



Third Quarter FY 2024 Quarterly Update

Infineon Technologies AG
Investor Relations



Infineon at a glance

Addressing long-term high-growth trends



Energy
green and efficient



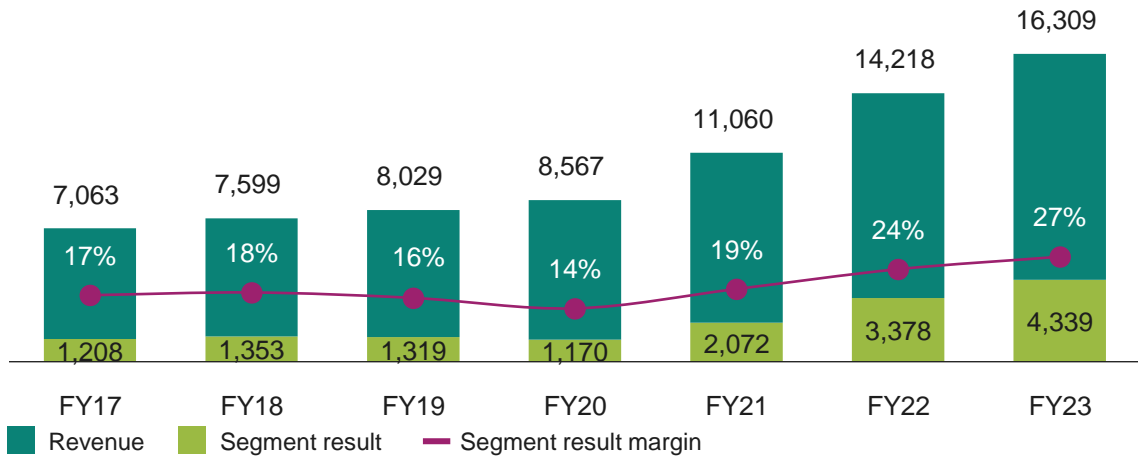
Mobility
clean and safe



IoT
smart and secure

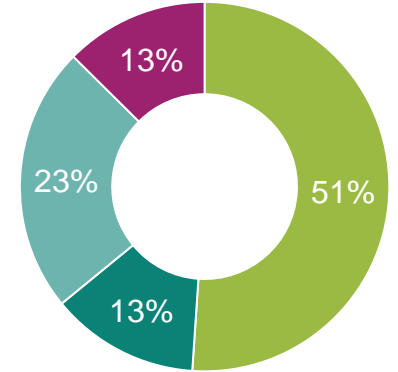
Financials

[EUR m]



FY23 revenue by segment

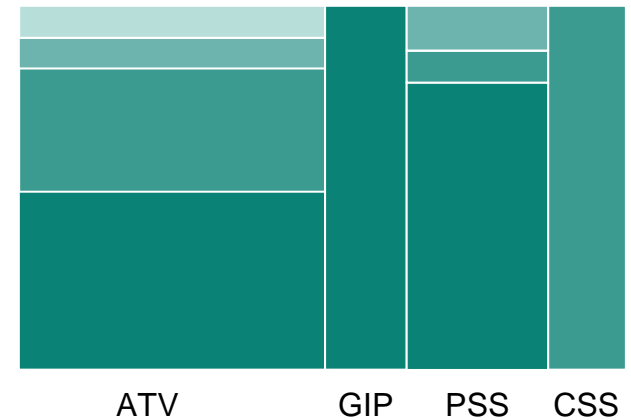
- Automotive (ATV)
- Green Industrial Power (GIP)
- Power & Sensor Systems (PSS)
- Connected Secure Systems (CSS)



FY23 revenue by product category

- ~5% memory ICs
- ~10% RF & sensors
- ~30% embedded control and connectivity
- ~55% power semi-conductors

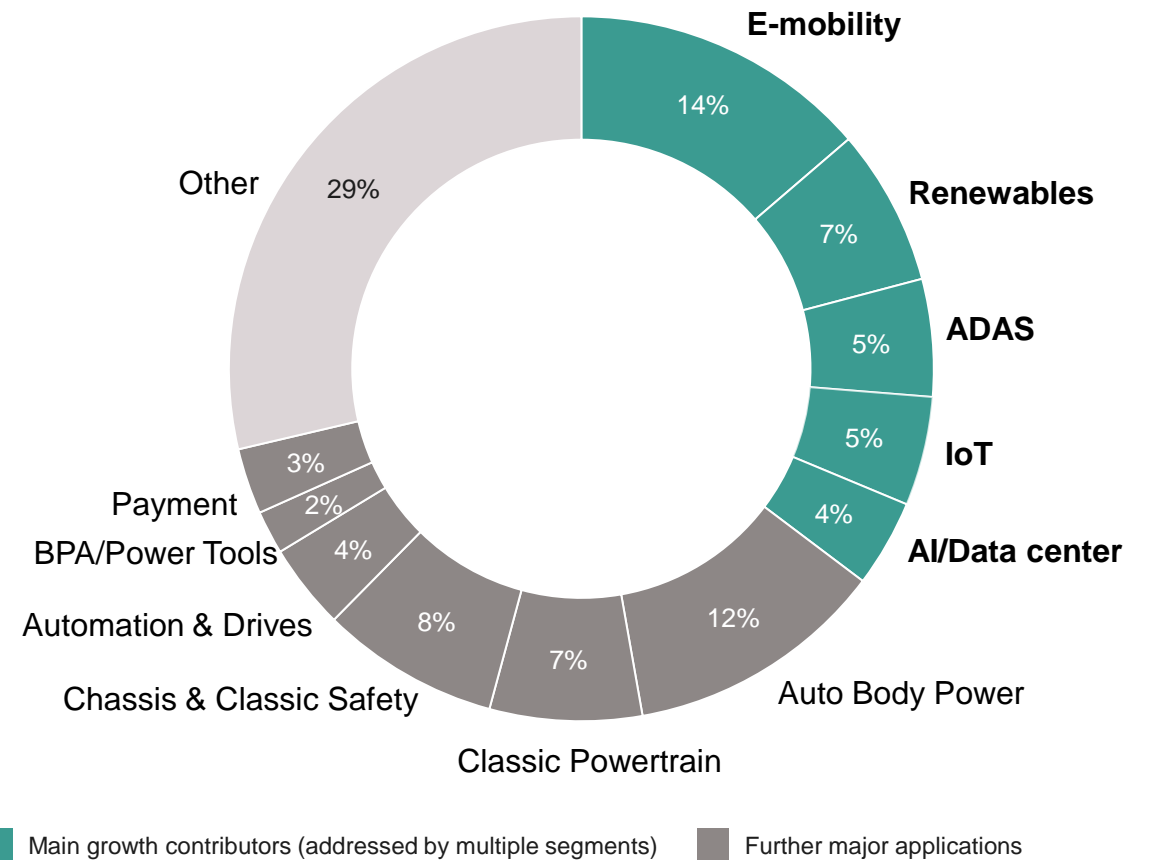
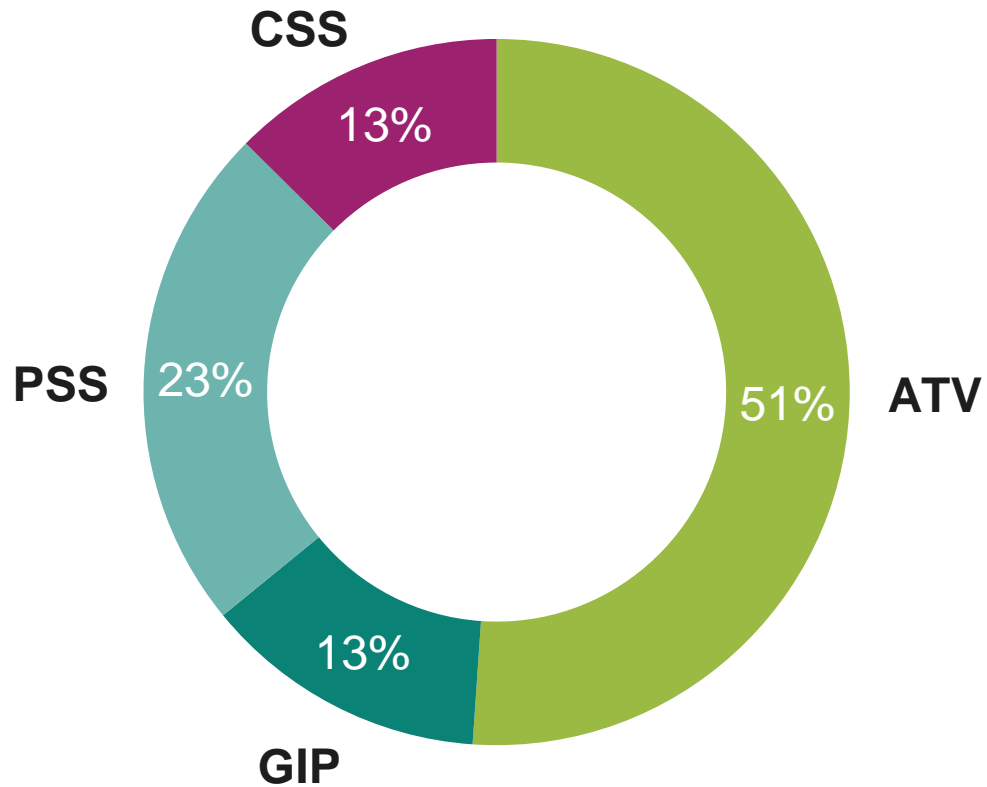
of total revenue



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



FY23 revenue of €16,309m by segment and key application

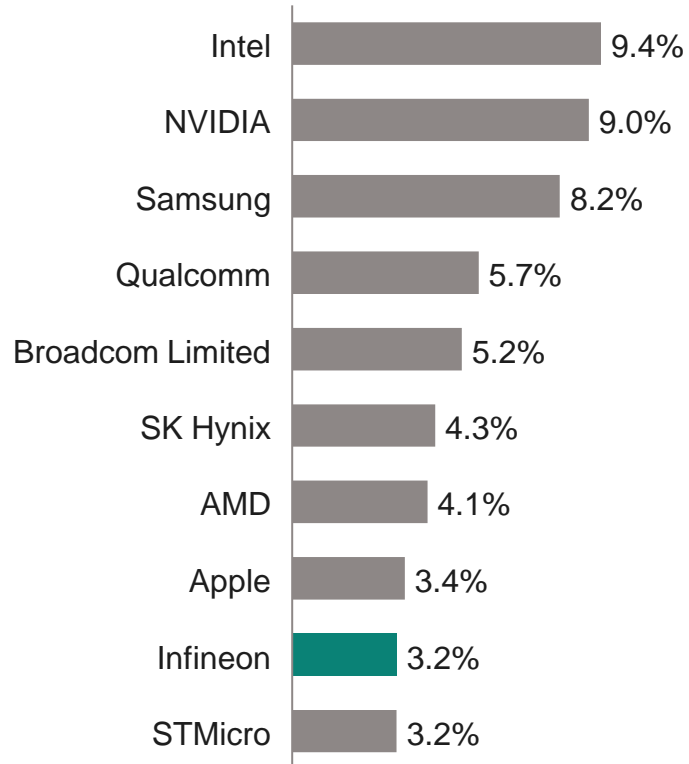


Infineon is a global player, clear #1 in power semiconductors, and ranked #2 in the overall microcontroller market



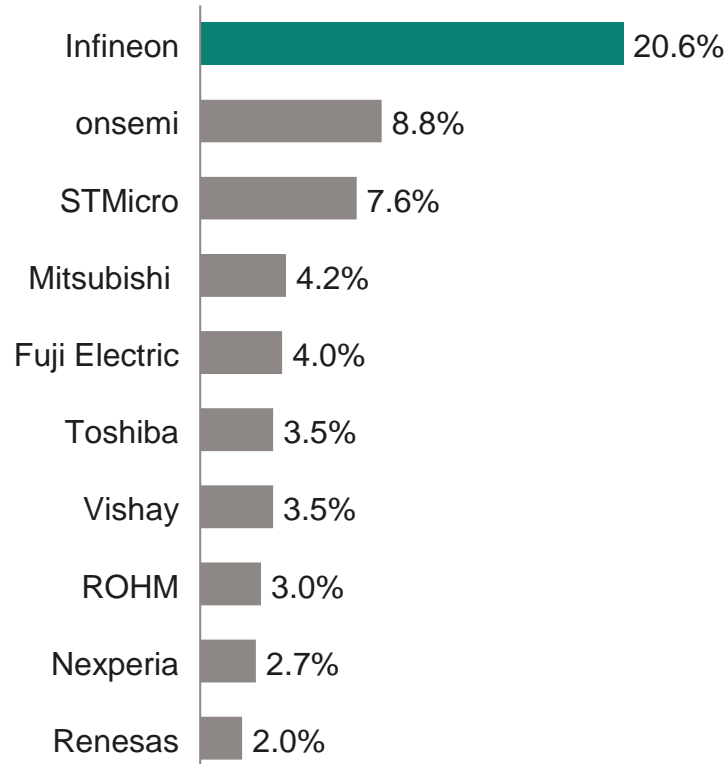
Semiconductor suppliers

2023 total global market: USD 544bn¹



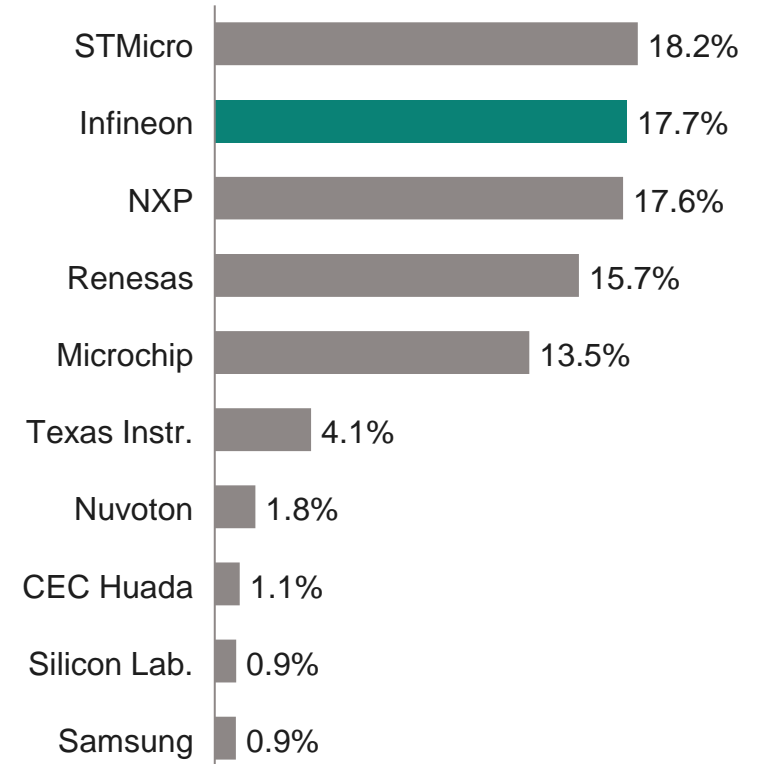
Power discretes and modules

2022 total global market: USD 30.9bn²



Microcontroller suppliers

2023 total global market: USD 28.1bn¹



¹ Based on or includes research from Omdia: *Annual 2001-2023 Semiconductor Market Share Competitive Landscaping Tool – 1Q24*. May 2024. | ² Based on or includes research from Omdia: *Power Semiconductor Market Share Database – 2022*. September 2023. Results are not an endorsement of Infineon Technologies AG. Any reliance on these results is at the third party's own risk.

Our Target Operating Model: committing to ambitious financial goals and being the sustainability leader



Target Operating Model through cycle



Revenue growth

>10%



Segment Result Margin

25%



Adj. Free Cash
Flow Margin¹

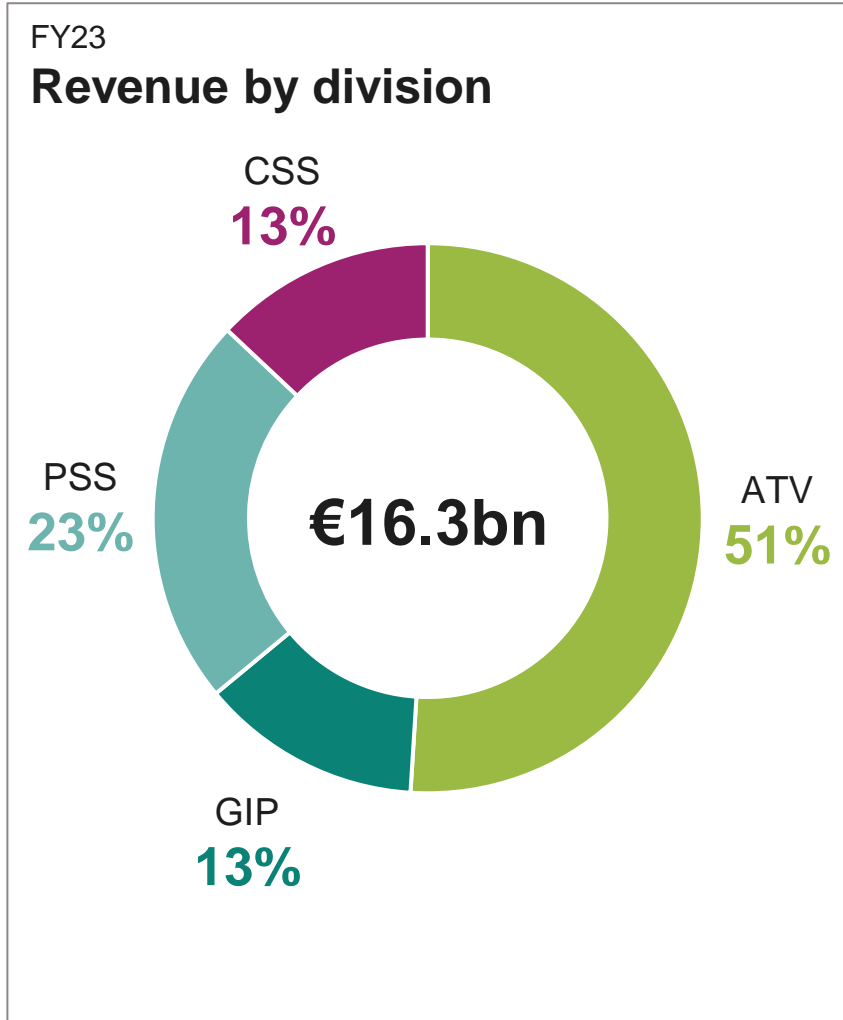
10-15%

Sustainability leader
CO₂ neutrality 2030

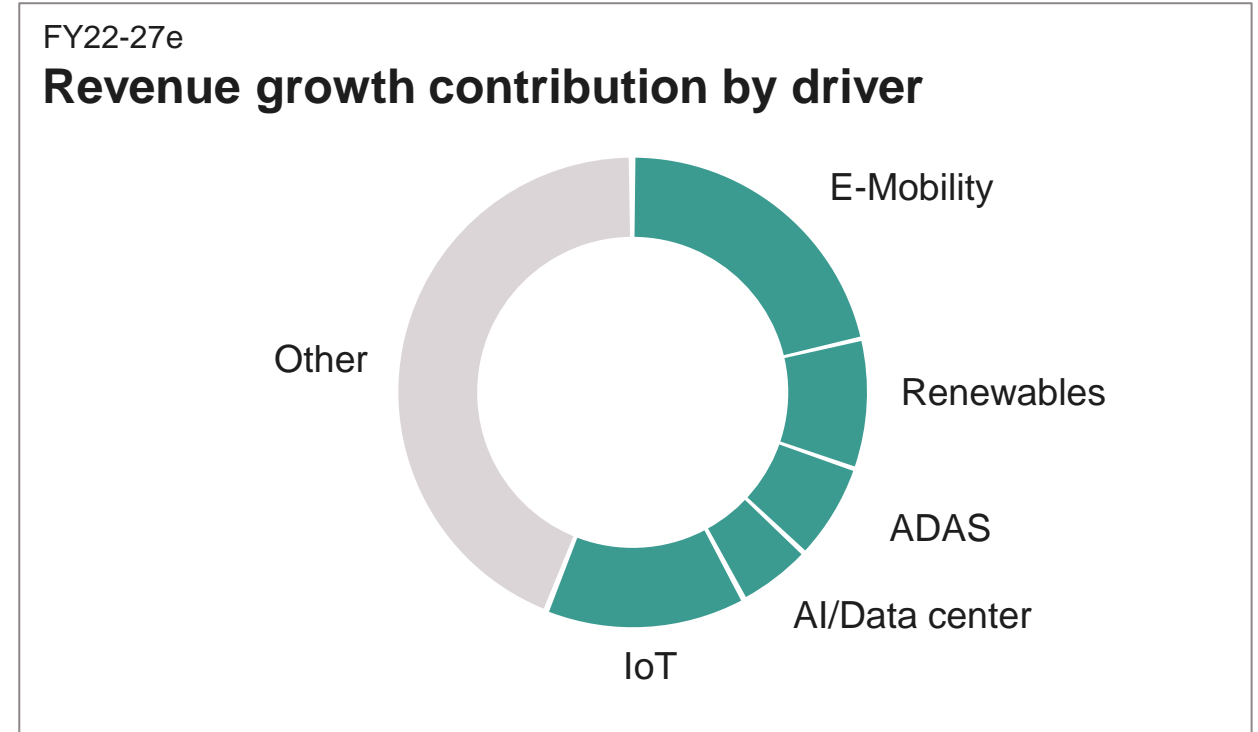


¹ Excluding major frontend buildings

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



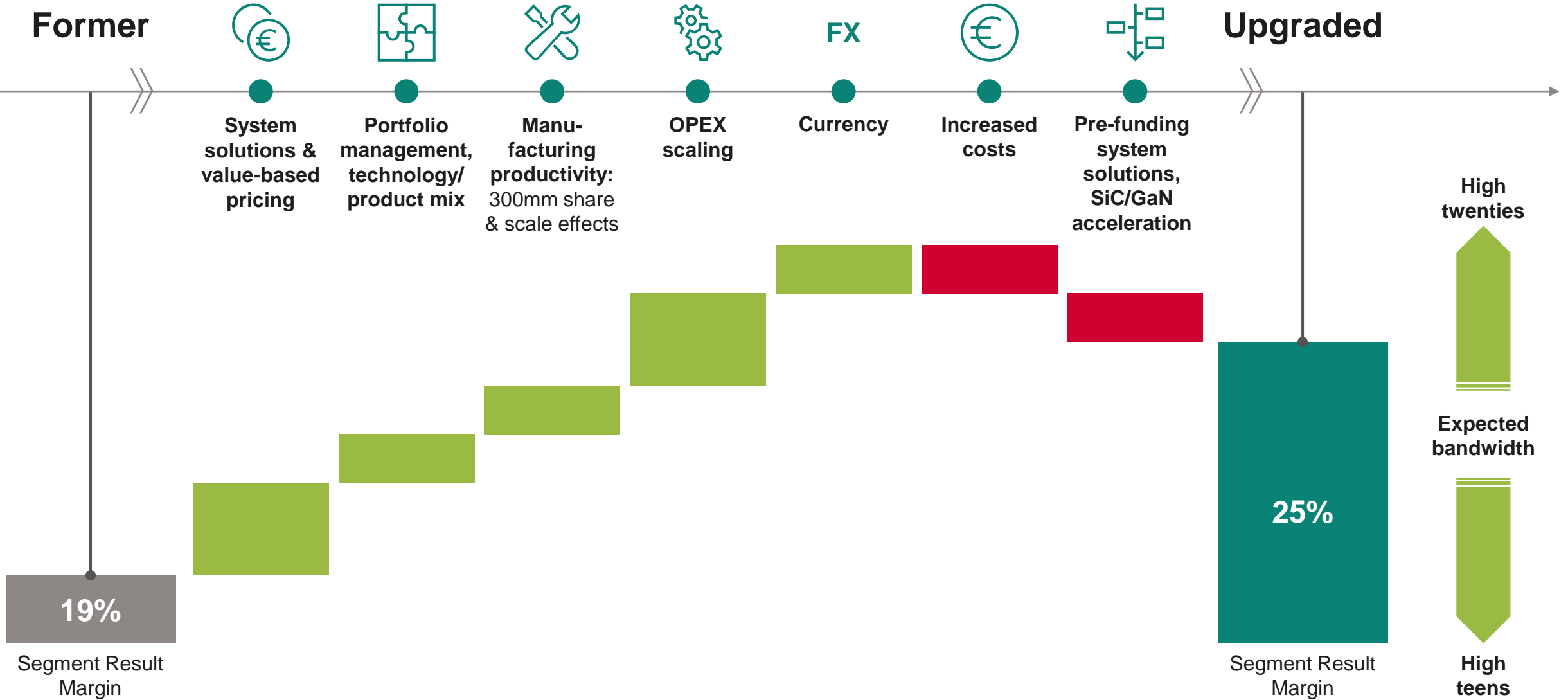
>10%
CAGR



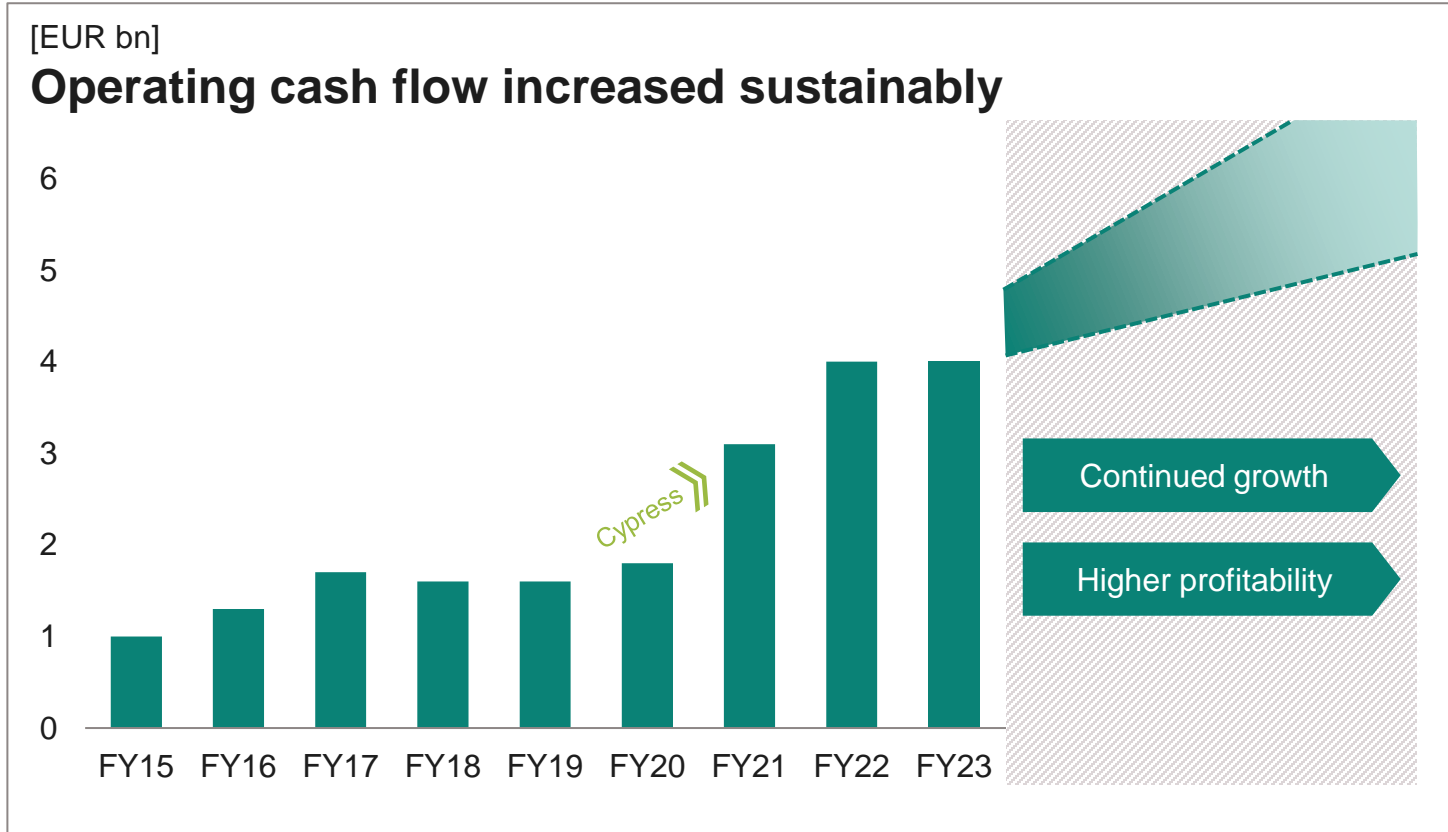
Through cycle growth rates by division

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

Our 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 mid-/long-term
- Differentiated in-house manufacturing complemented by ~40% outsourcing share over time
- FY24-28: ~€4.5bn cum. investments into major frontend buildings

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



Outlook for Q4 FY24 and FY24

	Outlook Q4 FY24¹	Outlook FY24¹
Revenue	~€4.0bn	~€15.0bn
Adj. Gross Margin		low-forties
Segment Result Margin	~20%	~20%
FCF/adj. FCF		~€-200m/~€1.5bn
Investments		~€2.8bn
D&A		~€1.9bn ²

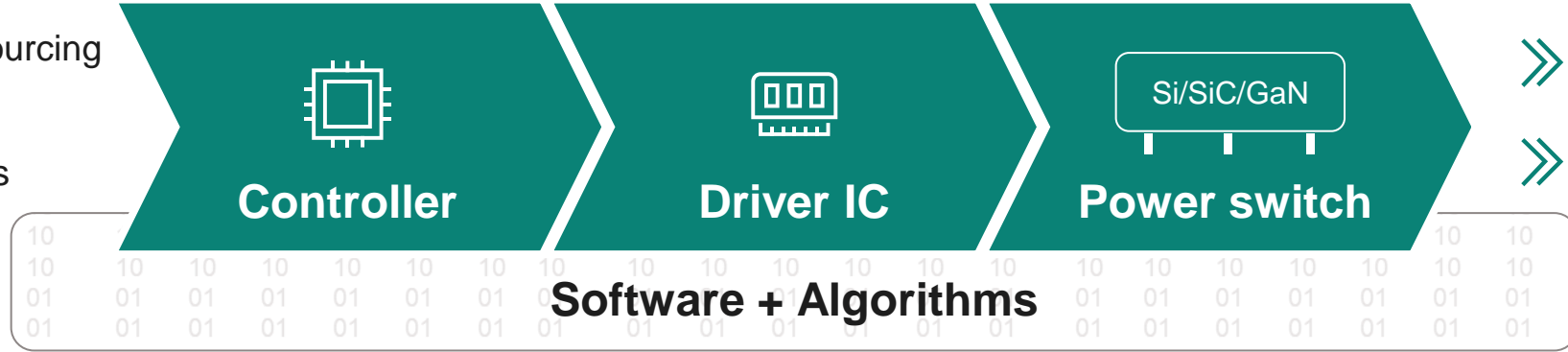
¹ Based on an assumed average exchange rate of \$1.10 for €1.00

² Including the amortization of around 400 million Euros from purchase price allocations

Undisputed power systems leadership mastering all three key materials



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



- » Application understanding
- » Packaging know-how and hybridization competence

Leadership in Power Systems across all materials and technologies

Silicon

Diode – MOSFET – IGBT – Driver – Controller



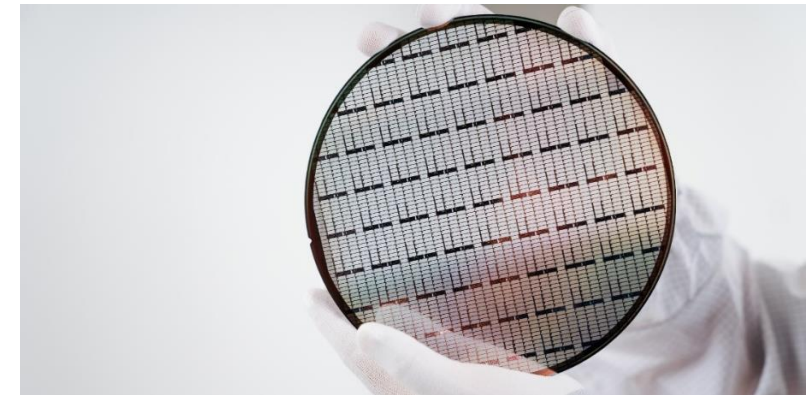
Silicon carbide

Diode – MOSFET



Gallium nitride

HEMT – Driver



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



Consumer IoT



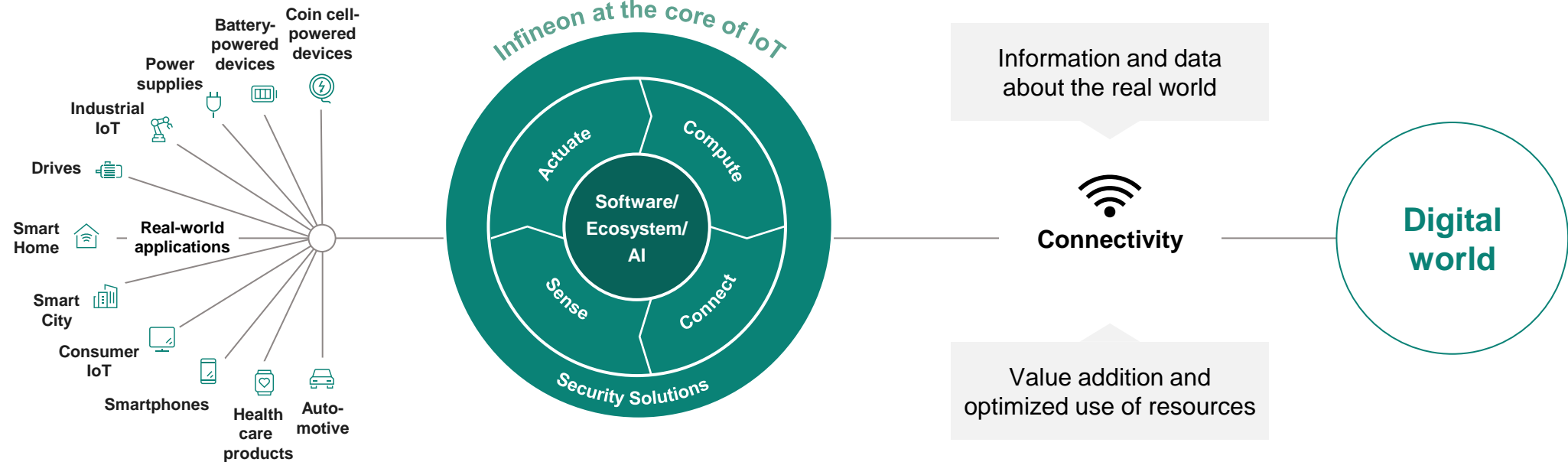
Industrial IoT



Automotive IoT



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



ESG: Targets and achievements



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



CO₂ burden¹

3.4 million tons of CO₂ equivalents



Ratio
~1:34

CO₂ savings²

116.6 million tons of CO₂ equivalents

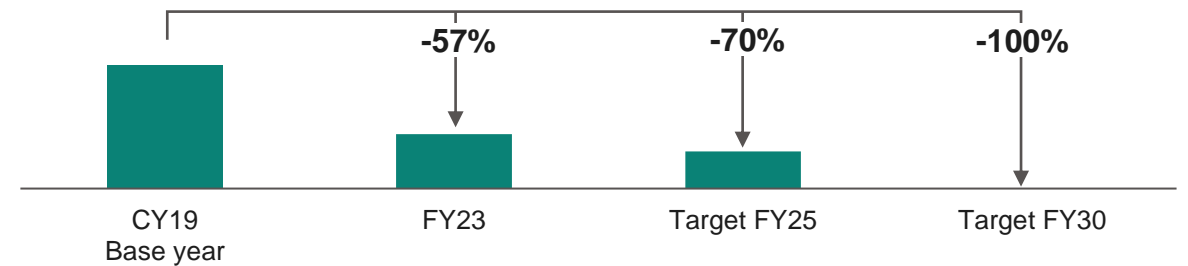


On the road to carbon neutrality³ we achieved significant milestones by

- Using green electricity in Europe and North America and our main sites Kulim and Melaka in Malaysia
- Installation start of PFC abatement system in Austin

Infineon's CO₂ target³ by 2025 and 2030

Net CO₂ emissions in million tons of CO₂ equivalents











» Net ecological benefit: CO₂ emissions reduction of more than 113 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

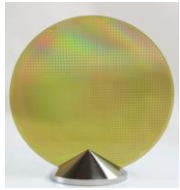


	Rating/Score	Scale	Date
 MSCI ESG	AAA	CCC to AAA	05/2024
 CDP	B climate scoring B water scoring	F to A	02/2024
 Ecovadis	99th percentile “Platinum” award	0 to 100	06/2024
 Dow Jones Sustainability™ Index In collaboration with 	77 Dow Jones Sustainability™ World Index listing	0 to 100	12/2023
 ISS ESG Corporate Rating	Prime Status	D- to A+	03/2023
 FTSE4Good Index	Index member	–	06/2024
 Sustainalytics	ESG industry top performer	–	01/2024

Infineon's wide bandgap strategy



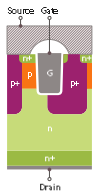
With opening Kulim 3, Infineon is on track to becoming the industry's most competitive provider of SiC technology



SiC raw material supplier network



- More than 6 qualified SiC wafer and boule suppliers
- Globally diversified and resilient



Superior trench technology



- 30% more chips per wafer than planar
- Unmatched reliability with zero field returns



Packaging portfolio



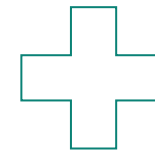
- Best-in-class in-house packaging solutions
- .XT technology for highest power density



Deep system understanding



- Decades of experience
- Broadest portfolio: off-the-shelf plus customized solutions



World-scale 200-millimeter fab with industry-leading cost position
Resilient setup together with Villach plant

Smart phase-over and ramp-up of 200mm volume production to enable next level of innovation for customer value with SiC



Villach

Kulim



CoolSiC™
200mm

Pilot projects on track



- Qualification on selected high-volume technologies nearly finished
- SiC multi-sourcing strategy for raw materials in place
- Wafer yield equal or better to 150mm

Smart 200mm phase-over



- Volume production in Villach and Kulim
- Cleanroom and tools already available
- Full transition to 200mm within 3 years after qualification planned



Timeline



- Product roll-out based on 200mm starting Q1/2025
- Major new chip developments on 200mm

Expansion of Kulim 3 backed by strong long-term customer commitments

Automotive



A total of **6** OEMs

Industrial (incl. PV and ESS)



A total of **5** major customers



Design-wins: ~ €5bn






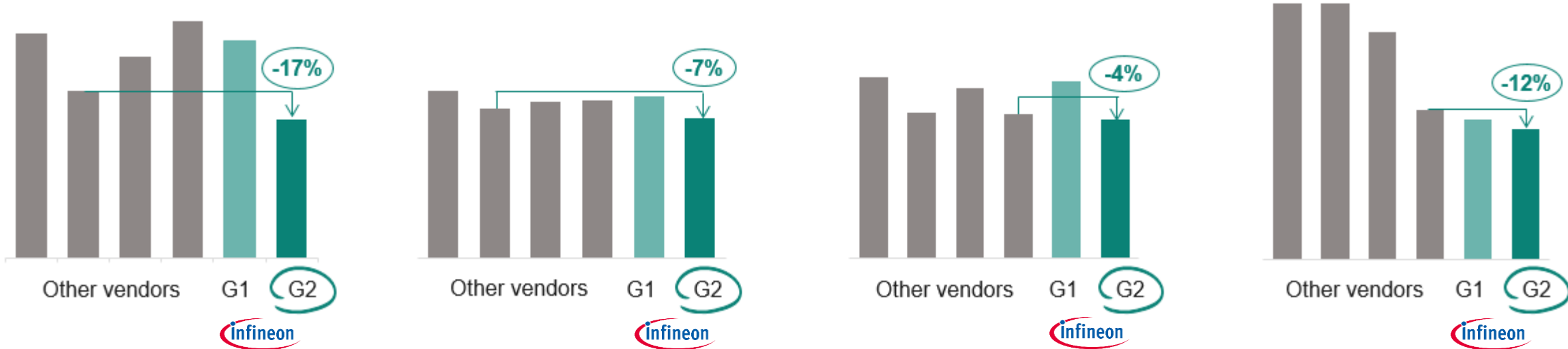
Related customer pre-payments: ~ €1bn

- Phase 2 of Kulim module 3 expansion is backed by numerous customer commitments
- Significant design-wins in automotive and renewable applications
- About €1bn of customer pre-payments contribute to our free cash flow in FY24 and FY25

Unveiling a new performance budget with CoolSiC™ G2

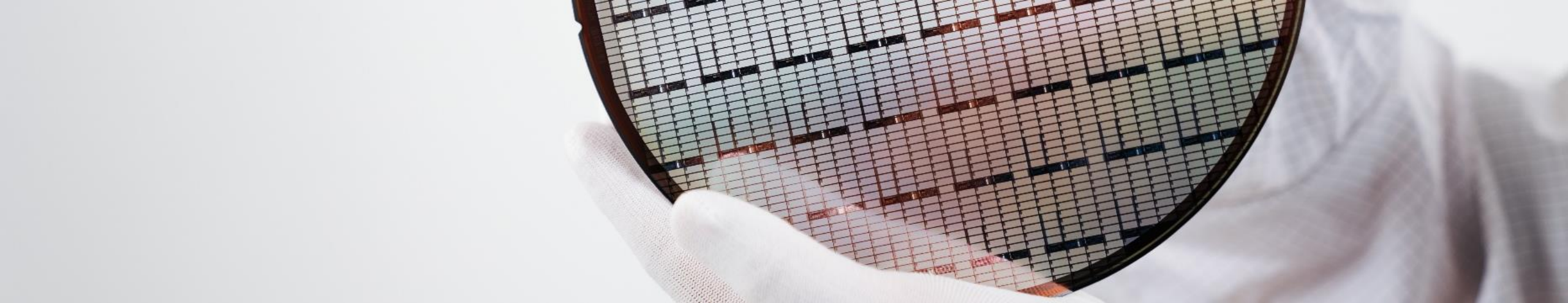
Figures-of-merit (FOM) comparison: lower is better for energy efficiency optimization

 <p>$R_{DSON} \times Q_{GD}$ (mΩ*μC) at 150°C, 800 V, 28 A:</p>	 <p>DC-DC $R_{DSON} \times Q_{OSS}$ (mΩ*μC) at 150°C, 800 V:</p>	 <p>$R_{DSON} \times E_{OSS}$ (mΩ*μJ) at 150°C, 800 V:</p>	<p>The classical MOSFET FOM (from low-voltage silicon world)</p> <p>$R_{DS} \times Q_G$ (mΩ*μC) at 150°C:</p>
<p>Lower is better in hard-switching topologies</p>	<p>Lower is better in soft-switching topologies</p>	<p>Lower is better for light-load efficiency</p>	<p>Lower means lower gate driving power loss</p>



Infineon products: IMBG120R030M1H, IMBG120R026M2H.
 Other SiC MOSFETs: value of parameters taken from datasheet in internet for the latest generations of 1200 V SiC MOSFETs in D2PAK 7pin: C3M0032120J1, SCT4018KW7, NTB030N120M3S, SCT025H120G3AG,
 Q_{GD} = total charge associated to C_{RSS} at given conditions, Q_{OSS} = total charge associated to C_{OSS} at given conditions. E_{OSS} = total energy associated to C_{OSS} at given conditions

Continuing our leadership in Power Systems with the most comprehensive GaN portfolio



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 understanding
incl. automotive

Leveraging foundry + IDM advantages



We own key IP and all frontend process steps

We combine foundry partnerships and dual-site in-house production, ready for 200 mm

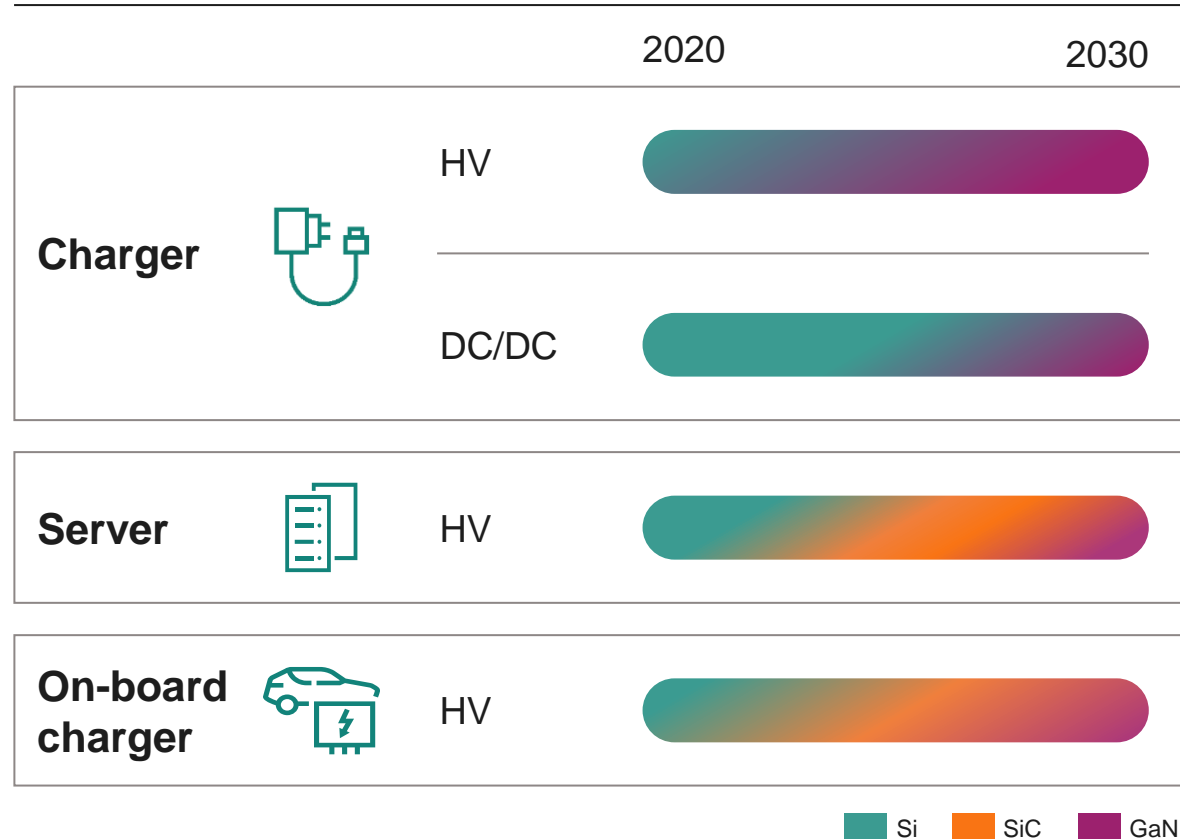
We target a leading market position

Infineon's design opportunity pipeline for GaN power in focus applications amounts to **more than €3bn**

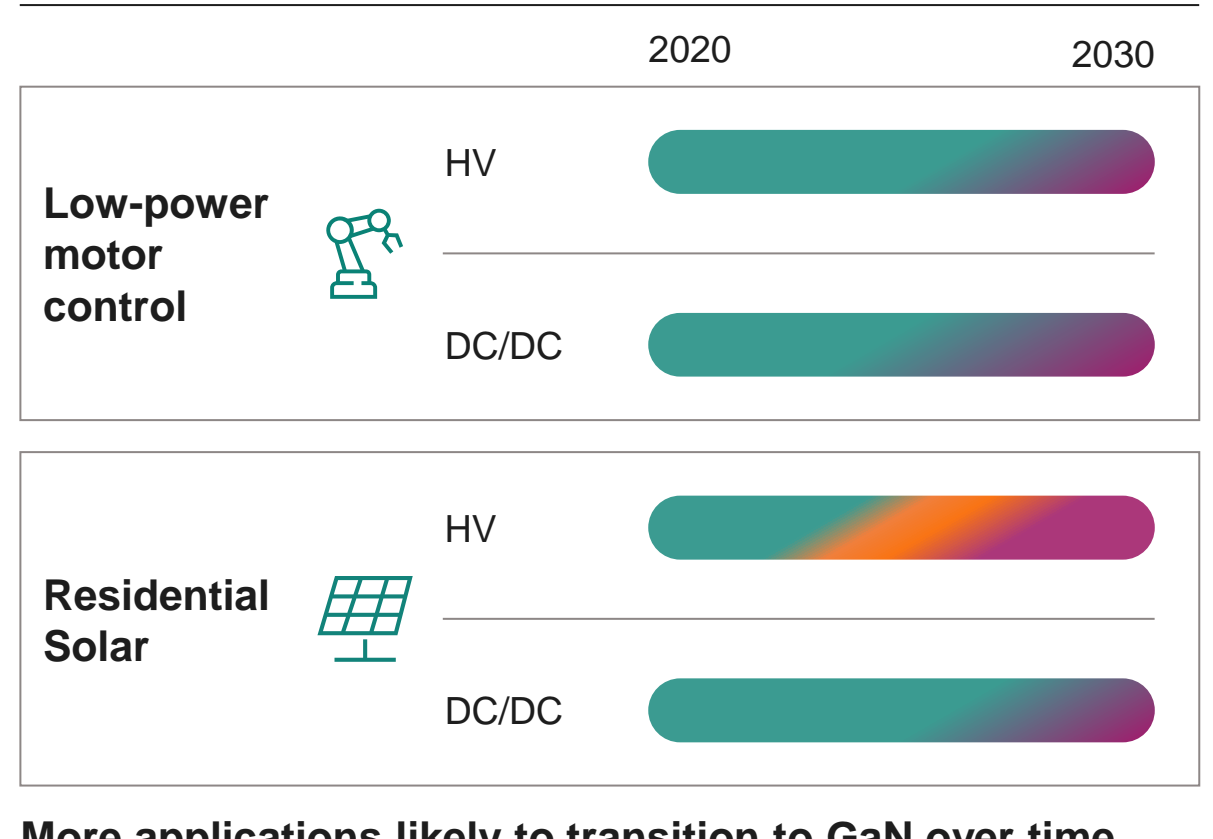
GaN expected to be the preferred technology in multiple core applications by 2030, different transition paths shaping up



GaN tipping point reached/in sight



GaN transition coming up



More applications likely to transition to GaN over time

Si SiC GaN



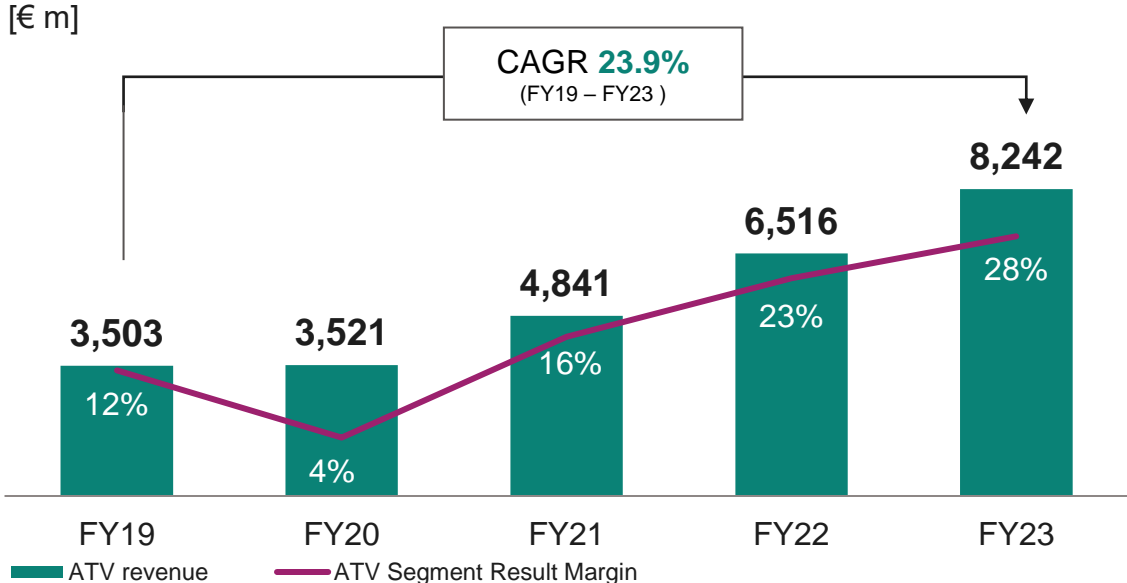
Strong position to offer all relevant power semiconductor technologies creates clear customer benefits

Automotive

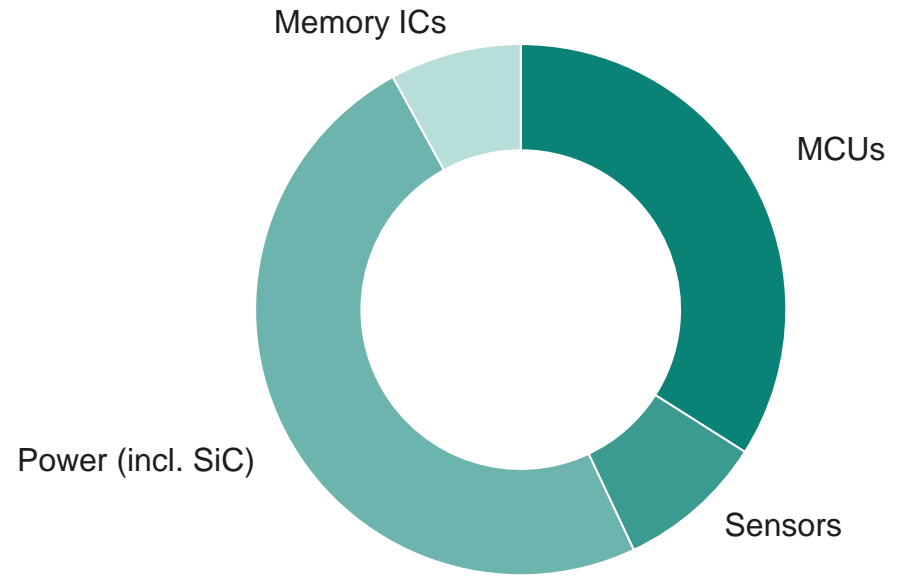


ATV at a glance

ATV revenue and Segment Result Margin



FY23 revenue split by product group



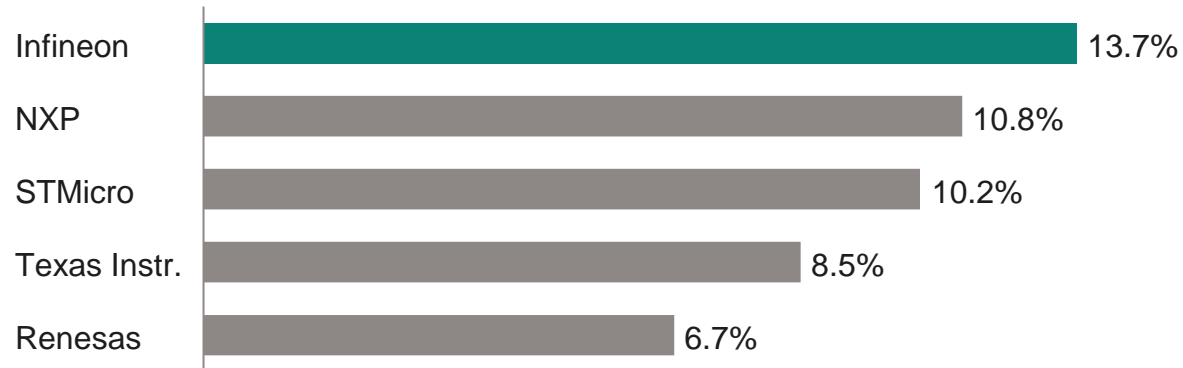
Key customers



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

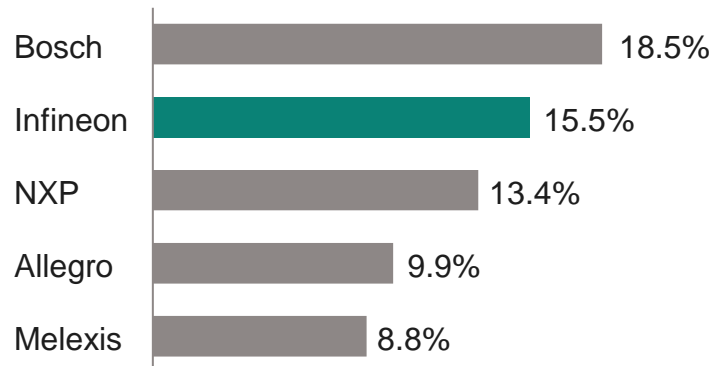


Automotive semiconductors (2023 total market: \$69.2bn; +16.5% y-y)

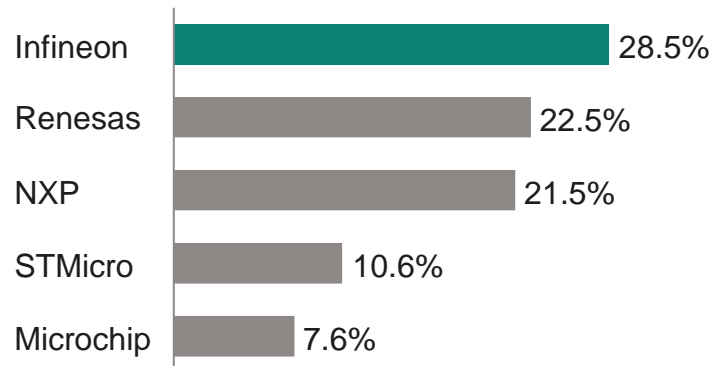


- Infineon grew by 26% y-y, gaining 1.0%-pts of market share to 13.7%, the highest level ever
- Infineon outgrew the market in all regions
- In MCUs, Infineon grew by 44% y-y (about twice as fast as the market), becoming the new #1
- Continuing #1 position in power semiconductors based on industry's broadest product portfolio
- Undisputed #1 in automotive NOR Flash memory ICs

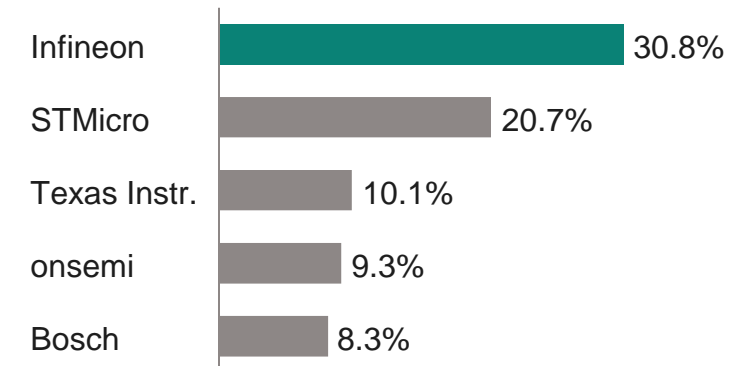
Sensors



MCUs



Power semiconductors



TechInsights: *Automotive Semiconductor Vendor Market Shares*. March 2024. Sensors: S&P Global: *Automotive Semiconductor Market Share Database*. April 2024.

Automotive semiconductor market expected to continue its growth journey even at flat light vehicle production growth

Applications

Market outlook for CY24



Automotive



- Stable vehicle production in 2024
- Vehicle affordability concerns persist, despite recent OEM price cuts
- No major semiconductor shortage expected



e-mobility



- Growth in xEV, albeit at slower rate in Western markets
- High demand in China, including PHEVs and REEVs
- Introduction of affordable BEV models by end of 2024 and 2025 will attract new customer base



Autonomous driving



- Growth of ADAS/AD continues – also driven by higher xEV share which usually offer higher levels of car autonomy and more advanced E/E architecture platforms
- First small-scale robotaxi projects launched

Several strong content growth drivers for Infineon, even at flat LV production



Several structural trends fueling our growth

xEV

- Strong volume growth of BEVs and PHEVs
- Increasing share of SiC in traction inverters
- Larger batteries lead to higher BoM in BMS

ADAS/AD

- Need for functional safety, redundancy
- More sensors, more computing performance

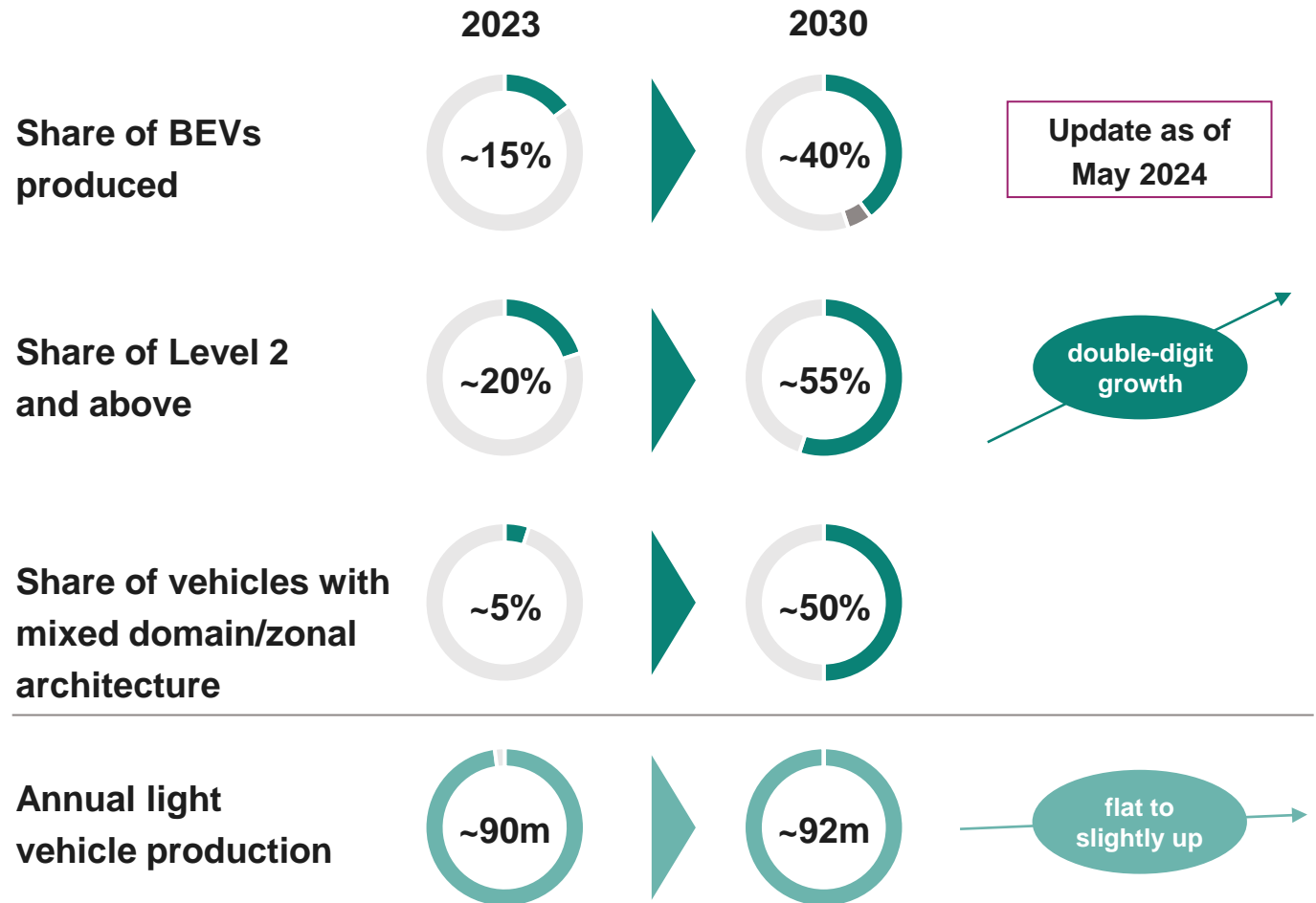
E/E architecture

- SW-defined cars with higher need for connectivity
- Centralized signal processing by zone computers
- Smart switches for decentralized power distribution

Comfort and premium features

- More loads (motors, heating, cooling etc.)
- Elaborate interior and exterior lighting

Overview of growth vectors until 2030



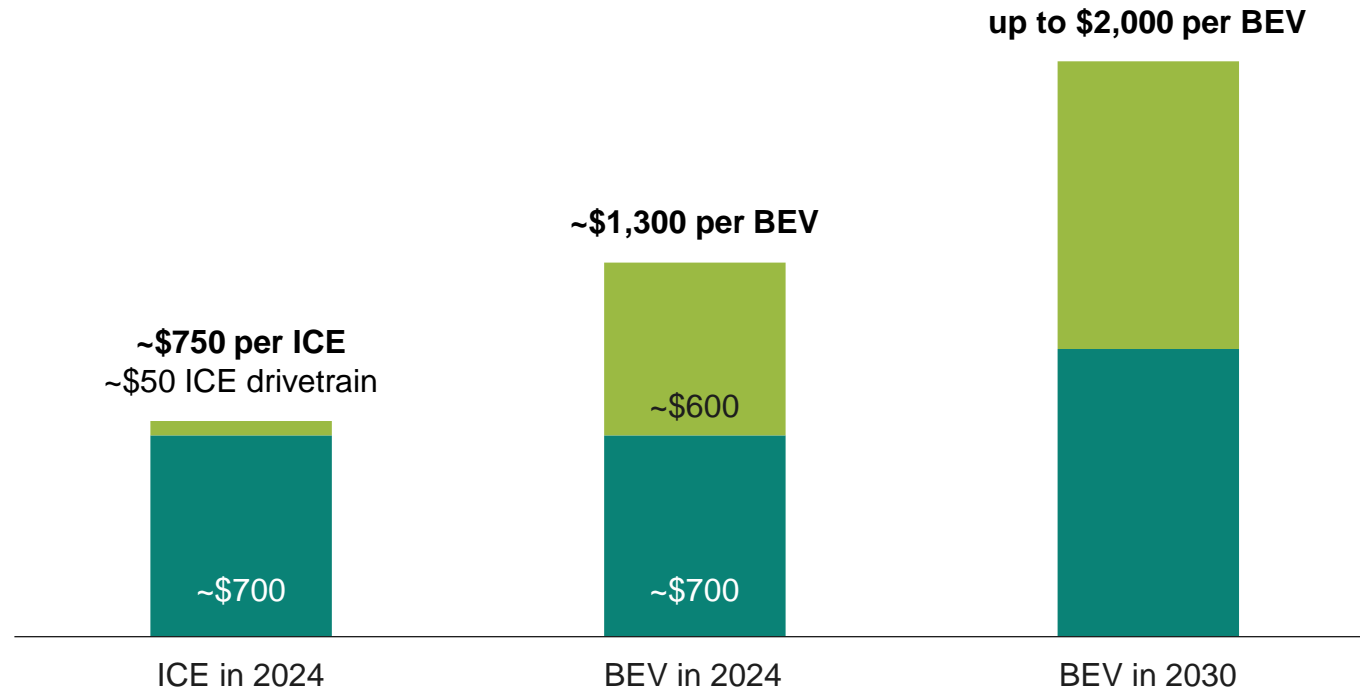
Infineon estimates

Infineon is the world leader in automotive semis, serving all key applications and benefiting strongly from content growth



Semiconductor bill-of-material in a car in 2024 and 2030

[USD]



Key applications for drivetrain semis:

- Inverter
- On-board charger (OBC)
- DC-DC converter
- Battery management system (BMS)
- Auxiliaries

Key applications for non-drivetrain semis:

- Autonomous and automated driving (ADAS/AD)
- Safety and advanced security
- Comfort and premium
- Connectivity
- Infotainment

■ Semis for drivetrain function (e.g. Inverters, on-board chargers, BMS, etc.)

■ Semis for non-drivetrain functions

Based on TechInsights: *Global xEV System Semiconductor and Sensor Demand Forecast 2022-2031*. May 2024; Infineon

A very broad portfolio with >300 product families is backing the market leadership of Infineon in Automotive



Infineon ATV division revenue by product families:



Major categories¹: AURIX™ families, CoolSiC™, IGBT 750V, IGBT 1200V, MOSFETs, PROFET™, Radar, TRAVEO™ – none more than ~10%

Unmatched customer value creation and portfolio resilience

Leading technologies

System competence (P2S)

Broadest portfolio

¹ In alphabetical order

Number of power MOSFETs per car continues to increase, and drives accelerated growth for the leading portfolio



Examples of MOSFET applications

Latest portfolio with constant innovation

Technologies, packages and voltages

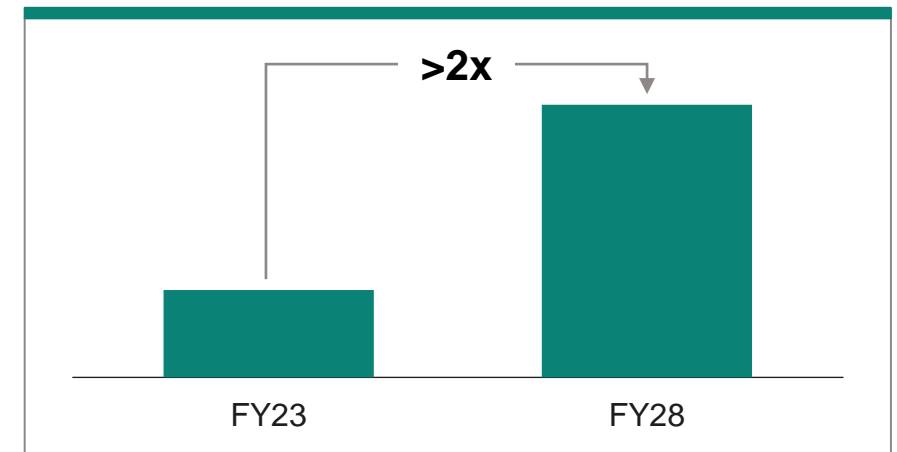
- OptiMOS™ 7
- OptiMOS™ 6
- OptiMOS™ 5
- OptiMOS™ T, T2, Gen 12.7

40 V
60 V
80 V
100 V
120 V

New **OptiMOS™ 7** family with outstanding technical performance

- 100 to 180 MOSFETs are used per vehicle in ~90 different applications in all segments: body, chassis, safety, ADAS/AD, powertrain
- Infineon offers broadest portfolio (>600 products) and eco-system to address specific and high-margin applications:
 - embedded control, gate driver, MOSFETs, software, P2S
 - entire eco-system with digital twins
 - simulation environment (esp. for motor control)

Infineon’s revenue growth



Electromobility

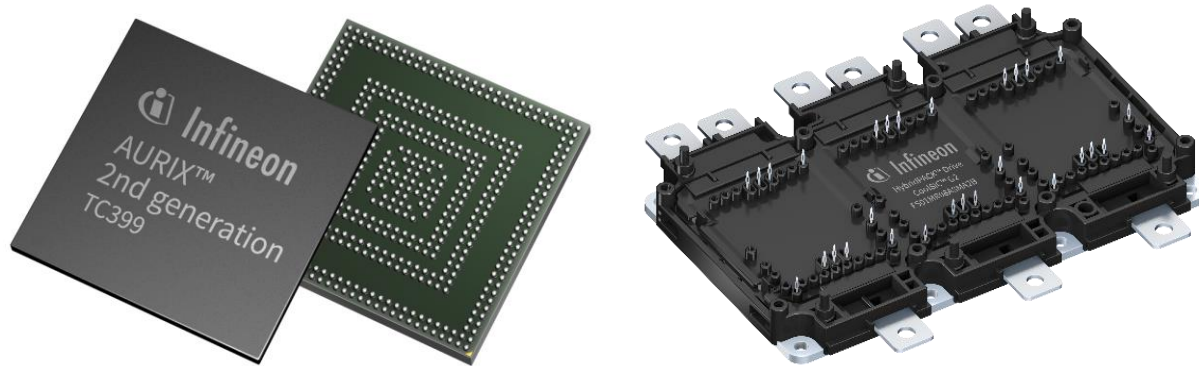


Xiaomi SU7 Max: Infineon contributes > 60 different components, incl. 2x HybridPACK™ Drive G2 CoolSiC™ 1200 V power modules



Infineon provides system solutions with > 60 different components for more than 10 applications

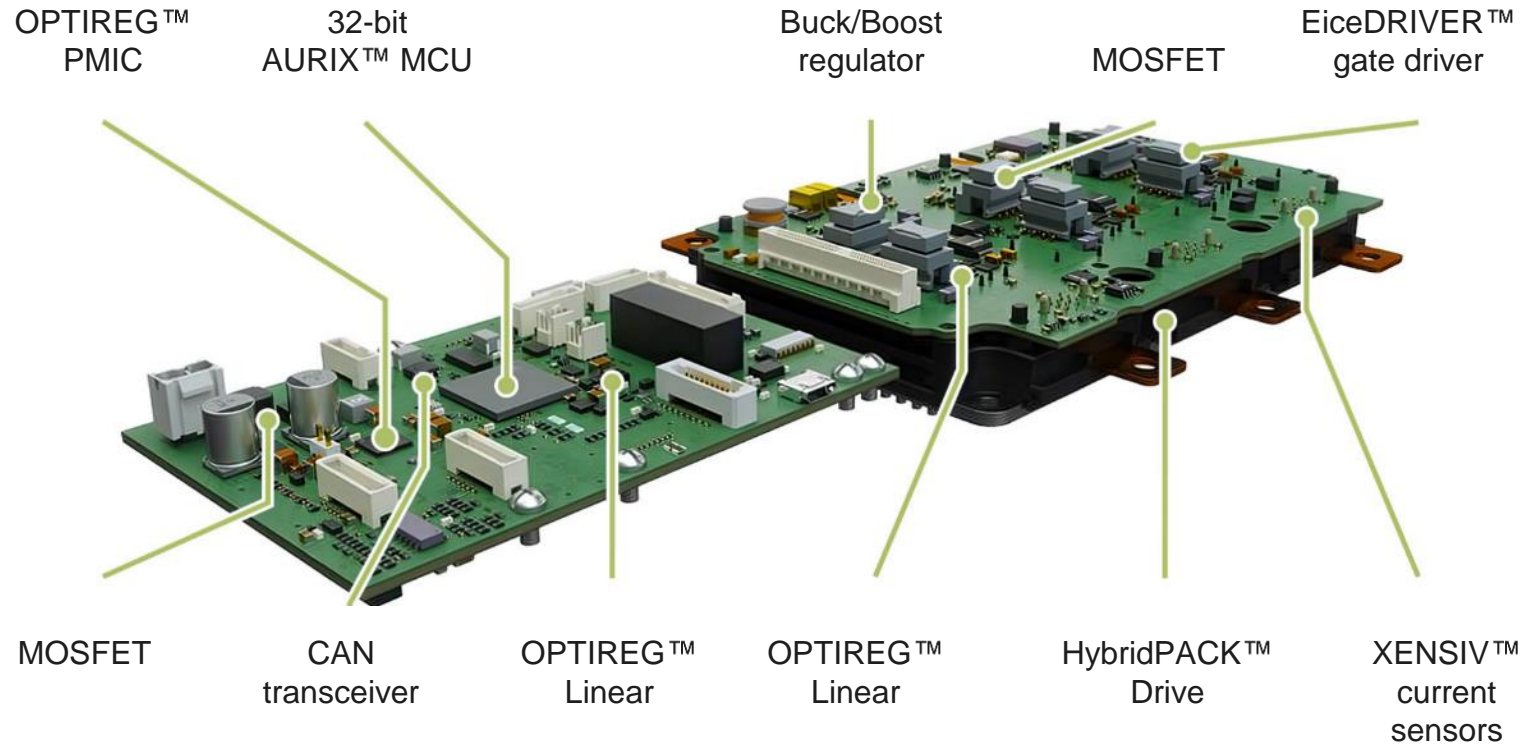
- › **MCUs, PMICs:** AURIX™ TC3, TRAVEO™ T2G, and PSoC™ for zone controller, ADAS, xEV drivetrain, and suspension
- › **2x HybridPACK™ Drive G2 CoolSiC™ 1200 V** power modules or bare dies and gate drivers for traction inverter in Xiaomi SU7 Max
- › **PROFET™** for E/E architecture
- › **MOSFETs**, system basis chips, others



Infineon's broad product portfolio and system understanding enable higher BoM and allows for compact designs and fast T2M



Infineon inverter reference design, covering up to 95% of value



P2S (product-to-system approach)

- Reference design for up to 300 kW, further customization possible
- System solution for easy implementation
- Fast time-to-market (T2M)

Freedom of choice

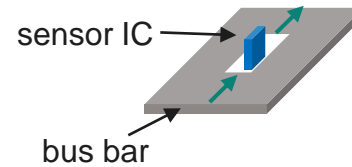
- IGBT and SiC in 750/1,200 V scale up to preferred power class
- HybridPACK™ Drive CoolSiC™ Gen2 continuous operation at 175°C
- EiceDRIVER™ gate driver Gen3 optimized for CoolSiC™
- Optimized 32-bit AURIX™ MCU

Infineon and Swoboda jointly develop high-performance current sensor modules for automotive applications

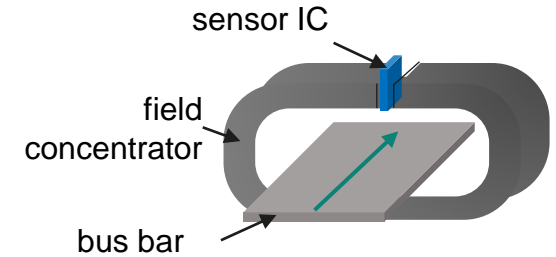


- The novel core-less sensing technology enables highly miniaturized integrated sensor modules by discarding the bulky core
- Infineon is a leading supplier of core-less sensors

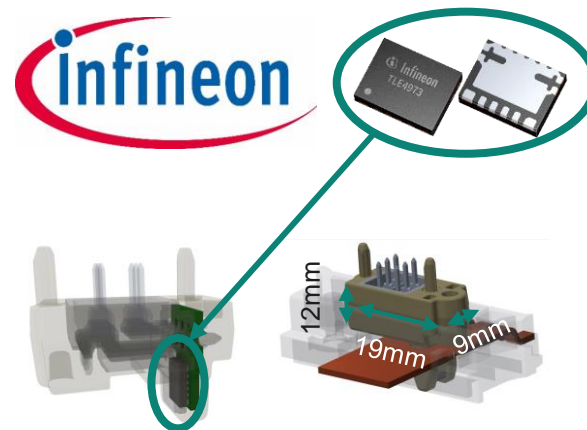
Core-less sensor



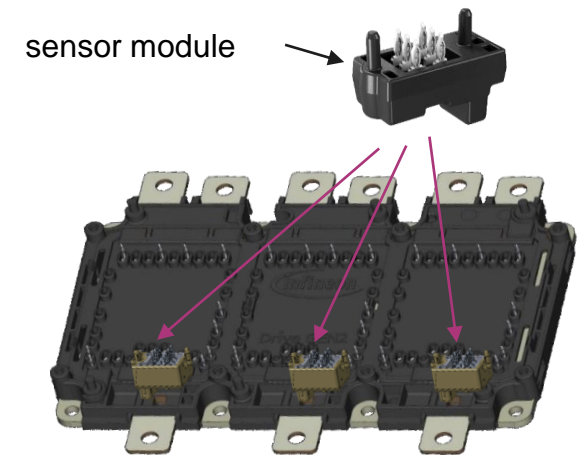
Core-based sensor



- Combining best-in-class core-less current sensor ICs from Infineon with Swoboda's industrialization expertise has enabled the most compact fully encapsulated sensor module for xEV traction inverter application
- The seamless integration with HybridPACK™ Drive G2 makes it a ready-to-use "zero footprint" leading-edge solution



swoboda CSM510HP2
technologies

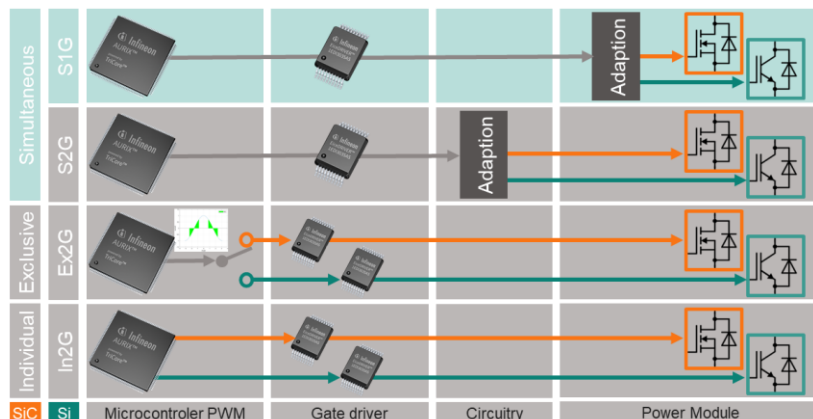


HybridPACK™ Drive G2
(available in Si and SiC)

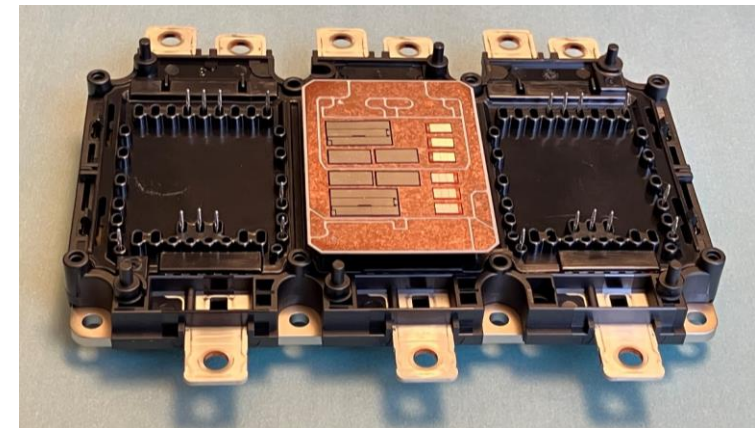
First Si/SiC fusion module concept (Si²C) significantly exceeding performance expectations without adding system complexity



Example: 400 V BEV 175 kW 2WD



← Infineon solution offers compelling cost-performance ratio without adding system complexity for customers

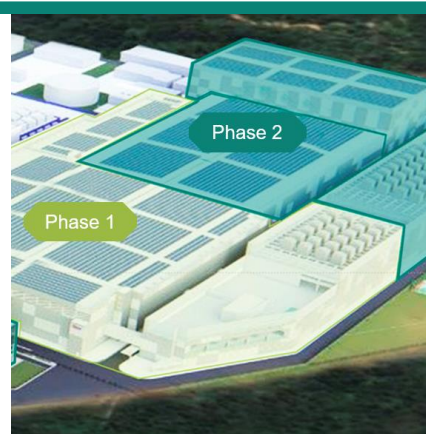


World-scale capacity, unmatched portfolio breadth and our worldwide customer base lead to accelerated growth in SiC



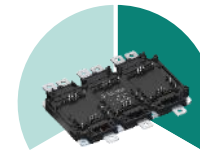
Leading SiC technology and production efficiency

- Unrivaled productivity with world-scale fab and most diversified supplier network
- Superior trench technology and highest reliability
- Extensive packaging portfolio and complete system competence



Most scalable SiC auto portfolio

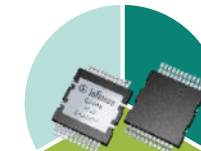
650 V 750 V 1,200 V



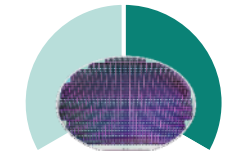
Module



DSC/SSC module



Discrete



Bare die

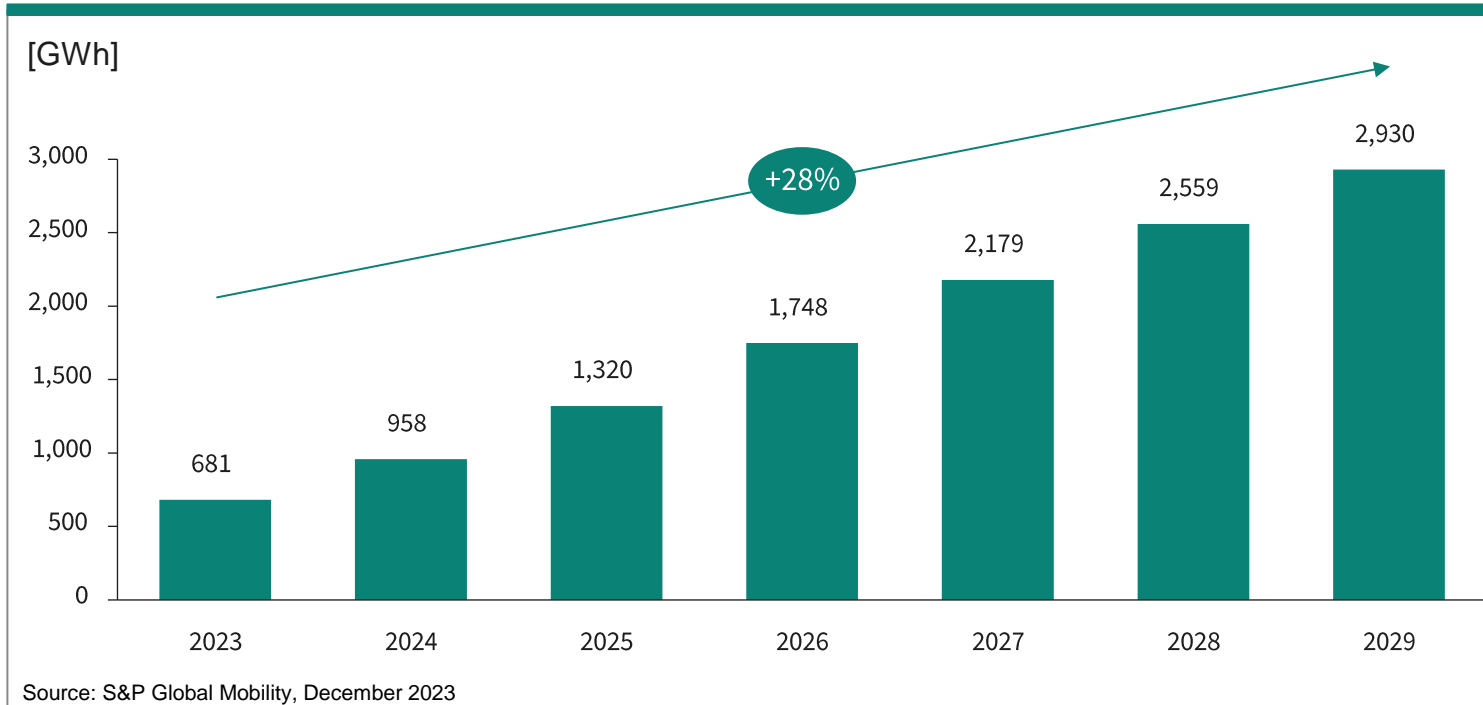
Continued strong SiC design-win momentum



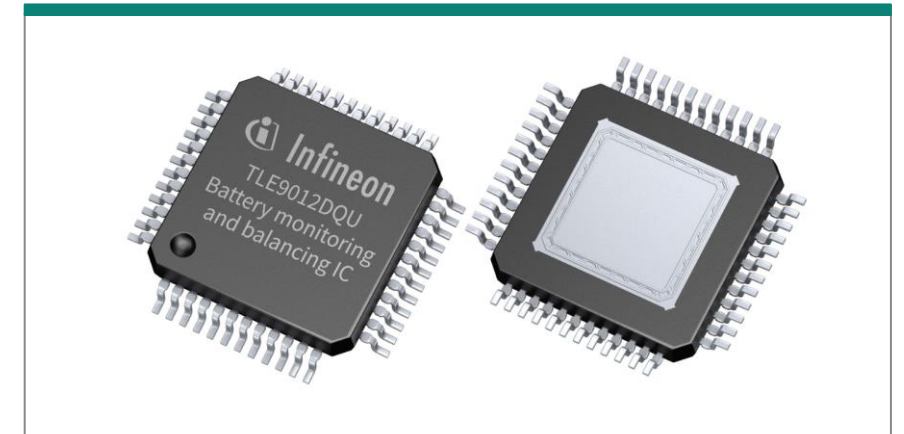
Infineon's extended BMS (battery management system) product portfolio paves the way for an exceptional growth story



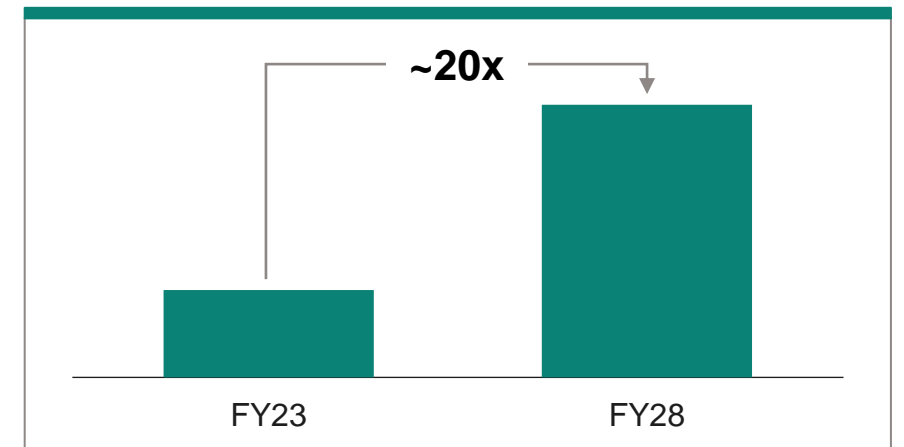
Demand for BMS analog frontend ICs driven by BEV battery capacity



BMS analog frontend IC



Infineon's revenue growth



- Drivers for BoM: increasing battery capacity, more cells, more channels
- Triple-digit million € design-win in pipeline
- Additional upside from non-automotive markets: ESS, street lighting, forklifts

Infineon AURIX™ TC4x with integrated PPU brings AI-on-the-edge to the battery



Battery cost

Battery health

Charging speed

Safety concerns

Range anxiety

Resale value,
residual value

Cloud dependencies
(latency, cost, stability)

AURIX™ TC4x

PPU

(parallel processing unit)



High computing performance with complex and accurate BMS algorithms

- AI-based battery diagnostic on-the-edge
- temperature model, electro-chemical model
- lithium plating detection
- remaining useful life prediction
- with and without cloud-based updates
- Product-to-System!

Efficient battery cell utilization

- Higher capacity
- Less cells
- Lower battery cost

Faster charging

- Higher user experience

Assure longevity, extended guarantee

- Longer lifetime (in years, in km)
- More charging cycles

Detect and prevent thermal runaway

Accurate battery, health prediction

» Trust in resale market

- Higher economic value (impacting insurances, fleets, OEMs, Tier1s, 2nd life market)

Open to partner up with further OEMs, Tier1s, insurance companies

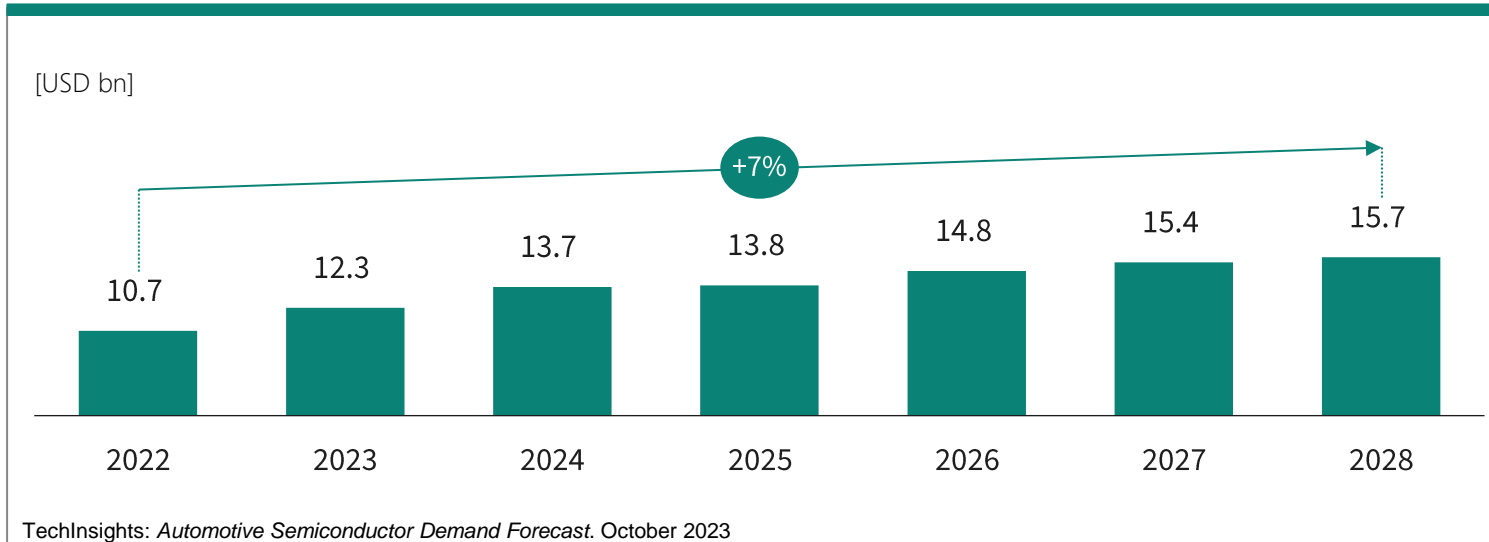
Automated Driving



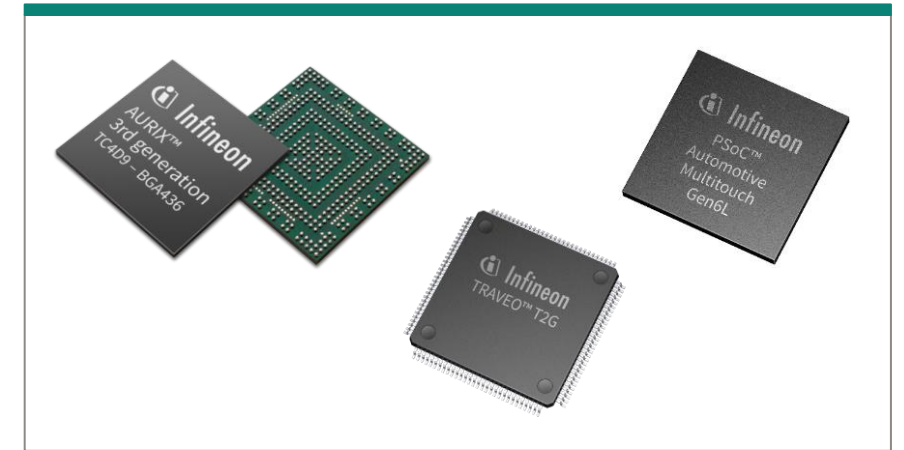
AURIX™ MCU is the gold standard for ADAS/AD, control, safety, and high-speed in-vehicle network



Total automotive MCU market development, excl. MPUs and SoCs



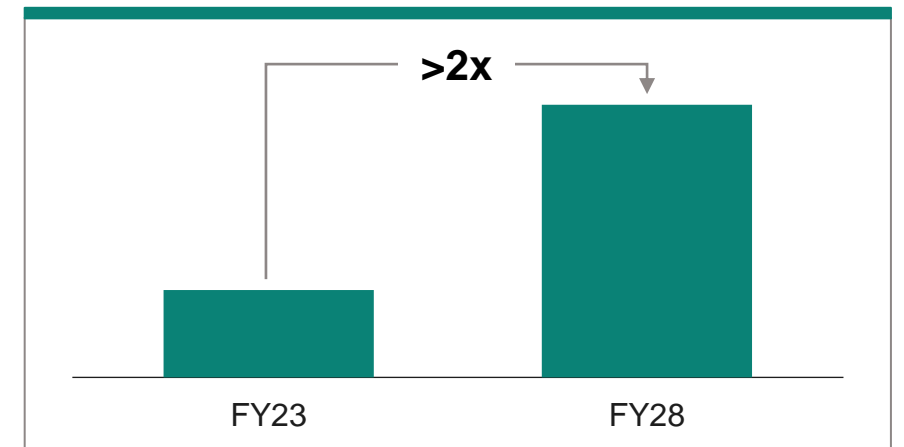
AURIX™, TRAVEO™, and PSoC™ families



€19bn MCU design-win volume secured

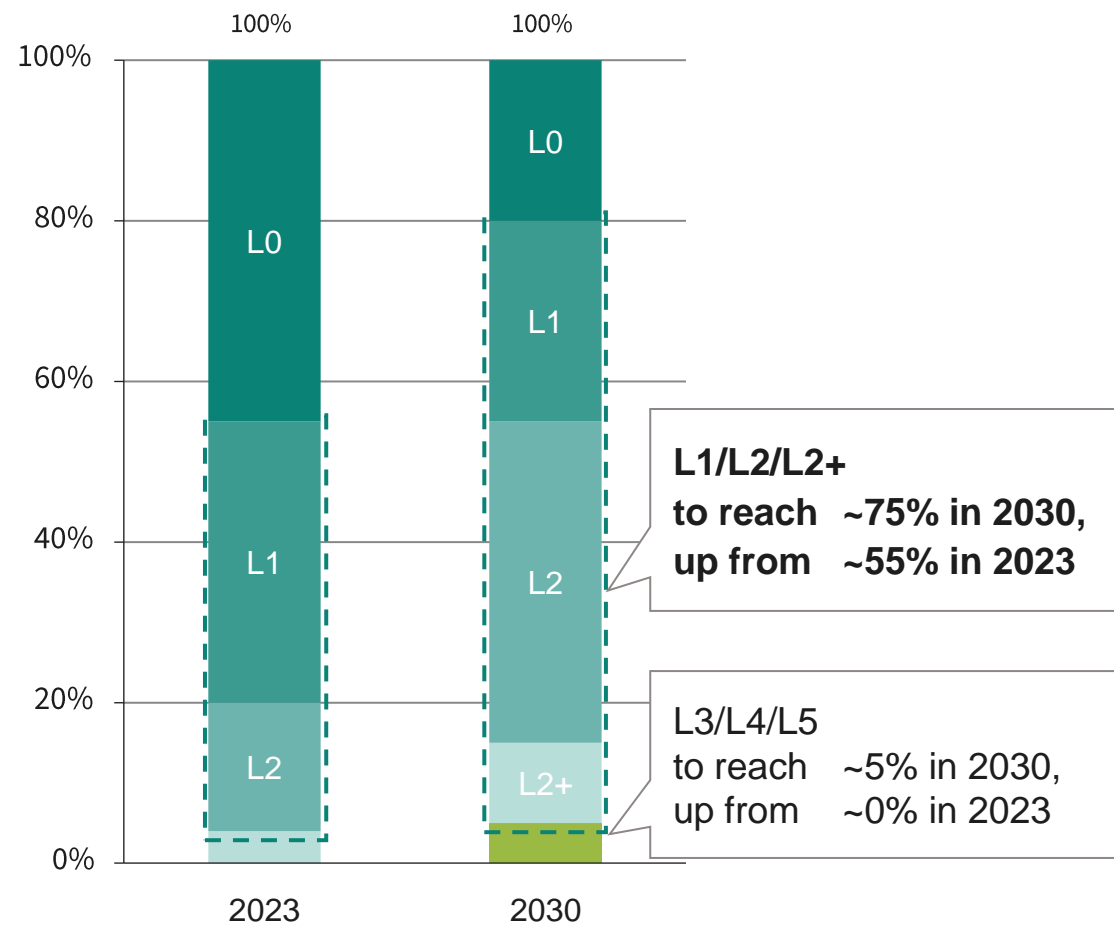
- Total automotive MCU design-win volume in the last four years exceeded €19bn
- Design-wins covering current and next decade ensuring robust and long-lasting growth
- Up to 40 MCUs per vehicle awarded to Infineon
- Strongest momentum in essential MCUs for E/E architecture, ADAS/AD, and xEV
- Around €3bn of revenues already in 2023

Infineon's revenue growth



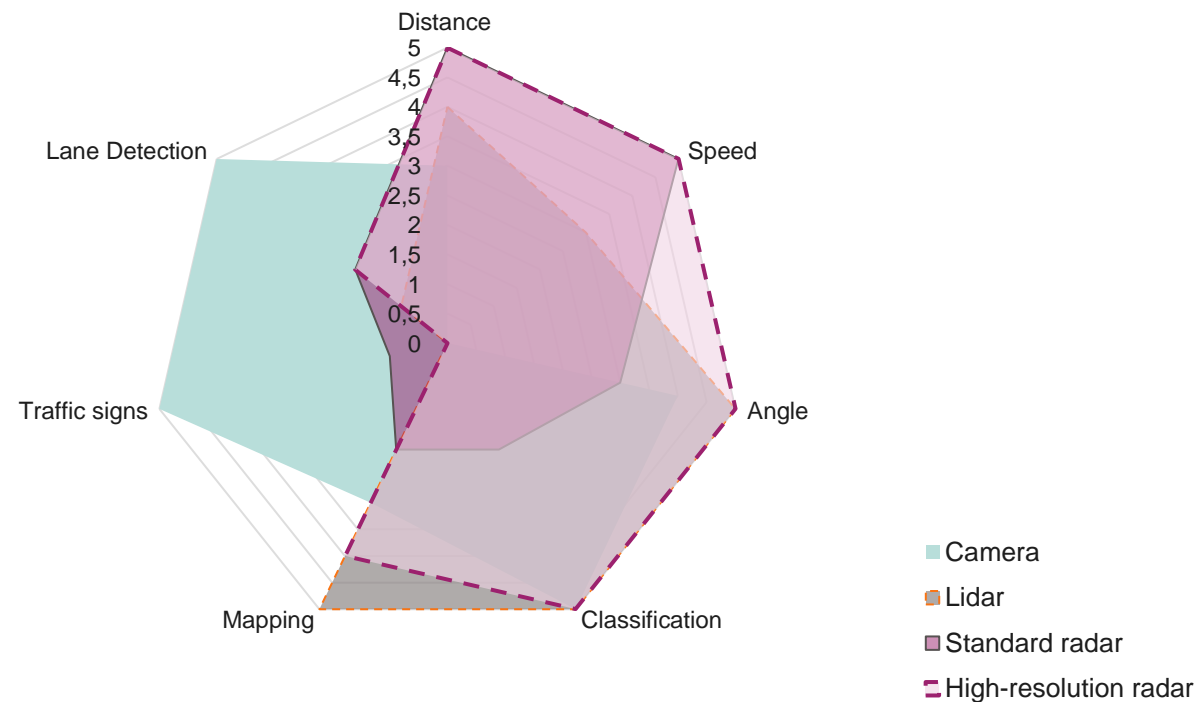
Growth of L1/L2/L2+ is the main driver of ADAS semiconductor content until 2030

Car production by degree of automation (SAE level)



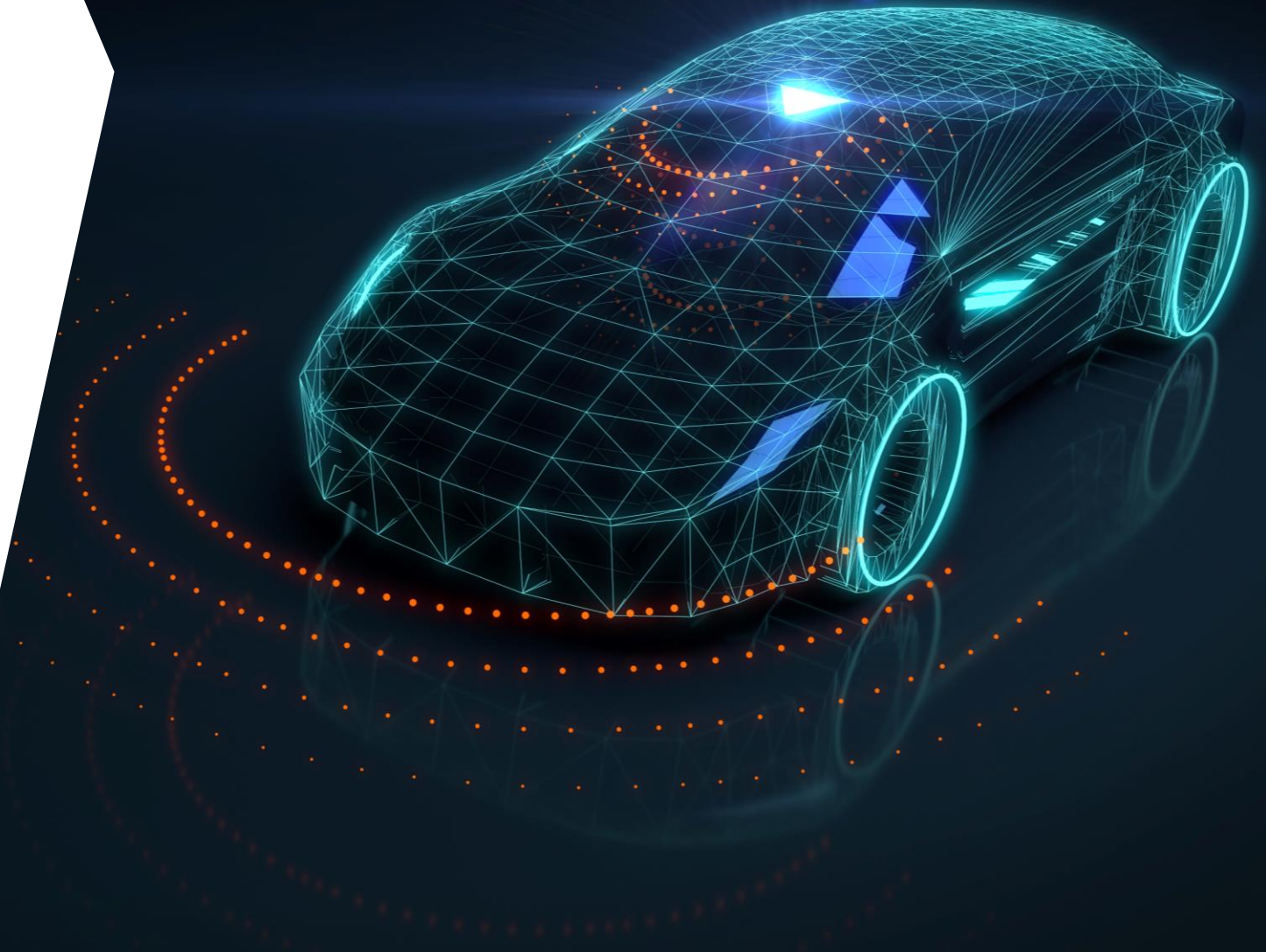
Market research companies; Infineon

Radar is essential to meet decisive requirements of ADAS/AD



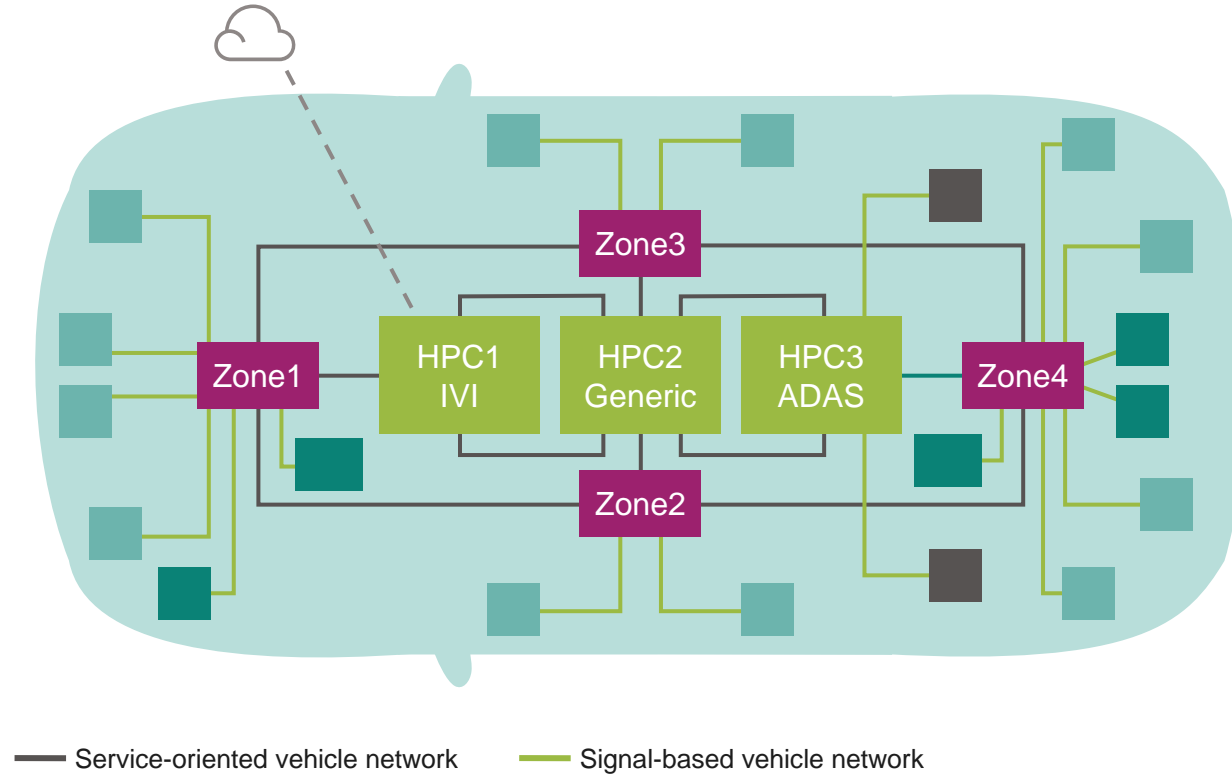
- Standard radar is **the** technology to detect distance and speed
- High-resolution radar significantly improves angle and classification

E/E architecture



Infineon strongly benefits from new E/E architectures that drive centralization of data and decentralization of power distribution

E/E architecture in a software-defined vehicle



New E/E architectures lead to more centralized processing of data and signal while more decentralized power distribution.

Components of E/E architecture and corresponding applications addressed by Infineon

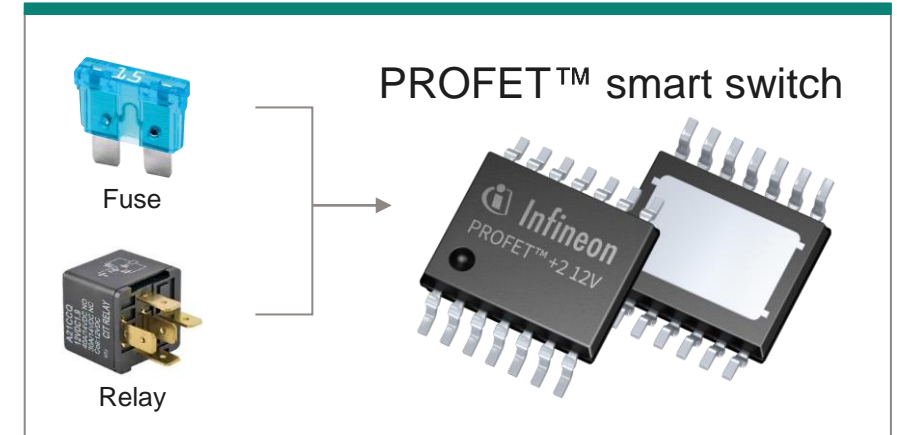
High Performance Computing (HPC)	Safety companion MCU for service-oriented SoCs, secure trust anchor, fail-safe power supply
Zone	Zone controller, gateway controller, incl. protocol translation, smart power distribution
Control	Smart real-time mechatronics (e.g. transmission, motor control, power steering, braking), BMS
Complex sensors and actuators	Radar, incl. signal pre-processing, bus connections, dedicated AI accelerators, camera
Simple sensors and actuators	Smart functional ECU (e.g. seat adjustment, power window, central lock, wiper), touch pad

Power distribution becomes a critical aspect of the E/E architecture and the SW-defined vehicle

New applications for intelligent power distribution ...



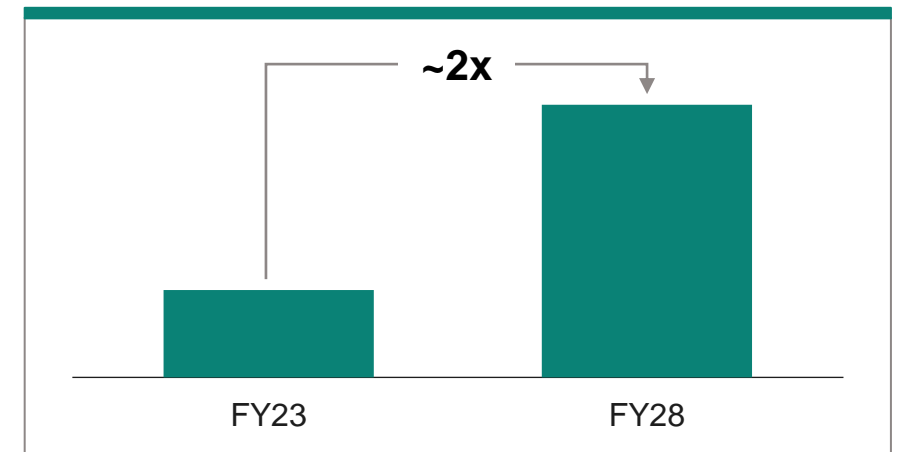
... are driving replacement of fuses/relays



Smart switches are mandatory for SAE L3 and above

- Superiority of semiconductors over fuses and relays:
 - Fast failure isolation (< 500 μ s) and activation of an alternative supply
 - Configurable wire protection
 - Diagnosis and non-destructive recovery
- Mandatory for SAE levels L3, L4 and L5
- Growth of smart switches per car:
 - Volume OEMs: from today's ~50 pieces/car towards ~200 pieces/car by 2028+
 - Innovator OEMs: already ~200 pieces/car today

Infineon's revenue growth

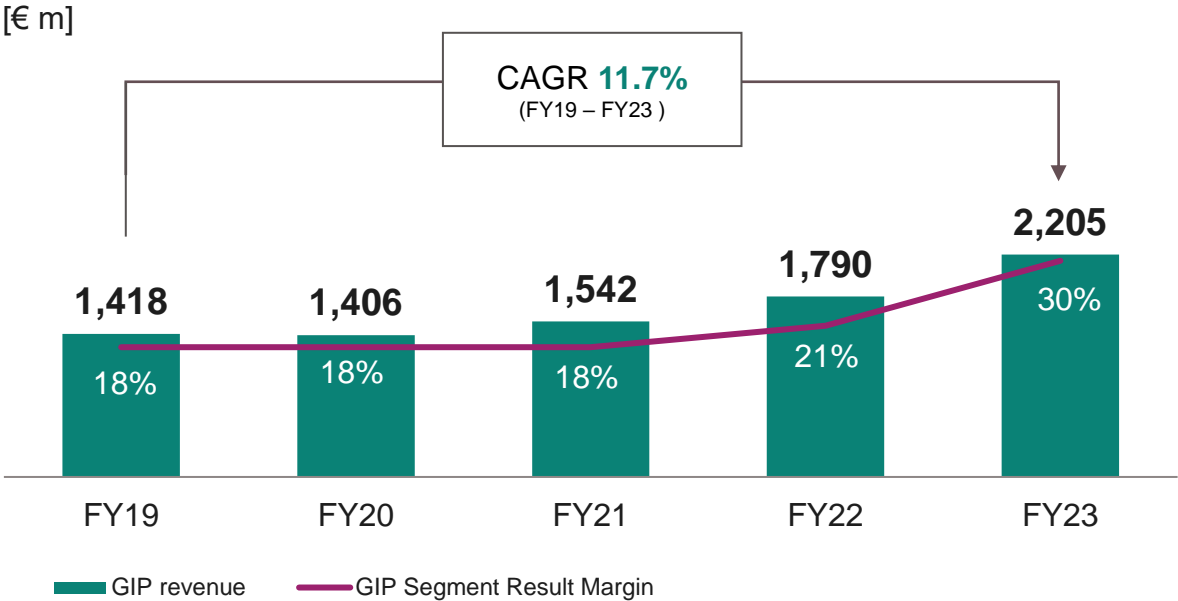


Green Industrial Power

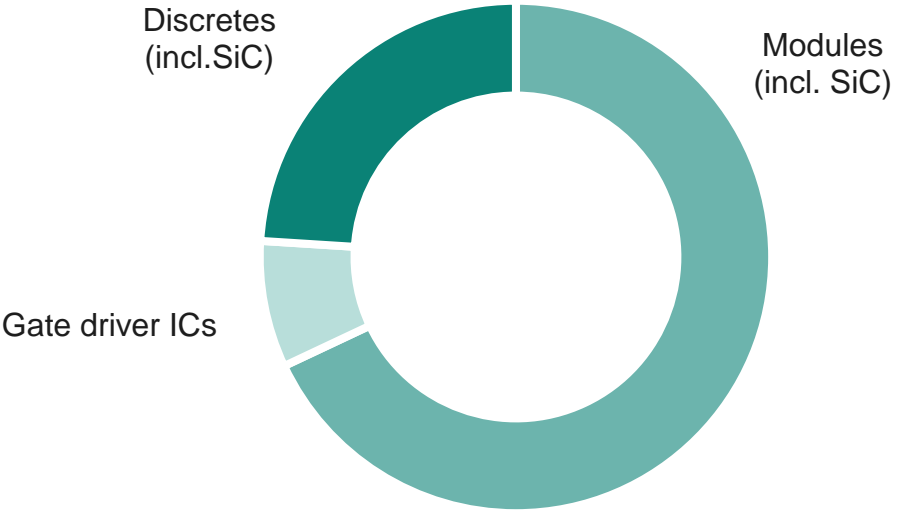


GIP at a glance

GIP revenue and Segment Result Margin



FY23 revenue split by product group



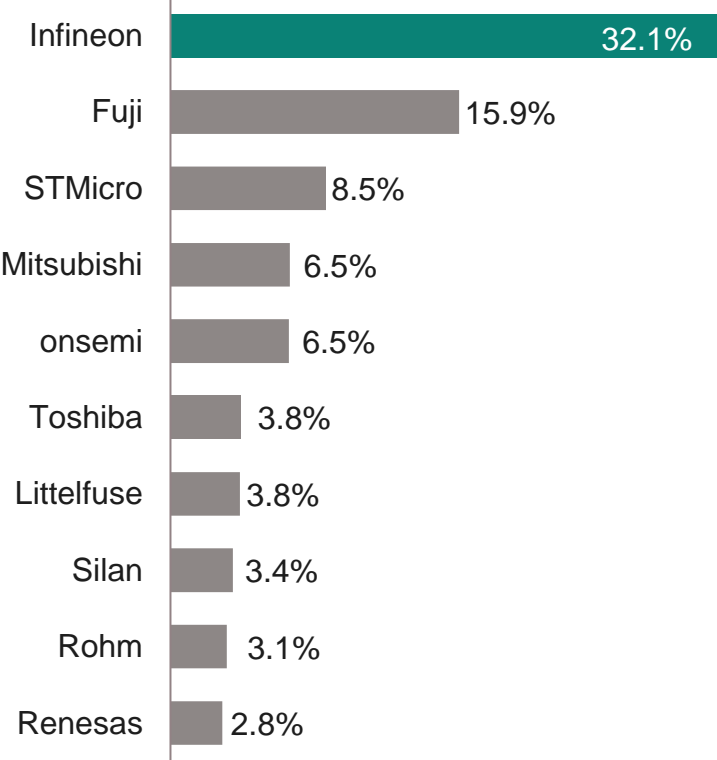
Key customers



Clear leader in discrete IGBTs and IGBT modules

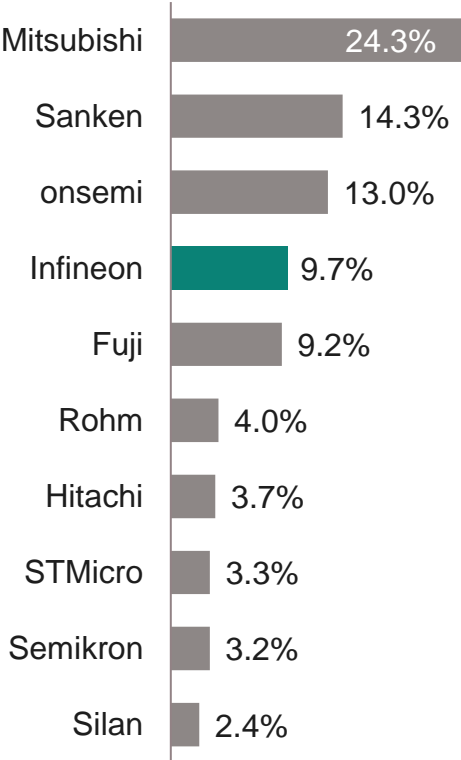
Discrete IGBTs

2022 total market: \$2.5bn



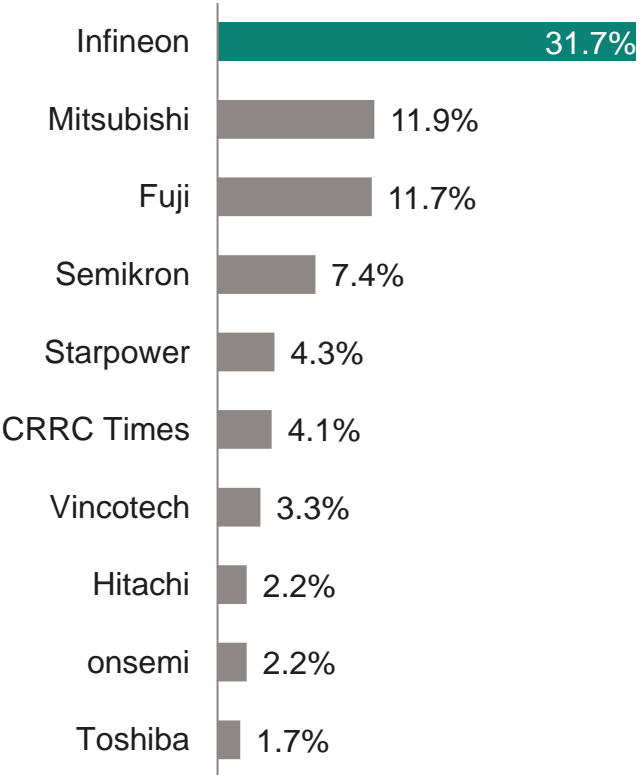
IPMs¹

2022 total market: \$2.1bn



IGBT modules²

2022 total market: \$4.4bn



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 content supplied by Omdia, "Power Semiconductor Market Share Database 2022", Final Version V2 September 2023.

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

Power Infrastructure demand remains strong while in major verticals inventory corrections persist

Applications

% of FY23 segment revenue¹



~26%
Renewable
Energy
Generation



~11%
Power
Infrastructure



~12%
Transportation



~28%
Automation
& Drives



~11%
Heating,
Ventilation,
Air condition



~6%
Home
Appliance

Market outlook for CY24



- PV installations continue to grow, in 2024 channel inventory limits PV inverter shipments and semi demand
- Wind installations expected to grow 17% (WM); Semi growth for Wind impaired by increasing share of DFIG technology.



- Healthy demand for UPS (uninterruptible power supply)
- EV Charging demand continues to be on growth track, especially for fast charger infrastructure
- Need for grid expansion drives investments in Transmission & Distribution and Energy Storage



- Rail market remains positive
- eBus growth trend confirmed, eTruck may be limited by installed charging infrastructure



- Demand recovery expected to start end of CY24, investment confidence still cautious.



- The market remains sluggish, with no signs of an upswing, as excess inventory and weak real estate markets continue to exert downward pressure.



- Weak signals of stabilizing inventory at customers and distributors, but still no strong indication of a demand recovery, suggesting that the market remains uncertain.

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

Infineon is offering the industry's highest power density with leading 2000 V SiC modules for grid storage



Infineon chip & module technology used in the customer application

- 62 mm CoolSiC™ MOSFET module 2000 V



Daihen uses CoolSiC™ 2000 V modules for their innovative unit-type power conditioners for grid storage batteries

*“In order to increase the voltage of power conditioners, the circuit configuration of conventional 1200 V devices had become complicated. However, by adopting Infineon's 2000 V SiC modules, we were able to achieve **a simplified circuit configuration and control design**, thereby **reducing development resources and the footprint.**”*

Mr. Akihiro Ohori, General Manager, Development Department, Energy Management System Division, Daihen.





Daihen Power Conditioner Unit





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






Generation

	Photovoltaic	+4,600 GW
	Wind power	+1,900 GW

Infrastructure

	Grid network	\$600bn annual investments
	Grid storage	+900 GW
	EV charging	+185m chargers (public and private)
	Electrolysis	+560 GW

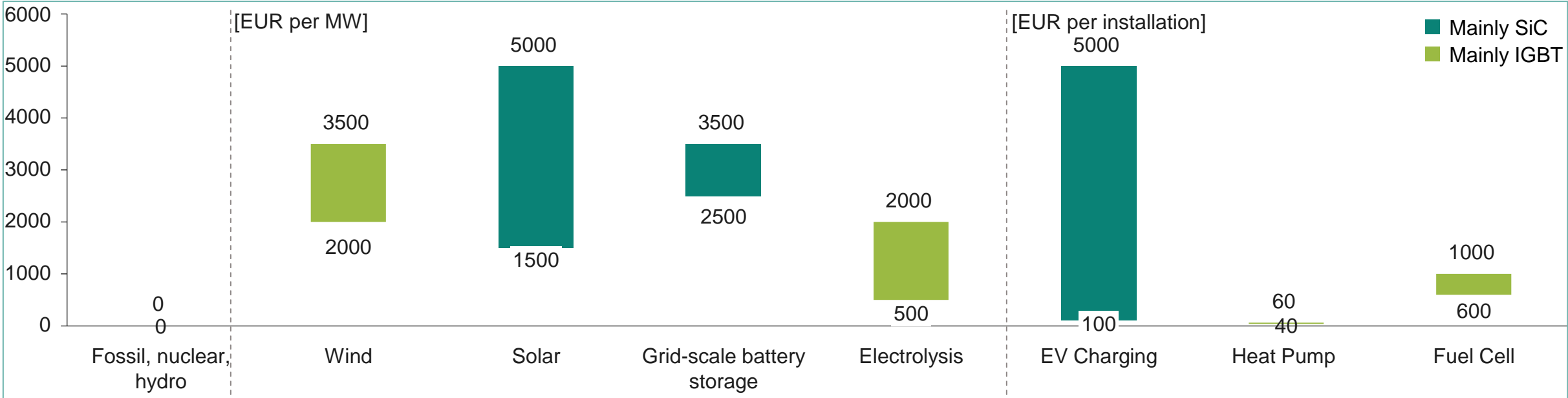
Consumption

	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 - World Energy Outlook, October 2023, 1 Internal Analysis

Green energy generation provides large business opportunities

Power semiconductor content by application



Additions in 2022¹⁾	74^[GW]	220^[GW]	12^[GW]	<1^[GW]	~6m^[inst.]	22m^[inst.]	5k^[inst.]
CAGR 2023 – 30	16%	23%	56%	92%²⁾	31%	16%	42%

¹ IEA: World Energy Outlook, October 2023; Sector Tracking reports October 2023; internal Analysis

² Based on 270 GW pipeline (midpoint), >100% based on NZE requirements of 560GW

EV charging is a key strategic application for Infineon

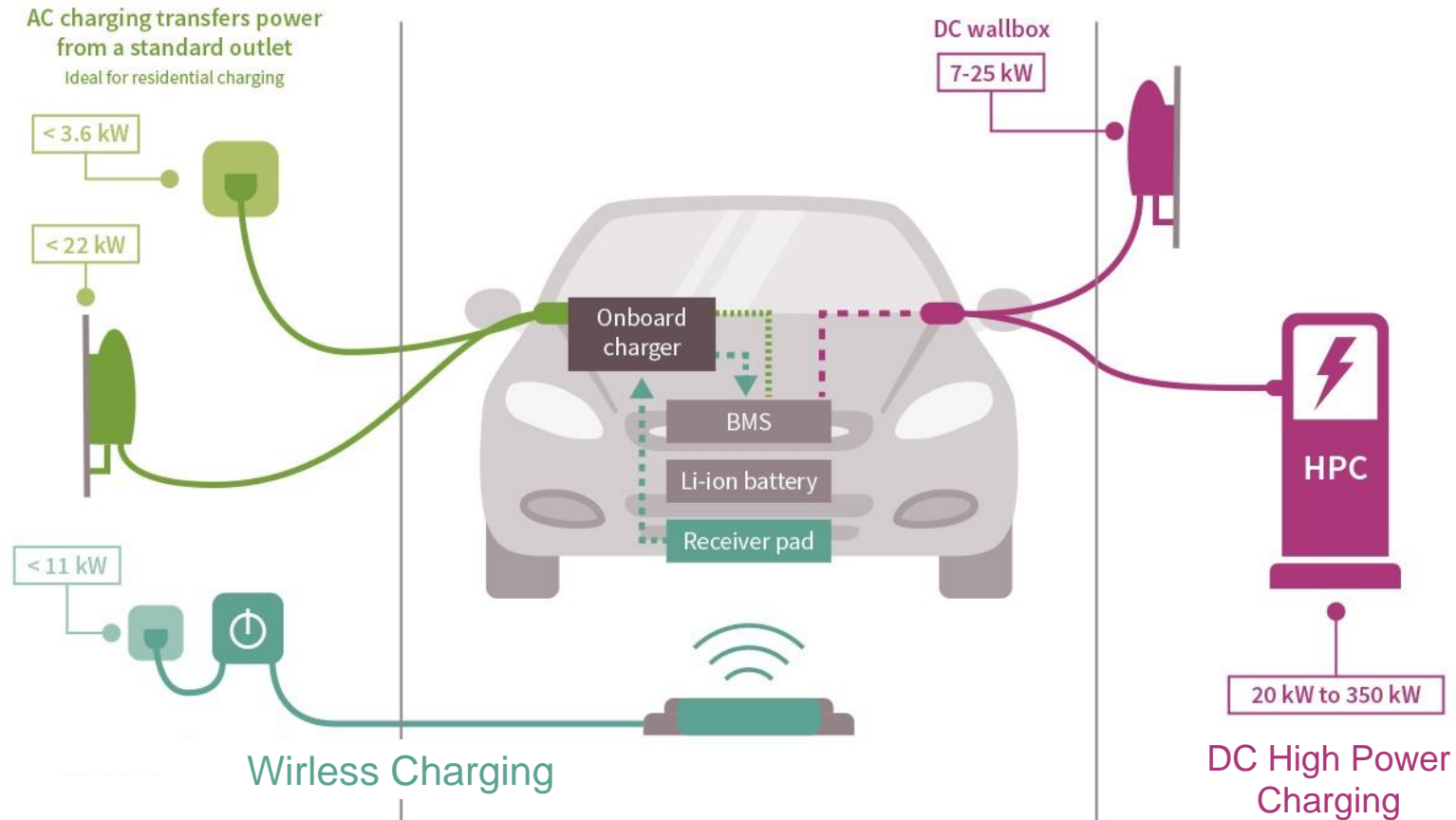
We cover the full ecosystem from AC to high power DC charging



Connectivity solutions

Automotive systems

High power industrial systems



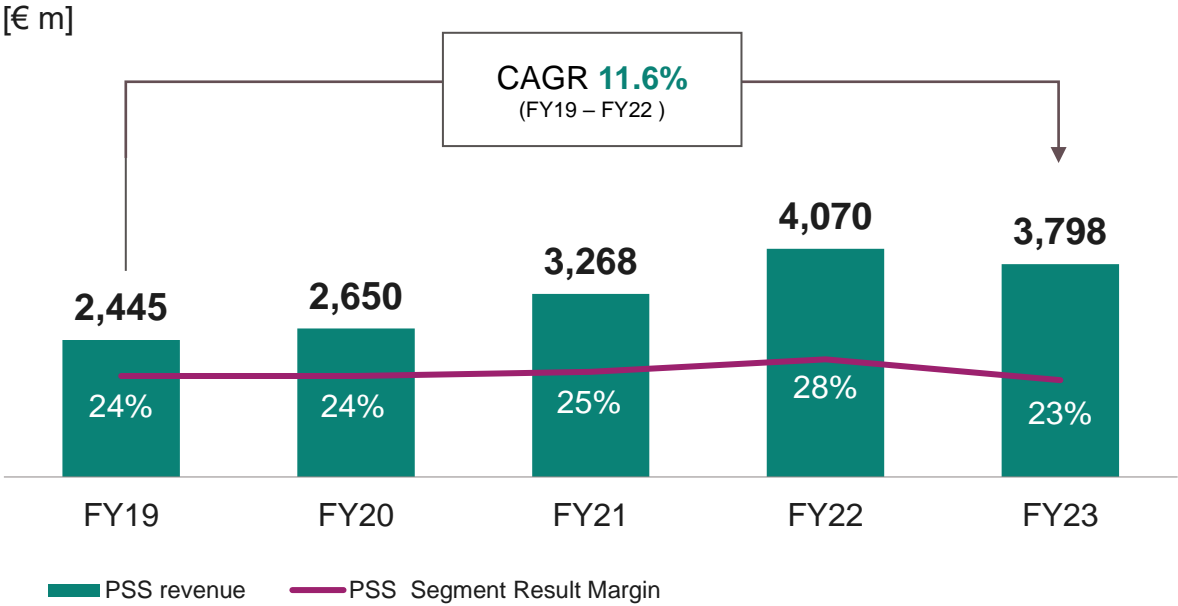
Infineon targets the complete EV charging ecosystem from AC to high-power DC

Power & Sensor Systems

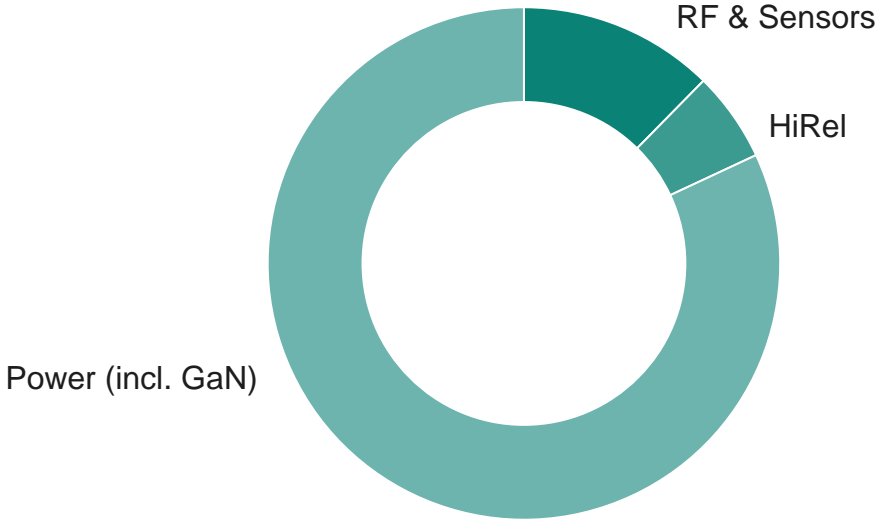


PSS at a glance

PSS revenue and Segment Result Margin



FY23 revenue split by product group



Key customers



Recovery in AI power and smartphones ongoing, in other verticals weakness to persist until end of CY 2024



Applications

% of FY23 segment revenue¹



~15%
Computing



~10%
Communications



~7%
Smartphones



~24%
Consumer



~35%
Industrial

Market outlook for CY24



- Server market showing YoY growth in CY24, especially benefiting from AI opportunities
- PC shipments are expected to recover during CY24 YoY, but still below pre-pandemic levels



- Total Telco capex and wireless capex growth is forecasted to decline in CY24 vs CY23.



- YoY growth in smartphone shipments expected in CY24. Recovery to have momentum in particular in H2.



- Weak macro environment and related inventory digestion in consumer markets continue in H2 CY24



- Negative YoY development for residential solar as well as weakness in broader industrial markets. Slowing YoY growth for EV market in 2024

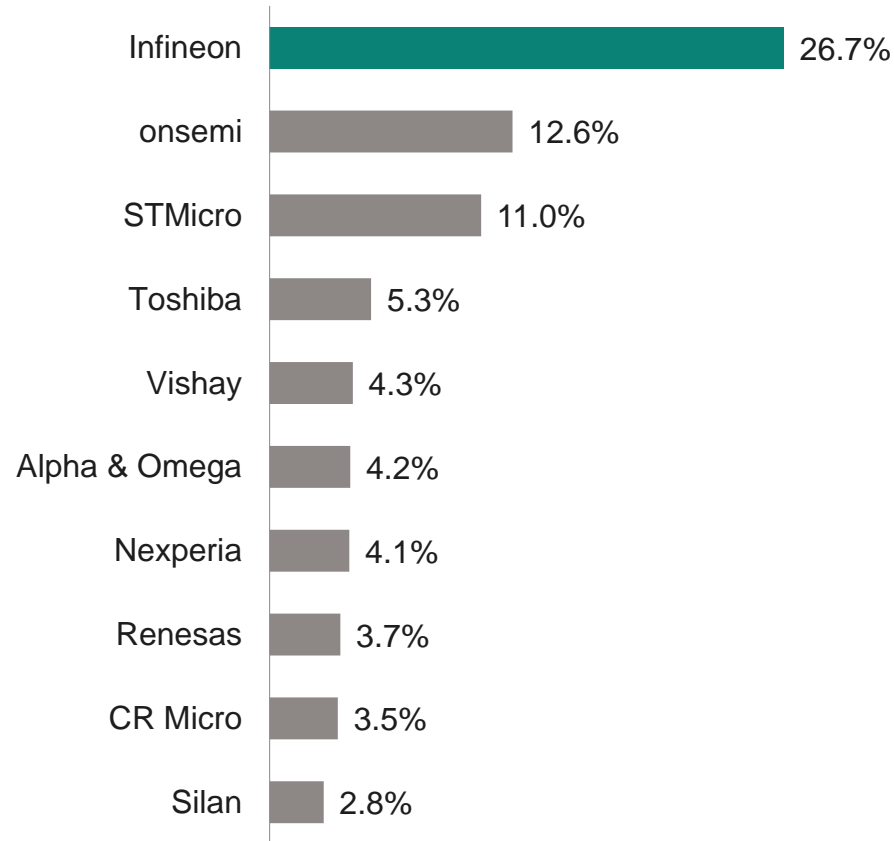
¹ Does not sum up to 100% due to other applications not shown here

Infineon is the clear leader in MOSFETs, additional growth potential in power ICs



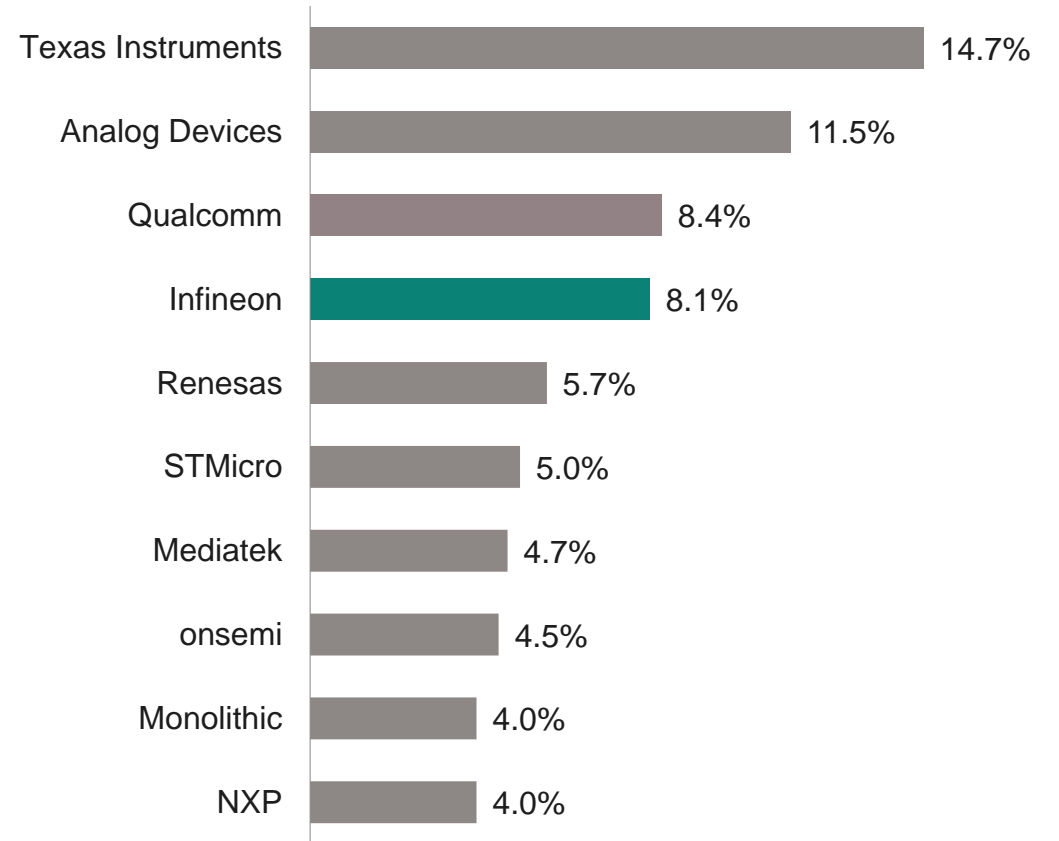
Discrete Power MOSFETs¹

2022 total market: USD 13.1bn



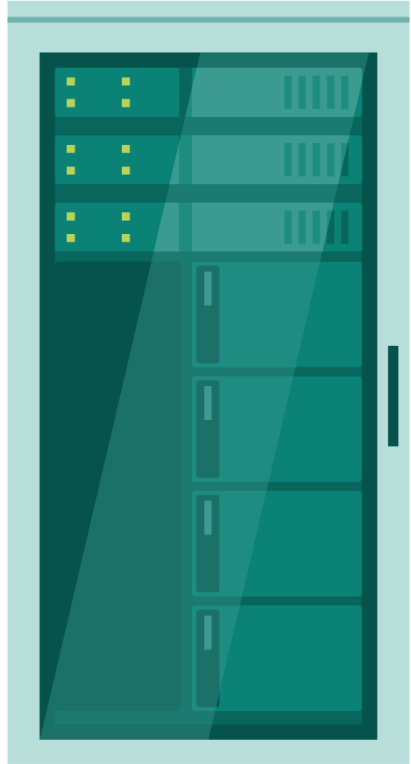
Power ICs²

2022 total market: USD 32.3bn



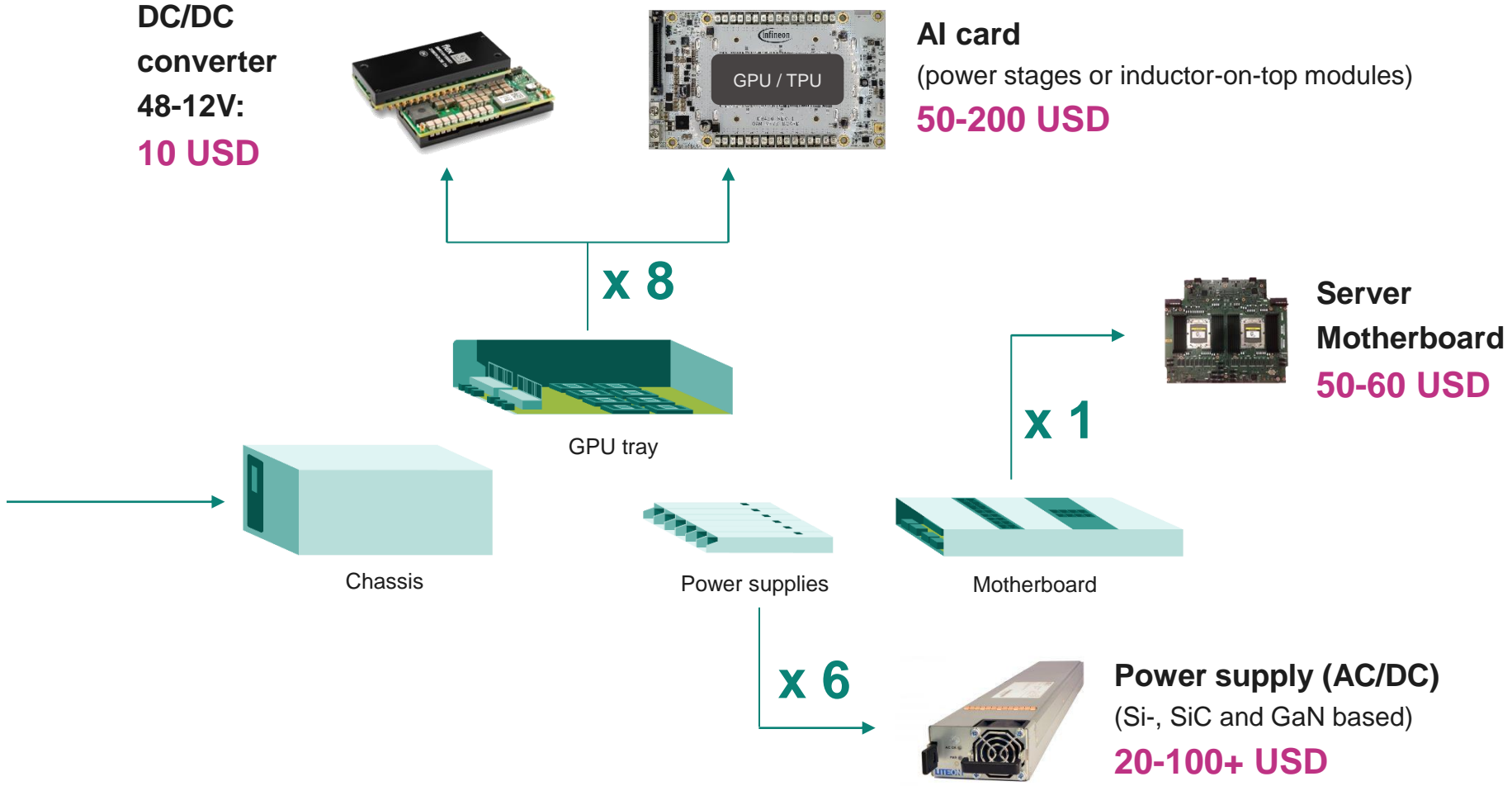
¹ Discrete Power MOSFET market includes automotive MOSFETs, Si Power MOSFETs, SiC Power MOSFETs, Si Protected MOSFETs and GaN Power Transistors ² Power IC market includes automotive power ICs. Based on or includes research from Omdia: *Power Semiconductor Market Share Database 2022*. September 2023. | Results are not an endorsement of Infineon Technologies AG. Any reliance on these results is at the third party's own risk.

Average Infineon BOM per AI server about 850 to 1800 USD

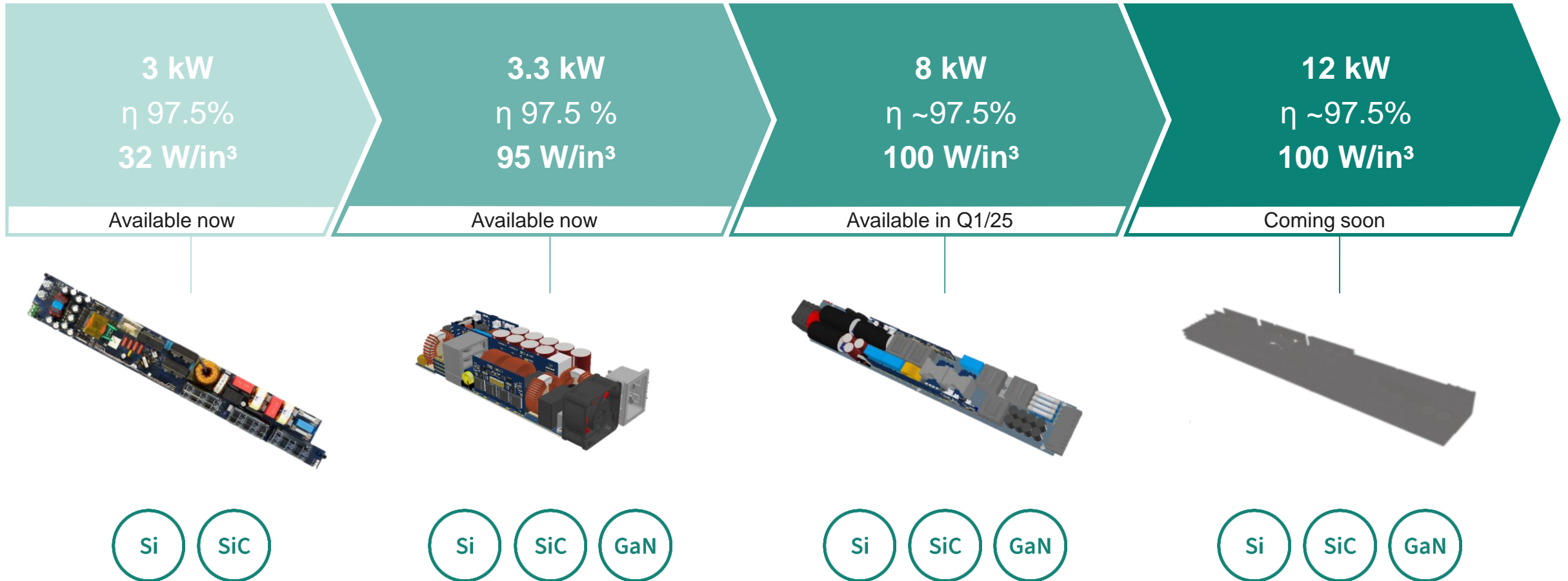


**1 Server rack includes
4 AI servers**

USD = potential Infineon content per AI server

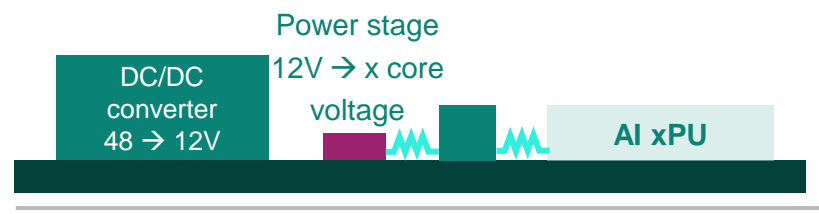
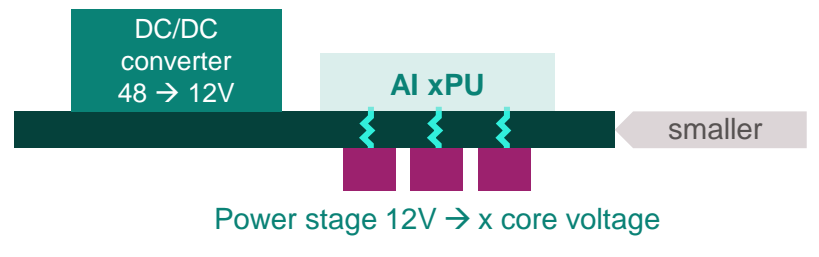


For AC/DC, Infineon is addressing the growing power demand of AI and data centers with PSU solutions ranging from 3 kW – 12 kW



Best-in-class energy efficiency, power density and TCO through Infineon's Dual-phase power modules and backside mounting



Power delivery network	Power design	
	Discrete solution Equivalent discrete solution	Module solution Infineon's dual-phase modules with inductor-on-top design
10% of input power loss¹		
<p>→ Lateral mounting</p> 	<p>Standard discrete solution</p> <ul style="list-style-type: none"> No additional energy savings 	<p>Dual-phase module with inductor-on-top design</p> <ul style="list-style-type: none"> 2% efficiency savings³ and up to 30% more powerful processor⁴
< 2% of input power loss²		
<p>↑ Vertical mounting</p> 	<p><i>not applicable</i></p>	<p>Dual-phase module with inductor-on-top design</p> <ul style="list-style-type: none"> additional 2% efficiency savings³ and up to 30% more powerful processor⁴ <p>Only Infineon combination offering best-in-class energy efficiency, power density & TCO</p>

1 In motherboard interconnections through lateral mounting
 2 In motherboard interconnections through vertical mounting

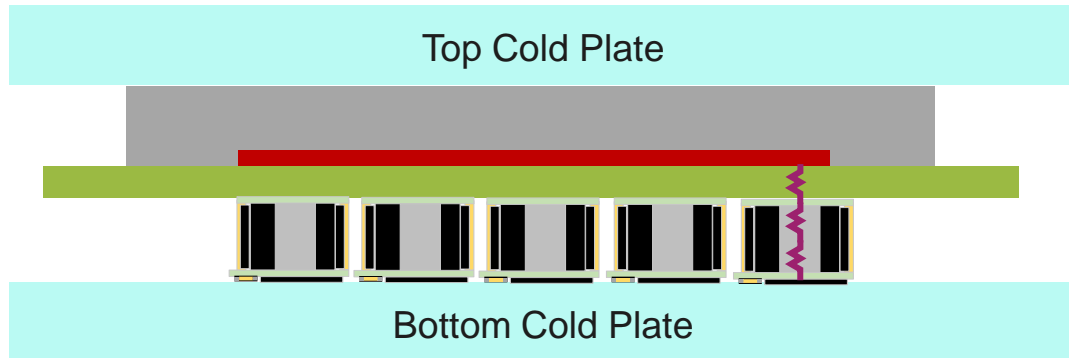
3 Using Infineon's dual-phase modules with an inductor-on-top design compared to an equivalent module solution
 4 Can be supplied within the same area through an up to 30% reduction of the occupation area enabling a current density increase

Better efficiency for Infineon's inductor-on-top vs competitor's power-stage-on-top modules



Patented vertical inductor CoolCore Magnetics technology enables true vertical power delivery in combination with trench OptiMOS™ MOSFET and is mechanically more robust

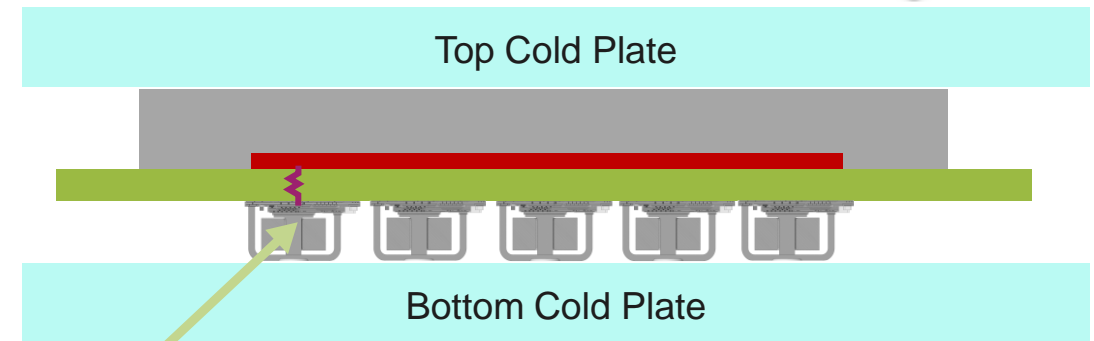
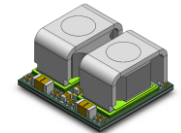
**Competitor:
power stage cooled**



Power-stage-on-top module

Total power dissipation	95W
Maximum PCB temperature	90°C

**Infineon:
inductor cooled**



Optimized pathway

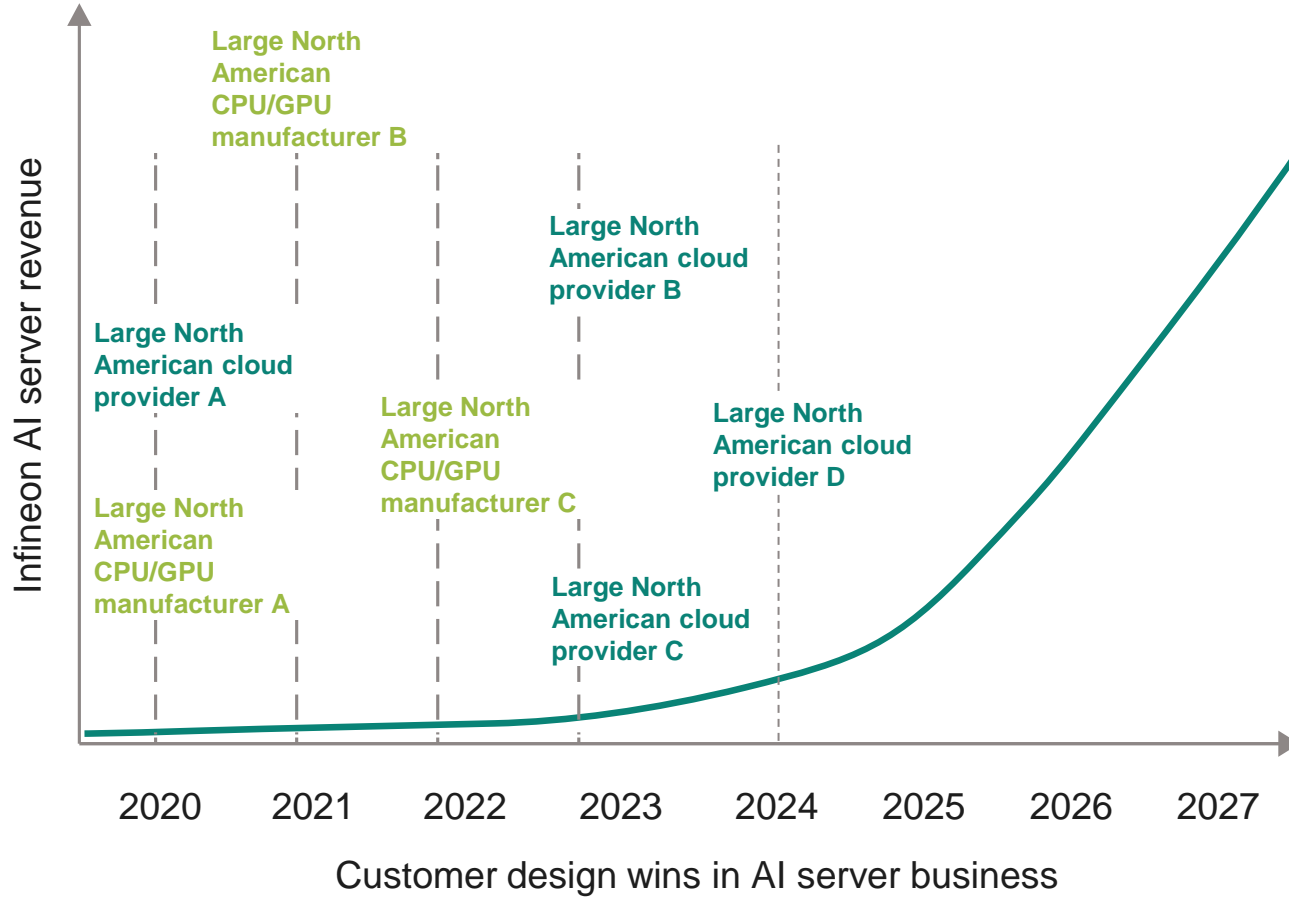
Inductor-on-top module

74W
85°C

Benefits

21W less power usage
PCB 5°C cooler

AI will be a strong driver of revenue increase for Infineon's server business



In FY24 AI revenue in our server business is expected to be a low-triple digit million amount

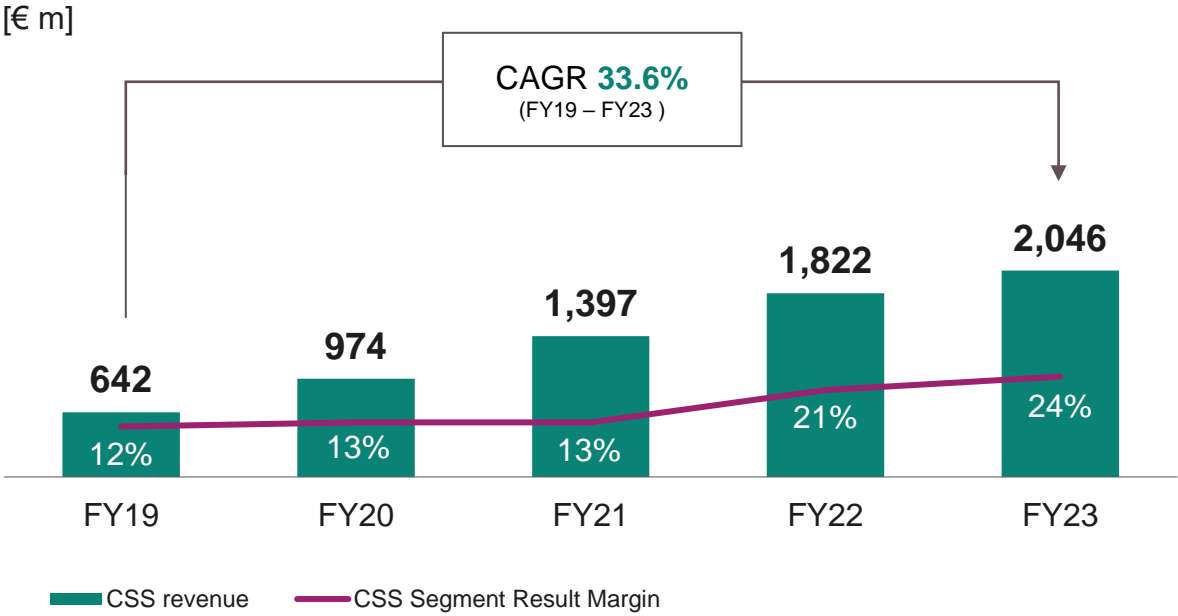
We expect to double those revenues in FY25 and to reach EUR 1 bn in 2-3 years

Connected Secure Systems

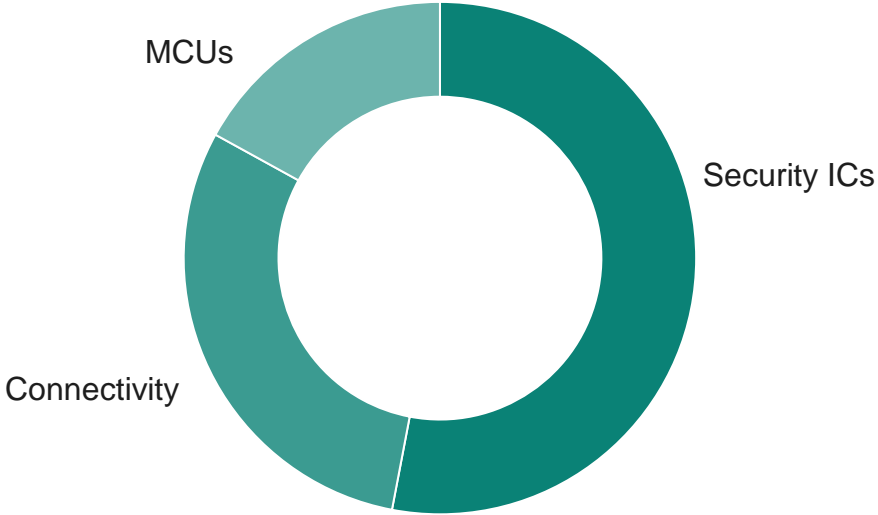


CSS at a glance

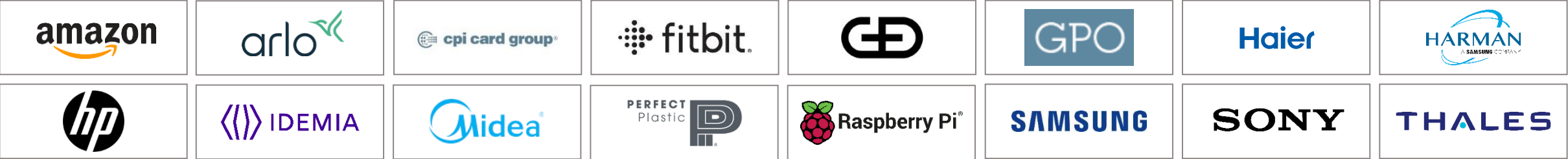
CSS revenue and Segment Result Margin



FY23 revenue split by product group



Key customers

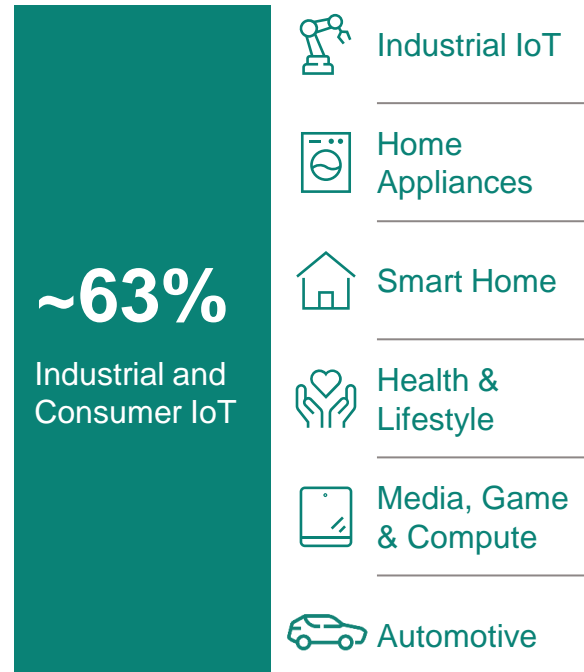


Market demand remains weak across consumer segments influenced by high inventories and continuing macro economic risks



Applications

% of FY23 segment revenue



Market outlook for CY24

- – Macroeconomic headwinds continue to slow growth. Industry 4.0 and Industrial IoT trends persist. The market is expected to bottom out in 2024.
- ↘ – Weak consumer sentiment constrains growth, driven by macroeconomic uncertainty and high inventory levels, resulting in sluggish demand.
- ↘ – Sluggish consumer sentiment, exacerbated by macroeconomic risks and elevated inventory levels, suppresses demand.
- ↘ – Consumer spending risks persist, market recovery yet to materialize.
- – PC and smartphone recovery expected later in FY24, driven by macro and sentiment improvements, but no sharp rebound forecasted
- – Automotive market is slightly slowing down after better-than-projected development in 2023, as macroeconomic headwinds persist.
- ↘ – The short-term outlook sees channel inventory digestion from high stock levels across the value chain, while card issuance is assumed to stay rather stable
- – Stabilization of market growth after post-Covid peak in ePassport; FY24 demand affected by stock overbuild at the customers

CSS offers a compelling product portfolio and roadmap for IoT

Microcontrollers (PSoC™ and XMC™)



- PSoC™ family for general purpose, XMC™ family for industrial
- Strength in low power, high performance, and capacitive touch sensing
- Compelling roadmap focused on AI, security, and integrated connectivity



AIROC™ Wi-Fi and Combos



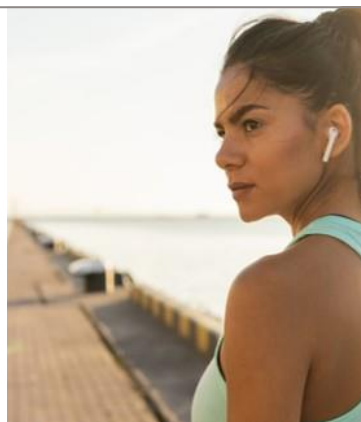
- Wi-Fi standalone and Wi-Fi & Bluetooth® Combo chips for end devices
- Focus on innovation for IoT applications: reliability and power
- Strong leader for battery-operated Wi-Fi
- Recent new product introduced Wi-Fi 6 & 6E – the first IoT-focused product in the brand new 6 GHz band



AIROC™ Bluetooth®



- Portfolio of standalone and PSoC™-integrated Bluetooth® and Bluetooth® Low Energy products
- Strong position in wearables, gaming, remote controls, HID, and automotive
- Introducing new products to support the newest smart-home industry standard: Matter



ModusToolbox™ and Software



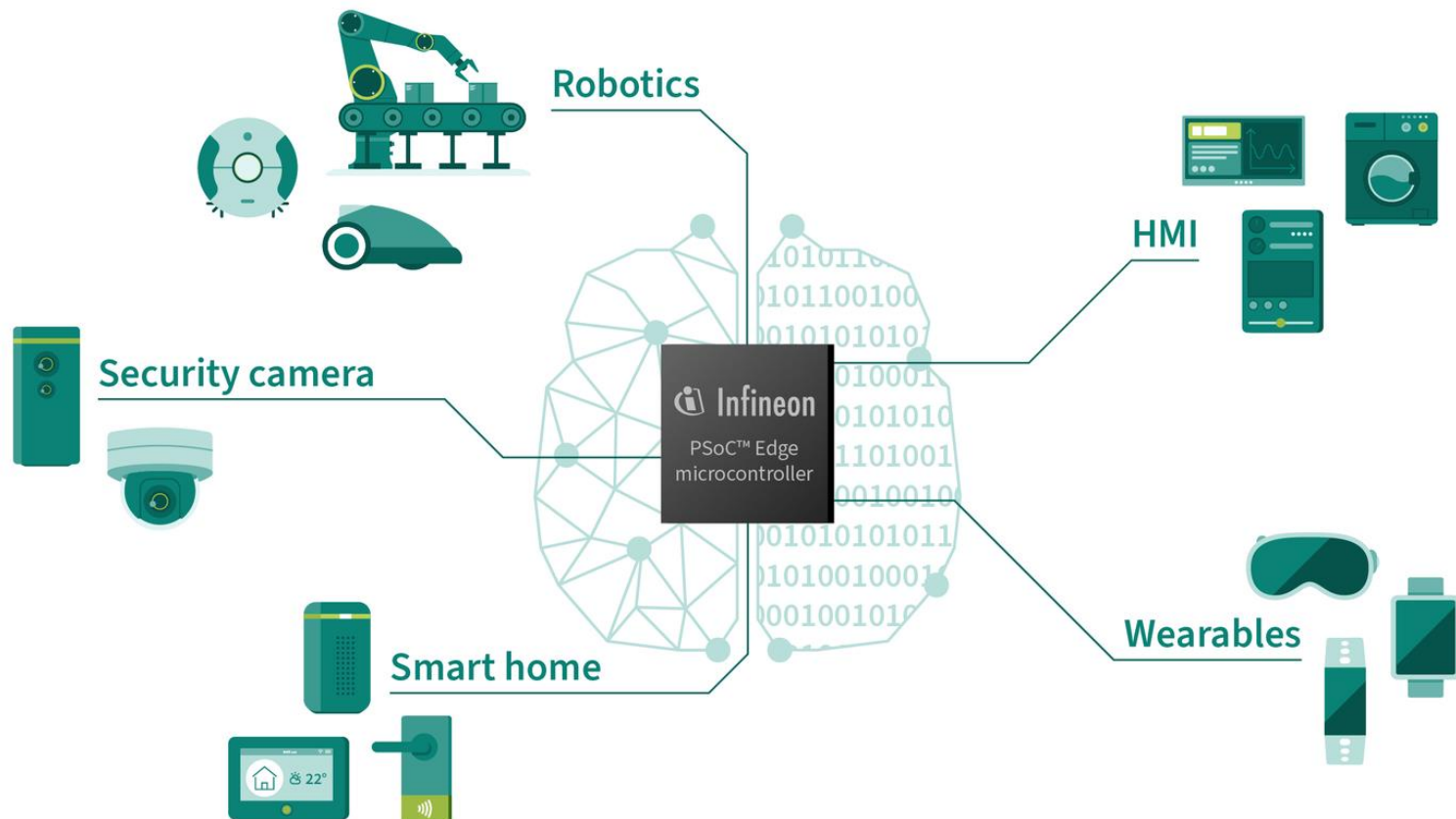
- ModusToolbox™ is a rich embedded software development toolset to accelerate and simplify development for Infineon MCUs, and the core development platform for Infineon software
- Strong set of SW features in MCU and connectivity SDK's
- CIRRENT™ is a cloud services platform for data-driven improvement of connectivity and delivery of innovative IoT services



Next-generation PSoC™ Edge portfolio: Infineon PSoC™ Edge E81, E83 and E84 microcontroller families



PSoC™ Edge – Enables a new generation of responsive machine learning devices



Fully integrated system-on-chip (SoC) devices supported with **comprehensive system design tools and software.**

Based on the **high-performance Arm® Cortex®-M55** with an embedded **ultra low power technology.**

Robust **security with on-chip, hardware-isolated secured enclave**

Out-of-the-box **Machine learning enablement**

Quickly move from concept to product enabling **fast time-to-market** for IoT and consumer applications.

PSoC™ 6 AI evaluation kit is Infineon's hardware platform to experience Edge AI offering

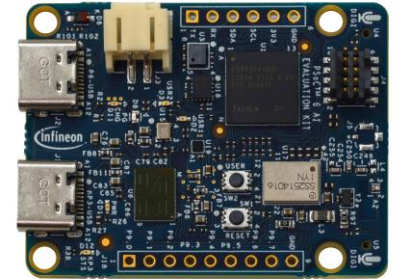


Infineon's PSoC™ 6 Artificial Intelligence evaluation kit

- Comprehensive kit for intelligent applications
- Integrated Infineon's MCU, sensors, connectivity, and software tools
- Small form factor and low cost for easy prototyping
- Complete and easy-to-use hardware and software platform

Target Use Cases

- Sound detection
- Presence detection, counting & tracking
- Gesture sensing / Customized radar
- Motion detection
- Sensor fusion



Key Features

- Small form-factor (35x45mm), wireless
- Solution approach with PSoC™ 6, QSPI Flash + multi-sensor input (radar, microphone, pressure & 6-axis motion sensors)
- Complete ML to embedded SW journey: ModusToolbox™ & Imagimob Studio compatible



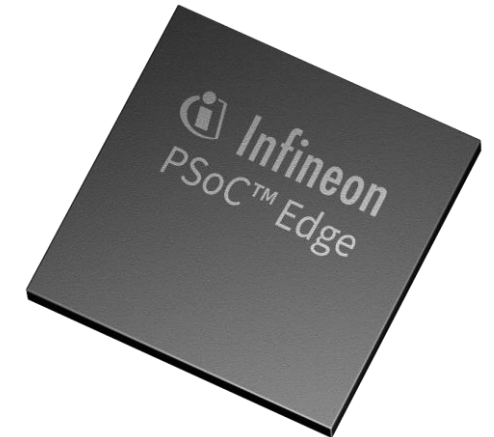
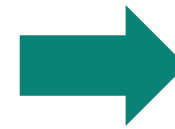
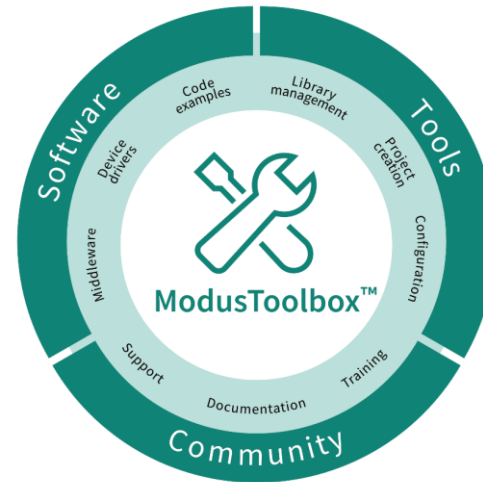
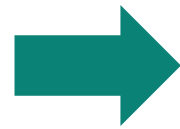
Benefits

- Low-cost evaluation board with efficient form factor for easy prototyping
- Rapid prototyping: Easy creation of sensor fusion-, ML-, acoustic-, time series- and radar models
- End-to-end: Collect data, create, train, evaluate & deploy ML models fast

Customized Machine Learning on PSoC™ Edge with Imagimob Studio and ModusToolbox™



With the seamless integration of **Imagimob Studio** and **ModusToolbox™** companies can build and deploy robust machine learning models. When paired with **PSoC™ Edge**, companies can optimize power consumption and improve efficiency while adding intelligence to products.

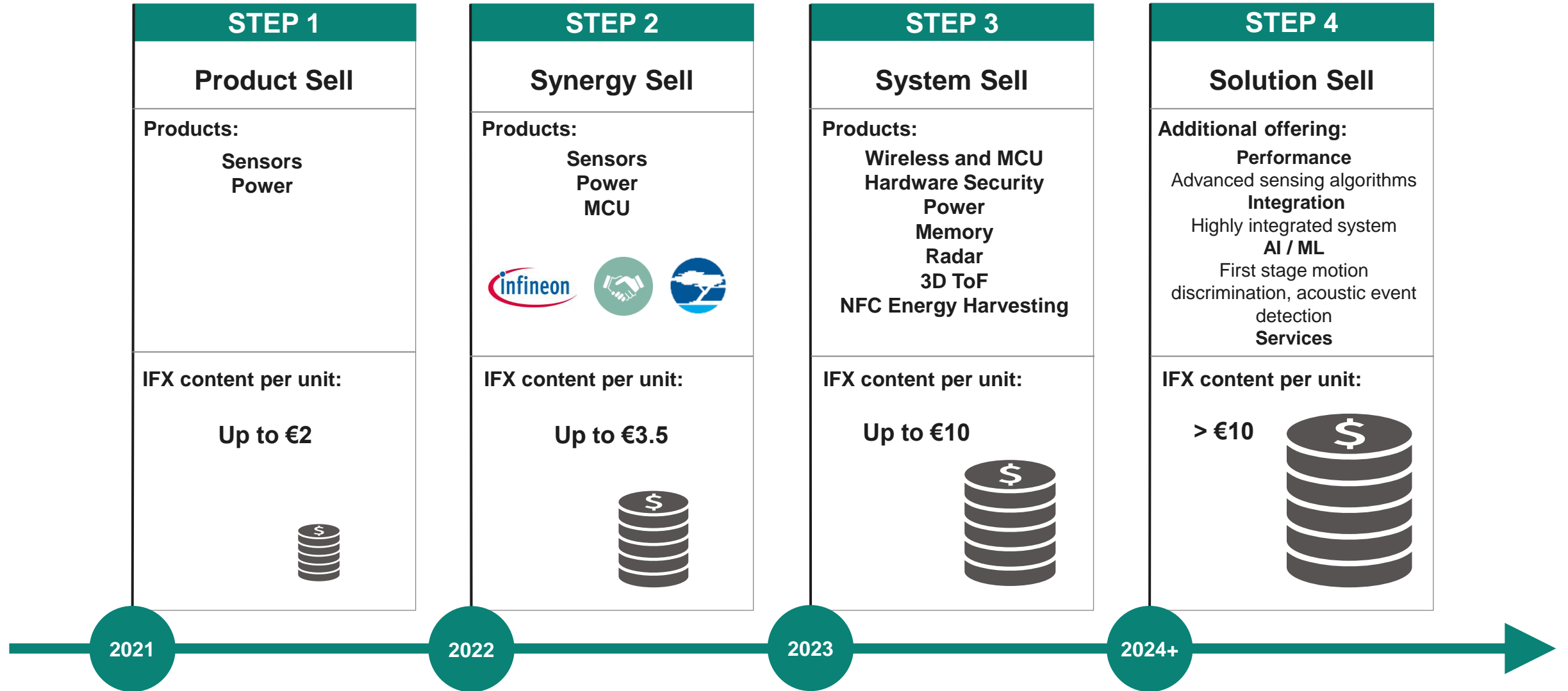


Imagimob Studio, Infineon's platform for machine learning development, makes it easier to create Edge AI models

ModusToolbox™ Software is a modern, extensible development ecosystem

PSoC™ Edge is the next generation Machine Learning-enhanced sensing, low power, secured, and advanced HMI high-performance microcontroller

Financial synergy success marked by our journey to becoming a leading IoT solution provider



Selected financial figures

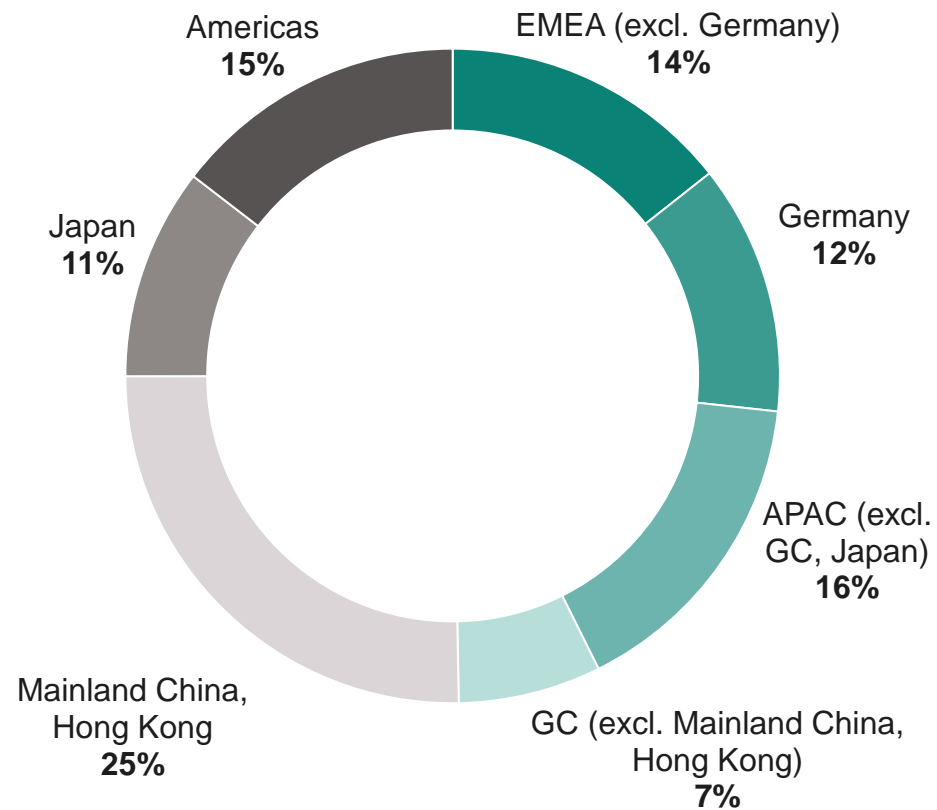
+0.72▲	634.270	3.984%	369,000
-0.51▼	538.014	2.416%	743,000
3.16▲	692.360	0.657%	405,000
.23▼	237.981	0.103%	882,000



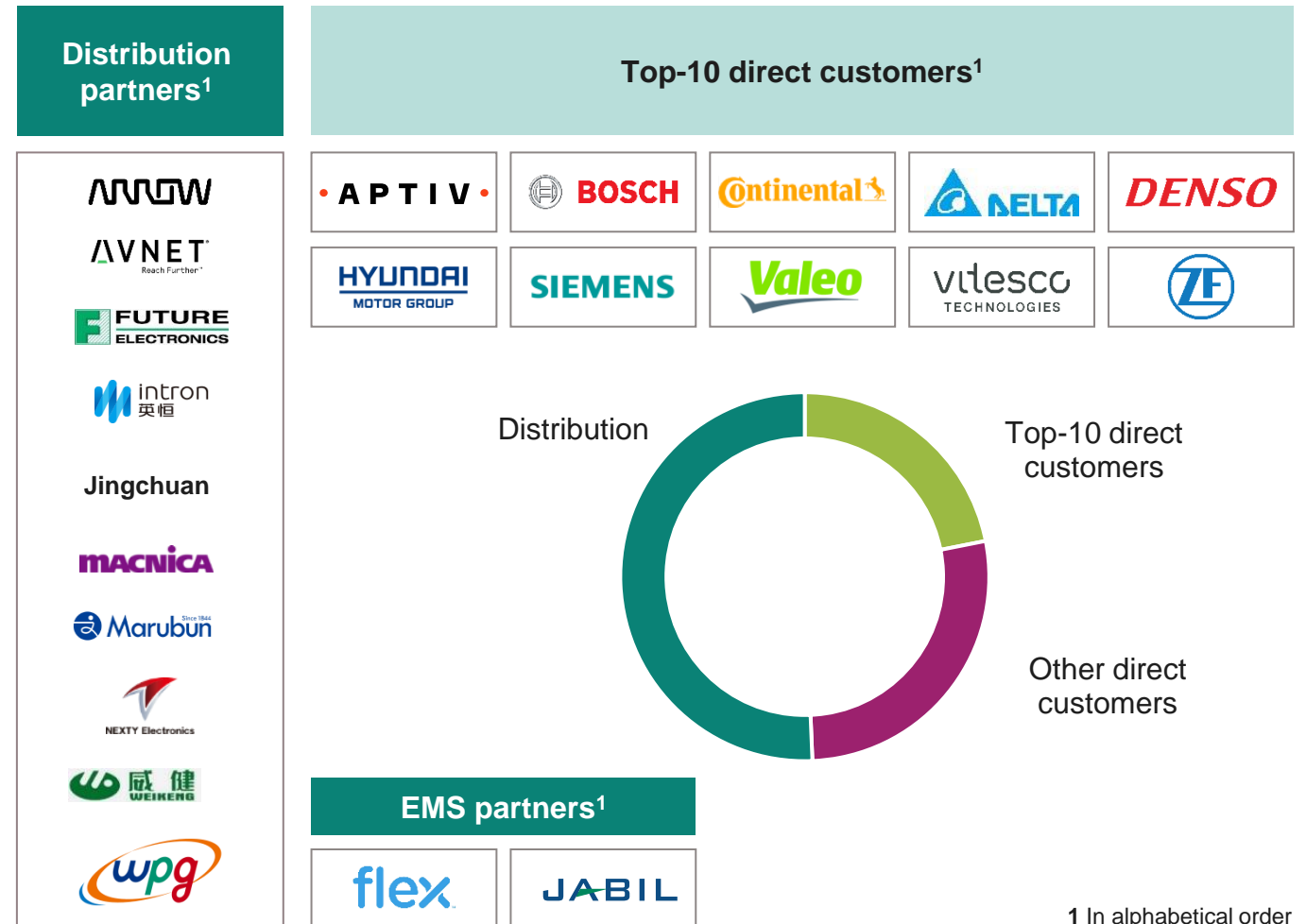
Strong presence in all regions; well-balanced customer portfolio; no customer represents more than 10% of total sales



FY23 revenue by region

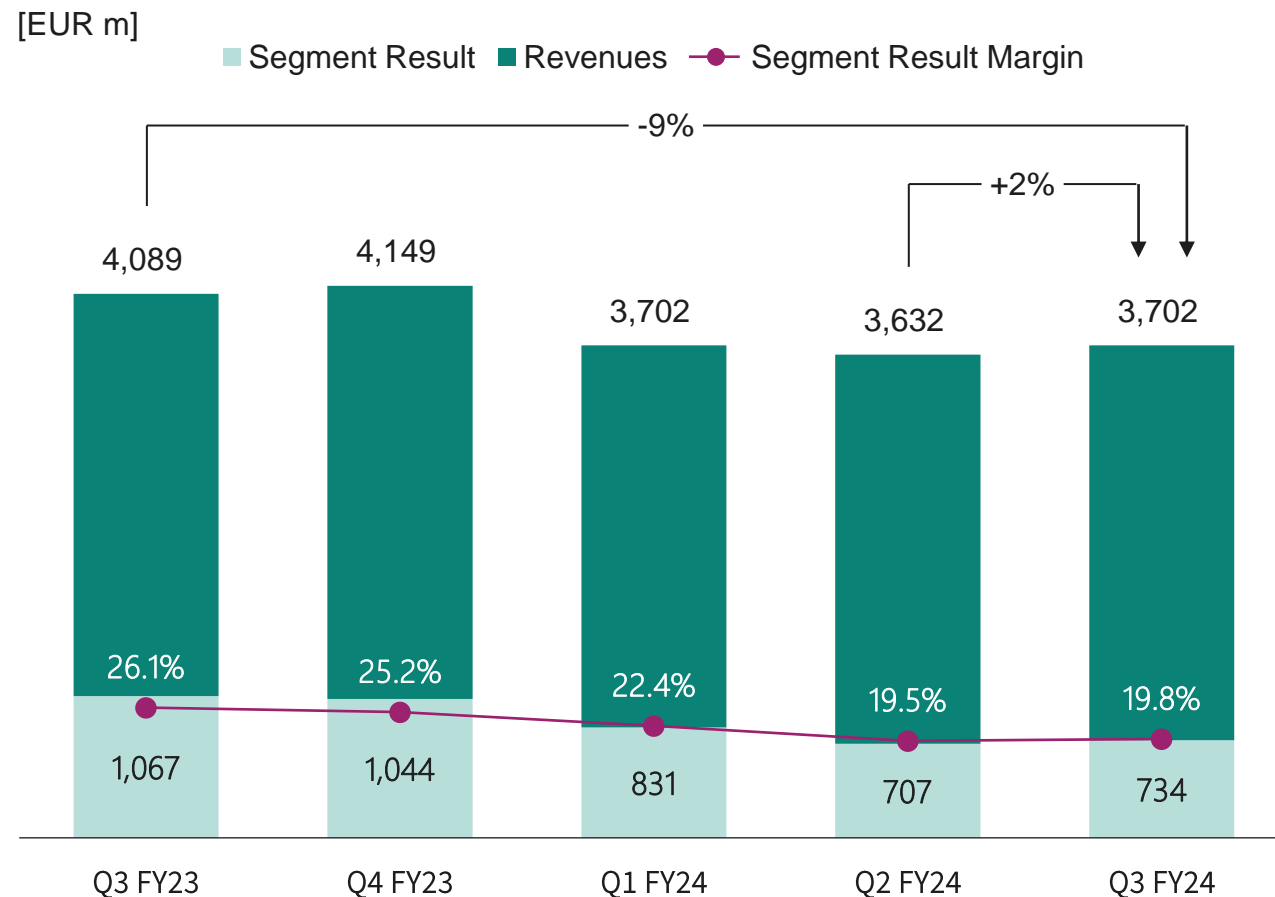


Revenue by sales channel



Group financial performance

Revenues and Segment Result

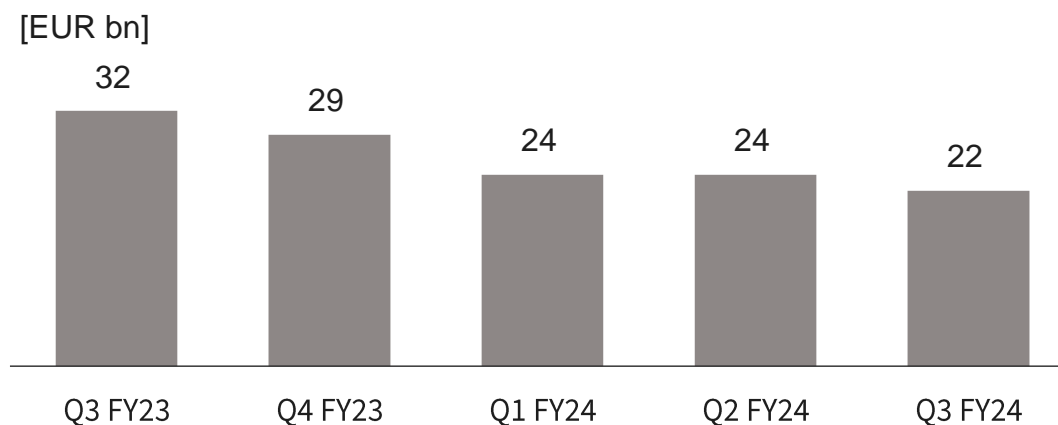


USD exchange rate

Average revenue exchange rate

	Q3 FY23	Q2 FY24	Q3 FY24
∅ USD/EUR	1.09	1.09	1.08

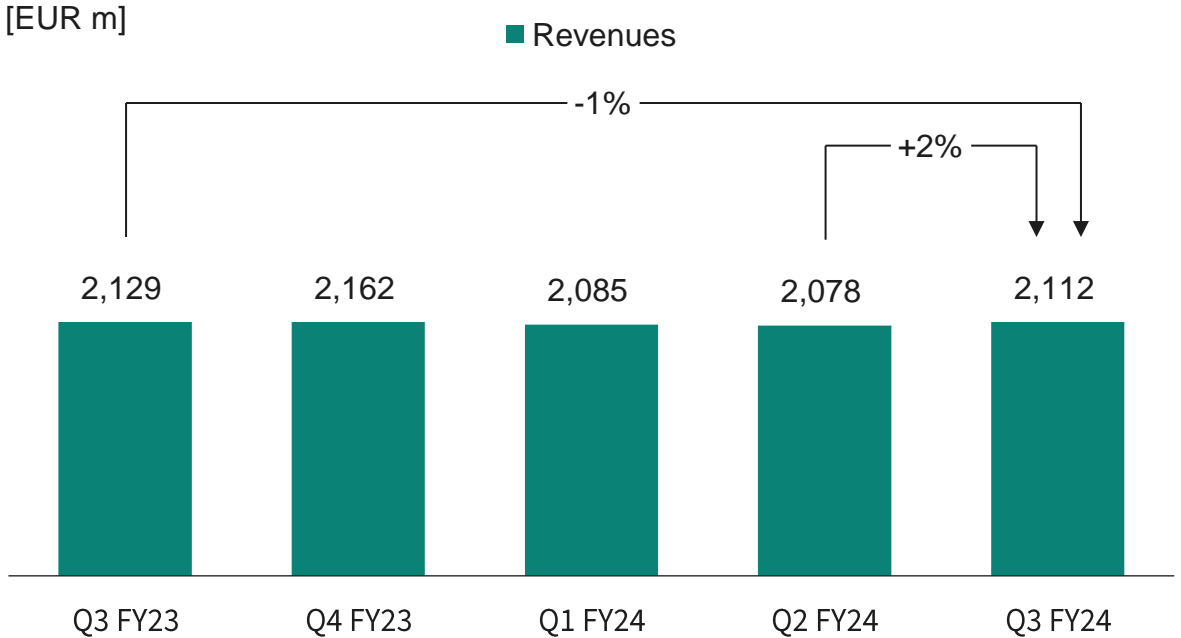
Order backlog¹



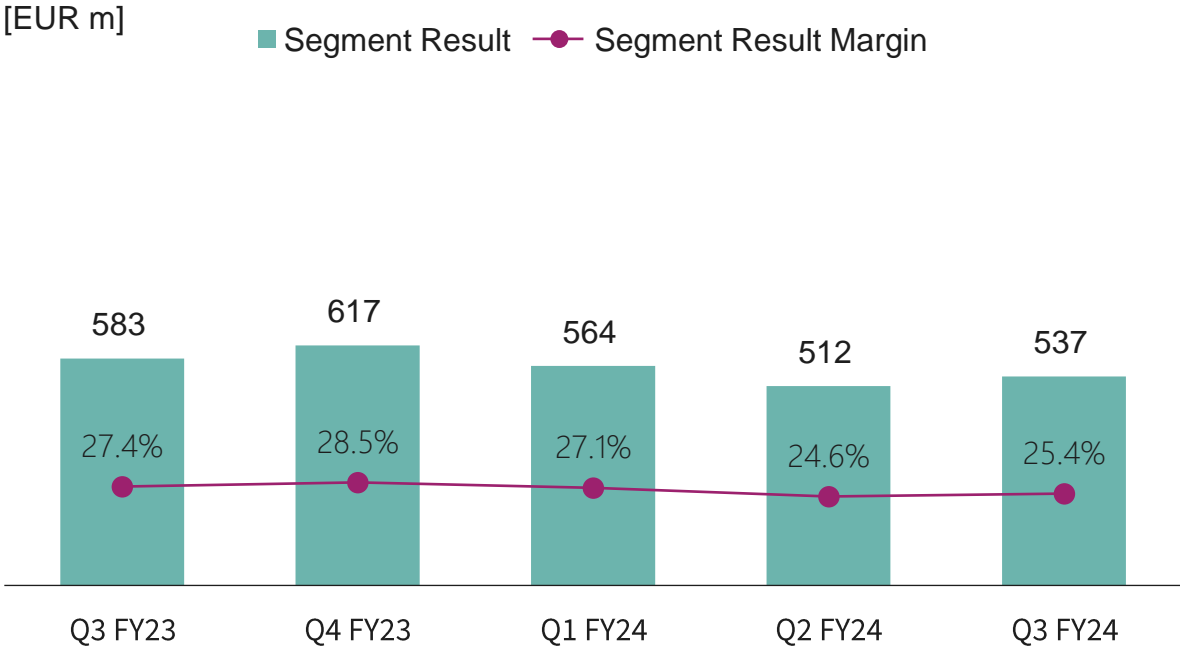
¹ See notes for definition

Automotive (ATV)

Revenues



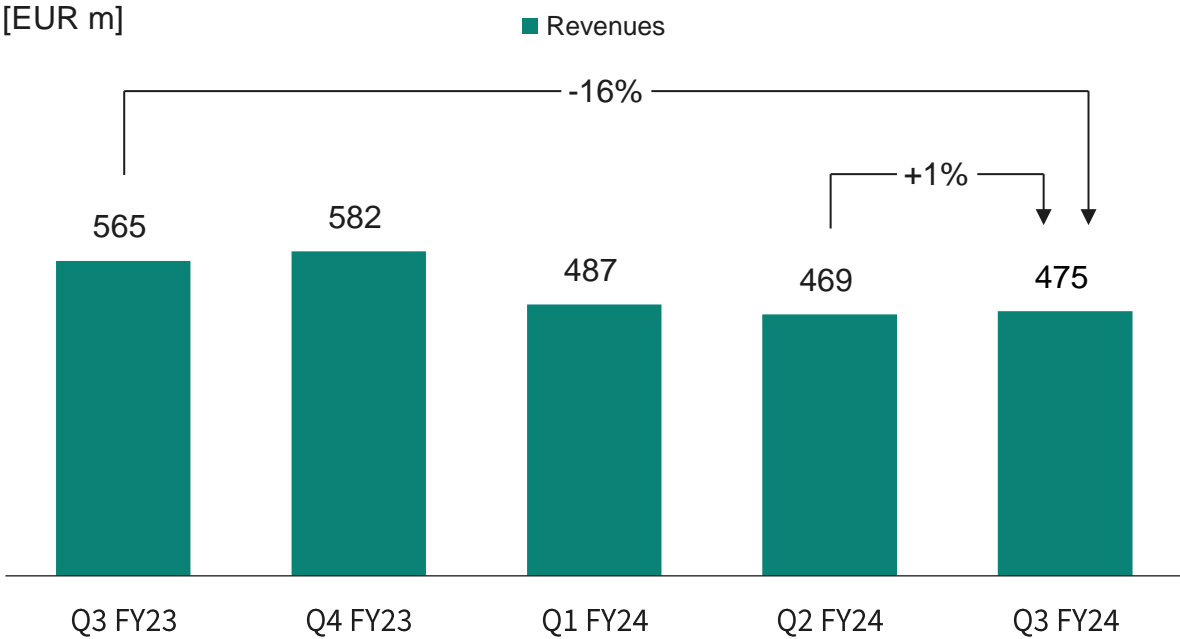
Segment Result



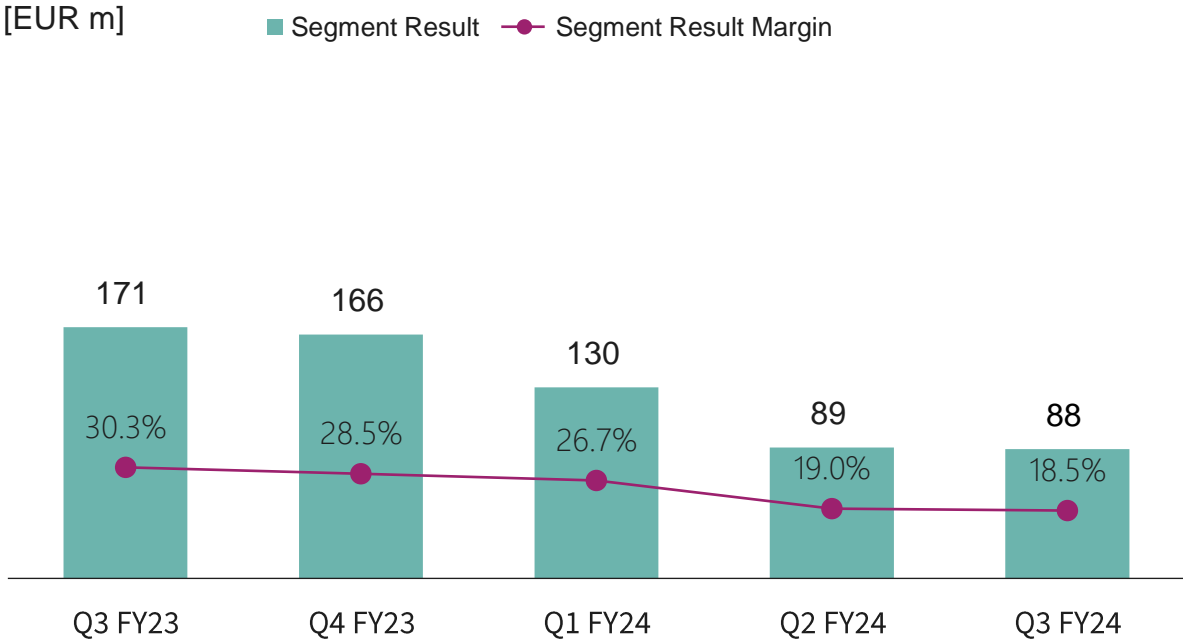
- Slight q-o-q revenue increase – volume gains in microcontrollers moderately exceeding ongoing inventory correction in traditional applications
- Opposing trends of inventory rebalancing and content growth
- For FY24, we expect revenue growth of ~3%, despite adverse market conditions, due to MCU share gains and xEV exposure

Green Industrial Power (GIP)

Revenues



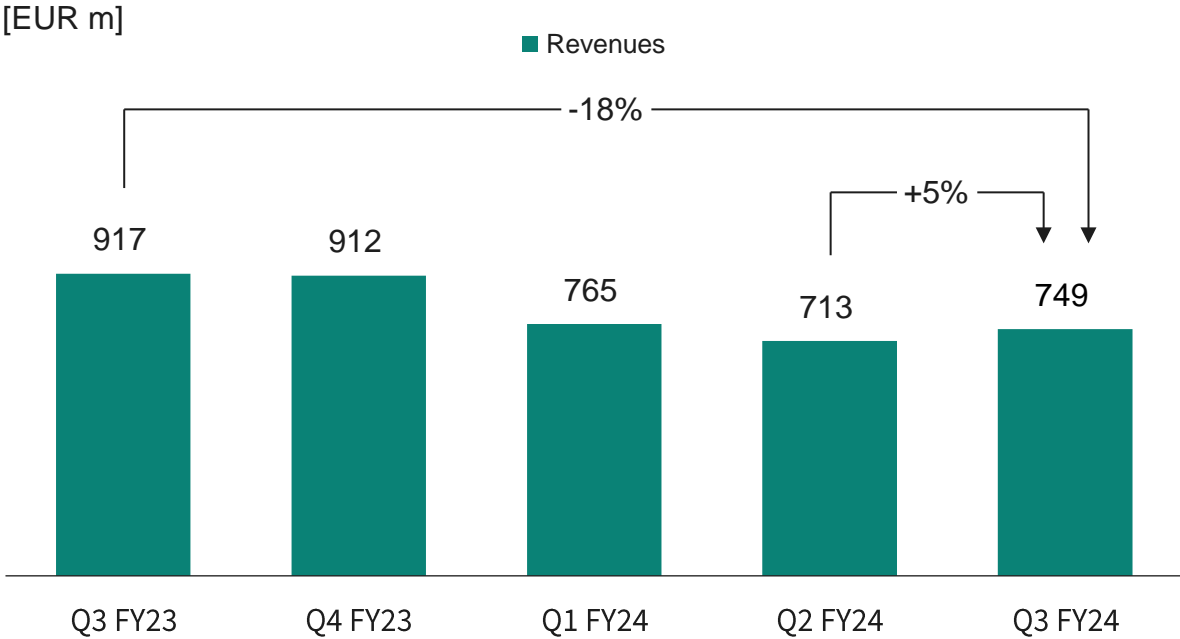
Segment Result



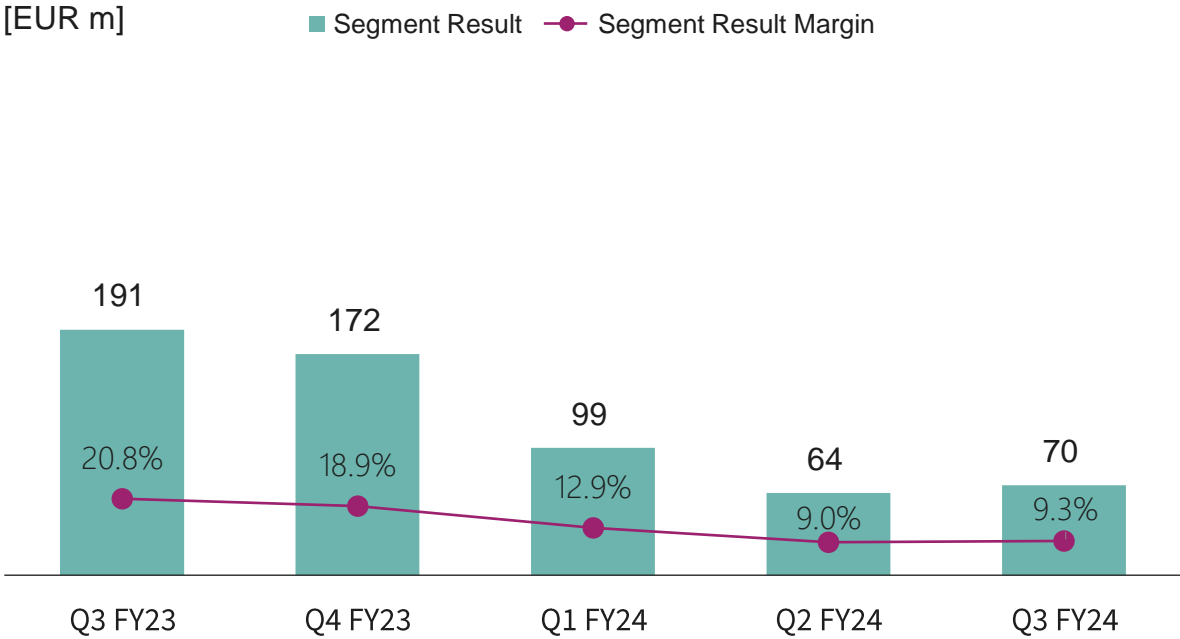
- Stable revenue trend, reflecting late-cycle business
- Industrial demand stabilized on a low level; inventories remain elevated. Recovery expected to be gradual
- Demand for decarbonization-related applications robust, but still dampened by high inventory levels

Power & Sensor Systems (PSS)

Revenues



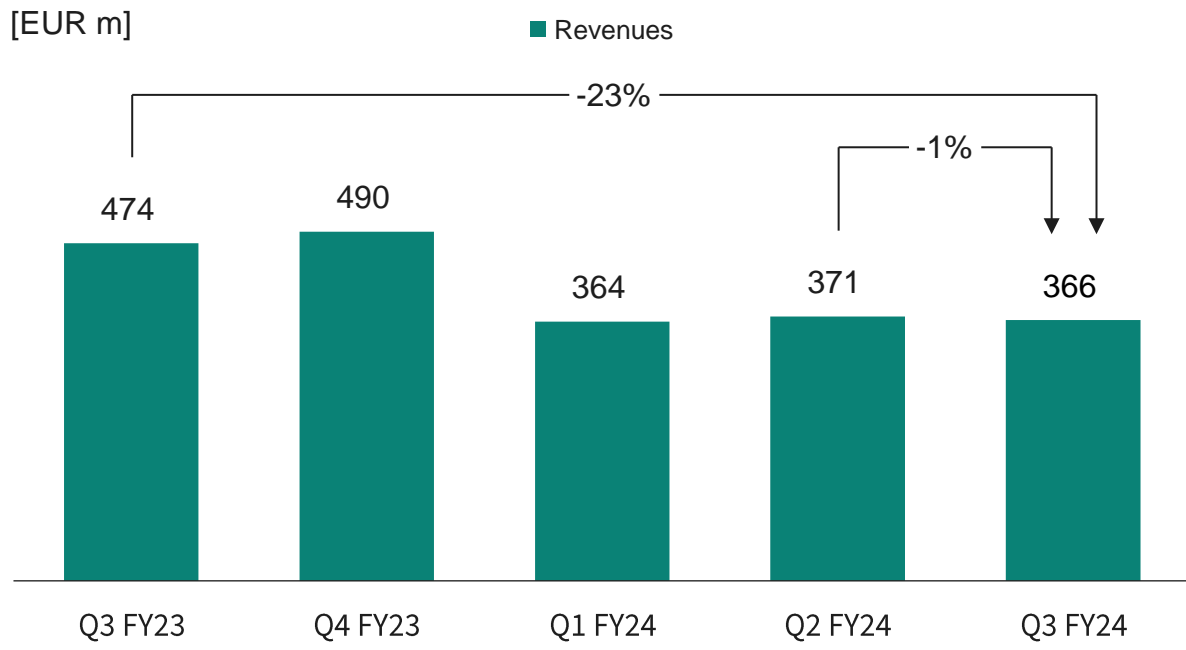
Segment Result



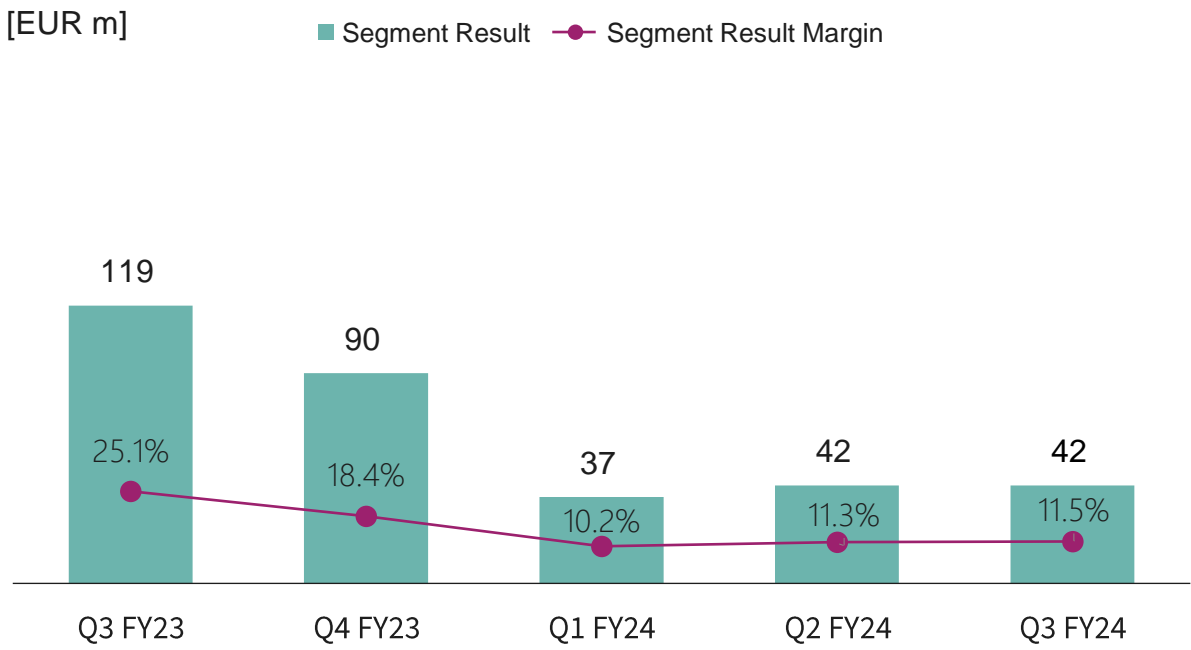
- PSS turning the corner after six quarters of revenue decline; rising underutilization charges capping margin expansion
- Consumer, compute and communications markets coming off their trough– working down of inventories softening recovery
- AI power business ramping, we are on track to doubling revenue in the next fiscal year!

Connected Secure Systems (CSS)

Revenues



Segment Result

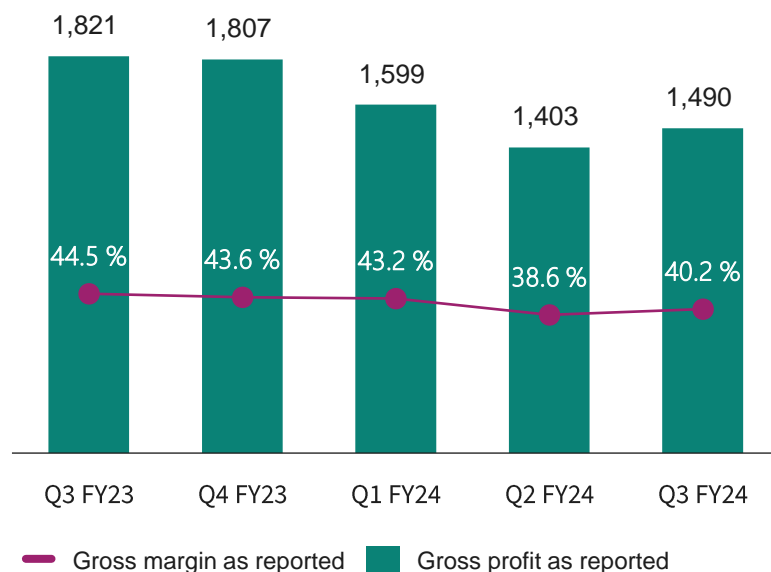


- Revenue continues to stabilize as IoT and security market demand is bottoming
- Distributor inventories worked down, paving the way for a gradual cyclical recovery
- Driving structural growth with advancements in Edge AI through the PSoC™ 6 AI evaluation kit

Gross margin and Opex

Gross profit

[EUR m]



Therein Non-Segment Result charges

[EUR m]

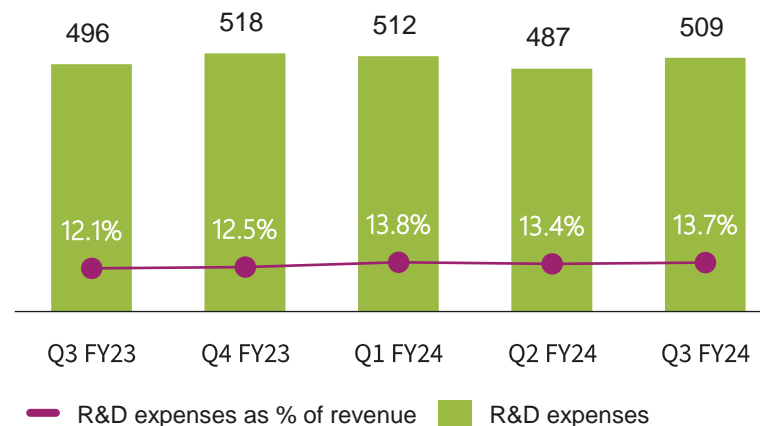
67	79	65	91	71
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Adjusted gross margin

46.2%	45.5%	44.9%	41.1%	42.2%
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R&D

[EUR m]



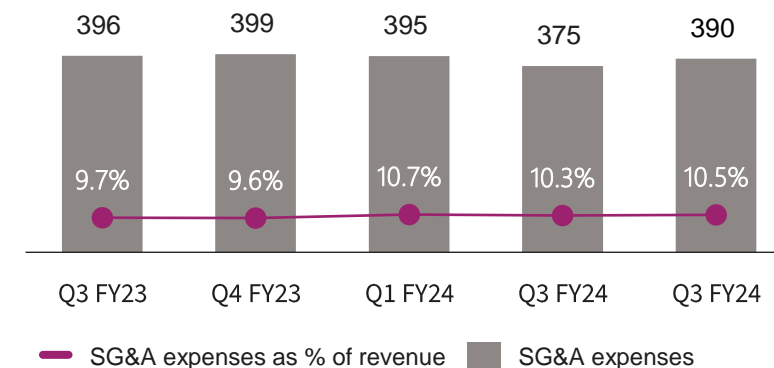
Therein Non-Segment Result charges

[EUR m]

12	12	16	18	15
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SG&A

[EUR m]



Therein Non-Segment Result charges

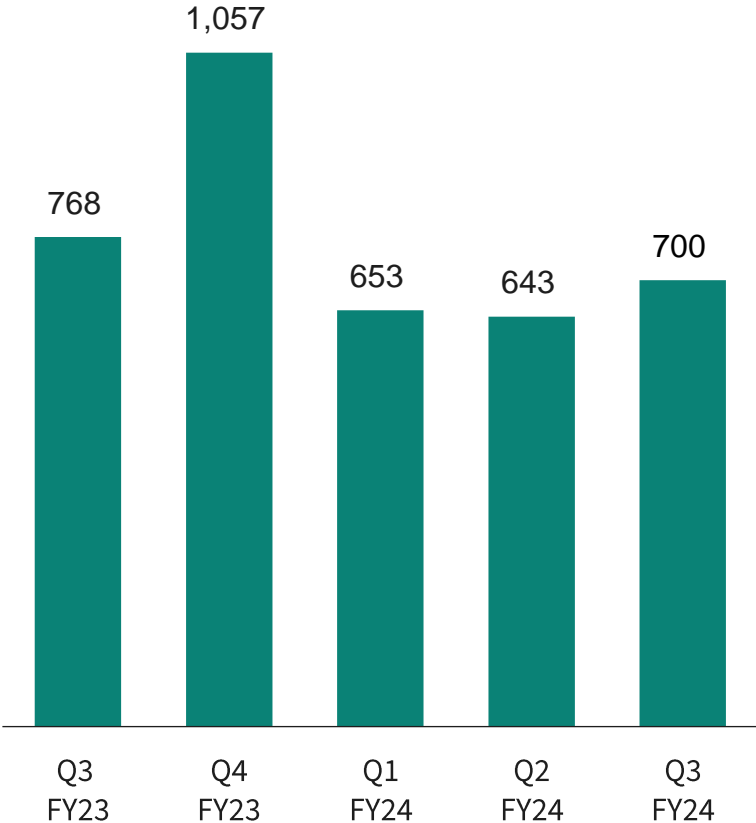
[EUR m]

55	57	54	54	54
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Investments, Depreciation & Amortization and Free Cash Flow

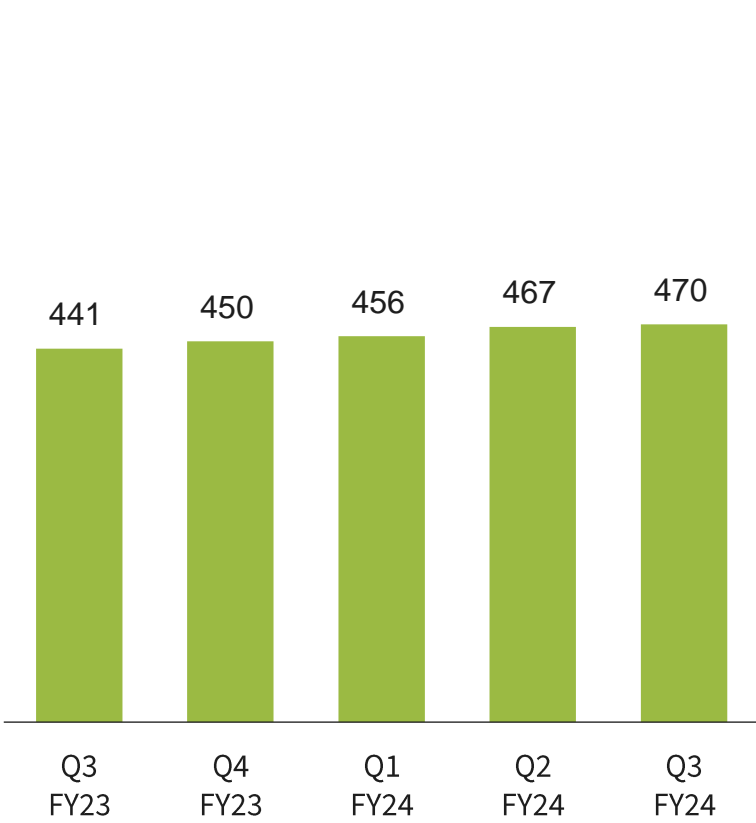
Investments

[EUR m]



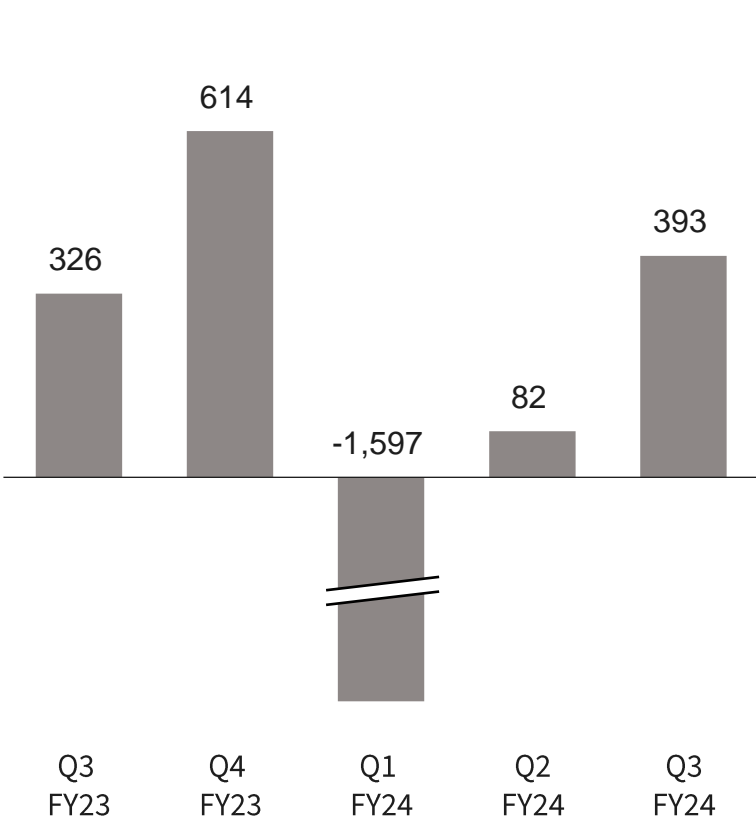
Depreciation & Amortization

[EUR m]



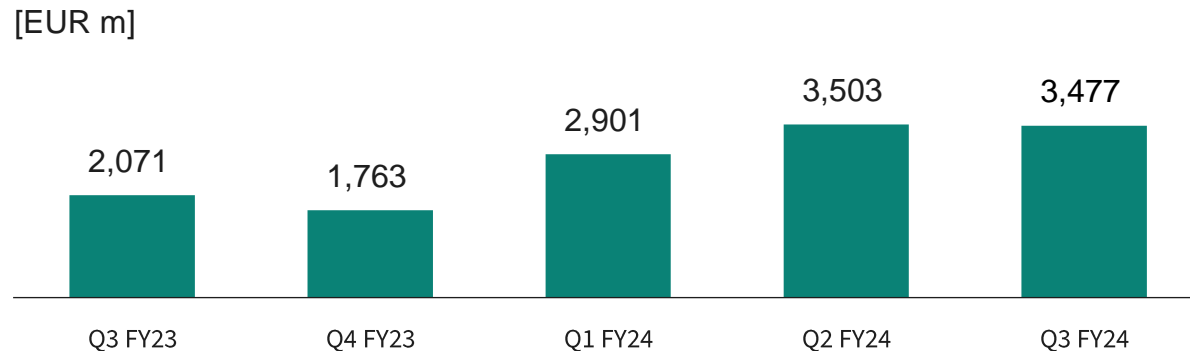
Free Cash Flow

[EUR m]

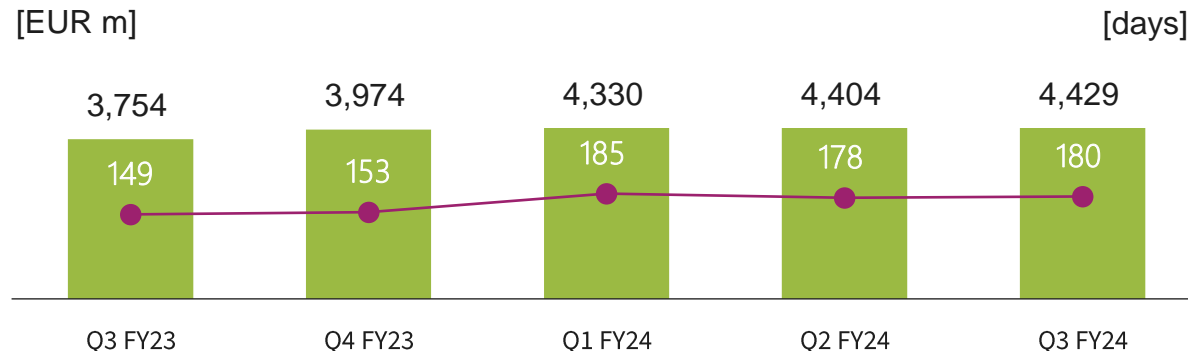


Working capital, in particular trade working capital components

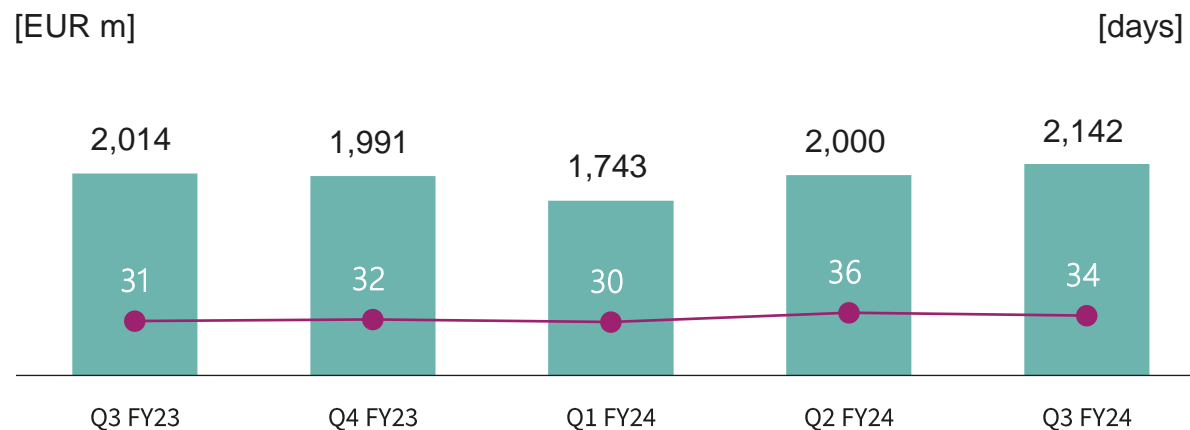
Working capital¹



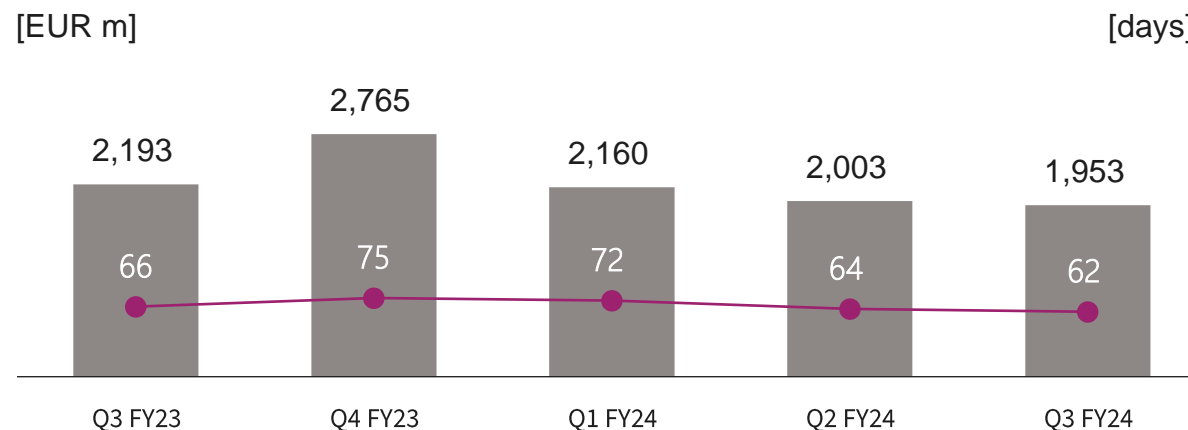
Inventories



Trade receivables



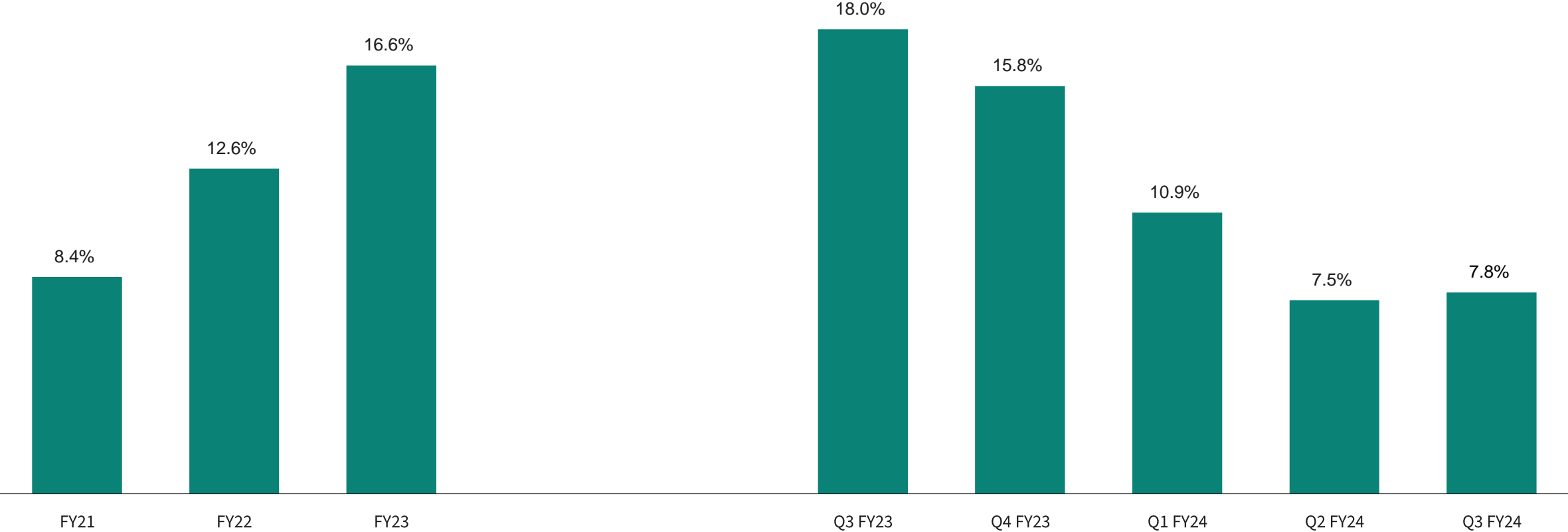
Trade payables



¹ See notes for definition

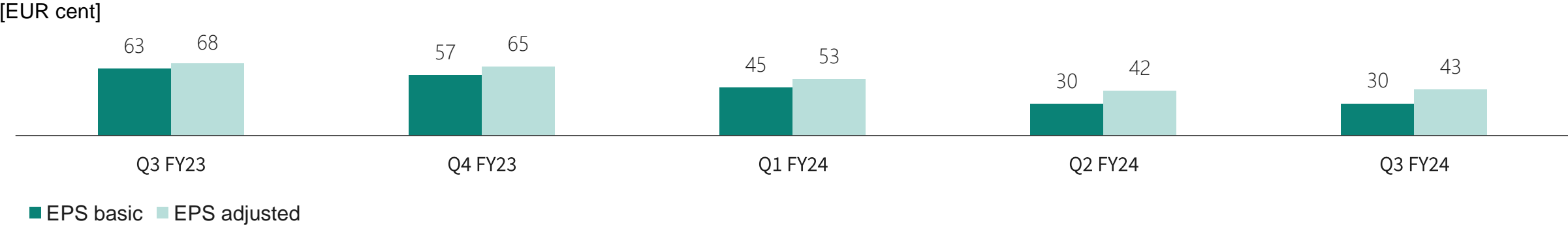
Return on capital employed

Historical development

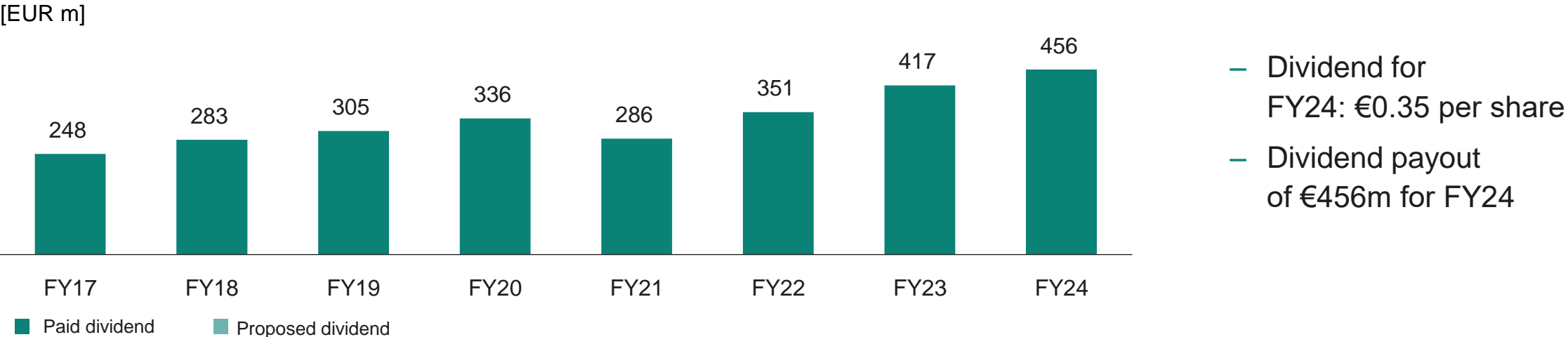


Earnings-per-share and total cash return

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

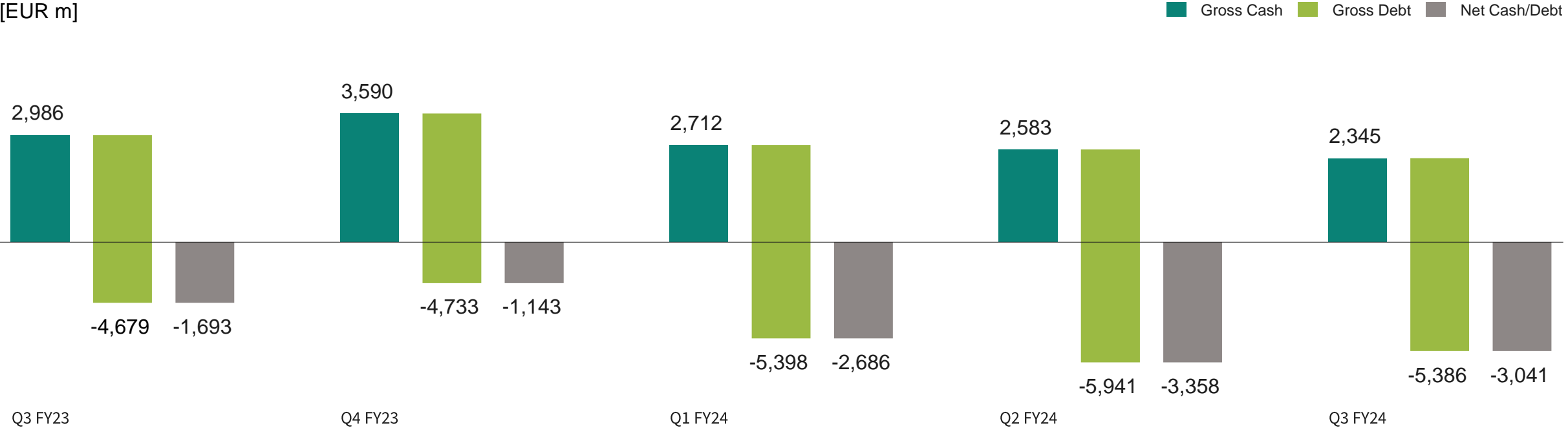


Total cash return to shareholders via dividends



Development of liquidity and debt

Capital structure

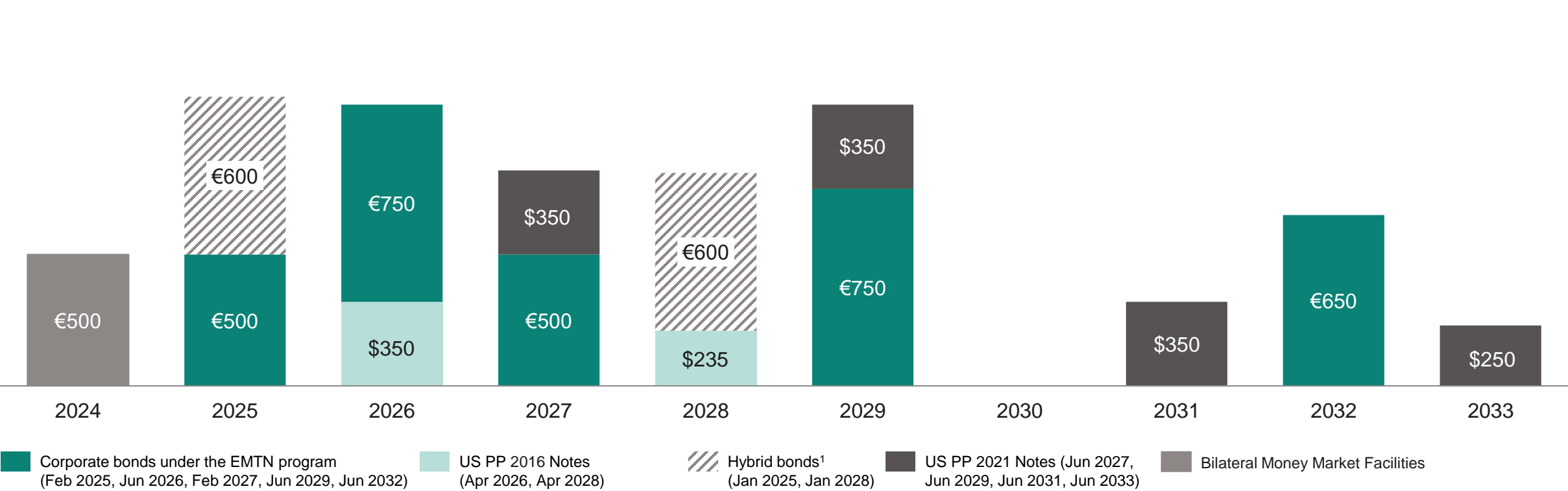


— Repayment of 350m USD debt at maturity

Maturity profile

Calendar years 2024 to 2033

[EUR m; USD m; nominal values]



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 30 June 2024)
Gross Cash¹	€1bn + at least 10% of revenues → €2.5bn	€1bn + 9% of revenues → €2.3bn
Gross Debt²	≤ 2.0x EBITDA	1.2x EBITDA
Comfortable liquidity position	<ul style="list-style-type: none"> – Flexibility for financing operating activities and investments through the cycle – Cushion for net pension liabilities and contingent liabilities 	
Balanced debt position	<ul style="list-style-type: none"> – Gross debt target commensurate with investment-grade rating – Successful de-leveraging offers ample headroom 	
Rating	Investment grade	BBB+ stable outlook (by S&P Global Ratings)

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



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Disclaimer

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Glossary

AC	alternating current
ACC	adaptive cruise control
AD	automated driving
ADAS	advanced driver assistance system
AEB	autonomous emergency braking
AI	artificial intelligence
AR/VR	augmented/virtual reality
BEV	battery electric vehicle
BLE	bluetooth low energy
BMS	battery management system
BoM	bill of materials
CAV	commercial, construction and agricultural vehicles
CMOS	complementary metal-oxide-semiconductor
DC	direct current
DSC/SSC	double/single sided cooling
E/E	electrical/electronic architecture
ECU	electronical control unit
eSE	embedded secure module
eSIM	embedded subscriber identity module
EMS	electronics manufacturing service
ESS	energy storage system
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
HEMT	high-electron-mobility transistor
HID	human interface device
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 uni
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
NFC	near-field communication
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
PSU	power supply unit
PV	photovoltaic
RAM	random access memory
RF	radio frequency
SAE	Society of Automotive Engineers
SDK	software development kit
Si	silicon
SiC	silicon carbide
SNR	signal-to-noise ratio
SoC	system-on-chip / state of charge
ToF	time-of-flight
UWB	ultra-wideband
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' – ('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 = ('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') – ('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. CO₂ savings are calculated based on the potential savings generated by technologies in which semiconductors are used. The CO₂ 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
27 Aug 24	Jefferies Global Semiconductor, IT Hardware & Communications Technology Conference	Chicago
28 Aug 24	DB Dana Point Conference	Los Angeles
4-5 Sep 2024	DB Access European TMT Conference	London
4-5 Sep 2024	Citi Global Technology Conference	New York
23 Sep 24	Berenberg Goldman Sachs German Corporate Conference	Munich
24 Sep 24	Baader Investment Conference	Munich
25 Sep 24	Bernstein Pan European Annual Strategic Decisions Conference	London
12 Nov 24 ¹	Earnings Release for the Fourth Quarter and the 2024 Fiscal Year	
21 Nov 24	Morgan Stanley European TMT Conference	Barcelona
4 Dec 2024	ATV presentation and roadshow with Peter Schiefer, Head of ATV	London
4-5 Dec 2024	UBS Global TMT Conference	Scottsdale
04 Feb 25 ¹	Earnings Release for the First Quarter of the 2025 Fiscal Year	
20 Feb 25 ¹	Annual General Meeting 2025	

¹ Preliminary

Investor Relations contacts



Alexander Foltin

**Executive Vice President
Finance, Treasury & Investor Relations**

+49 89 234-23766
alexander.foltin@infineon.com



Daniel Györy

**Senior Director
Team lead Investor Relations**

+49 89 234-35078
daniel.gyoery@infineon.com



Isabell Diel

**Senior Manager
Institutional Investor Relations**

+49 89 234-38297
isabell.diel@infineon.com



Alexander Groschke

**Director
Institutional Investor Relations**

+49 89 234-38348
alexander.groschke@infineon.com



Holger Schmidt

**Director
Institutional Investor Relations**

+49 89 234-22332
holger.schmidt@infineon.com



Verena Soos

**Senior Manager
Retail Investor Relations**

+49 89 234-22332
verena.soos@infineon.com

Visitor address

Am Campeon 1 – 15
885579 Neubiberg
Germany

