



AIXTRON

H1/2024 Investor Presentation

Dr. Felix Grawert, CEO

Dr. Christian Danninger, CFO

July 25th, 2024

This document may contain forward-looking statements regarding the business, results of operations, financial condition and earnings outlook of AIXTRON. These statements may be identified by words such as “may”, “will”, “expect”, “anticipate”, “contemplate”, “intend”, “plan”, “believe”, “continue” and “estimate” and variations of such words or similar expressions. These forward-looking statements are based on the current assessments, expectations and assumptions of the executive board of AIXTRON, of which many are beyond control of AIXTRON, based on information available at the date hereof and subject to risks and uncertainties. You should not place undue reliance on these forward-looking statements. Should these risks or uncertainties materialize or should underlying expectations not occur or assumptions prove incorrect, actual results, performance or achievements of AIXTRON may materially vary from those described explicitly or implicitly in the relevant forward-looking statement. This could result from a variety of factors, such as those discussed by AIXTRON in public reports and statements, including but not limited to those reported in the chapter “Risk Report”. AIXTRON undertakes no obligation to revise or update any forward-looking statements as a result of new information, future events or otherwise, unless expressly required to do so by law.

Due to rounding, numbers presented throughout this report may not add up precisely to the totals indicated and percentages may not precisely reflect the absolute figures for the same reason.

Our registered trademarks: AIXACT[®], AIXTRON[®], Close Coupled Showerhead[®], EXP[®], EPISON[®], Gas Foil Rotation[®], Optacap[™], OVPD[®], Planetary Reactor[®], PVPD[®], STExS[®], TriJet[®]



Financials Q2/2024: Strong increase in order intake

- Strong order intake with EUR 176m (Q2/23: EUR 178m)
- Revenues with EUR 132m at upper half of guided range
- Gross Profit of EUR 49m; Gross Margin at 37% (lower yoy due to product mix)
- EBIT at EUR 13m; EBIT Margin at 10% (lower yoy due to mix and increased R&D spend)



Continued success in power electronics

- 57% of equipment OI from SiC and 29% from GaN power electronics in Q2
- Win of additional Top-5 SiC customer
- Large repeat orders from both SiC and GaN customers



Expansion of production footprint in Italy

- Initial invest of low double-digit EUR mio. for facility and start of production
- Flexible capacity upside up to 100% from today's (requires additional larger invest into facility infrastructure)



FY/2024 guidance adjusted

- Revenues FY/24E: EUR 620m – EUR 660m (before: EUR 630m – 720m)
- Gross Margin FY/24E: 43% – 45% (unchanged)
- EBIT Margin FY/24E: 22% – 25% (before: 24% – 26%)

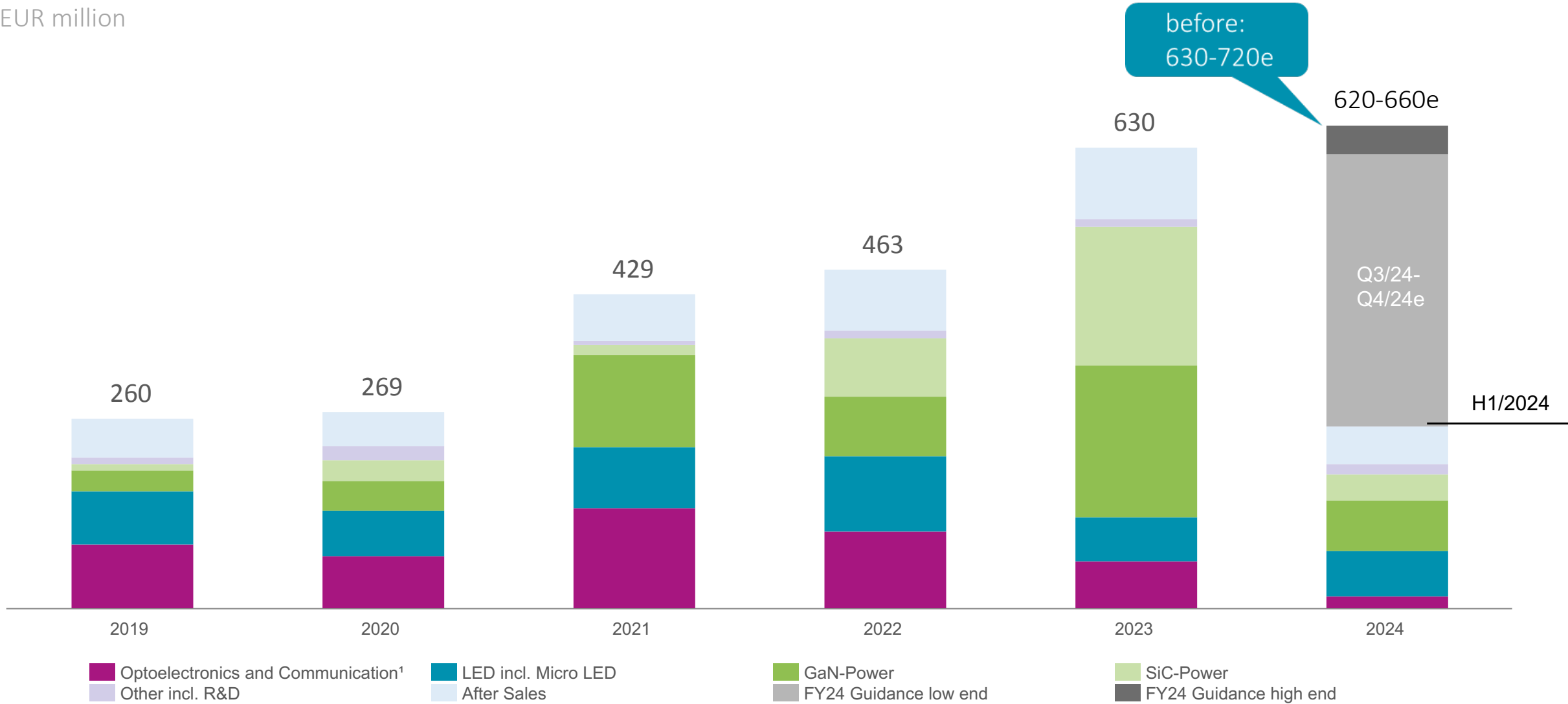


Revenues Q3/24E: EUR 150m – 180m

Annual Revenues by Application - flat to moderate growth in 2024



EUR million



¹ Includes applications in Consumer Optoelectronics, Solar and Telecom/Datacom

Consolidated Income Statement¹

(EUR million)	H1/2024	H1/2023	+/- (%)	Q2/2024	Q2/2023	+/- (%)
Revenues	250.1	250.7	—%	131.8	173.5	(24)%
Cost of sales	157.2	146.1	8%	82.7	100.0	(17)%
Gross profit	92.9	104.6	(11)%	49.1	73.5	(33)%
<i>Gross margin</i>	<i>37%</i>	<i>42%</i>	<i>(5)pp</i>	<i>37%</i>	<i>42%</i>	<i>(5)pp</i>
Selling expenses	7.4	6.7	10%	3.7	3.6	3%
General & admin expenses	15.7	16.5	(5)%	8.1	8.5	(5)%
R&D	47.5	39.0	22%	24.6	19.8	24%
Net other operating income	(0.5)	(5.6)	(91)%	(0.1)	(3.0)	(97)%
EBIT	22.8	48.1	(53)%	12.9	44.6	(71)%
<i>EBIT margin</i>	<i>9%</i>	<i>19%</i>	<i>-10pp</i>	<i>10%</i>	<i>26%</i>	<i>-16pp</i>
Net profit	22.0	43.9	(50)%	11.2	40.4	(72)%

¹ Rounded figures; may not add up

Consolidated Balance Sheet¹



(EUR million)	30.06.24	31.03.24	31.12.23
Property, plant & equipment and leased assets	209.8	169.9	147.8
Goodwill	72.9	72.7	72.3
Other intangible assets	5.4	4.8	4.4
Others	44.5	44.0	41.8
Non-current assets	332.5	291.5	266.3
Inventories	447.9	436.4	394.5
Trade receivables	117.0	118.0	157.6
Others	35.5	41.9	30.0
Cash & cash deposits & investments	79.4	148.5	181.7
Current assets	679.7	744.8	763.7
Equity	758.1	790.4	777.6
Non-current liabilities	7.5	7.7	7.7
Trade payables	72.9	55.0	57.8
Contract liabilities for advance payment	133.0	138.3	141.3
Others	40.7	44.9	45.6
Current liabilities	246.6	238.2	244.6
Balance sheet total	1,012.2	1,036.3	1,029.9

¹ Rounded figures; may not add up

Consolidated Statement of Cash Flows¹

(EUR million)	H1/2024	H1/2023	Q2/2024	Q2 2023
Net result	22.0	43.9	11.1	10.8
Adjust for:				
Non-cash items	7.6	5.3	4.6	2.1
Changes in Working Capital	(16.8)	(119.7)	4.4	(118.8)
Cash flow from operating activities	12.8	(70.5)	20.2	(76.3)
Capital expenditures/disposals	(69.2)	(9.6)	(43.5)	(5.7)
Free cash flow	(56.5)	(80.1)	(23.4)	(82.0)
FX effects/other	—	(1.3)	(0.4)	(0.7)
Cash & cash deposits & investments	79.4	210.4	79.4	210.4

¹ Rounded figures; may not add up

Renewed product portfolio – strong market adoption of G10 tool family

RIXTRON

G10-SiC



- 9x150mm (6") or 6x200mm (8")
- Cost benefit of batch tool with uniformity on par with single wafer tool
- Highest productivity in the market
- **End Markets/Products:** Electric vehicles, charging infrastructure

G10-GaN



- 8x150mm (6") or 5x200mm (8")
- Compact cluster for high volume GaN manufacturing
- Designed for replacement of Si power devices with GaN devices
- **End Markets/Products:** GaN Power Electronics & Wireless communication

G10-AsP



- 8x150mm (6") or 5x200mm (8")
- Fully automated AsP MOCVD system
- 10x lower defect density than predecessor tool
- **End Markets/Products:** Micro LED, Optical Communications, 3D-sensing & LiDAR

Strong market adoption – G10 makes ~50% of 2024 revenues

We address a comprehensive set of growth applications with our G10 family of products



Power Electronics

Optoelectronics / LEDs



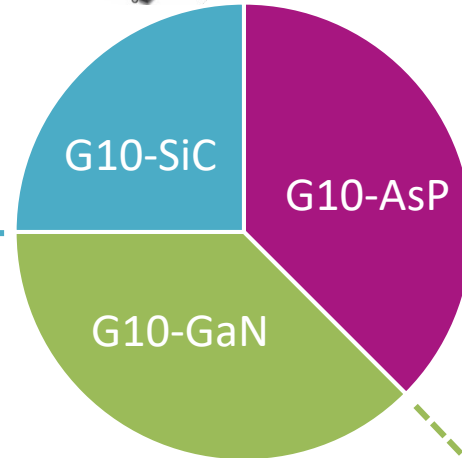
SiC Power

- EV main inverters and EV OBCs
- EV charging infrastructure
- Data centers: AC/DC
- Wind & PV
- Traction & large drives



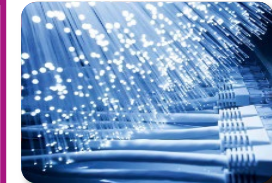
GaN Power & RF

- Fast charging / mobile devices
- Data centers: AC/DC & DC/DC
- Motor drives, e.g., white goods
- AI power delivery
- EV OBCs



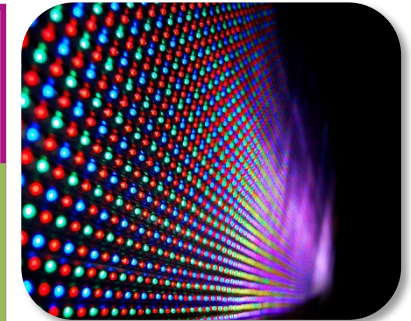
Lasers

- Optical data communication
- 3D sensing
- LiDAR



Micro LEDs / Specialty LEDs

- Displays
- TVs
- Smart watches
- Horticulture
- Automotive



GaN power adaption progressing application by application – and broadening in voltage class

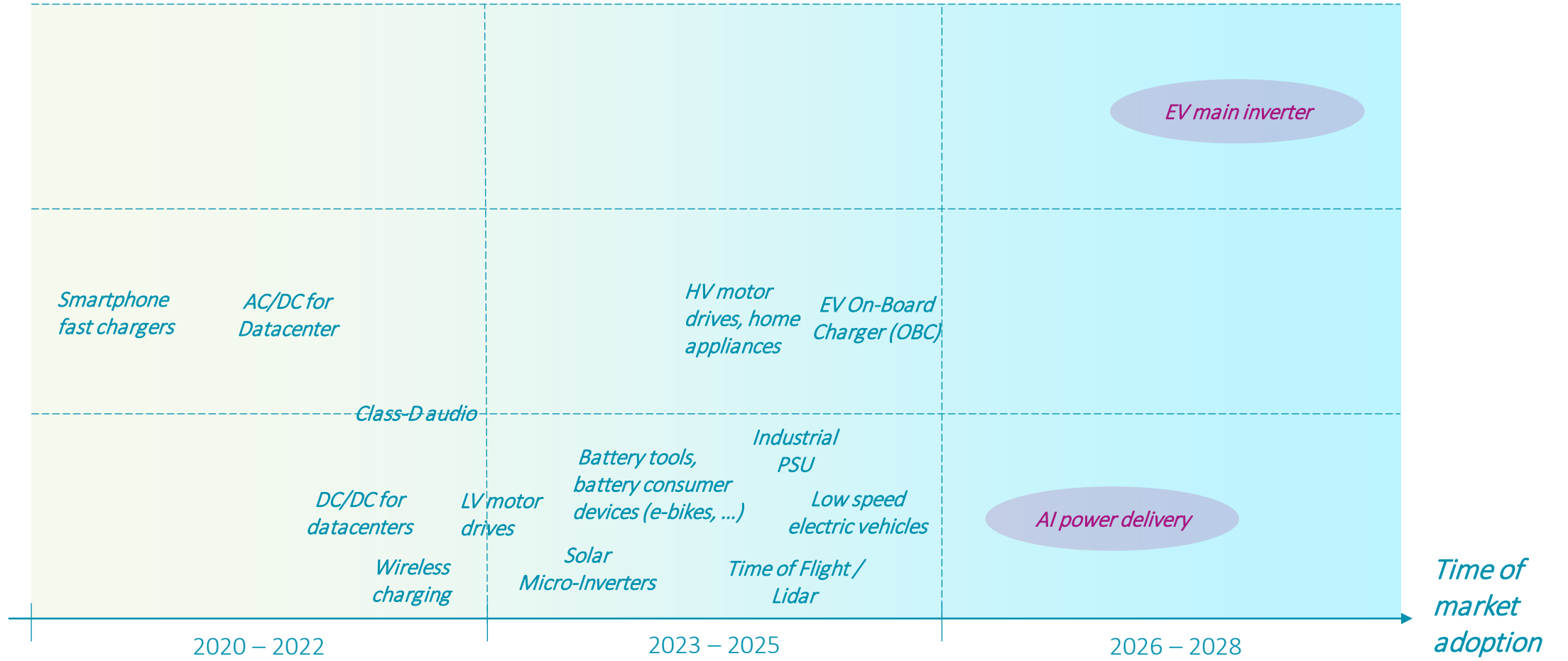
Voltage

≥ 1200 V

500-700 V

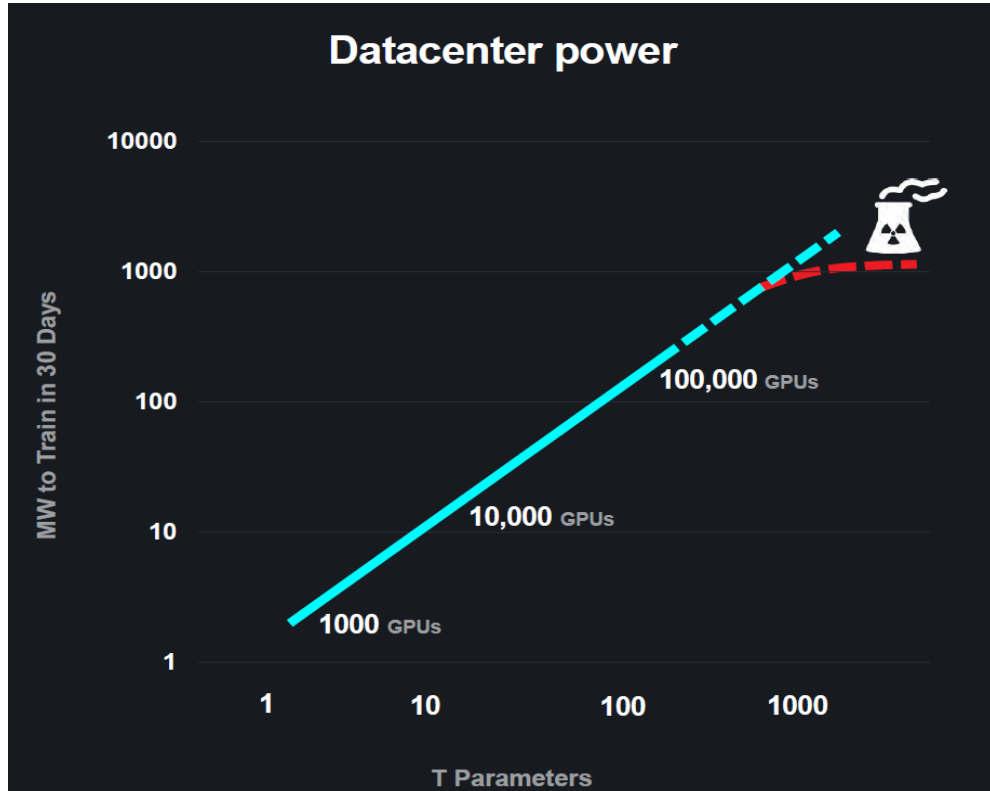
< 200 V

Deep dive next pages



Applications (mostly) captured by analysts

Not captured by analysts



Source: AMD (imec Technology Forum 2024)

The AI challenge of energy consumption

- Power consumption of AI GPUs increases from ~700W (H100) to est. 2000W per GPU in 2026
- Power to train one LLM equates to 1 nuclear power plant
- Energy efficiency becomes critical

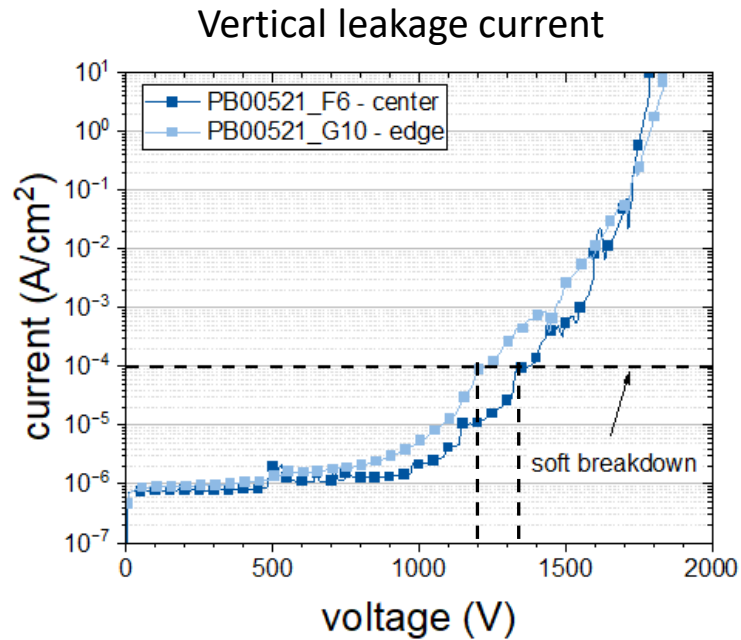
GaN power for AI GPUs

- GaN power switches offer high efficiency gains in energy conversion from wall-plug to transistor
- GaN can replace silicon in multiple conversion steps from 240V -> 48V, 48V -> 12V, 12V -> 1V
- Technology maturity expected on-time for the market need

Implications for AIXTRON

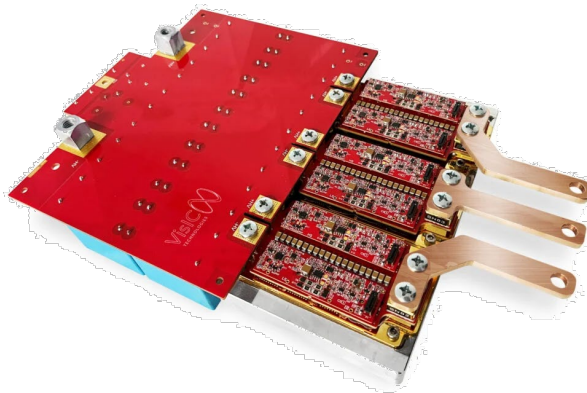
- High volume market opportunity due to increased currents at low voltages (>1000A)
- Additional momentum for GaN power electronics 2026+
- Need for flexible (peak) volume capacity – addressed by Italy plant

GaN achieves > 1200V breakdown voltage



Source: AIXTRON, measurement RWTH Aachen

3-Phase traction inverter powered by GaN devices



Status of GaN for EV main inverters

- $\geq 1200V$ breakdown for GaN devices demonstrated, achieving key parameters required for HVM
- Multiple companies with 650V or 1200V prototypes in the roadmaps for traction inverters
- Potential for cost reduction in main inverter
- Test at several OEMs ongoing

Implications for AIXTRON

- Additional momentum for GaN power electronics 2026/27+
- Need for flexible (peak) volume capacity – addressed by Italy plant



First tools to move in as planned in H2/2024

- Total invest of EUR ~100 million
- 1,000m² additional cleanroom space
- Allows for collaboration and co-development with customers

New AIXTRON Turin (Italy) site

AIXTRON



AIXTRON prepared to cover additional (peak) capacity demand

- Addresses (peak) volume demand of new markets
- 15,000m² of shop floor space – doubling capacity available today
- ■ Low initial invest (low double-digit EURm) for building incl. renovations and facility invest
- Complete buildout – with additional invest – allows to scale up to 250 units p.a. (additional ~EUR 1bn revenues)

AIXTRON – Guidance for Q3/2024 and FY/2024

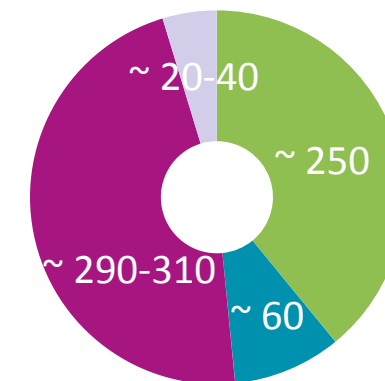


EUR million

Guidance ¹	Q3/2024 ¹	FY/2024 ¹
Revenues	EUR 150m – 180m	EUR 620m – 660m (from EUR 630m – 720m)
Gross Margin (%)		43% – 45%
EBIT Margin (%)		22% – 25% (from 24% – 26%)

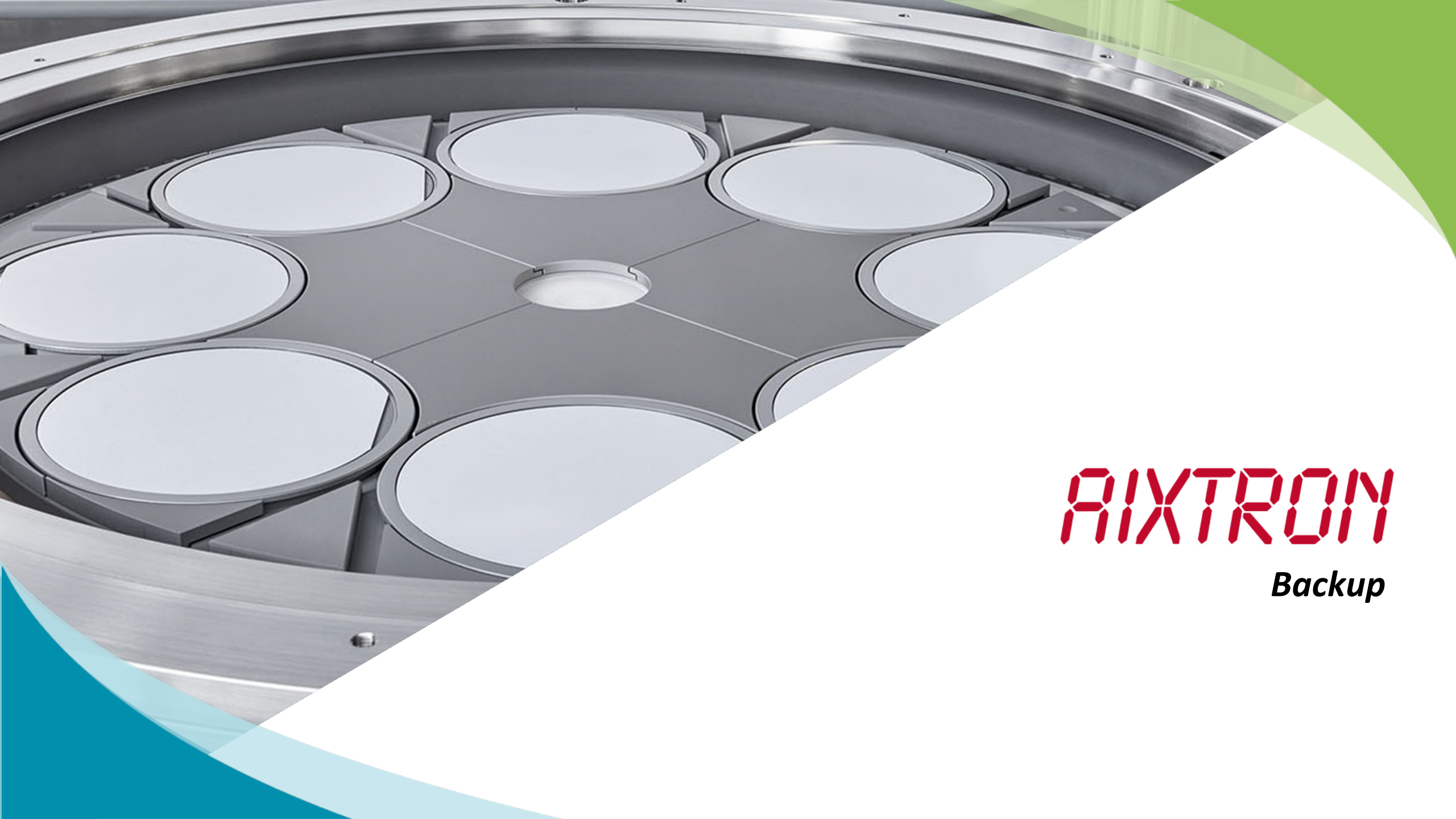
Revenue Guidance FY/2024

EUR million



- H1/2024 Revenues
- Q3-Q4/24e Revenues After Sales
- Q3-Q4/24e from Equipment Order Backlog
- Q3-Q4/24e from New Orders

¹: At \$1.15/€ Budget Rate for 1: At \$1.15/€ Budget Rate for 2024; please refer to the "Outlook" in the AIXTRON 2024 Half-Year Report



AIXTRON

Backup

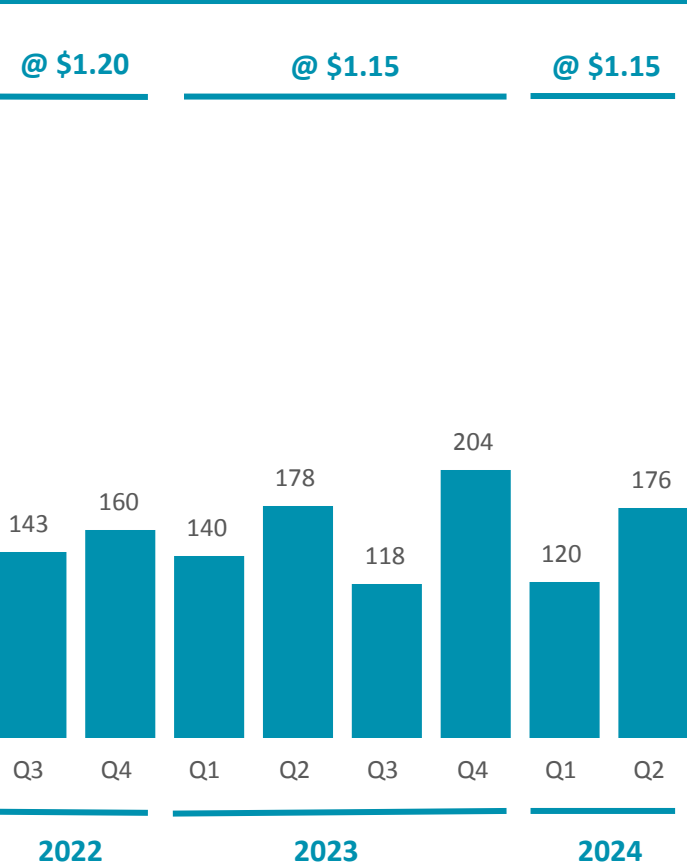
24 Months Business Development



EUR million

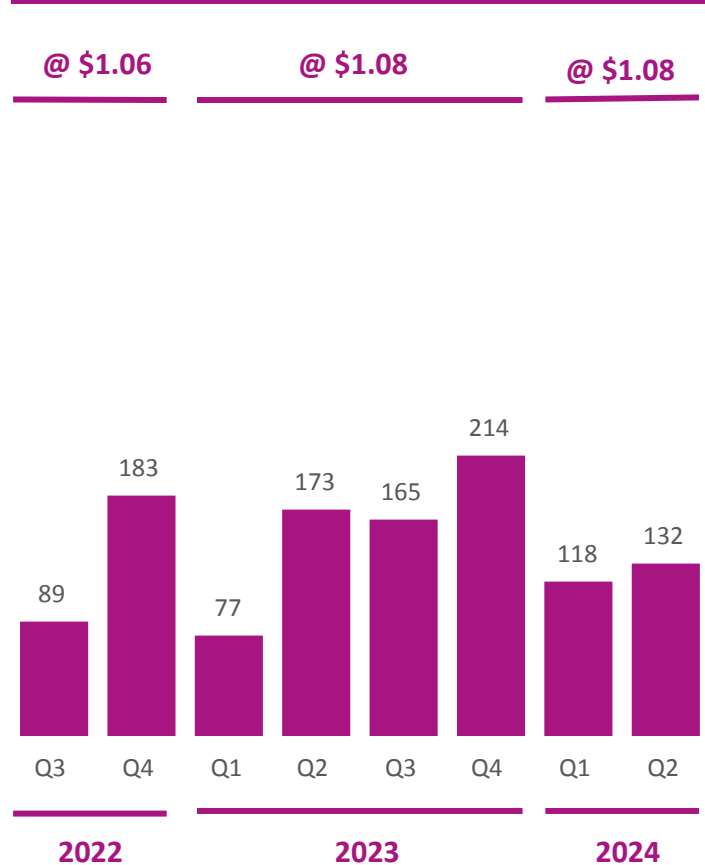
Order Intake

(incl. equipment & after sales)¹



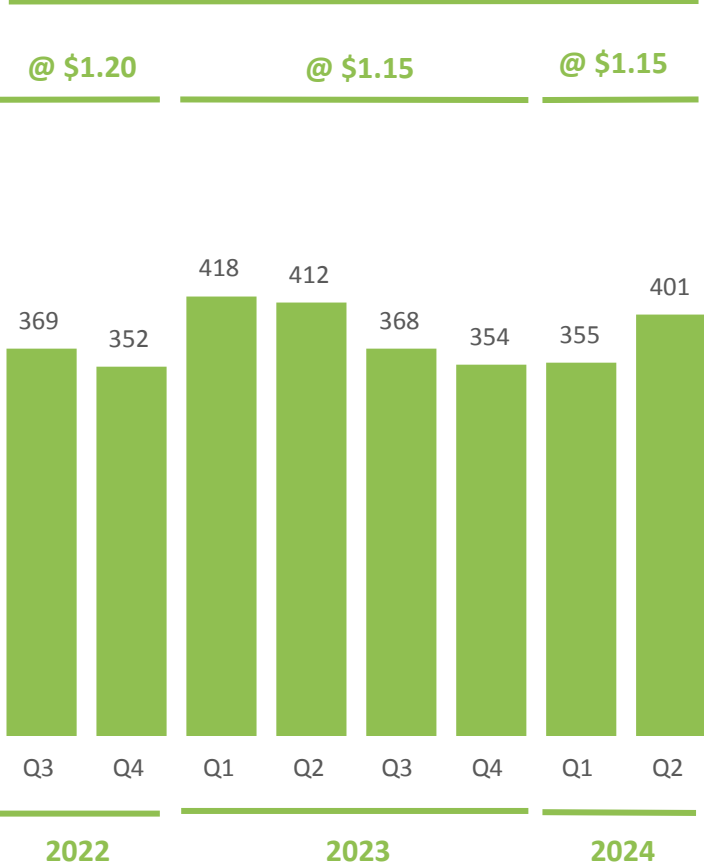
Revenues

(incl. equipment & after sales)²



Order Backlog

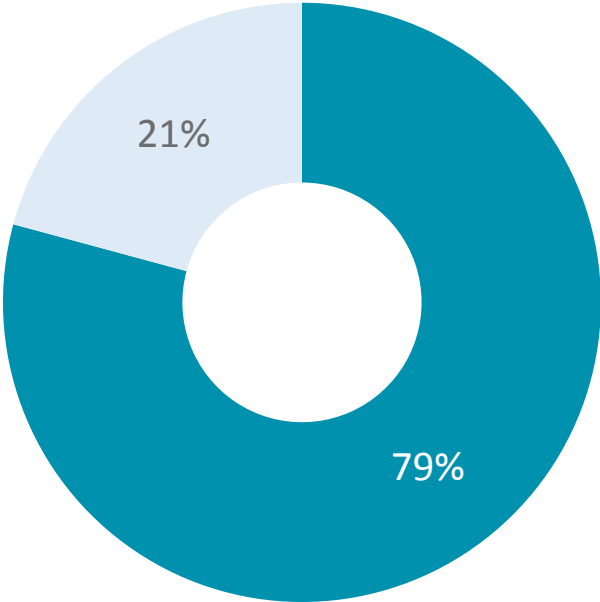
(equipment only)¹



¹ USD order intake and backlog were recorded at the prevailing budget rate (2022: \$1.20/€; 2023: \$1.15/€; 2024: \$1.15/€)

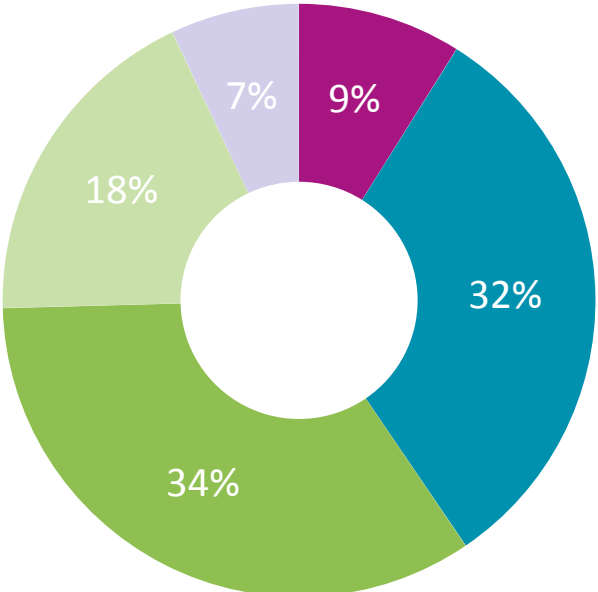
² USD revenues were converted at the actual period average FX rate (2022: \$1.06/€; 2023: \$1.08/€; 2024: \$1.08/€)

Equipment & After Sales



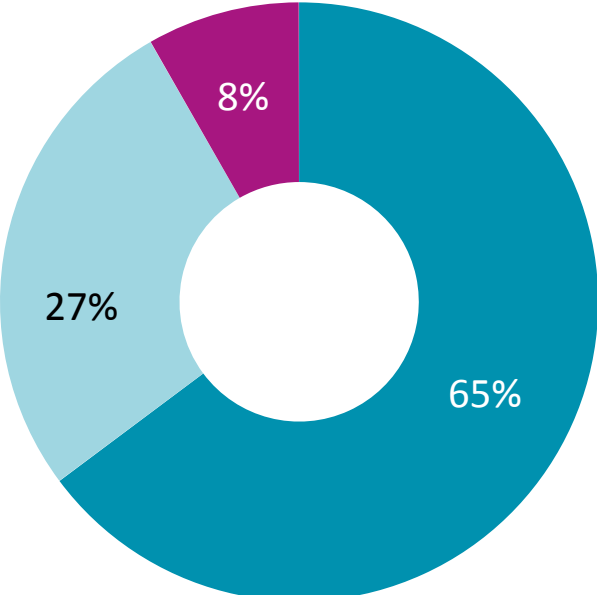
■ Equipment ■ After Sales

End Application (equipment only)



■ Optoelectronics & Communications²
■ LED incl. Micro LED
■ GaN-Power
■ SiC-Power
■ Other incl. R&D

Regional Split



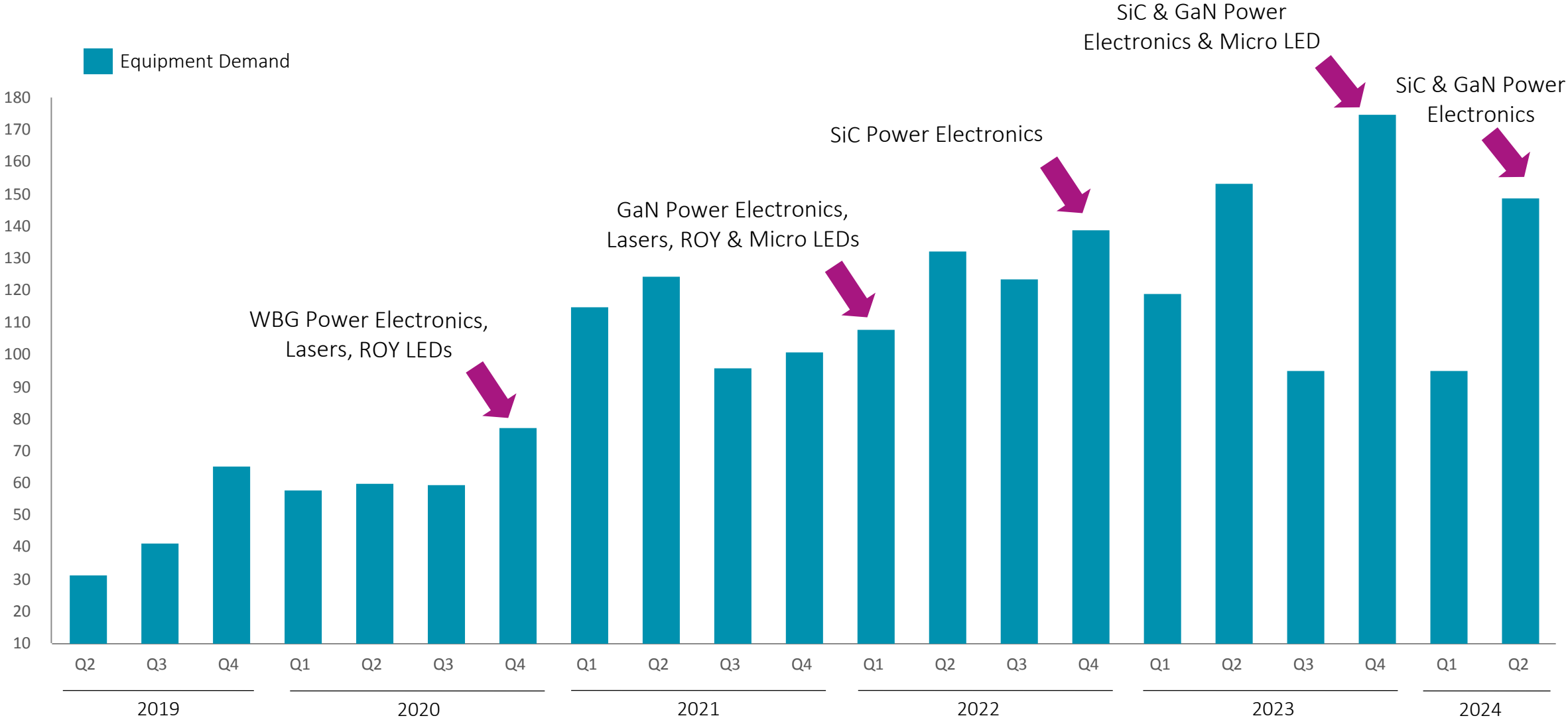
■ Asia ■ Europe ■ Americas

¹ Rounded figures; may not add up
² includes applications in Consumer Optoelectronics, Solar and Telecom/Datacom

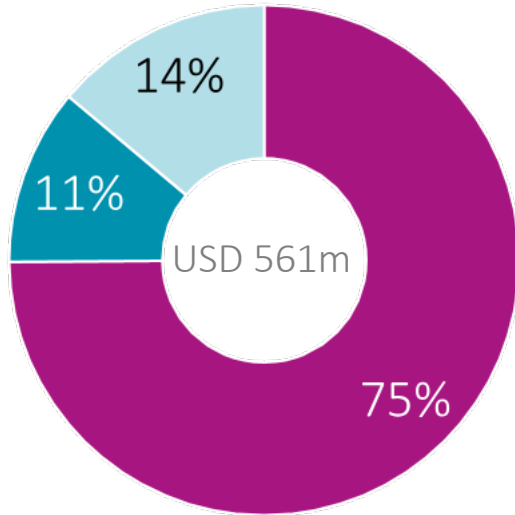
Demand Drivers on Order Intake per Quarter (Equipment Only)



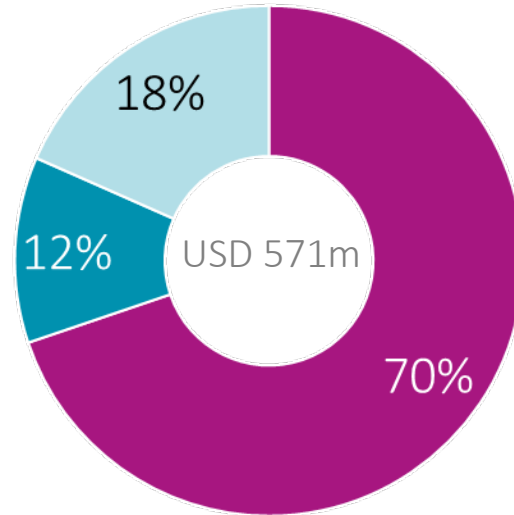
EUR million



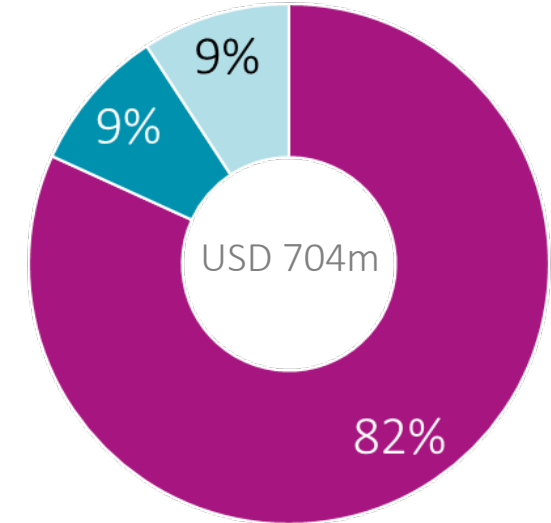
2021



2022



2023



AIXTRON Veeco AMEC

AIXTRON Competitive Landscape – clear market leader



		USA	Europe	China/Taiwan	Korea	Japan
Opto	GaAs/InP Lasers ROY (Micro) LED					
	GaN (Micro) LED			 		
Power	GaN Power					
	SiC Power			 		

Four Year View on Consolidated Income Statement¹



(EUR million)	FY/23	FY/22	FY/21	FY/20
Revenues	629.9	463.2	429.0	269.2
Cost of sales	350.8	267.9	247.5	161.0
Gross profit	279.0	195.3	181.5	108.3
<i>Gross margin</i>	44%	42%	42%	40%
Selling expenses	14.1	11.2	10.0	9.7
General & admin expenses	32.6	29.2	25.4	18.0
R&D	87.7	57.7	56.8	58.4
Net other operating income	(12.1)	(7.6)	(9.7)	(12.6)
EBIT	156.8	104.7	99.0	34.8
<i>EBIT margin</i>	25%	23%	23%	13%
Net result	145.2	100.5	94.8	34.5

¹ Rounded figures; may not add up

Four Year View on Consolidated Balance Sheet¹



(EUR million)	31.12.2023	31.12.2022	31.12.2021	31.12.2020
Property, plant & equipment and leased assets	147.8	99.0	74.0	63.5
Goodwill	72.3	72.5	72.3	71
Other intangible assets	4.4	3.3	2.2	2.9
Others ²	41.8	34.9	25.4	74.9
Non-current assets	266.3	209.7	174.0	212.2
Inventories	394.5	223.6	120.6	79.1
Trade receivables	157.6	119.7	81.0	41.3
Others	30.0	24.5	12.6	8.1
Cash & cash deposits & investments	181.7	325.2	352.5	249.7
Current Assets	763.7	692.9	566.7	378.2
Equity	777.6	663.3	592.2	496.4
Non-current liabilities	7.7	10.0	8.5	6.6
Trade payables	57.8	46.1	19.6	10.8
Contract liabilities for advance payment	141.3	141.2	77.0	50.8
Others	45.6	41.9	43.4	25.8
Current liabilities	244.6	229.3	140.1	87.5
Balance Sheet total	1,029.9	902.6	740.7	590.4

¹ Rounded figures; may not add up

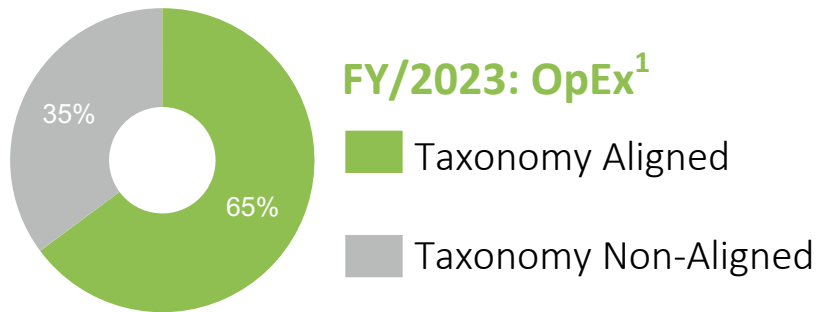
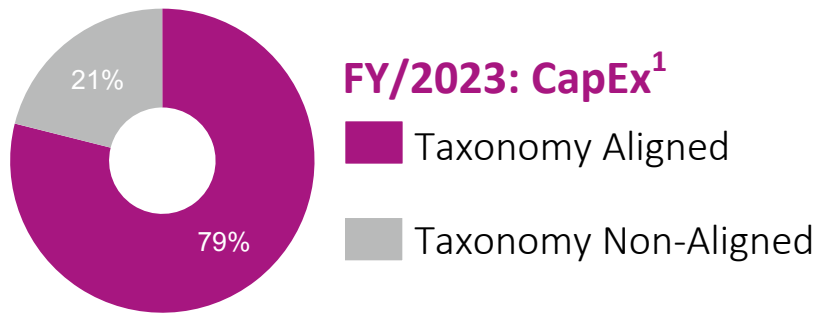
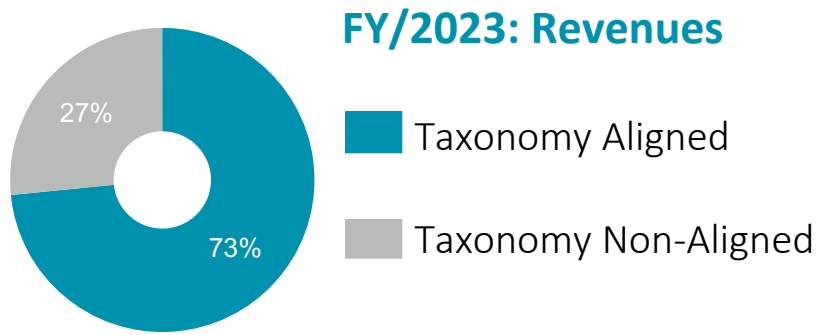
² Includes cash deposits of €60m as per Dec. 31, 2020

Four Year View on Consolidated Statement of Cash Flows¹



(EUR million)	FY/23	FY/22	FY/21	FY/20
Net Result	145.2	100.5	94.8	34.5
Adjust for:				
Non-Cash Items	7.5	5.7	5.7	8.0
Changes in Working Capital	(200.0)	(69.1)	(34.2)	(19.2)
Cash Flow from Operating Activities²	(47.3)	37.1	66.4	23.3
Capital Expenditures/Disposals	(62.4)	(29.5)	(17.4)	(9.3)
Free Cash Flow	(109.7)	7.7	48.7	14.0
FX Effects/Other	(1.7)	(0.4)	3.2	(2.0)
Cash & cash deposits & investments	181.7	325.2	352.5	309.7

¹ Rounded figures; may not add up
² Excludes changes in financial assets



¹ In line with EU Taxonomy Regulation

EU Taxonomy Aligned Technologies

- **Wide Band Gap (WBG) Power Semiconductors** based on:
 - **Gallium Nitride (GaN) and Silicon Carbide (SiC)**

Key technologies for energy-efficient Power Electronics
- **Micro LEDs:**
For the next generation of displays
- **Laser Diodes for Data Communication:**
Key technology for the digitalization of our world
- **Photovoltaics based on Compound Semiconductors:**
For high-tech applications (e.g., space applications)
- **Quantum Technologies:**
For neuromorphic computing and quantum sensing

ESG-Ratings

- **CDP (Europe):**
 - 2023: D (B)
 - 2022: C (B)
- **MSCI:**
 - 2023: AA
 - 2022: AA
- **Sustainalytics:**
 - 2023: 19.6 - Low risk
 - 2022: 19.2 - Low risk
- **ISS Oekom:**
 - 2023: C-
 - 2022: C-

Our Financial Reporting Dates:

31 Oct. 2024

Q3/24 Results, Conference Call

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Conferences & Roadshows:

27/28 Aug
29 Aug
3 Sep
4 Sep
23/24 Sept
25 Sept
19 Nov
20/21 Nov

Jefferies Semi [et al.] Summit, Chicago
Deutsche Bank Conference, Dana Point
Commerzbank & ODDO Conf. 2024, FFM
DB Access TMT Conference, London
Berenberg & Goldman Sachs Conf., Munich
Baader Investment Conference, Munich
DZ BANK Equity Conference, Frankfurt
Morgan Stanley European Technology [et al.]
Conference 2024, Barcelona

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Our technology. Your future.

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