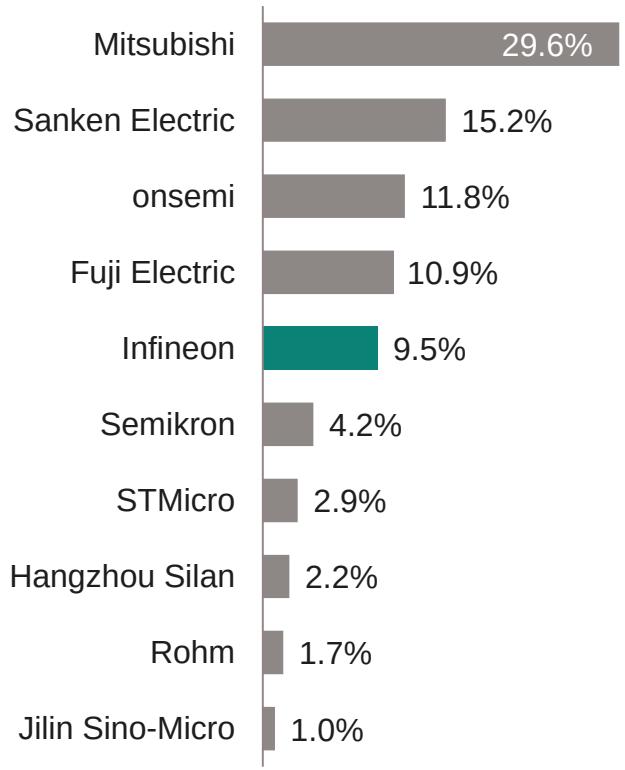
| Applications<br>% of FY22 segment revenue | Market Outlook for CY23 |
|---|---|
| **~35%**<br>Automation and Drives | → – Analysts expect market pullback in 2H/2023 due to decline in demand, but no contraction due to ongoing energy transition and energy efficiency trends<br>– Customers see still strong demand overall, for China demand seems to slow down (increased stock levels) |
| **~26%**<br>Renewable Energy Generation | ↗ – Growth rates remain strong for global PV installations (43% YoY); demand for green hydrogen boost outlook<br>– Wind project delays in China pushed demand from 2022 to 2023 (51% YoY growth of global wind installations), project push outs in Europe into 2024/2025 impair growth in 2023 |
| **~10%**<br>Power Infrastructure | ↗ – Growth in EV charging infrastructure is expected to remain strong supported by government push programs<br>– Further growth of ESS (34% YoY) and T&D required to capture renewable energy generated |
| **~17%**<br>Home Appliance | → – Overall market is weak, semiconductor demand more stable in areas linked to progressing inverterization<br>– Residential AirCon demand slowed down, China government measures expected to induce stabilization in 2H/2023; heat pump demand remains strong |
| **~5%**<br>Transportation | ↗ – Strong growth opportunities for CAV and OBC (electrification)<br>– Traction: growth for locomotives & metro to stay flat, demand for high-speed trains still weak, but slightly ramps |
| **~7%**<br>Others | ↗ – Long-term positive outlook driven by general trend of electrification in emerging applications (e.g. e-aviation, e-marine) |

# Clear leader in discrete IGBTs and IGBT modules

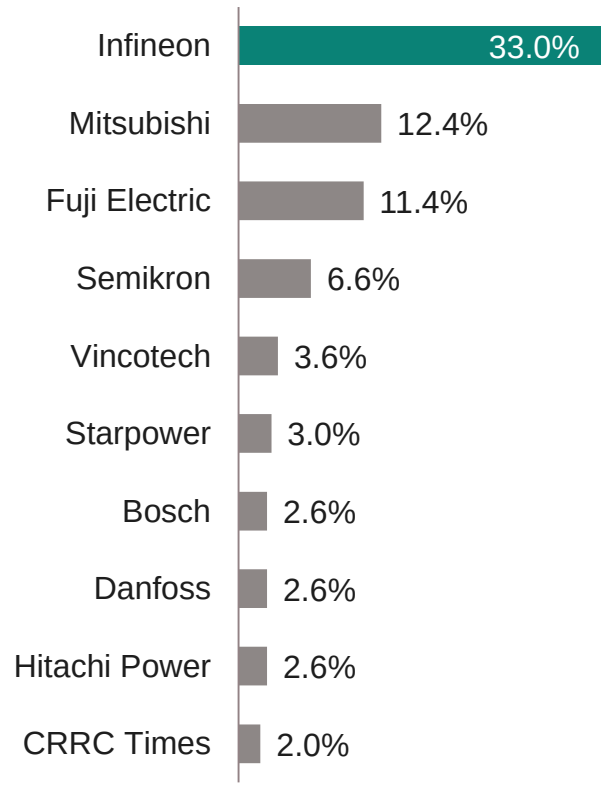
## Discrete IGBTs
2021 total market: $2.2bn




## IPMs[1]
2021 total market: $2.0bn




## IGBT modules[2]
2021 total market: $4.2bn



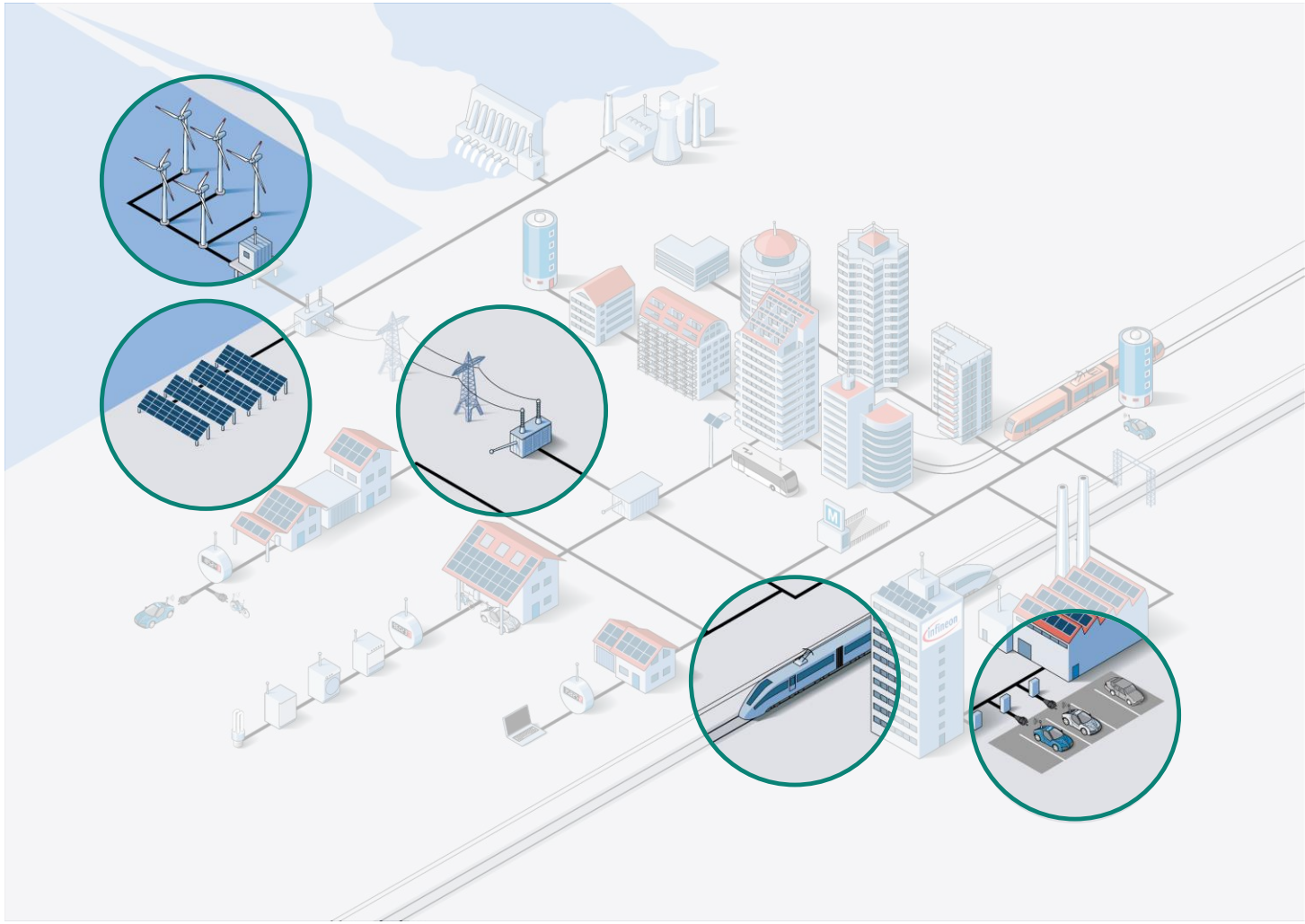

[1] Including MOSFET-based IPMs and IGBT-based IPMs
[2] Including standard (non-integrated) IGBT modules and power integrated modules (PIMs)/converter inverter brake (CIB) modules.
Based on or includes research from Omdia: *Power Semiconductor Market Share Database 2021 – Final V2.* October 2022.
Results are not an endorsement of Infineon Technologies AG. Any reliance on these results is at the third party's own risk.

# Infineon is the key enabler for Power Systems that are needed at every step of the entire power transformation chain

## Renewable energy generation
**#1 semi enabler**
powering ~50% of currently
installed wind/solar capacity

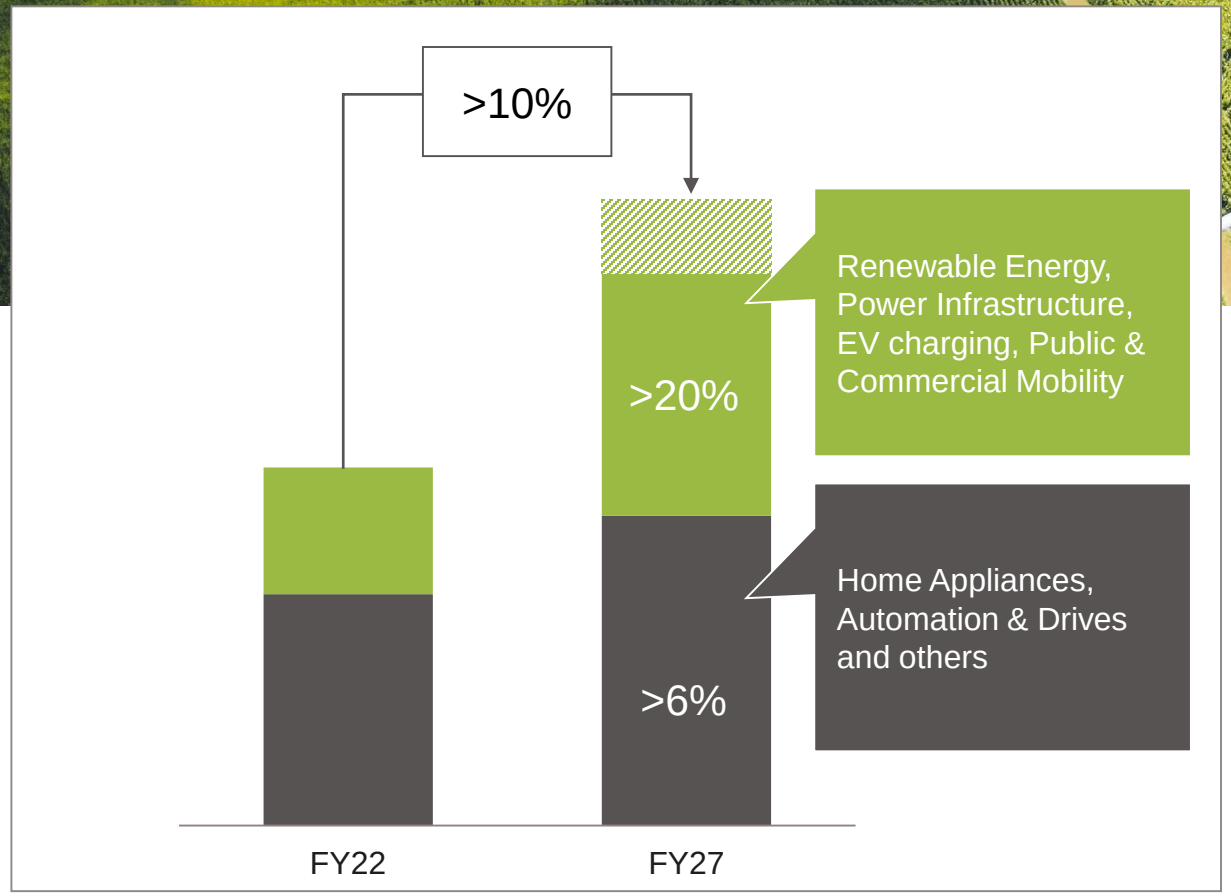
## Energy infrastructure
**#1 semi enabler**
for ~2/3 of grid infrastructure
incl. EV charging

## Energy conversion and usage
**#1 semi enabler**
broadest portfolio covering all verticals
leader in power density and efficiency
**#1 in vehicle electrification**



Based on or includes research from Omdia: *Power Discrete and Module Market Tracker – 2021*. September 2022. Infineon market model.

# GIP markets accelerate growth – Enabling green energy and driving decarbonization




Source: Infineon analysis x% CAGR FY22–27e

## Key facts

More **Growth**

More **SiC**

More **Profitability**

- The **acceleration of the energy transition** drives GIP markets
- **SiC penetration accelerates**
- **SiC** is a key point of **differentiation** and drives GIP **profitability**

# Huge potential along entire green energy chain until 2030 according to IEA Net Zero scenario

## Generation

| | |
|---|---|
| Photovoltaic | **+4,200 GW** |
| Wind power | **+2,400 GW** |

## Infrastructure

| | |
|---|---|
| Grid network | **$600bn annual investments** |
| Grid storage | **+660 GW** |
| EV Charging | **+32m chargers** |
| Electrolysis | **+720 GW (pipeline: 240 GW)** |

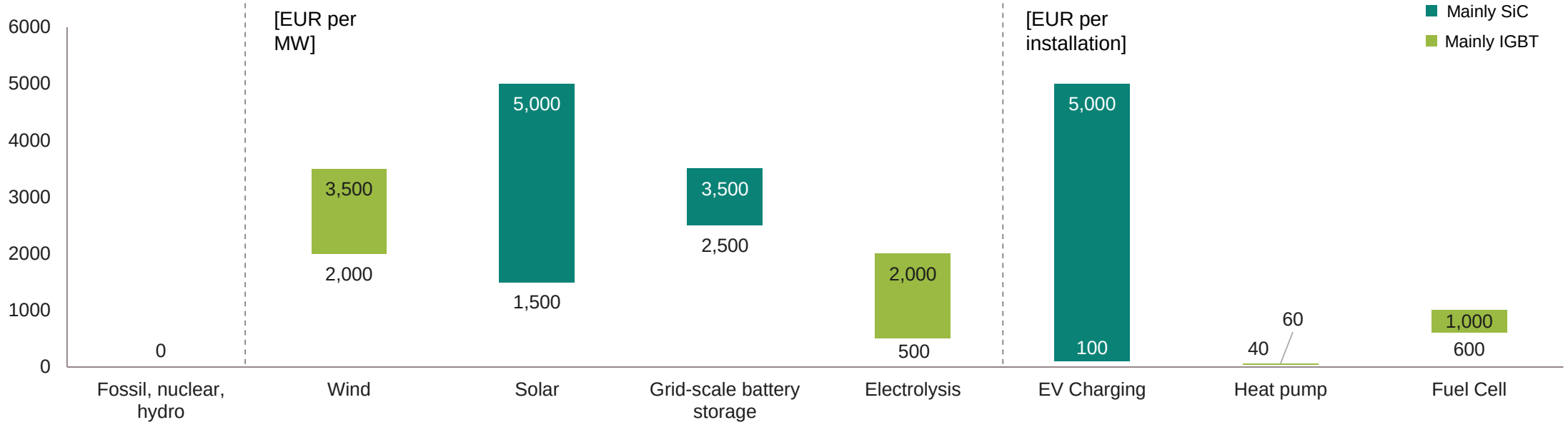
## Consumption

| | |
|---|---|
| Heat pump | **+420m units** |
| $H_2$ Fuel Cell[1] | **+200k FC EV +200k FC Trucks** |
| eAviation \| eMarine | |

**Note:** Based on Net Zero Scenario (IEA) | **Source:** IEA, [1]Internal Analysis

# Green energy generation provides large business opportunities

## Power semiconductor content by application




| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Additions in 2021[1] | **94** [GW] | **150** [GW] | **6** [GW] | **<1** [GW] | **<1m** [inst.] | **20m** [inst.] | **5k** [inst.] |
| CAGR 2022 – 30 | **19%** | **22%** | **50%** | **77%**[2] | **33%** | **16%** | **42%** |

[1] IEA: Net Zero by 2050 – A Roadmap for the Global Energy Sector. May 2021; Sector Tracking reports September 2022; internal Analysis | **2** Based on 240 GW pipeline, >100% based on NZE requirements

# Infineon is manifesting its leading position in the industrial SiC market with above market 5y CAGR and strong outlook

**>300**
Industrial SiC products available

More than **3,600 active customers** being served

Design opportunity pipeline of **~€5bn**[1]

Industrial revenue **CAGR >40%** – cum. Design-Wins **almost €2bn** on track for revenue of **>€500m in 2025**

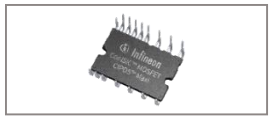
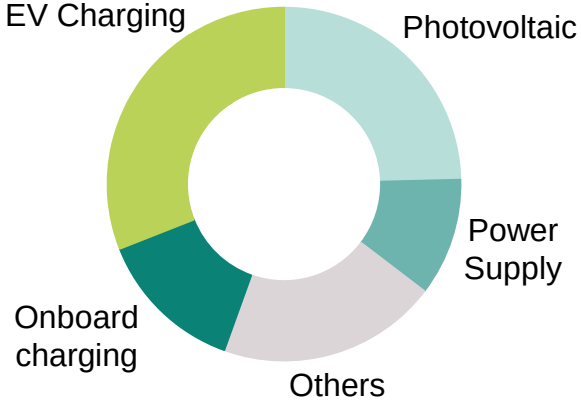
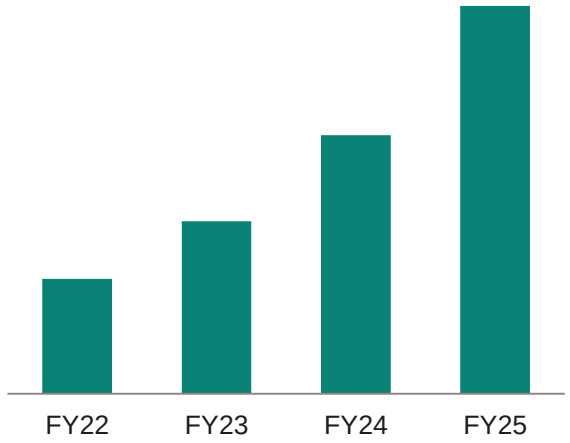







ABB
Alpitronic
中国中车 CRRC
LG
LITEON
Schneider Electric
SIEMENS
SMA
solaredge
TRITIUM



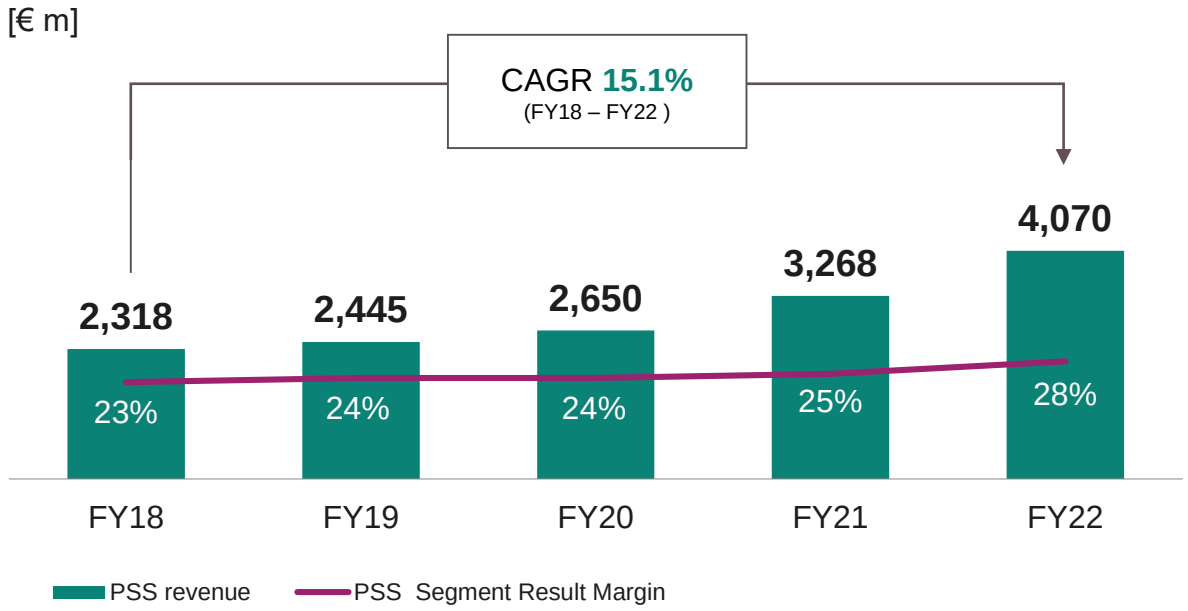




[1] Excluding Auto Drivetrain

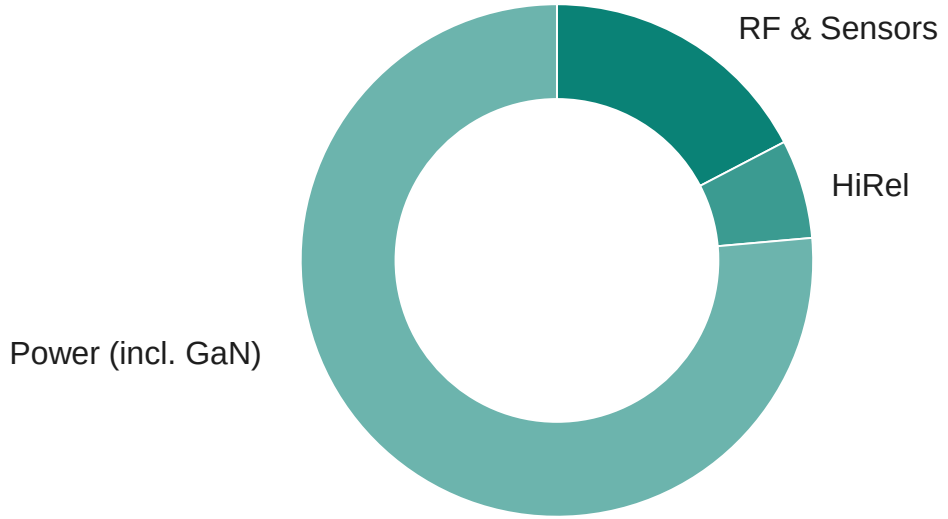
# Power &
# Sensor Systems

# PSS at a glance

## PSS revenue and Segment Result Margin




## FY22 revenue split by product group




## Key customers

amazon | CISCO | DELL | DELTA | ERICSSON | Google
hp | Makita | Panasonic | SAMSUNG | solaredge | ZTE

# Weakness in all verticals except industrial persists in 2023

| Applications<br>% of FY22 segment revenue | Market Outlook for CY23 |
|---|---|
|  **~18%** Computing | – Server market is still soft and bottoming out, while channel inventories are on an elevated level However, increasing power content in servers could be a tailwind<br>– PC market and edge computing market shipments are bottoming out |
|  **~9%** Communications | – 5G roll-out in India continues, but overall telecom market shows signs of slowdown |
|  **~12%** Smartphones | – Continued weak smartphone market remains, however, H2 expected to see reversal of negative trend based on improved macro environment |
|  **~25%** Consumer | – Global decline in consumer confidence continues to create headwinds for consumer spending |
|  **~32%** Industrial | – Demand in renewable energy, EVs and EV charging expected to further accelerate<br>– Stimuli packages for renewables and respective infrastructure to support growth in CY23 |

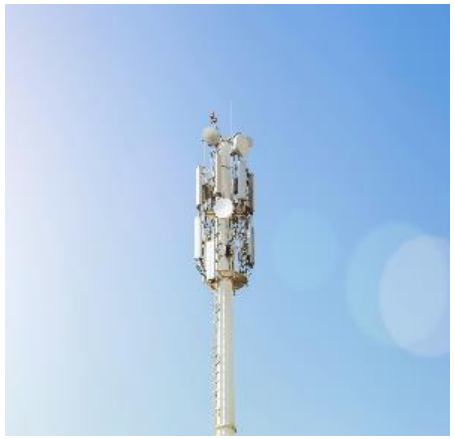
[1] Does not sum up to 100% due to other applications not shown here

# PSS's growth is built on many applications from different sectors in power and non-power

## Computing

- Data center
- Enterprise server
- PC, notebook
- Peripherals
- Chargers and adapters

## Communications



- Base stations
- Backhaul cellular infrastructure
- 5G massive MIMO
- Telecommunication servers

## Smartphones

- Smartphones
- Mobile devices
- Wearables
- USB Type-C, USB Type-C PD

## Consumer

- eBikes, eScooter
- Multicopter
- Gaming
- TV sets
- Smart home

## Industrial

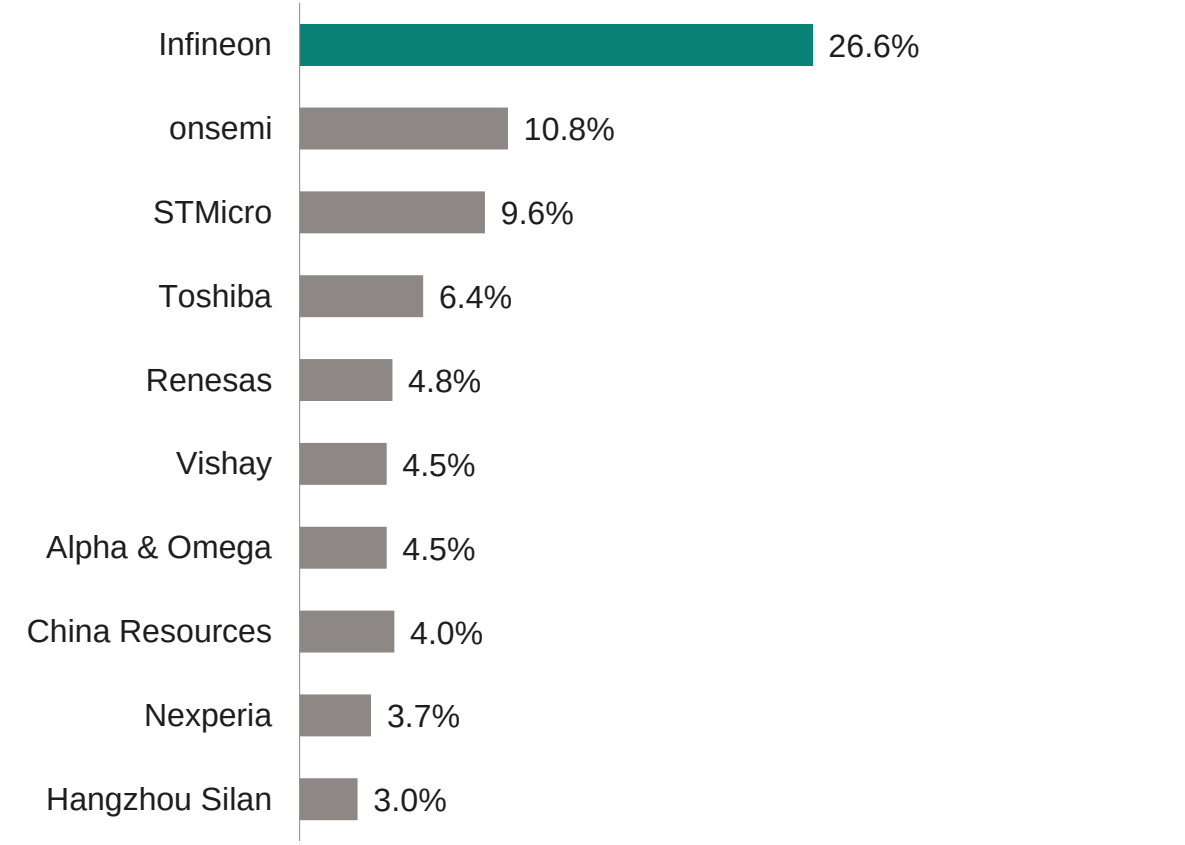
- Power supplies
- EV on-board charger
- Charging infrastructure
- PV inverter
- Power tools
- Lighting
- Industry 4.0
- Aerospace

# PSS – Power

# Infineon is the clear leader in MOSFETs with further market share gains, additional growth potential in power ICs

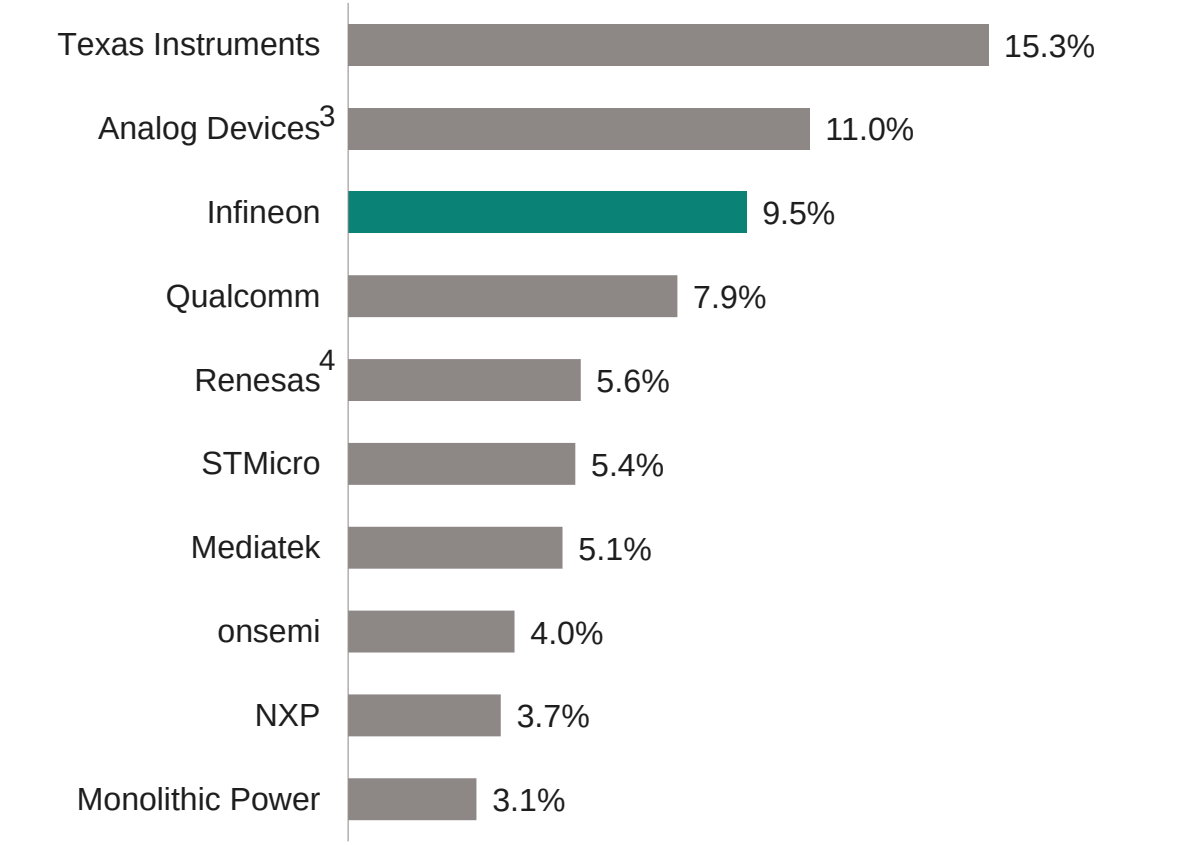
## Discrete Power MOSFETs[1]

2021 total market: $11.1bn




## Power ICs[2]

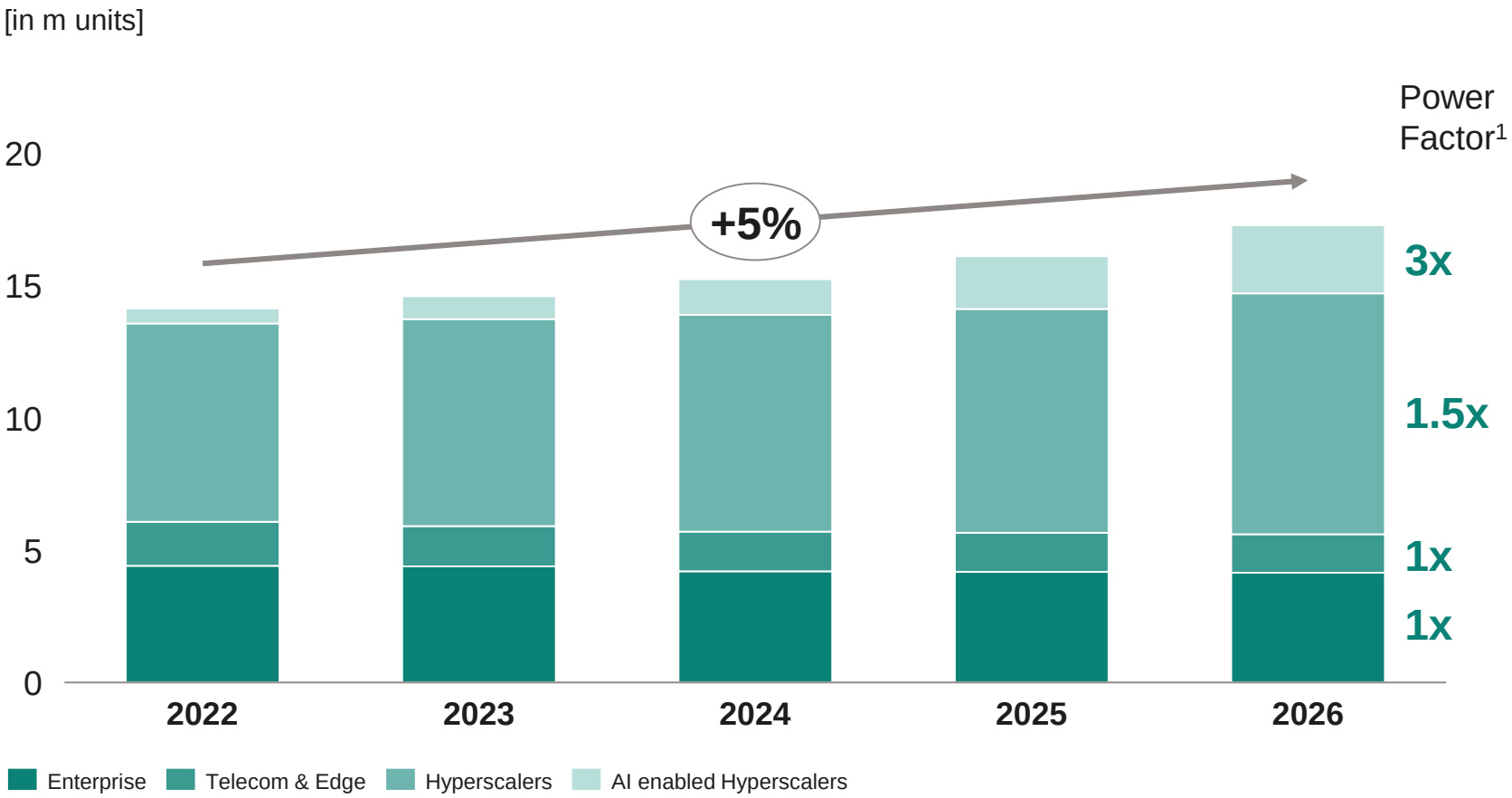
2021 total market: $30.9bn




[1] Discrete Power MOSFET market includes automotive MOSFETs, Si Power MOSFETs, SiC Power MOSFETs, Si Protected MOSFETs and GaN Power Transistors | [2] Power IC market includes automotive power ICs.
[3] Analog Devices acquired Maxim in August 2021 | [4] Renesas acquired Dialog Semiconductor in August 2021. | Based on or includes research from Omdia: *Power Semiconductor Market Share Database 2021 – Final V3.* December 2022. | Results are not an endorsement of Infineon Technologies AG. Any reliance on these results is at the third party's own risk.

# Server market including AI hyperscalers offers attractive growth potential

## Server market units as well as BoM expected to grow




Exponential increase in **AI Training & Networking** power level requires cutting-edge innovation in Device & Packaging technologies to solve power efficiency and density challenges

**→ The bill of material is outpacing unit growth by a factor of ~1.3x**

[1] Normalized overall power requirement per server board for x-comparison

Based on or includes research from Omdia: *Data Center Server Tracker – 3Q22 Database.* September 2022

Results are not an endorsement of Infineon Technologies AG. Any reliance on these results is at the third party's own risk.

# Infineon components enable best power usage effectiveness for data centers

## Supermicro collaborates with Infineon on green computing

### Supermicro MicroBlade servers contain …

**28** digital multi-phase controllers

**112** power stages

&

**28** point-of-load controllers

- Infineon's power stages provide the best power efficiency in the industry
- Infineon's power IC's high temperature tolerance and excellent reliability enables operations at high ambient temperature → less energy-intense external cooling needed

### Example

In one use case[1], the end customer of Supermicro's MicroBlade server saved **56% in data center space utilization, 45% in capex and $13m/year in electricity**. This led to customer's **data center power usage effectiveness** (PUE) **of 1.061**

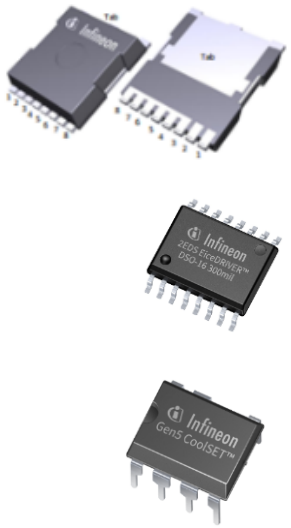
An ideal PUE value is 1.0, which means that all the power required for a data center is **in the actual computing devices**, not in overhead costs such as cooling or power conversion. According to recent research[2], **IT** and **data center managers** reported an **average annual PUE ratio of 1.57** at their largest data centers.

[1] **Source:** https://www.supermicro.com/CaseStudies/CaseStudy_Fortune100.pdf
[2] Statista Research Department: *Data center average annual power usage effectiveness (PUE) worldwide 2007-2021*. July 21, 2022.

# PSS is a key enabler for residential solar systems

## Full portfolio breadth for solar

- **Innovative MOSFET transistors**
  for MV & HV applications in all technologies:
  OptiMOS™, CoolMOS™, CoolSiC™, CoolGaN™
- **Isolated gate driver and GaN driver ICs**
  for high system level efficiencies, excellent power density and consistent system robustness
- **Coolset integrated power stages**
  for auxilliary power supply
- **Digital isolaters** enables safe signal transfer



## Enabling residential solar energy systems

PV **microinverters**

**DC optimizer + string inverter**

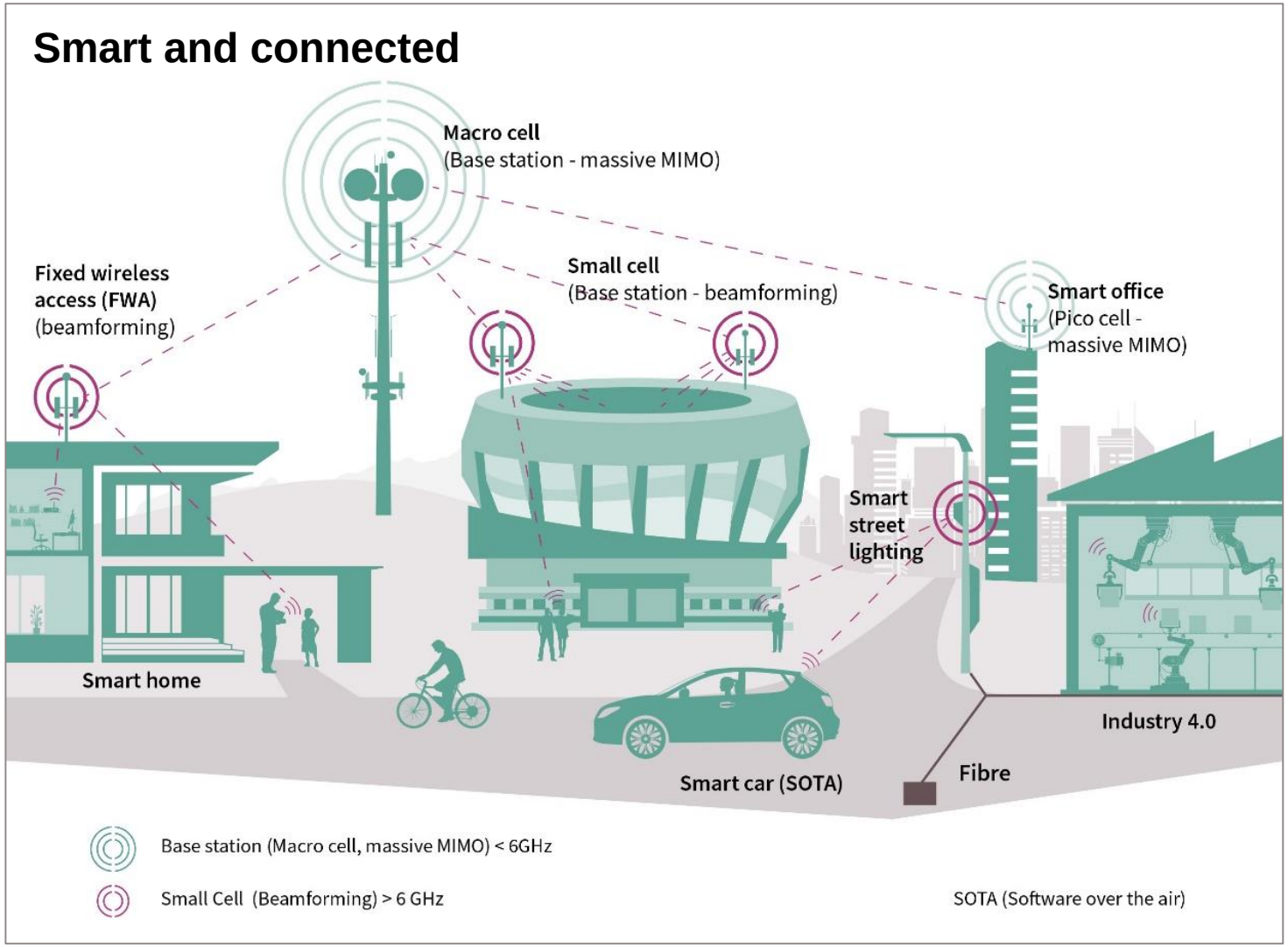
**Energy storage** systems

## » Partnering with leading customers of the industry

Securing customer and market growth
by entering into long-term strategic agreements

Growing above industry CAGR with
the leading customers of the industry

# Transition to 5G drives demand in power semis for antennas and power supplies




## Driver #1

Massive growth of data and computing power

## Driver #2

Higher number of base stations due to dense network

## Driver #3

~ 4x higher power semi content per radio board: From ~$25 for MIMO antenna to ~ $100 for massive MIMO antenna array

## Driver #4

Fog computing data center as a completely new market

# PSS – RF and Sensing

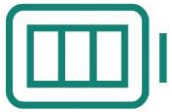
# Main applications addressed by PSS sensors portfolio

## MEMS microphone

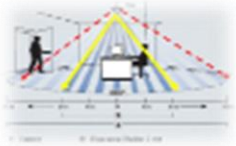
Best audio performance

Low power consumption

## 3D radar (24/60 GHz)



Ultra-low power consumption



Presence detection/ Vital Sensing

## 3D ToF image sensor

Best price/-performance

Face ID (biometrics), VR/AR

## Environmental

High precision and Small form factor

Measure $CO_2$

## Main applications

- Smartphone
- True wireless stereo headsets
- Smart speaker
- Laptop & tablet

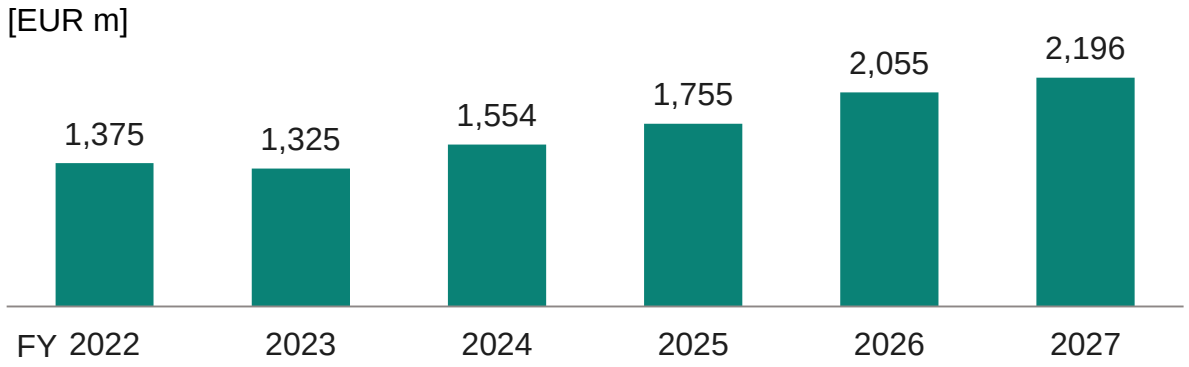
- Automotive
- Smart home
- TV
- Security camera
- Smart building

- Smartphone: World-facing and user-facing
- Robotics
- Automotive in-cabin sensing
- Payment terminals

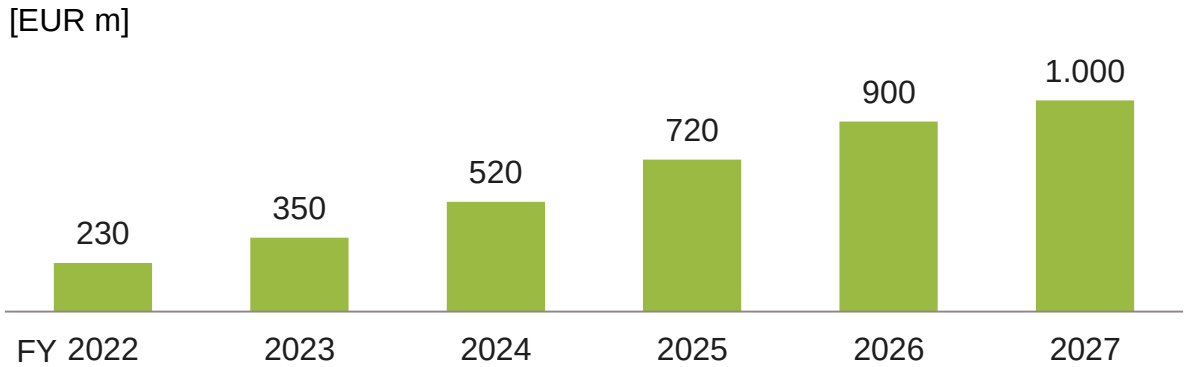
- Heating, ventilation, air conditioning (HVAC)
- Air purifier
- Smart thermostat
- $CO_2$/virus risk reduction

# Sensor markets targeted by PSS offer attractive growth potential

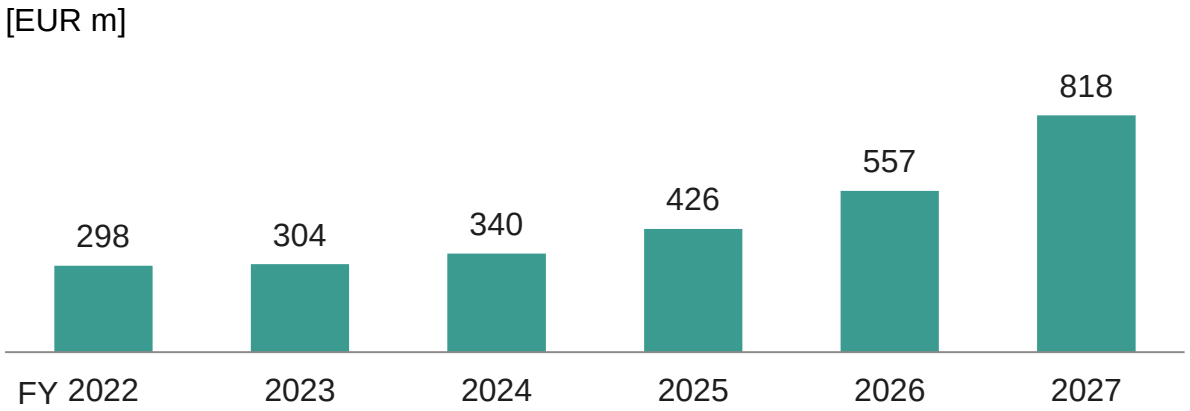
## MEMS microphone market



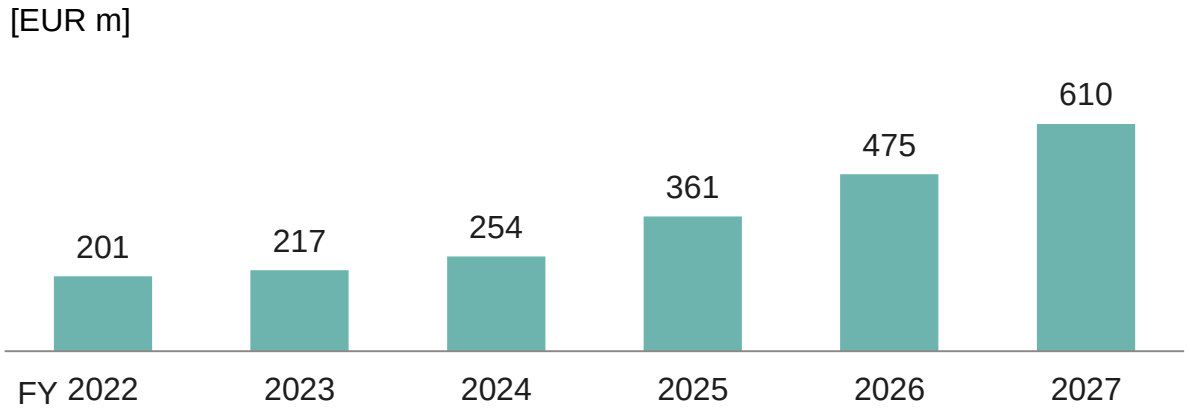

## Radar IC market (24 GHz and 60 GHz only)




## 3D ToF image sensor market



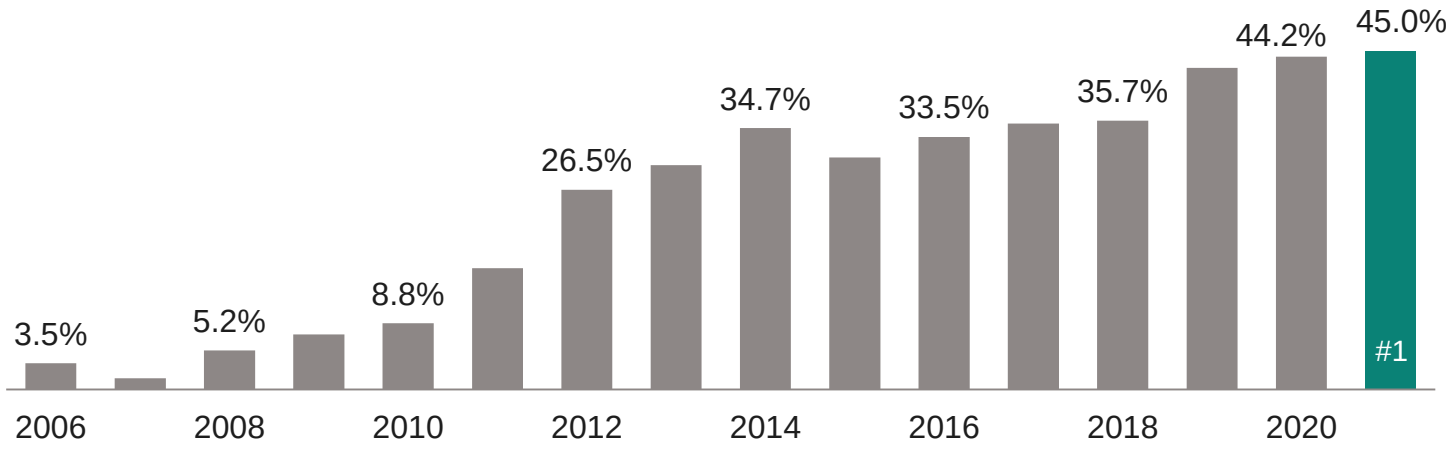

## Environmental sensor market[1]




[1] Infineon is addressing smart building, smart home, smart appliances, consumer IoT devices and automotive.
Source: Infineon estimates

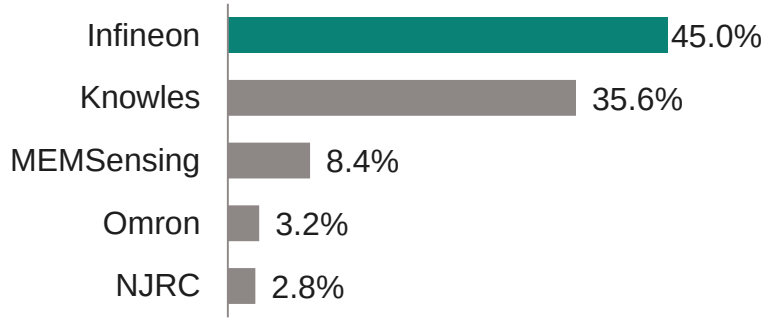
# Infineon as market leader has significantly increased the distance to #2

## Infineon's market share development in MEMS microphones (by units)




**2021 MEMS die market share**

total market: 6.7bn units




Based on or includes research from Omdia: *MEMS Microphones Report Dice Market Shares 2022*. October 2022.
Results are not an endorsement of Infineon Technologies AG. Any reliance on these results is at the third party's own risk.

## New XENSIV™ MEMS microphone with very low power consumption

- New PDM (pulse density modulation) microphone is based on Infineon's latest Sealed Dual Membrane MEMS technology
- Offers unmatched SNR of 69 dB(A) that enables crystal-clear audio experience
- Needs **half of current consumption** compared with available models on the market with similar performance
- This leads to a **long battery life** and is therefore **perfect suited for hearable** applications like true wireless earbuds, over-ear headsets, and hearing enhancement devices

# Expanding our portfolio towards H2 (hydrogen) sensors to address battery protection and the entire fuel cell ecosystem

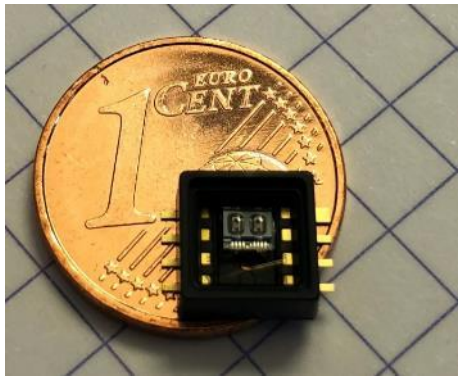
## $H_2$ sensor key use cases

$H_2$ gas leakage sensor for fuel cell applications

$H_2$ gas leakage sensor for infra-structure applications

$H_2$ outgasing sensor for battery thermal runaway detection

## $H_2$ sensor details




Based on Infineon's **MEMS technology**

## $H_2$ sensor key target applications



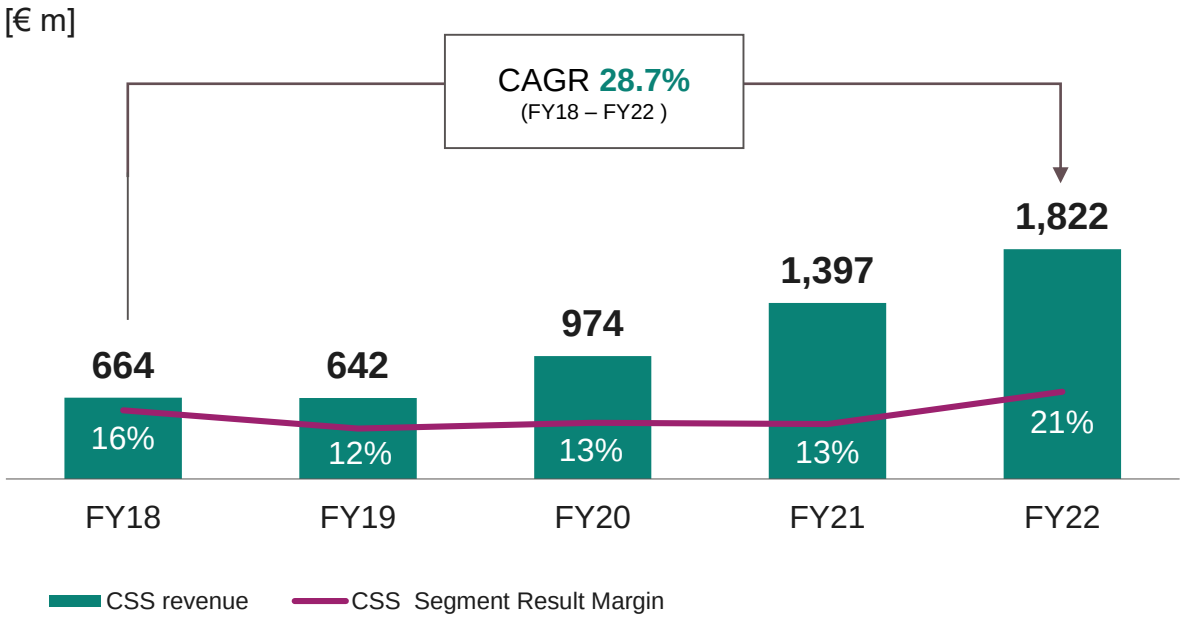



**Currently in evaluation with around 20 customers**

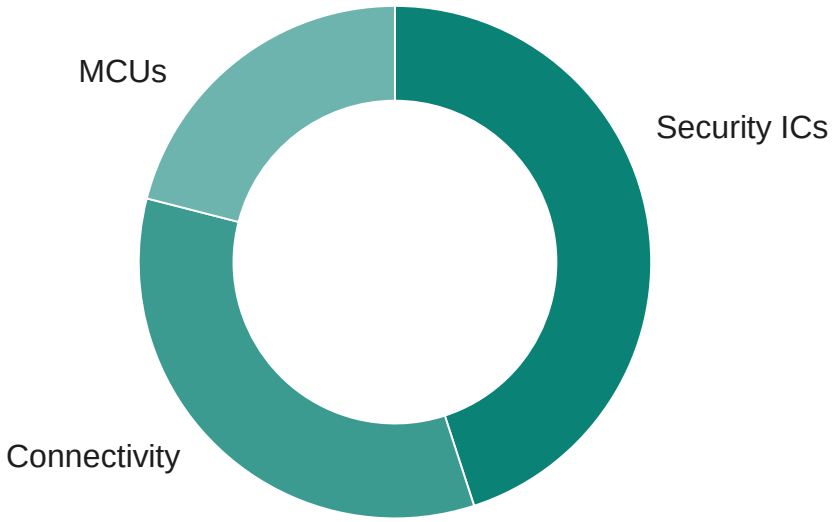
# Connected Secure Systems

# CSS at a glance

## CSS revenue and Segment Result Margin




## FY22 revenue split by product group




## Key customers

amazon, cpi card group, fitbit, GPO, Haier, HARMAN, hp, IDEMIA, Lenovo, Microsoft, PERFECT Plastic, Raspberry Pi, SAMSUNG, SONY, THALES

# Market outlook is affected by macroeconomic conditions; risks continue especially for consumer segments

## Applications
% of FY22 segment revenue

**~67%**
Industrial and Consumer IoT

- Industrial IoT
- Home Appliances
- Smart Home
- Health & Lifestyle
- Media, Game & Compute
- Automotive

**~33%**
Smart cards

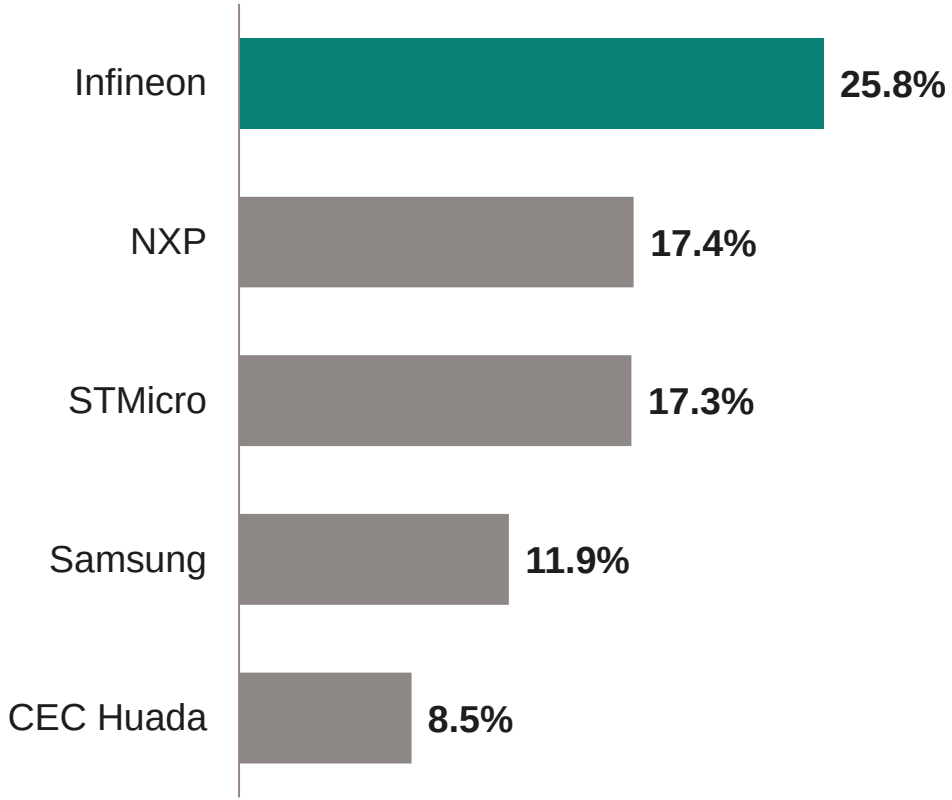
- Payment
- Identification

## Market Outlook for CY23

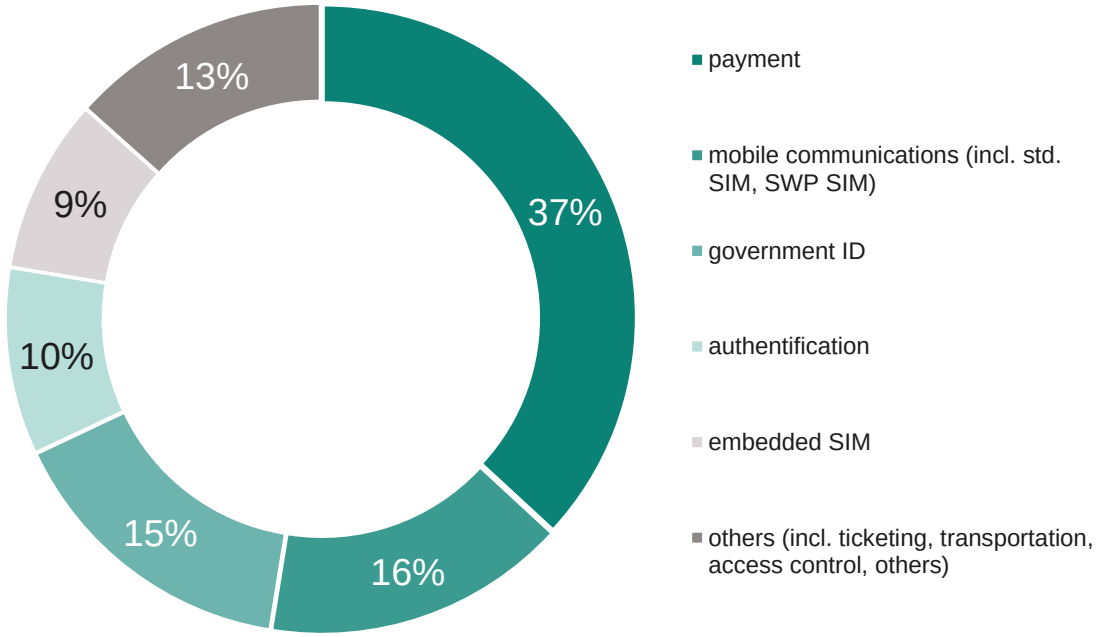
| | |
|---|---|
| → | – Growth in industrial IoT is expected to stretch into CY23 based existing order backlog despite geopolitical and economic uncertainties |
| → | – Overall demand slowing down and returning to prepandemic levels. Although penetration of smart appliances increases, deterioration of customer sentiment might limit growth |
| → | – Launch of Matter 1.0 standard and focus on energy management systems counteracted by risks driven by overall consumer sentiment |
| → | – Market risks driven by overall consumer sentiment might outweigh potential growth in areas like smart watches |
| ↘ | – Main consumer markets are trending downwards due to overall macroeconomic environment and reduced consumer sentiment, while enterprise product categories remain rather flat |
| → | – Market outlook for 2023 has improved driven by the easing of China's zero-Covid policy, while risks of demand destruction due to worsening macroeconomic conditions persist |
| ↗ | – The market is assumed to grow as supply constraints continue to ease |
| ↗ | – Positive trend expected driven by recovery in passports issuance as well as project roll-out for other eDocuments |

# Infineon remains top player in security ICs

## Security ICs (excl. NFC controllers; excl. NFC eSE)
2021 total market: $3.2bn

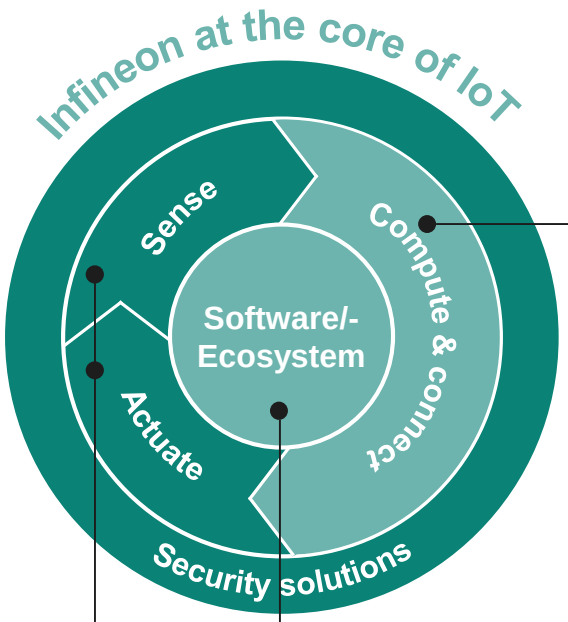



## Security ICs (excl. NFC controllers; excl. NFC eSE)
2021 by application




ABI Research: *Smart Card and Embedded Security IC Technologies*. October 2022.

# MCU and software are key for the success in IoT as they define the functionality and time-to-market of the device




Numerous P2S opportunities with other system components

Hardware

## Customer expectations

- Broad portfolio
- Application fit
- Solution offering

## Infineon's MCU offering

- Broad solution-oriented MCU family offering
- Platform strategy for MCU development:
  - shared core IP
  - use-case-specific components

Software

## Customer expectations

- Seamless experience
- Ease of use
- Rich ecosystem

## Infineon's software and services offering

- Software development environment and ecosystem with ModusToolbox™
- Cloud-connected software for IoT devices using Wi-Fi, PSoC™, OPTIGA™
- Motor drive software stack for iMOTION™ controller
- Driver software, firmware and complete functional products for easy hardware integration (e.g., OPTIGA™ family)
- Fast innovation: AI/ML enablement
- Software-as-a-service (SAAS) for IGBT module lifetime simulation

# Infineon is enabling the ‘IoT at a fingertip’ with robust and reliable touch solutions and reconfirming Cypress revenue synergies

## Infineon as the leader[1] in Touch-HMI inherited through Cypress acquisition

**>6 Billion**
conventional buttons replaced

**>100 Patents**
filed for touch solutions

**5th generation of CAPSENSE™ controller in advanced analog/mixed-signal technology available**

## Infineon CAPSENSE™ technology in volume production in a wide range of applications


Capacitive sense buttons

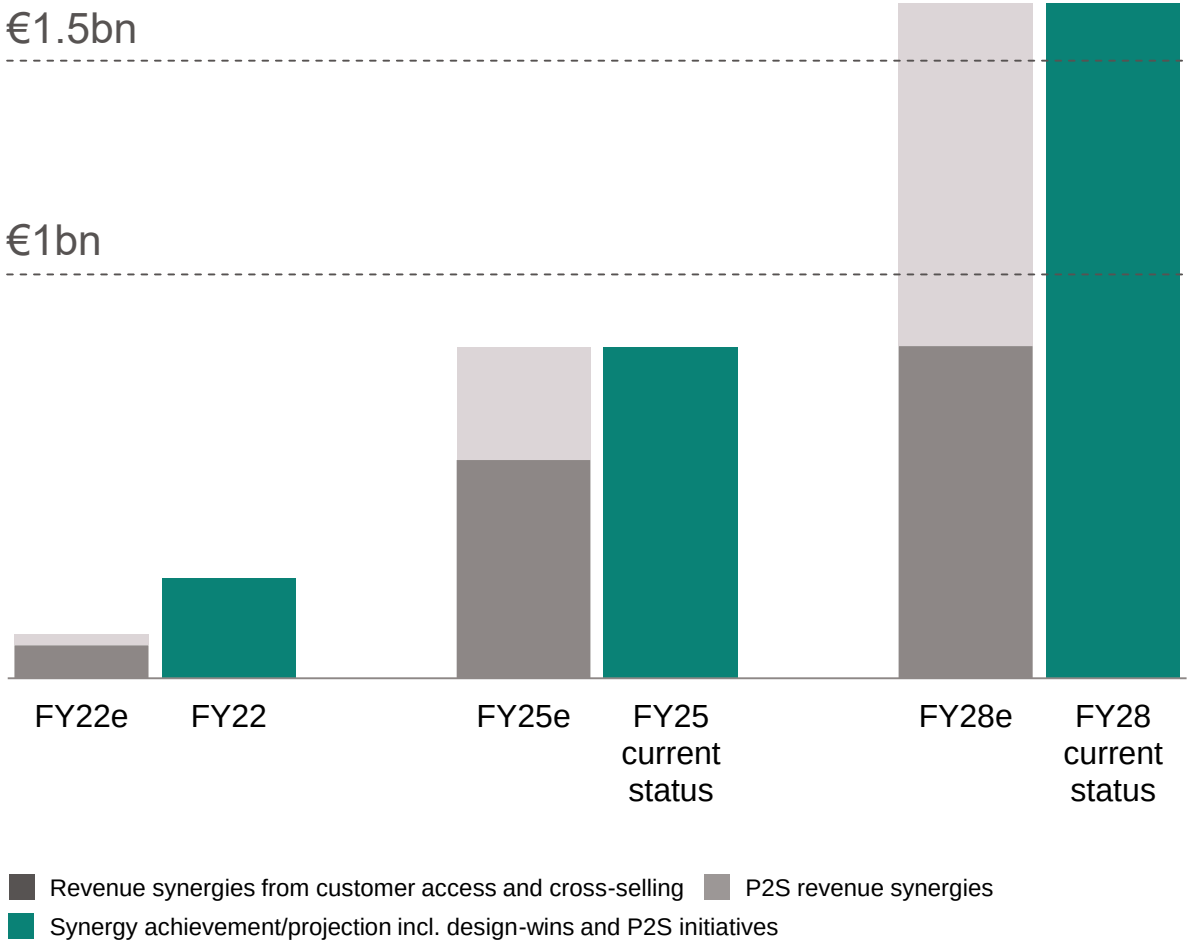

Metal proximity


Capacitive sense slider


Touchless gesture control

[1] Infineon estimate

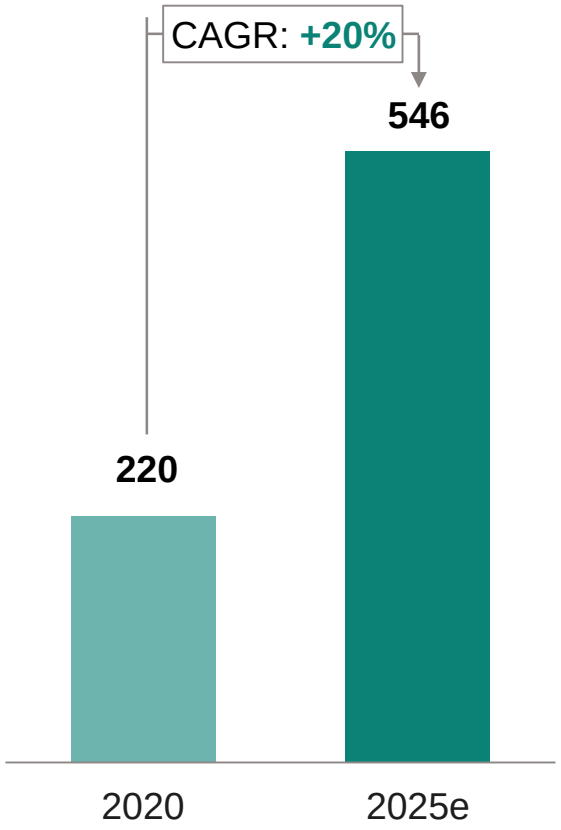
## We are fully on track to reach or even overachieve the announced Cypress revenue synergy targets



# With a broad set of key enabling technologies, Infineon is well positioned to capture growth opportunities

## Market: Home Automation Devices[1]

[units m]




## Leading competencies to provide full system solutions

- Application understanding
- Ease-of-use
- Software
- Sense
- Compute
- Actuate
- Security
- Connectivity

Smart door lock

Wireless smart camera

Energy harvesting lock

## Customer ex. for wireless smart cameras and smart door locks

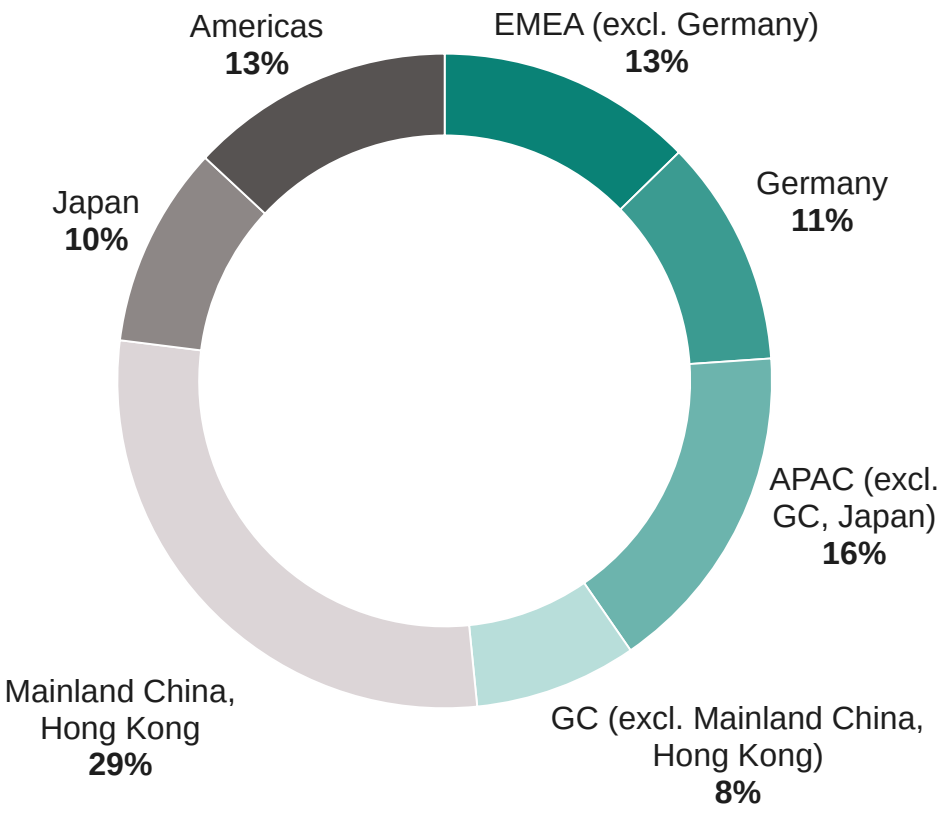
arlo
ASSA ABLOY
blink an amazon company
Google
LUMI
Kaadas
WYZE

[1] ABI Research: *Wireless Connectivity Technology Segmentation and Addressable Markets*. July 2021; excluding Chromebooks, desktop PCs, feature phones, media tablets, netbooks, smartphones, white box tablets.

# Selected financial figures

# Strong presence in all regions; well-balanced customer portfolio; no customer represents more than 10% of total sales

## FY22 revenue by region



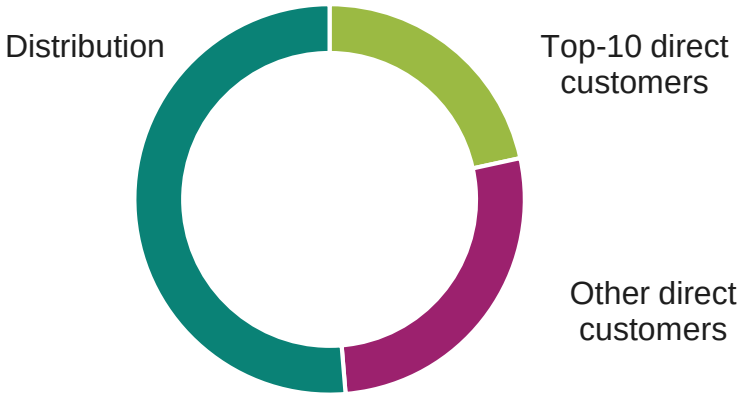

## Revenue by sales channel

**Distribution partners[1]**

- Arrow
- Avnet
- dabo
- Future Electronics
- intron 英恒
- JCT
- Macnica
- Nexty Electronics
- Rutronik
- SAC
- 威健 Weikeng

**Top-10 direct customers[1]**

- Astemo
- Bosch
- Continental
- Delta
- Denso
- Hyundai Motor Group
- Samsung
- Thales
- Vitesco Technologies
- ZF



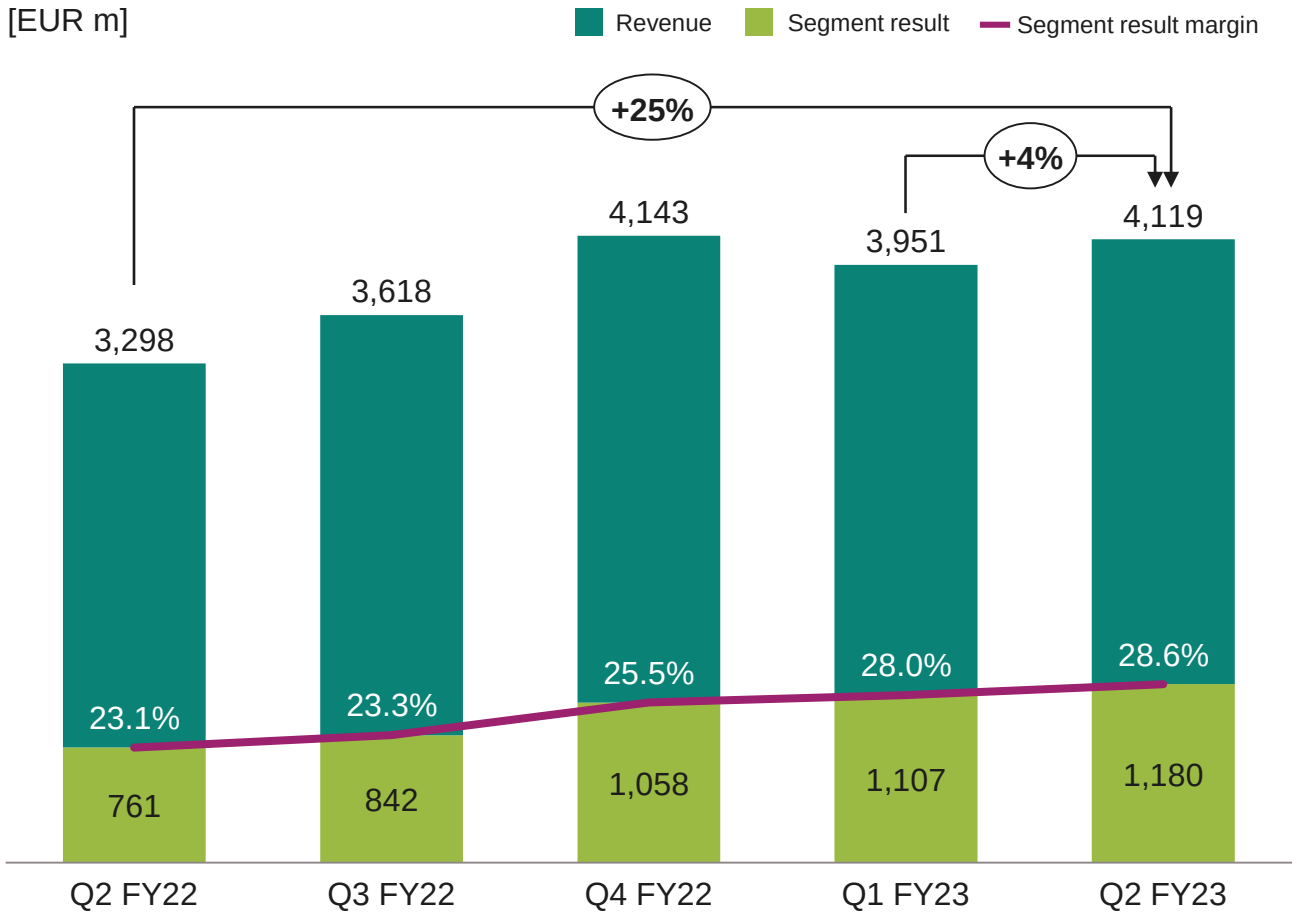

**EMS partners[1]**

- flex
- Foxconn

**1** In alphabetical order

# Group financial performance

## Revenues and segment result

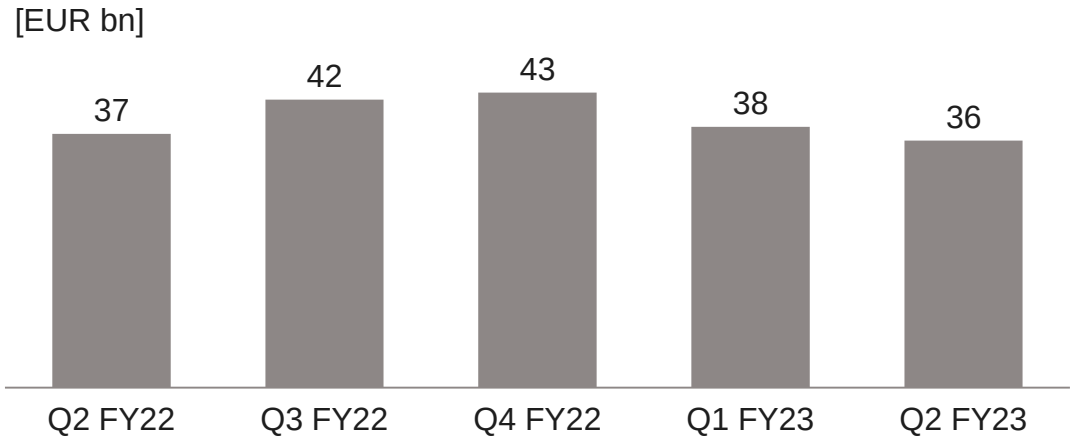



## USD exchange rate

### Average exchange rate

| | Q2 FY22 | Q1 FY23 | Q2 FY23 |
|---|---|---|---|
| ø USD/EUR | 1.12 | 1.02 | 1.08 |

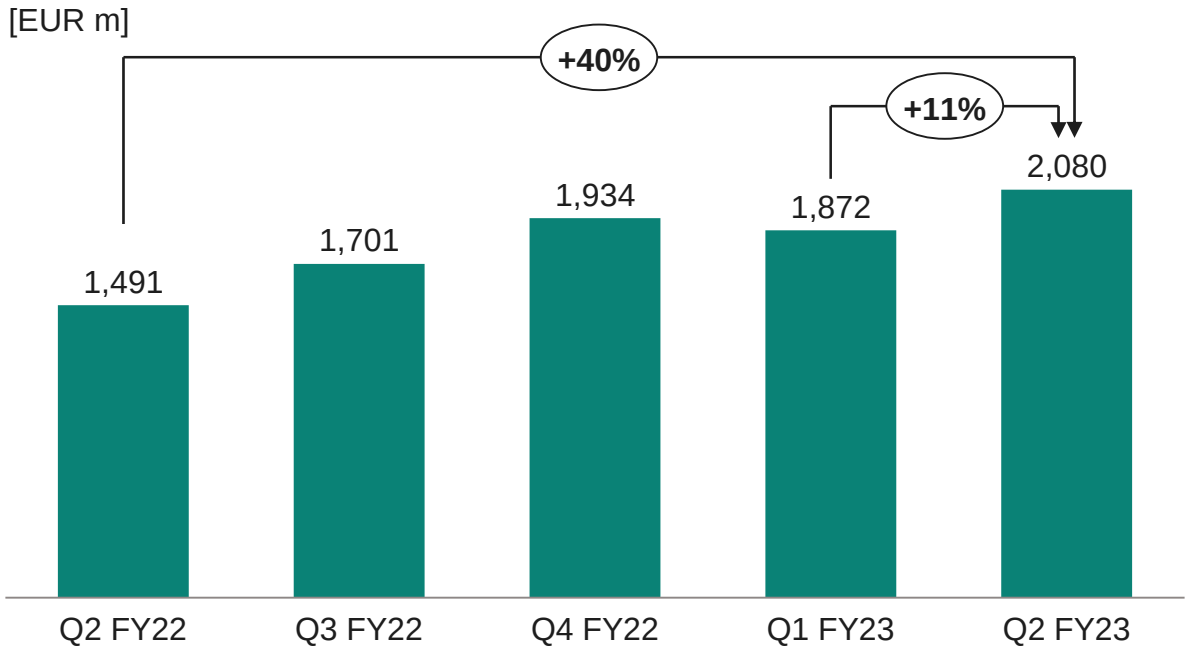
## Order backlog[1]



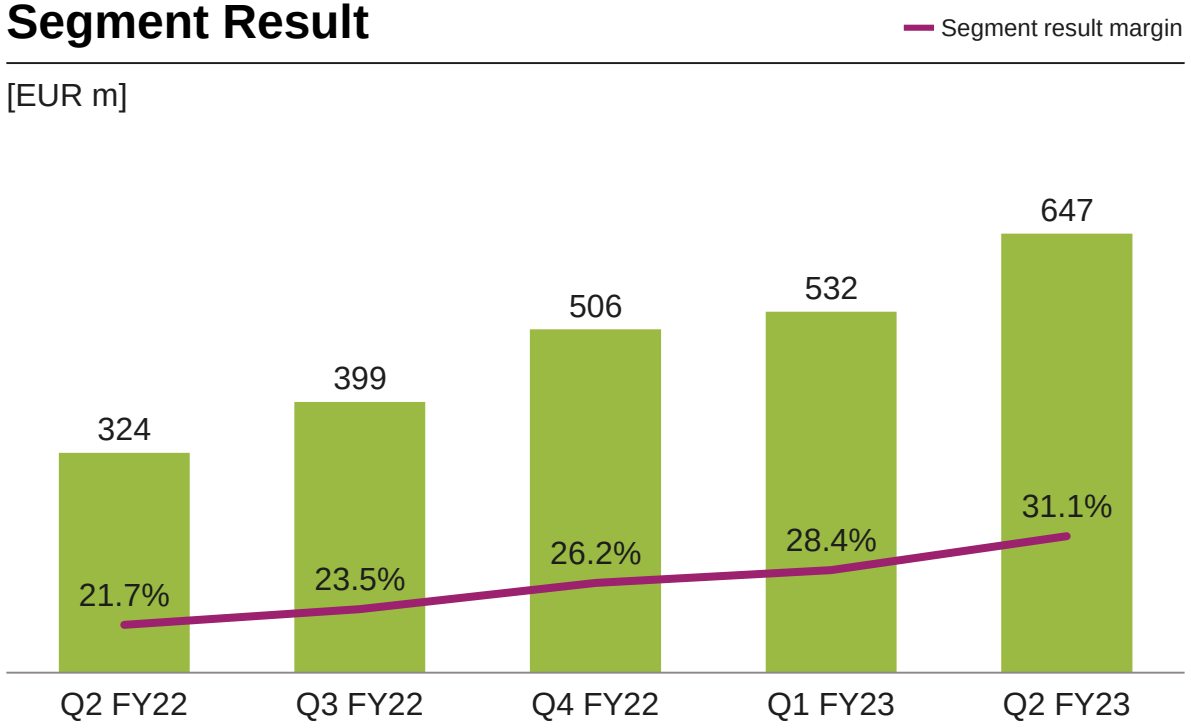

[1] See notes for definition

# Automotive (ATV)

## Revenues




## Segment Result

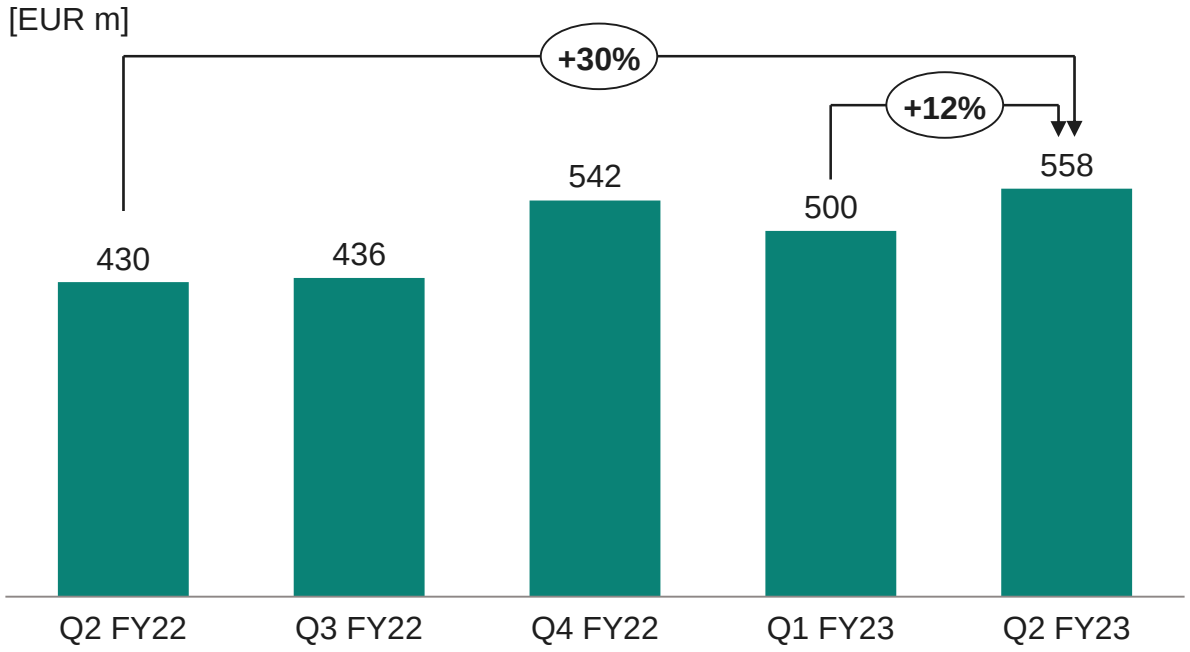



- Record revenues and segment result – ATV crossed the 2bn EUR quarterly turnover mark for the first time ever
- All product groups, especially microcontrollers, specialty memories, and power components contribute to this success
- ATV continues to be the global market leader in automotive power, and moves up to a second place position in automotive microcontrollers[1]
- The exposure to the structural megatrends e-mobility, ADAS and new E/E architectures supports our business' resilience

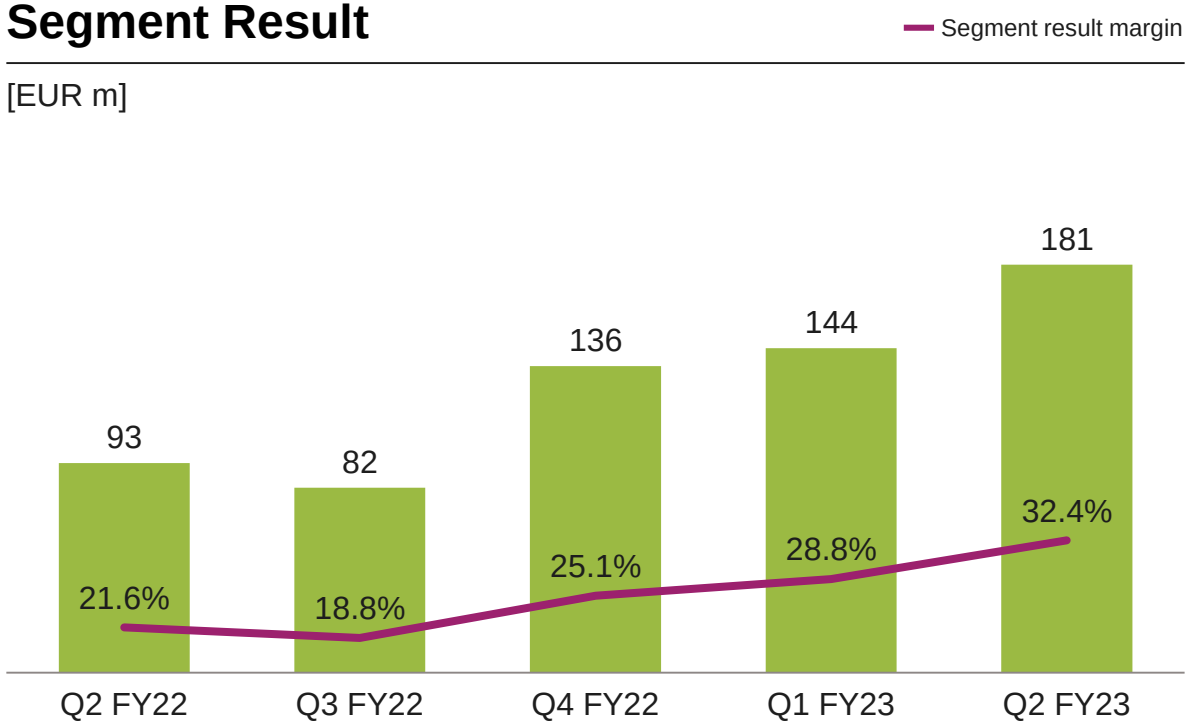
[1]TechInsights (formerly Strategy Analytics): *Automotive Semiconductor Vendor Market Shares 2022*. April 2023

# Green Industrial Power (GIP)

## Revenues




## Segment Result

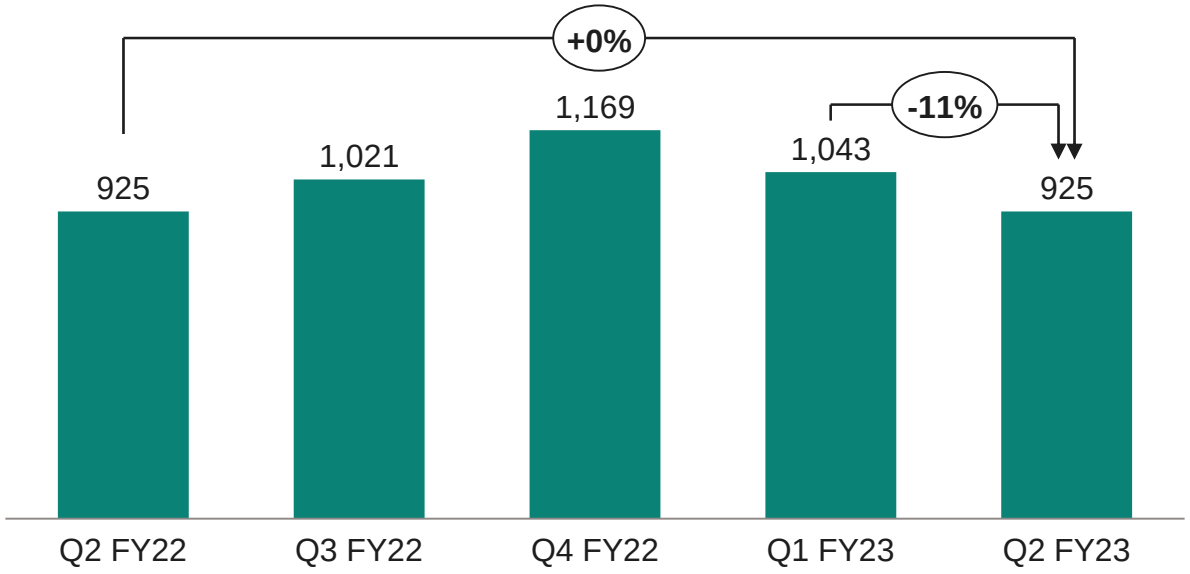



- The division has been renamed "Green Industrial Power" (GIP), originally IPC, to reflect above-average growth in the fields of renewable energy and energy infrastructure
- In Q2 FY23, revenue and segment result reached an all-time high – all product groups contributed to this achievement
- Decarbonization-related demand overcompensates macro-driven weakness in home appliances; general-purpose drives going back to long-term growth rates

# Power & Sensor Systems (PSS)

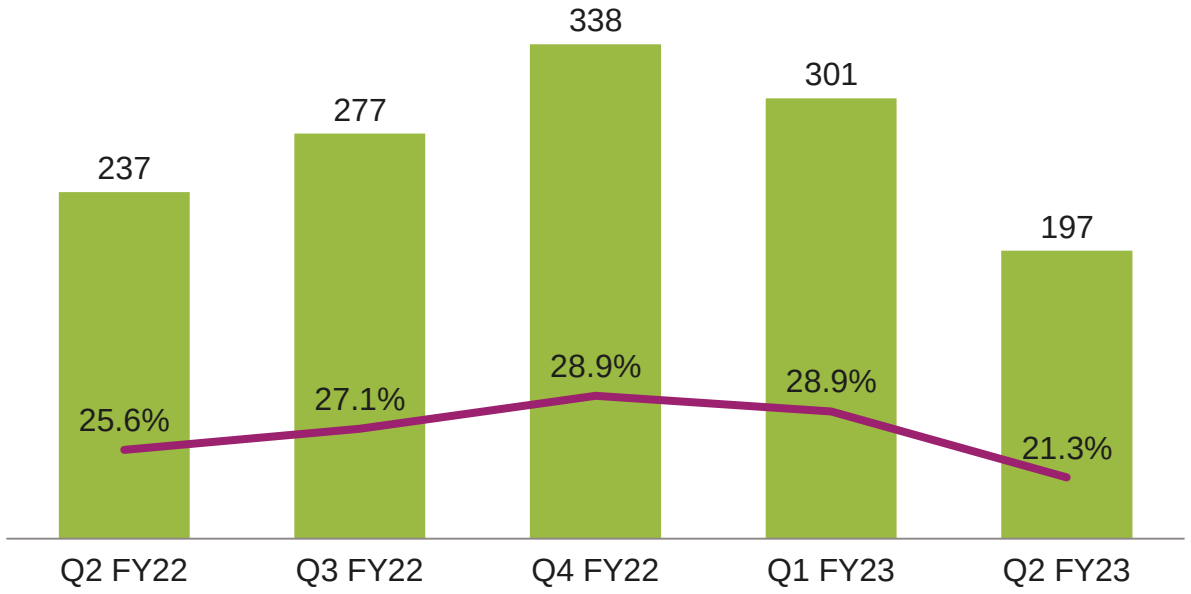
## Revenues

[EUR m]




## Segment Result

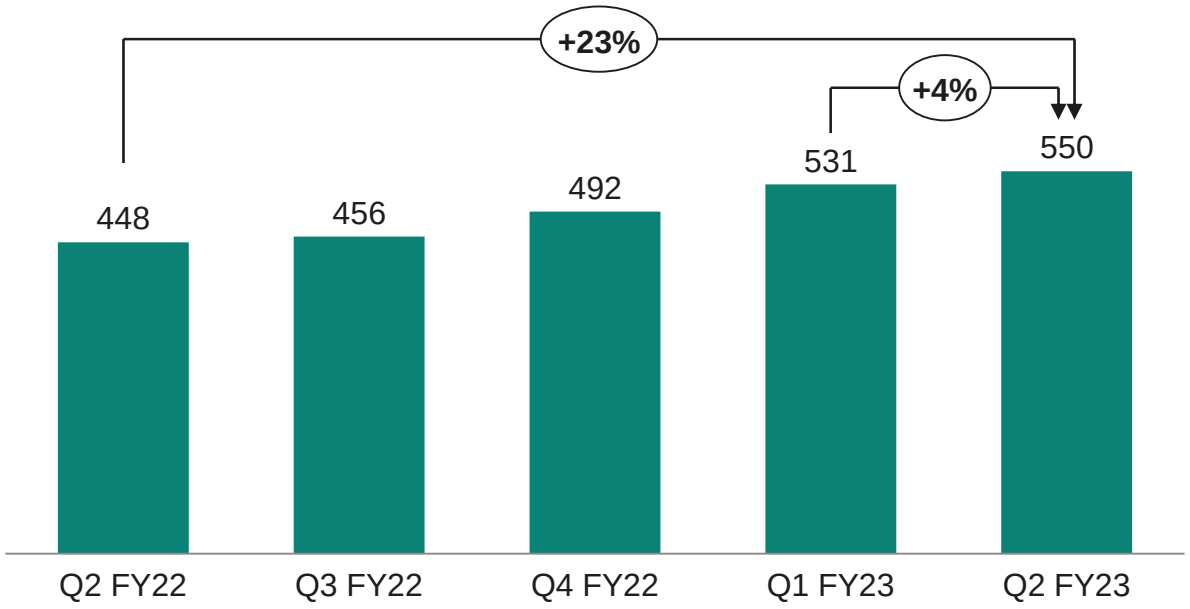
[EUR m]



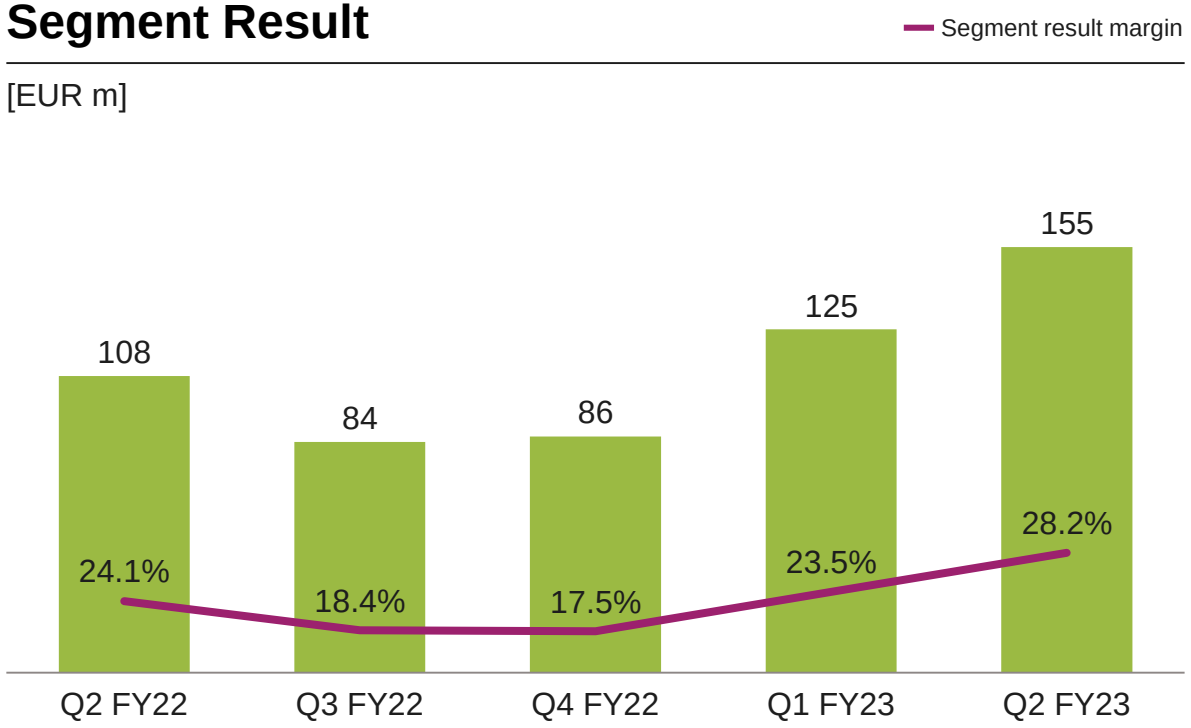

- Revenue step down was driven by the well-known softness in consumer, computing and communications applications
- Higher idle costs weigh on margin development
- Underlying long-term trends remain strong, especially demand for gallium nitride-based solutions

# Connected Secure Systems (CSS)

## Revenues




## Segment Result

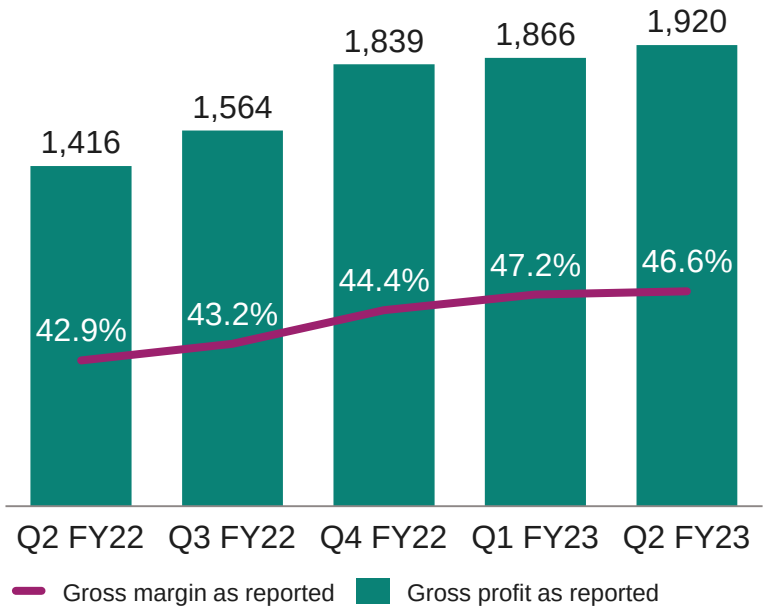



- Record revenue and segment result
- Revenue growth primarily driven by payment applications, embedded security and general-purpose microcontrollers
- Strong segment result was supported by pricing and higher volumes overcompensating negative currency developments
- Demand for smartcard ICs remains high – long-term growth opportunities for consumer as well as industrial IoT applications undiminished

# Gross margin and Opex

## Gross profit

[EUR m]




**Therein non-segment result charges**

[EUR m]

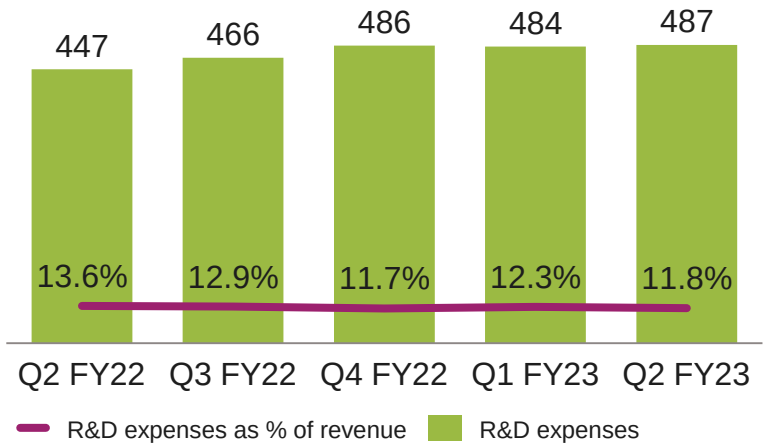
| | | | | |
|---|---|---|---|---|
| 82 | 78 | 81 | 76 | 81 |

**Adjusted gross margin**

| | | | | |
|---|---|---|---|---|
| 45.4% | 45.4% | 46.3% | 49.2% | 48.6% |

## R&D

[EUR m]



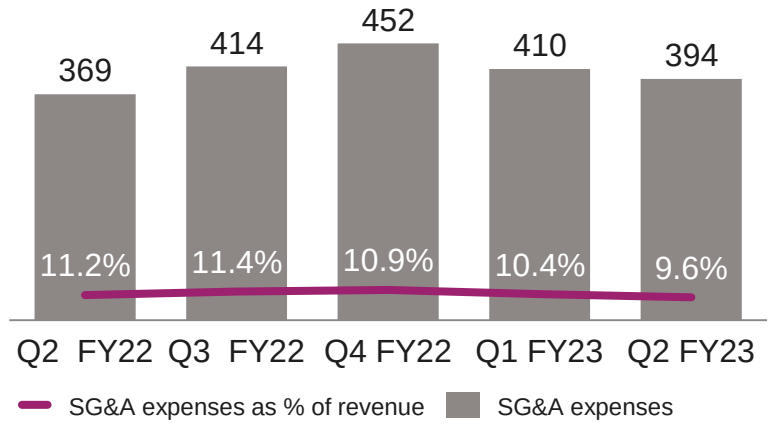

**Therein non-segment result charges**

[EUR m]

| | | | | |
|---|---|---|---|---|
| 6 | 7 | 12 | 10 | 8 |

## SG&A

[EUR m]




**Therein non-segment result charges**

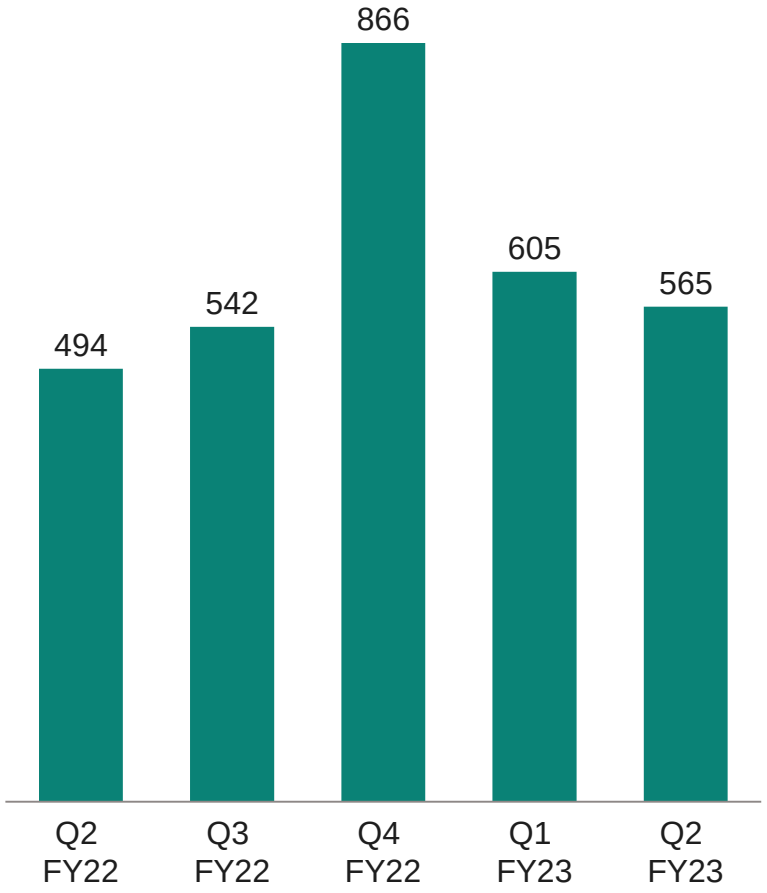
[EUR m]

| | | | | |
|---|---|---|---|---|
| 50 | 62 | 56 | 53 | 54 |

# Investments, Depreciation & Amortization and Free Cash Flow

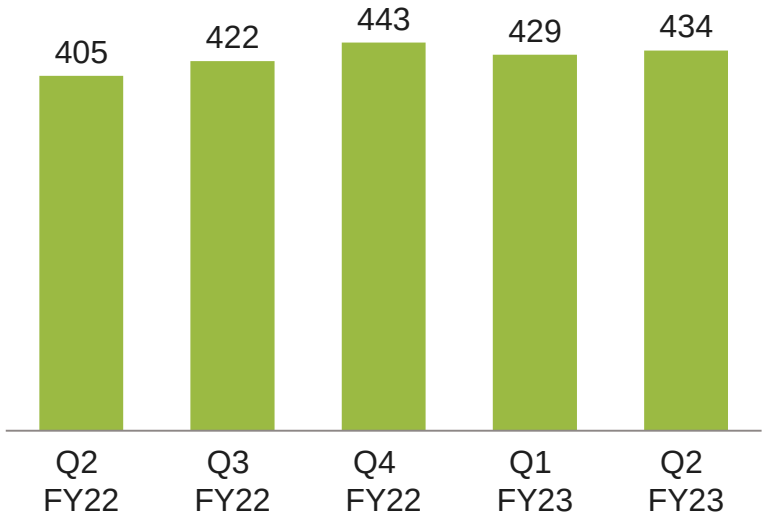
## Investments

[EUR m]



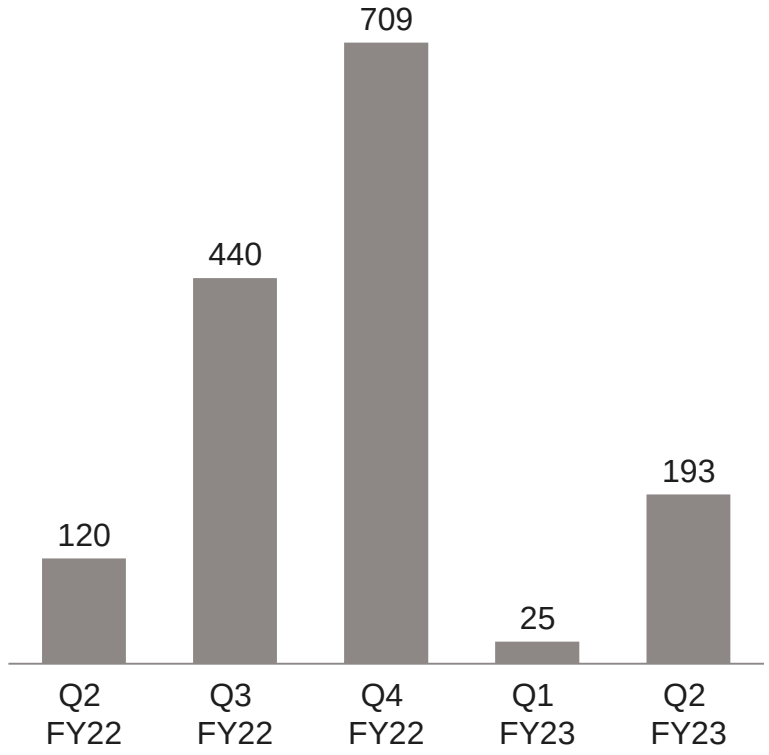

## Depreciation & Amortization

[EUR m]



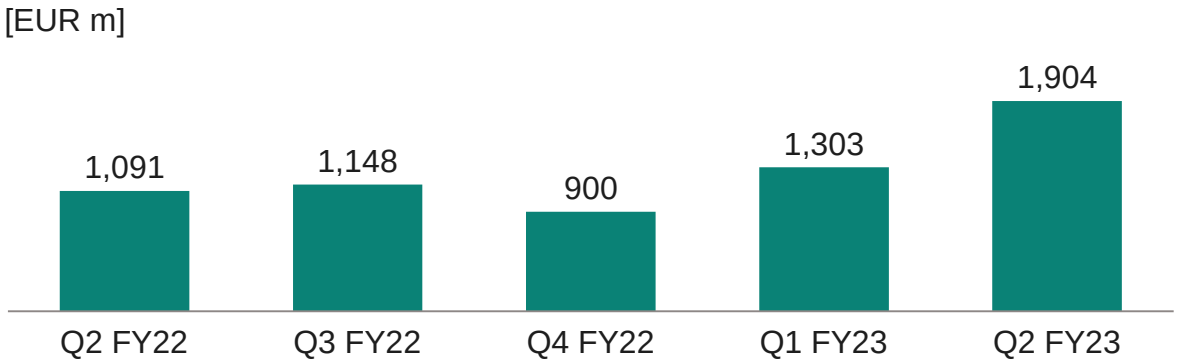

## Free Cash Flow

[EUR m]

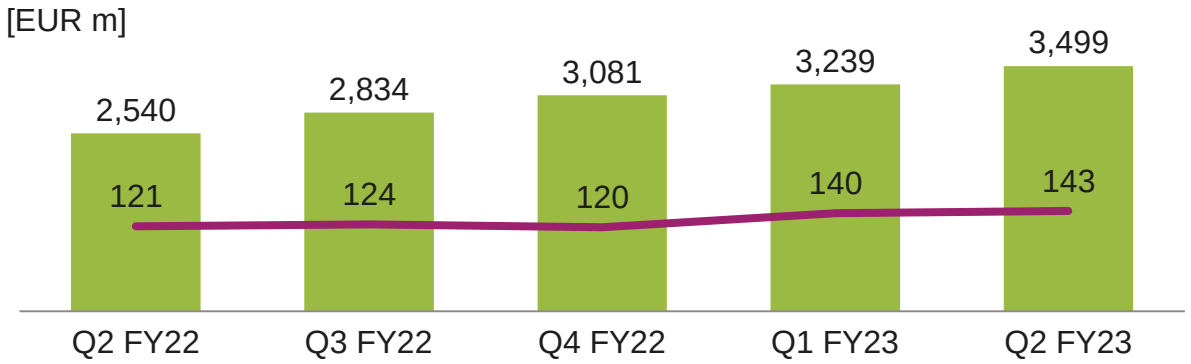


# Working Capital, in particular trade working capital components

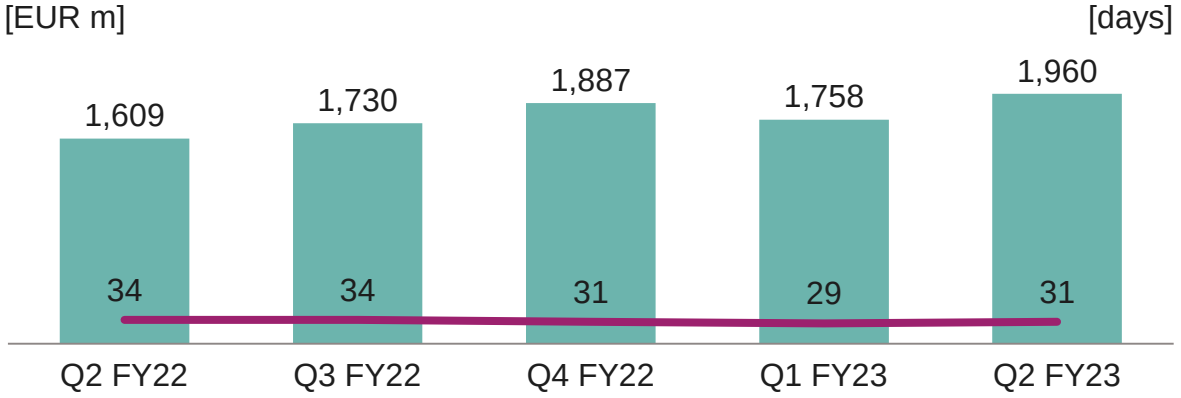
## Working capital[1]



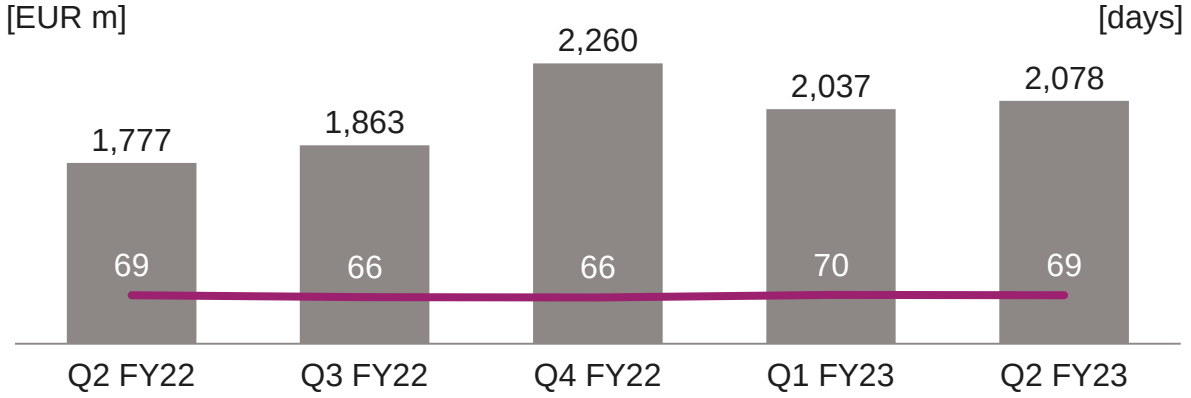

## Inventories




## Trade receivables



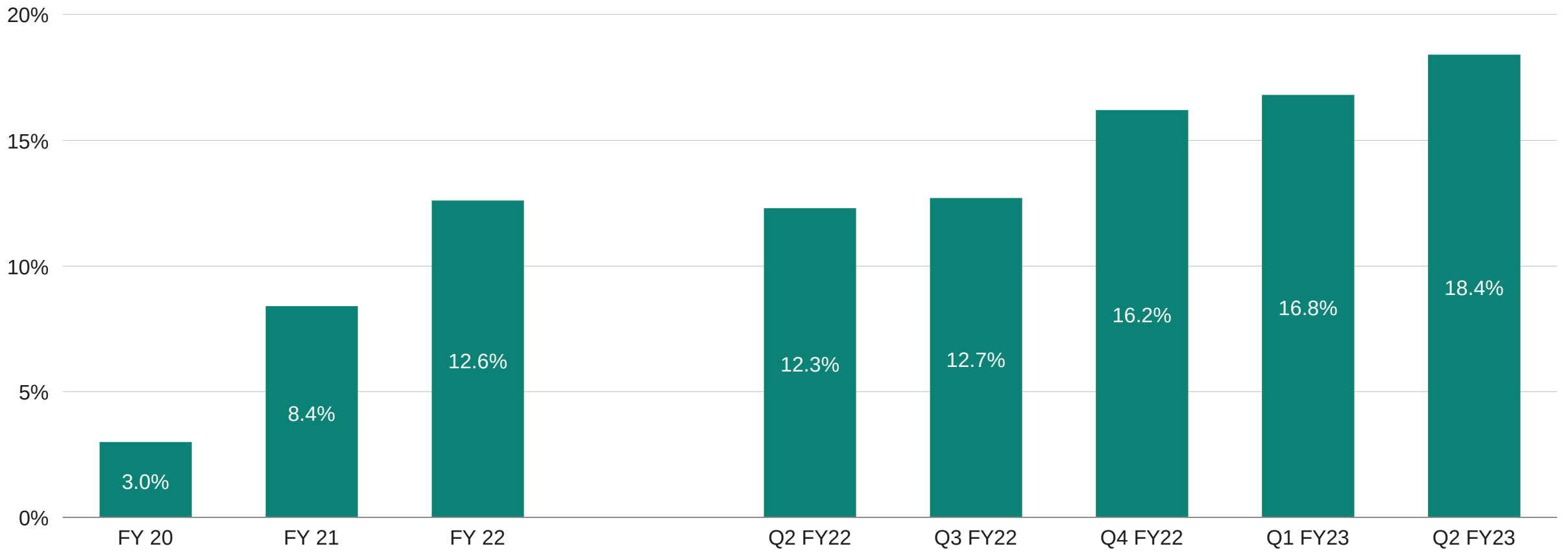

## Trade payables




[1] For definition please see page "Notes“
[2] Along with the integration of Cypress refund liabilities to customers are presented under “other current liabilities” instead of “trade receivables”. Prior quarters’ figures were adjusted accordingly for better comparability.

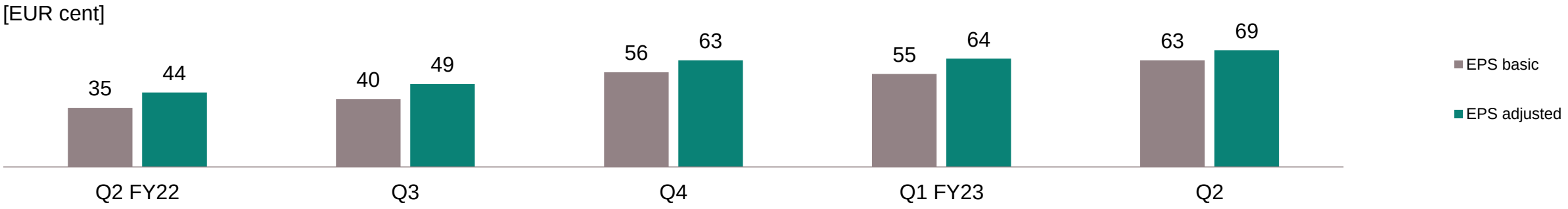
# Return on capital employed

## Historical development

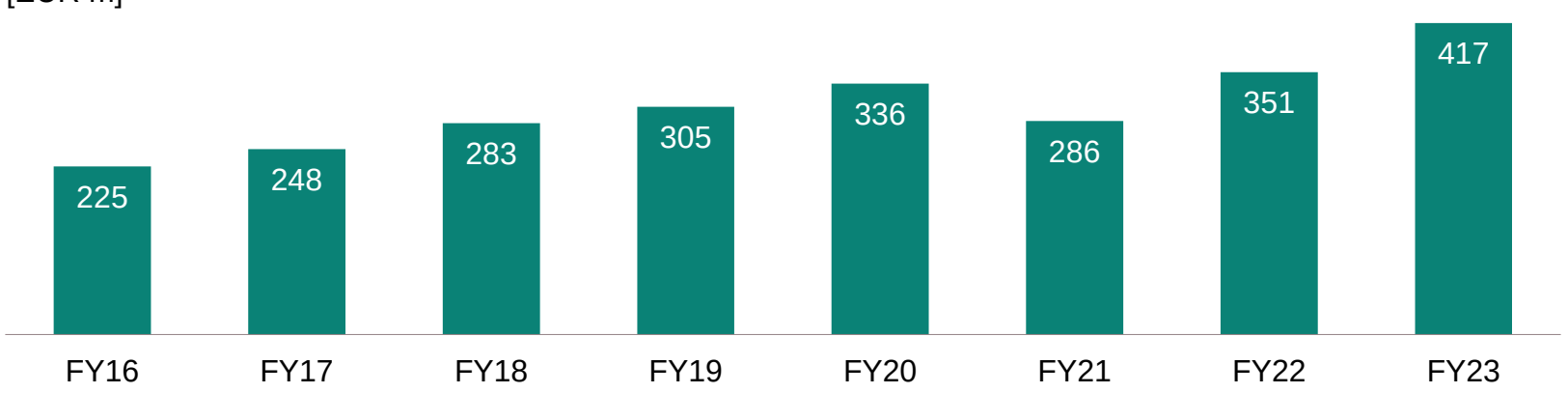


# Earnings-per-share and total cash return

## Development of earnings-per-share (EPS) from continuing operations




## Total cash return to shareholders via dividends

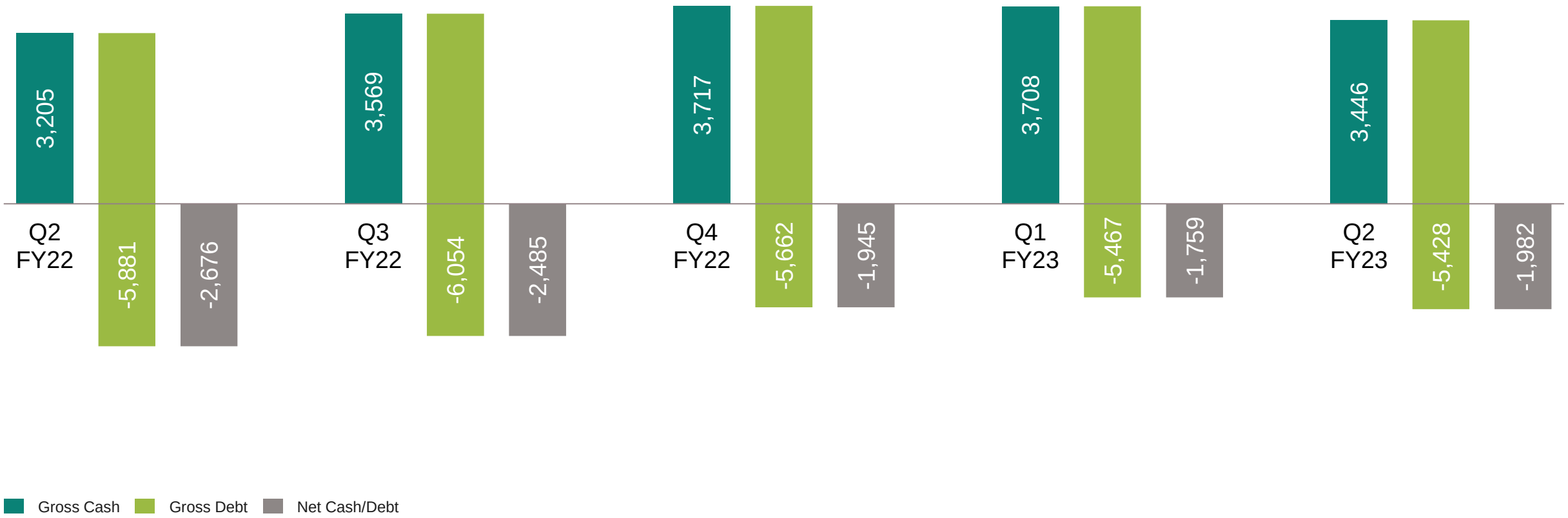



- Dividend for FY22: €0.32 per share
- Dividend payout of €417m for FY22

# Liquidity development

## Historical liquidity development

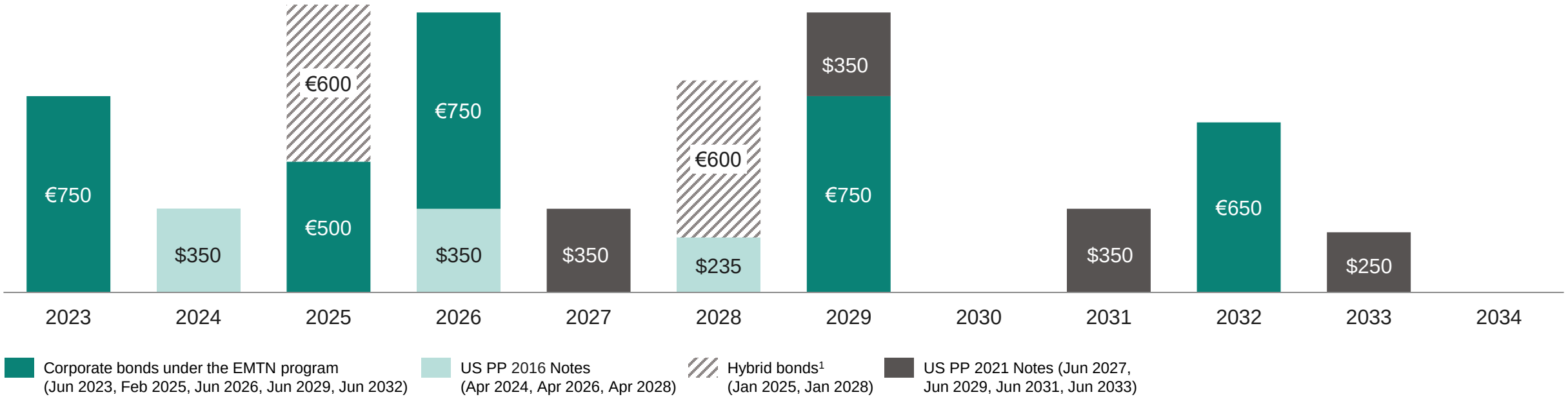
[EUR m]



# Maturity profile

## Maturity profile from 2023 to 2034

[EUR m; US$ m; nominal values]




Graph excludes additional debt totaling €2m maturing in 2023.

[1] On 1 Oct 2019, Infineon issued a perpetual hybrid bond with two tranches: €600m with first call date in 2025 and €600m with first call date in 2028; both are accounted as equity under IFRS.

# Conservative financial policy and strict commitment to investment-grade rating are the basis for through-cycle flexibility

| | Financial Policy Targets | Status Quo (LTM 31 March 2023) |
|---|---|---|
| **Gross Cash**[1] | €1bn + at least 10% of revenues → **€2.5bn** | €1bn + 15% of revenues → **€3.4bn** |
| **Gross Debt**[2] | **≤ 2.0x** EBITDA | **1.0x** EBITDA |

| | |
|---|---|
| **Comfortable liquidity position** | – Flexibility for financing operating activities and investments through the cycle<br>– Cushion for net pension liabilities and contingent liabilities |
| **Balanced debt position** | – Gross debt target commensurate with investment-grade rating<br>– De-leveraging and refinancing after Cypress acquisition completed ahead of schedule |

| | | |
|---|---|---|
| **Rating** | Investment grade | **BBB** positive outlook (by S&P Global) |

[1] Gross cash position is defined as cash and cash equivalents plus financial investments | [2] Gross debt is defined as short-term debt and current maturities of long-term debt plus long-term debt. EBITDA is calculated as the total of earnings from continued operations before interest and taxes plus scheduled depreciation and amortization


Infineon

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# Glossary

| | |
|---|---|
| AC | alternating current |
| ACC | adaptive cruise control |
| AD | automated driving |
| ADAS | advanced driver assistance system |
| ADC | analog-to-digital converter |
| AEB | autonomous emergency braking |
| AI | artificial intelligence |
| AR/VR | augmented/virtual reality |
| ASIC | application-specific integrated circuit |
| BEV | battery electric vehicle |
| BLE | bluetooth low energy |
| BMS | battery management system |
| BoM | bill of Materials |
| BPA | bisphenol A |
| CAV | commercial, construction and agricultural vehicles |
| CMOS | complementary metal-oxide-semiconductor |
| DC | direct current |
| E/E | electrical/electronic architecture |
| ECU | electronical control unit |
| eSE | embedded secure element |
| eSIM | embedded subscriber identity module |
| ESS | energy storage systems |
| EV | electric vehicle |
| FCEV | full cell electric vehicle |
| FHEV/MHEV | full/mild hybrid electric vehicle |
| FoM | figure of merit |
| F-RAM | ferroelectric memory |
| GaN | gallium nitride |
| HMI | human machine interaction |
| HV | high voltage |
| HVAC | heating, ventilation, air conditioning |
| IC | integrated circuit |
| ICE | internal combustion engine |
| IGBT | insulated gate bipolar transistor |
| IoT | internet of things |
| IPM | intelligent power module |
| LED | light-emitting diode |
| MCU | microcontroller unit |
| MEMS | micro electro-machanical systems |
| MHA | major home appliances |
| MIMO | multiple input, multiple output |
| ML | machine learning |
| MNO | mobile network operator |
| MOSFET | metal-oxide silicon field-effect transistor |
| MV | medium voltage |
| OBC | on-board charger |
| OEM | original equipment manufacturer |
| P2S | Infineon's strategic product-to-system approach |
| PD | power delivery |
| PHEV | plug-in hybrid electric vehicle |
| PMIC | power management integrated circuits |
| PoL | point of load |
| PSoC | programmable system-on-chip |
| PUE | power usage effectiveness |
| PV | photovoltaic |
| RAC | risk-adjusted capital |
| RAM | random-access memory |
| RF | radio frequency |
| SBC | system basis chip |
| Si | silicon |
| SiC | silicon carbide |
| SiGe | silicon-germanium |
| SNR | signal-to-noise ratio |
| SWP | single wire protocol |
| ToF | time-of-flight |
| WBG | wide band gap, specifically referring to SiC and GaN based devices |

# Notes and ESG footnotes

| | |
|---|---|
| **Investments** = | 'Purchase of property, plant and equipment' + 'Purchase of intangible assets and other assets' incl. capitalization of R&D expenses |
| **Capital Employed** = | 'Total assets' – 'Cash and cash equivalents' – 'Financial investments' – 'Assets classified as held for sale<br>– ('Total Current liabilities' – 'Short-term debt and current maturities of long-term debt' – 'Liabilities classified as held for sale') |
| **RoCE** = | Operating profit from continuing operations after tax/Capital Employed<br>= (‘Operating profit' – ‘Financial result excluding interest result' – 'Share of profit (loss) of associates and joint ventures accounted for using the equity method'-'Income tax')/Capital Employed |
| **Working Capital** = | ('Total current assets' – 'Cash and cash equivalents' – 'Financial investment' – 'Assets classified as held for sale’)<br>– ('Total current liabilities' – 'Short term debt and current maturities of long-term debt' – 'Liabilities classified as held for sale') |
| **DIO** (days inventory outstanding; quarter-to-date) = | ('Net Inventories'/'Cost of goods sold') x 90 |
| **DPO** (days payables outstanding; quarter-to-date) = | ('Trade payables'/['Cost of goods sold' + 'Purchase of property, plant and equipment']) x 90 |
| **DSO** (days sales outstanding; quarter-to-date) = | ('Trade receivables’ - ‘reimbursement obligations’)[1]/'revenue' x 90 |

| | |
|---|---|
| **Order backlog** = | The total amount of orders received regardless of their current status |

**ESG footnotes:**

1) This figure takes into account manufacturing, transportation, own vehicles, travel, raw materials and consumables, chemicals, water/waste water, direct emissions, energy consumption, waste, etc. as well as direct and indirect energy-related emissions by manufacturing service providers. It is based on data collected internally and publicly available conversion factors and relates to the 2021 fiscal year.
2) This figure is based on internally established criteria, which are described in the explanatory notes. The figure relates to the 2020 calendar year and takes into account the following application areas: automotive, LED, induction cookers, servers, renewable energy (wind, photovoltaic) and cell phone chargers as well as drives. $CO_2$ savings are calculated based on the potential savings generated by technologies in which semiconductors are used. The $CO_2$ savings are allocated based on Infineon's market share, semiconductor share, and the lifetime of the technologies concerned, based on internal and external experts' estimations. Despite the fact that carbon footprint calculations are subject to imprecision due to the complex issues involved, the results are nevertheless clear.
3) Carbon neutrality is defined in terms of Scope 1 and Scope 2 emissions.

[1] Without debtors with credit balances

# Financial calendar

| Date | Event | Location |
|---|---|---|
| 10 May 2023 | Berenberg Madrid Seminar | Madrid |
| 11 May 2023 | GIP business update call along with PCIM trade show | |
| 12 May 2023 | Stifel German Corporate Conference | Frankfurt |
| 15 – 16 May 2023 | J.P. Morgan European Technology, Media and Telecoms Conference | London |
| 17 May 2023 | UBS Best of Europe Conference | virtual |
| 23 May 2023 | Equita European Conference | Milan |
| 31 May 2023 | Goldman Sachs Global Semis Conference | New York |
| 6 June 2023 | Berenberg Innovation Conference | Zurich |
| 6 – 7 June 2023 | 24th CEO Conference of BNP Paribas Exane | Paris |
| 12 June 2023 | Future of the auto industry Conference, Newstreet Research | virtual |
| 20 June 2023 | dbAccess German Corporate Conference | Frankfurt |
| 21 June 2023 | BofA EU TMT Conference | London |
| 3 August 2023[1] | Q3 FY23 results | |
| 15 November 2023[1] | Q4 FY23 and FY 2023 results | |

[1] Preliminary

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