

Corporate Presentation

April 2024

Forward-Looking Statement

Certain statements included herein may constitute forward-looking statements within the meaning of the securities laws of certain jurisdictions. Certain such forward-looking statements can be identified by the use of forward-looking terminology such as "believes", "expects", "may", "are expected to", "intends", "will", "will continue", "should", "would be", "seeks", "anticipates" or similar expressions or the negative thereof or other variations thereof or comparable terminology. These forward-looking statements include all matters that are not historical facts. They include statements regarding Alphawave IP Group Plc's ("Alphawave IP") intentions, beliefs or current expectations concerning, amongst other things, its results in relation to operations, financial condition, prospects, growth, strategies and the industry in which it operates. By their nature, forward-looking statements involve risks and uncertainties because they relate to events and depend on circumstances that may or may not occur in the future. Forward-looking statements are not guarantees of future performance and Alphawave IP's actual results of operations, financial condition, and the development of the industry in which it operates, may differ materially from those made in or suggested by the forwardlooking statements contained in this Presentation. In addition, even if Alphawave IP's results of operations, financial condition, or the development of the industry in which it operates are consistent with the forward-looking statements contained in this Presentation, those results or developments may not be indicative of results or developments in subsequent periods. Important factors that could cause those differences include, but are not limited to customer demand, Alphawave IP's innovation and R&D and technology capabilities, target market trends, industry trends, customer activities and end-market trends, market acceptance of Group technologies; increased competition; macroeconomic conditions; changes in laws, regulations or regulatory policies; and timing and success of strategic actions. These forward-looking statements speak only as of the date of this Presentation. As such, undue reliance should not be placed on forward-looking statements. Other than in accordance with legal and regulatory obligations, Alphawave IP undertakes no obligation to publicly update or revise any forwardlooking statement, whether as a result of new information, future events or otherwise.



Founding Team and Track Record

Alphawave Semi's Founding Team Has Supplied Connectivity Solutions For Global Tier-One Customers Since 1998

Experienced Founding Management Team

JOHN LOFTON HOLT

Executive Chairman, Founder



achronix \$3

HOLT BROTHERS

Capital Partners

 >20 years of executive and investment experience

TONY PIALIS

Chief Executive Officer, President, Founder



Snowbush IP



 >20 years of executive experience

JONATHAN ROGERS

SVP Engineering, Founder



SVP Operations, Founder





 >20 years of executive experience



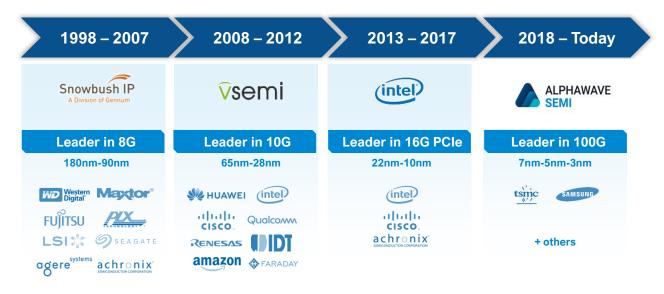




 >20 years of executive experience

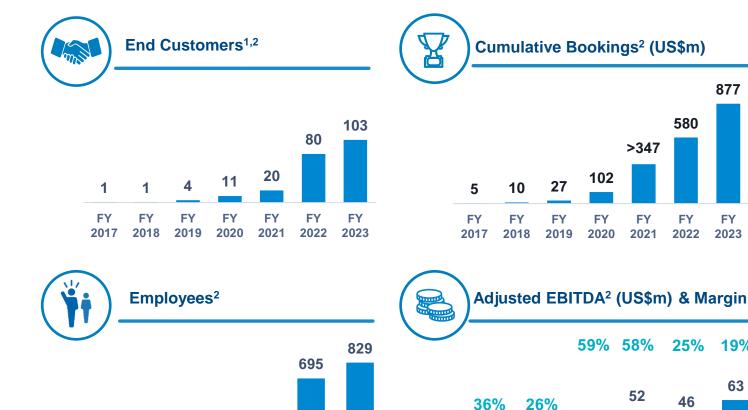
Swift Success at Alphawave Underpinned by a >20 Year Track Record

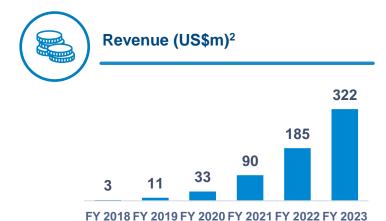
- ✓ Members of the Management team have worked together for nearly two decades
- ✓ Technical team has developed in every advanced technology from 180nm → 3nm
- ✓ Communications products shipped to Tier-One customers globally since 1998
- ✓ Founders have raised and deployed \$300M across four successful semiconductor companies that have generated nearly \$3B of value since 2004

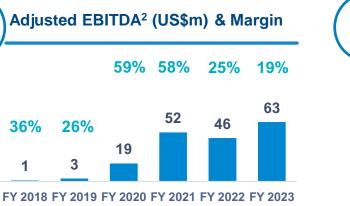




Focused on Delivering Results Since IPO...











FY 2017 and FY 2018 as per IPO prospectus. FY 2023 includes backlog adjustment

149

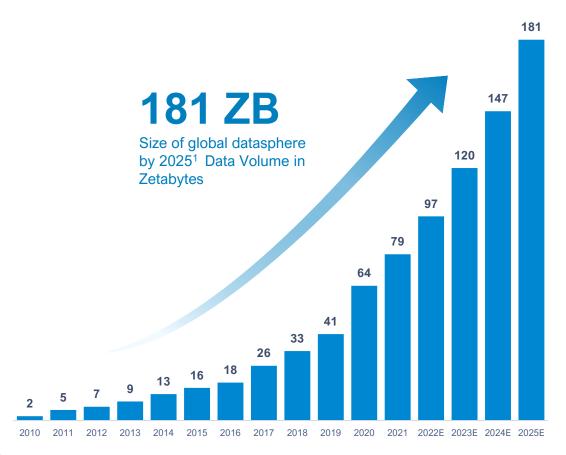
FY 2018 FY 2019 FY 2020 FY 2021 FY 2022 FY 2023

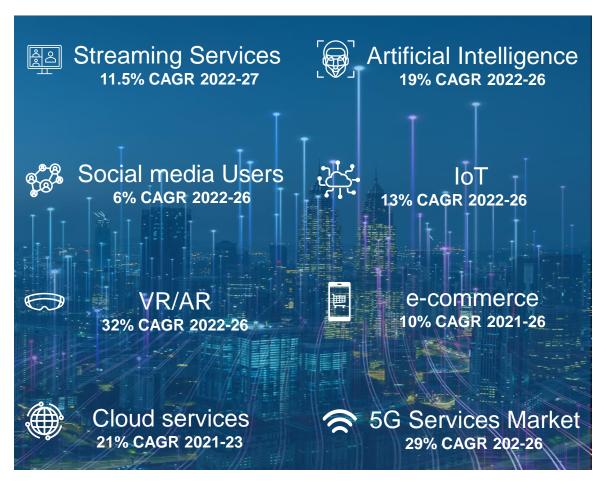
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The Age of Exponential Data Growth

More Sensors, Devices, Images and Multimedia... More Enterprise Data

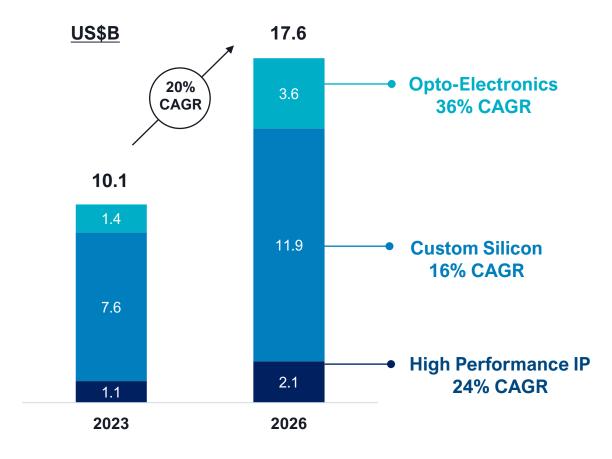




¹ The Data Center Journey, From Central Utility To Center Of The Universe (semiengineering.com). Source Statista See slide 93 for all other references



Addressable Market Expanding to \$18B by 2026



Market Drivers

- Digitalisation drives exponential growth in data
- Data bandwidth doubles every 2-3 years driving a technology refresh of switches and transceivers
- High-speed and power-efficient connectivity technology is a key enabler
- Hyperscalers investing through the economic cycle



Semico Research Corporation, December 2022, IPNest and Lightcounting



Alphawave Technology Strengths

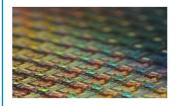
Leading Edge Capabilities and Technologies to Deliver the Fastest Connectivity Solutions

High-Speed Connectivity IP



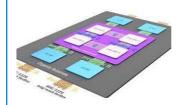
- •224Gbps,112Gbps, HBM, chiplets
- •#1 TSMC OIP partner 2020-2023
- •2022-2023 Samsung Best Collaboration Award

Advanced Silicon



- •First in 7nm, 6nm, 5nm, 4nm and 3nm
- •Working on 2nm and 18A

Chiplet – Package Design



- Deep expertise in chiplet packages design
- •2.5D and 3D package designs in production

Opto-Electronics



- PAM4, Coherent DSPs, and silicon photonics for 1.6T Ethernet
- •224Gbps photonics in silicon





Data Connectivity Everywhere

Our Expertise is in The Circuits and Systems Required to Communicate Data...

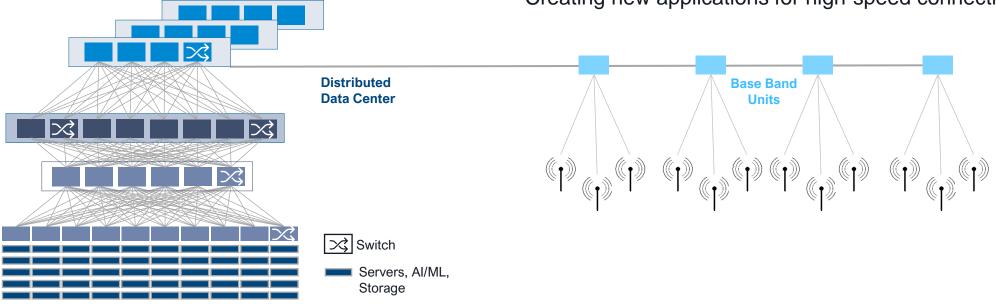
...Whether separated by kilometres of optical fibre or meters of copper cable, sub-millimetre printed wiring, the start- and end-points of data are silicon chips

Inside Data Centers...

 Up to 76% of all data centre internet traffic traverses internally within data centres

...and at the Edge (5G rollout a major driver)

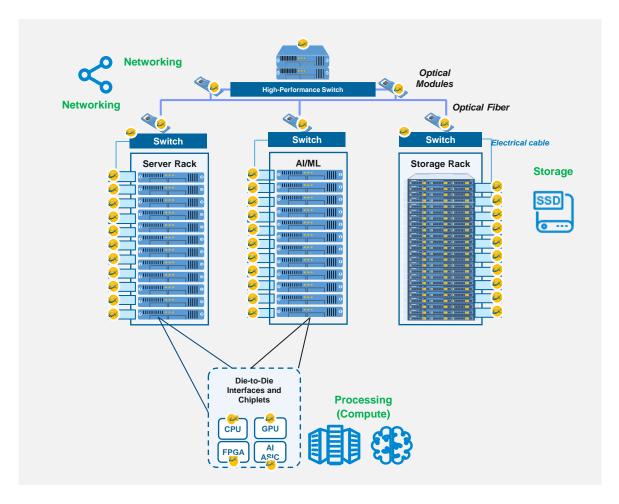
- Placing application-specific compute close to the sources of data
- Creating new applications for high-speed connectivity





Our Technology Enables High-Speed Data Transmission

In Key Applications Inside Data Centers



Semiconductors are at the start and end points of any transmission of data

	Applications	Where
Processing (Compute)	CPU, GPU, FPGA, AI	In Servers and AI/ML racks
Networking	Network cards (NICs), Switch, optical modules and cabling	In servers and AI/ML racks, switches, optical modules, and cabling
Storage	Solid State Drives (SSD), Flash Memory, Hard Disk Drives (HDD)	In storage rack



Key Technology Trends

Optics Getting Closer to The End Points

Increasing use of optical cables over copper and co-packaged optics for lower cost, power and latency

Coherent Optical

Increasing use of coherent optical communication inside data centers to overcome the bandwidth limitations of optical components

Disaggregated Computing

Disaggregation of compute and storage to increase efficiency

Advances on CMOS Technology

Higher development and manufacturing costs of high-end semiconductors

Chiplet

Emergence of the chiplet design paradigm



Long-Term Technology Trends

Today

- Emphasis on using copper connectivity wherever possible to keep costs low
- Computer and system designers select packaged electronic parts and wire them together on a custom circuit board
- Global and interconnected supply chain

10 Years

- Ubiquitous use of low-cost optical connectivity solutions, even over short reaches
- Complete systems
 designed and made by
 packaging multiple
 standard silicon chiplets
 within a few centimetres
- Complete on-shore ecosystem for integrated circuits, chiplets, advanced packaging

Alphawave Semi is well-positioned to:

Extend and expand technology leadership

Deliver solutions for emerging optical connectivity

Offer complete custom silicon expertise and chiplet IP

Leverage solid relationships with major western companies and governments



Drivers of Our Vision and Ambition



Building a Leading Connectivity Business



Land and Expand



High-Performance
Silicon IP and Products

People and culture



Vertically Integrated



Building a Leading Connectivity Business



High-Performance Silicon IP and Products

- Leading edge connectivity IP
- Delivering the fastest connectivity solutions
- Complete set of products and expertise aligned to long-term market trends



Vertically Integrated

- Monetising our IP through IP licences, custom silicon and connectivity products
- Greater scale
- Enhanced competitive position



People and Culture

- Technology-centric, open and diverse culture fosters innovation
- Over 800 employees
- Key design centres in Canada, US, Israel and India



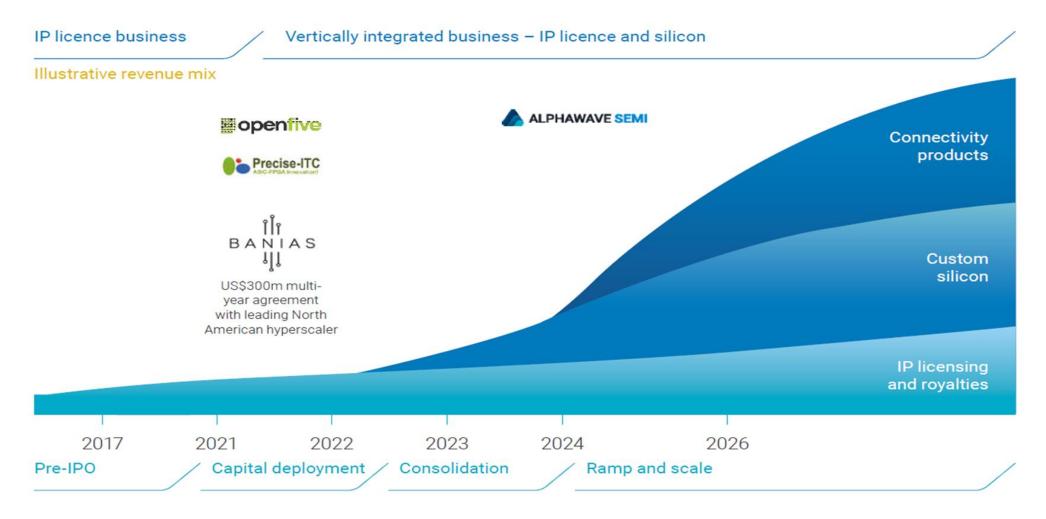
Land & Expand

- Adding value to customers by servicing more of their connectivity needs
- Growing opportunity with large cloud, wireless infrastructures and hyperscalers
- Collaborative approach with customers promotes innovation



Leading Connectivity Technology for Digital Infrastructure

Vertically Integrated - Monetising our IP Through IP Licence and Silicon





Growth Strategy Built on a Broad Product Portfolio

Leading Connectivity IP and Silicon

Connectivity Silicon IP



Networking, Optical, Compute, Storage, AI, CPU, 5G Infrastructure, Automotive

Custom Silicon



Bespoke silicon to customers' requirements incorporating our Connectivity IP

Connectivity Products



High bandwidth, advanced node optical and electrical networking products

First revenue 2024

PAM4 & Coherent Transceivers

>235 IPs and partnered with TSMC, Samsung, Intel 103 revenue generating end customers

Leveraging our IP



Connectivity Silicon IP

Servers and Storage



High-speed Interface IP for data centre compute – CPU, GPU, AI & FPGA

PCIe Gen6 / CXL 3.0



Networking



Interface IP for Networks – Switches, Routers, DPUs, NICs

400G, 800G, 1.6T Ethernet



Memory



Memory Interface IP for DRAMs & HBM – CPU, GPU, AI, FPGA, DPUs

HBM, LPDDR, DDR



Chiplets



Chiplet Interface IP 2.5D and 3DIC

UCIe, BOW, Open-HBI





Custom Silicon

Silicon Proven Solutions Leveraging Our High-Performance IP



Custom Silicon Expertise

- Experienced engineering teams and advanced packaging expertise (2.5/3D)
- Reliable operations and partnerships
- Proven design flow and methodology for leading nodes
- Application optimized IP sub-systems





Silicon IP



>235 IPs and partnered with TSMC, Samsung, Intel

- PCIe/CXL
- 224G/112G
- Ethernet
- HBM, LPDDR, DDR
- Die-to-Die Chiplets
- RiscV

Strong Partnerships Across the Supply Chain



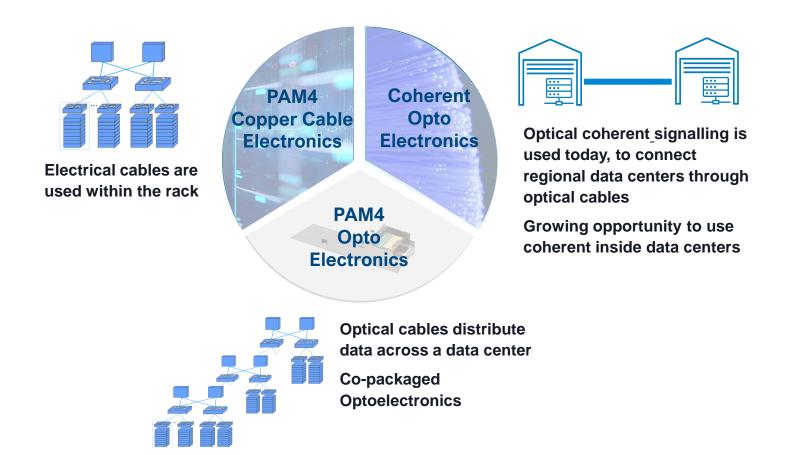


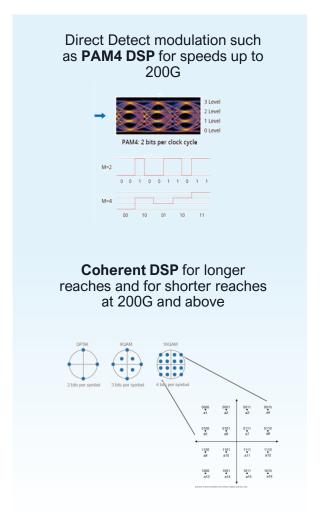




Connectivity Products

Full Range of PAM4 and Coherent DSPs – Electrical and Optical

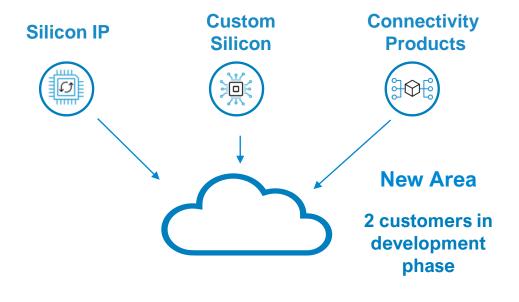






Adding Value to Customers - Land & Expand

Servicing More Connectivity Requirements



Number of Revenue
Generating End-Customers

20 103

FY 2021 FY 2024

- Technology refresh/upgrade provide an opportunity to work with new customers
- Once technology is qualified and deployed is easier for customers to increase adoption
- Close R&D collaboration with customers drives product development
- Hyperscaler multi-year agreement provides unique platform to develop new products and scale the business



People and Culture

Attracting Talent and Creating an Environment to Foster Leading Innovation

- Attracting and retaining talent:
 - Employee share ownership aligned to shareholder's interests
 - Working on leading edge technology
 - Supporting employees' wellbeing through period of accelerated business expansion
- Technology-centric culture focused on solving the hardest challenges
- Promoting an open and diverse environment to foster innovation
- Great Place To Work certified in all our main locations









Our Commitment to ESG

Building the Team to Support a Responsible Business Expansion

ESG Steering Group to drive improvements and long-term sustainability strategy



- Our products contribute to more sustainable data centers
- Fabless business model with relatively lower carbon footprint
- Ongoing commitment to actively manage and reduce our carbon footprint
- Environmental disclosures following TCFD recommendations



Social

- Talent identification and retention programme
- Commitment to Diversity & Inclusion
- Corporate values fostering innovation and the next wave of innovators
- University Relations, Internships, and Community Engagement programme



Governance

- Responsible Company adhering to high standards as per our Code of Ethics and Business Conduct
- Increasing focus on Supply Chain Governance
- Head of Governance driving further improvements



Recent Company Announcements

Alphawave Semi and InnoLight Collaborate to Demonstrate Low Latency Linear Pluggable Optics with PCIe 6.0[®] Subsystem Solution for High-Performance AI Infrastructure at OFC 2024

03.25.2024

Alphawave Semi
Demonstrates 3nm SiliconProven 24Gbps Universal
Chiplet Express™ (UCle™)
Subsystem for HighPerformance Al Infrastructure

03.11.2024

Alphawave Semi Announces Appointment of Charlie Roach as Chief Revenue Officer

02.12.2024

Alphawave Semi and Teledyne LeCroy Unveil PCIe 7.0 Signal Generation and Measurement

01.31.2024

Nubis Communications and Alphawave Semi Showcase First Demonstration of Optical PCI Express 6.0 Technology

01.30.2024

Alphawave Semi and proteanTecs Collaborate to Provide System Insights and Analytics for Custom Silicon and Chiplets

01.30.2024



FY 2024 and FY 2025 Outlook

US\$	2024 Outlook	2025 Outlook
Revenues	\$345m to \$365m	\$450m
Adjusted EBITDA	~\$70m	
Adjusted EBITDA %	20%	20%-25%

- This reflects the deliberate decision to materially reduce China as a proportion of revenue.
- We expect the revenue profile in 2024 to be back end loaded and H1 2024 revenue to be below H1 2023, which saw a significant contribution from the legacy OpenFive backlog.
- In H1 2024 we expect to invest in capital and R&D expenses as we continue to invest in our product business





Bookings Q1 2024

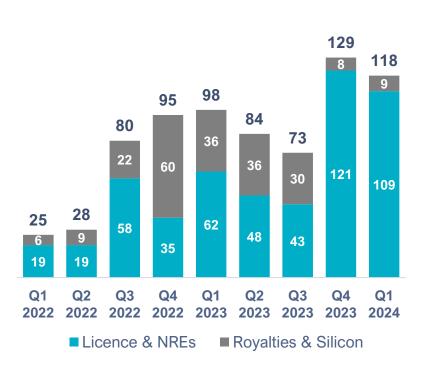
Q1 2024 Bookings – Strong Start to 2024

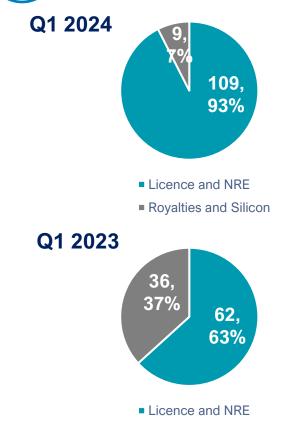
Licence and NRE Bookings up 75% Year-on-Year





Split by Business (US\$m)





■ Royalties and Silicon

US\$118m bookings in Q1 2024

Licence & NRE

- Two 5nm Al-related custom silicon design wins (Korea and North America)
- 4nm licencing IP deal with leading North American automotive company

Royalties & Silicon

 Accelerated transition away from low margin legacy business from Chinese customers

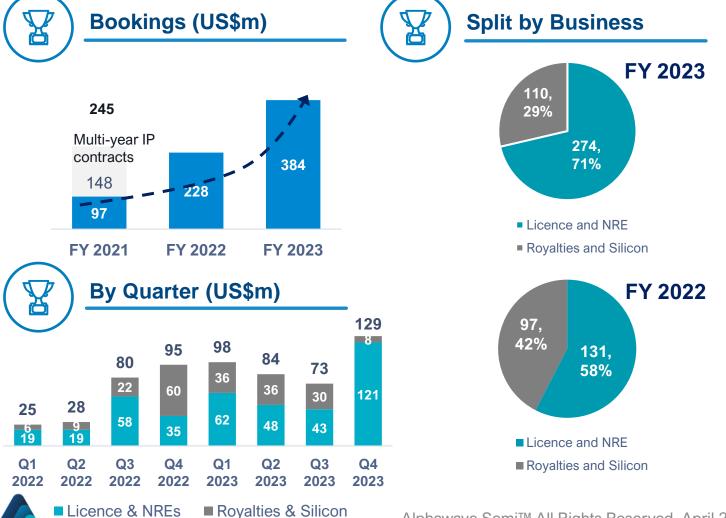




Financial Results FY 2023

FY 2023 Bookings up 70% Year-on-Year

Over 80% of Licence & NRE Bookings in Advanced Nodes



Licence & NRE

- Main contribution from North American customers
- Increased contribution from APAC and EMEA
- Reduced contribution from China customers for the second consecutive year
- Major extension of IP development and licence deal with a leading APAC customer including 2nm technology
- Two 3nm custom silicon design wins

Royalties & Silicon

- Mainly driven by orders from legacy Chinese customers
- Increased contribution from North American customers

FY 2023 Highlights

Bookings

US\$384m

FY 2022: US\$228m

Revenue

US\$322m

FY 2022: US\$185m

Adjusted EBITDA¹

US\$63m

FY 2022: US\$49m

Design Wins

34

FY 2022: 28

End-Customers

103

FY 2022: 80

Employees

829

FY 2022: 695

1 See slide 36 for reconciliation of non-GAAP metrics



FY 2023 Highlights

Backlog¹

US\$355m

Dec 2022: US\$380m

Bookings¹

US\$384m

FY 2022: US\$228m

Revenue

US\$322m

FY 2022: US\$185m

Adjusted EBITDA¹

US\$63m

FY 2022: US\$49m

Cash generated from operations

US\$26m

FY 2022: US\$1.0m

Cash and Cash Equivalents

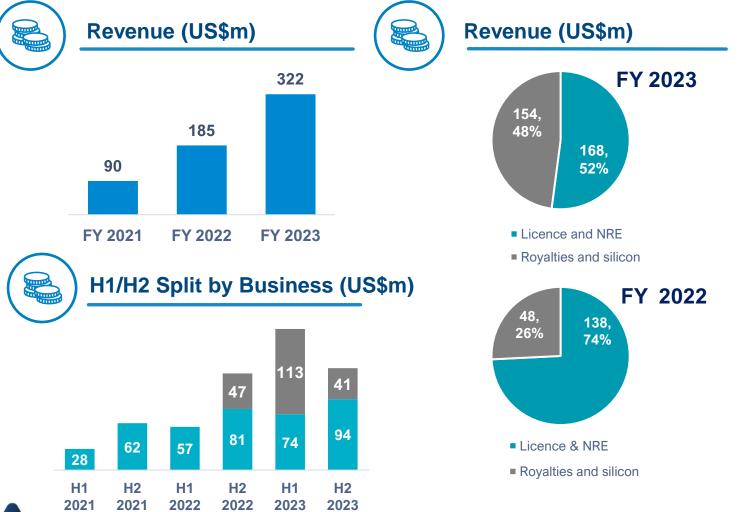
US\$101m

FY 2022: US\$186m



FY 2023 Revenue up 74% Year-on-Year

Revenue Outside of China US\$131m up 63% Year-on-Year



■ Royalties and silicon

Licence & NRE

Growth mainly driven by multiyear contracts and APAC customers

Royalties & Silicon

 Approximately 2/3 from Chinese customers related to preexisting custom designs in production

APAC + 97% YoY North America +60% YoY

FY 2023 Gross margin at 51% reflects business mix including legacy revenue



■ Licence and NRE

Investing In Future Revenue Growth

Operating Expenses Reflect Increased Headcount

- Increased average headcount from 361 to 758
- R&D increased average headcount and some additional IT/SW tooling required
 - US\$54.5m development capitalised in FY 2023 (FY 2022: US\$7.2m) of which US\$46.2m were R&D expenses
- S&M and G&A increased average headcount and further investment to upscale our finance, legal and HR functions
- Other expenses/(income)¹
 - FY 2023 SBP US\$40.7m (FY 2022: US\$15.7m)
 - US\$3.0m exchange loss (FY 2022: exchange gain US\$36.8m)

Closing Headcount	FY 2022	FY 2023
R&D	621	741
S&M	17	30
G&A	57	58
Total	695	829



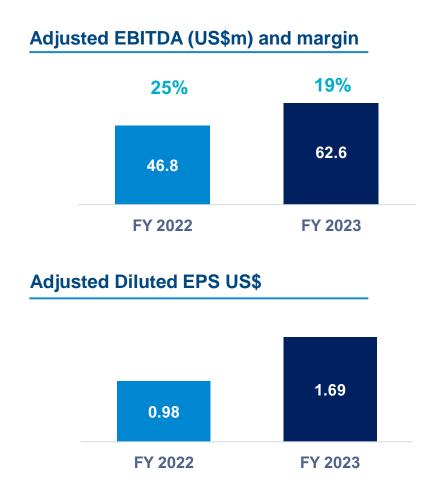
Due to rounding, numbers presented in the chart may not add up to the totals provided.

^{1.} There has been a change to the grouping of operating expenses in 2022, specifically relating to the compensation element of Banias deferred cash rights. This is shown within other operating expenses/(income) in 2023 so we have changed 2022 operating expenses /(income) to be presented on the same basis (see notes 6 and 30).

Higher Adjusted EBITDA Reflects Increasing Scale

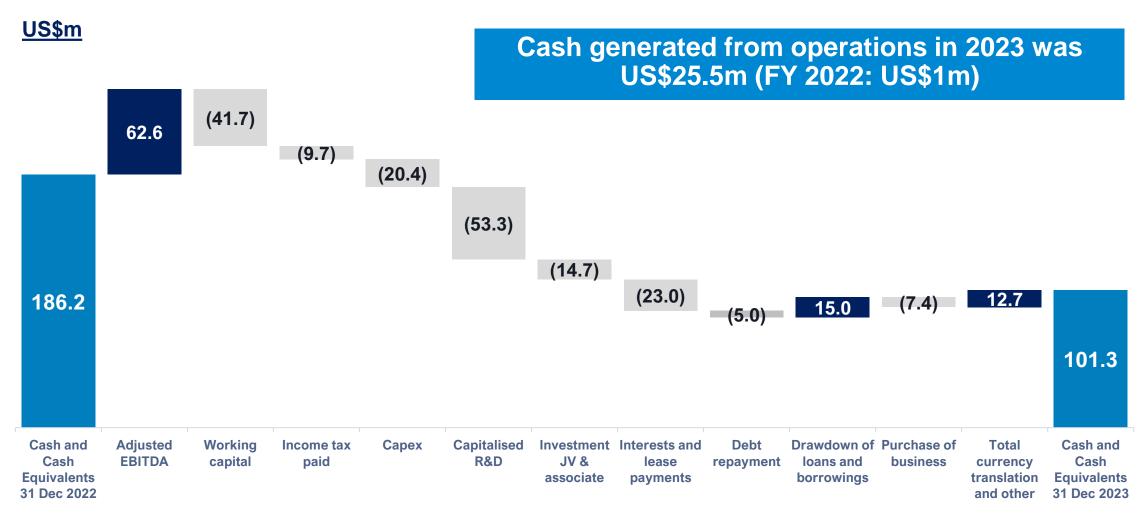
Adjusted EBITDA Margin Reflects Business Mix and Investment in Growth

- Adjusted EBITDA¹ of US\$62.6m, 34% over FY 2022
- Adjusted EBITDA margin of 19% reflects:
 - Increased contribution from legacy custom silicon revenue at low margin
 - Investment to support our pipeline of opportunities
- Adjusted diluted EPS of \$1.69, up 72% over FY 2022





FY 2023 Cash Flow Bridge



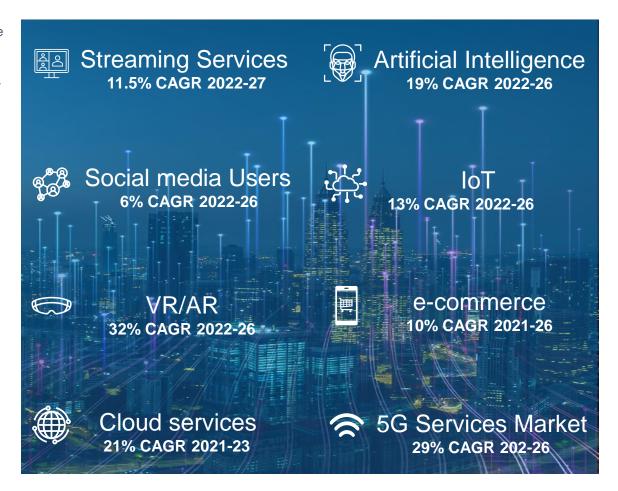




Appendix

References Slide 4

- Streaming Services <u>Video Streaming (SVoD) Global | Statista Market Forecast Revenue</u> is expected to show an annual growth rate (CAGR 2022-2027) of 11.48%, resulting in a projected market volume of US\$139.20bn by 2027
- Social Media Users Number of worldwide social network users 2027 | Statista Number of users from 4.26 billion in 2021 to almost six by 2027
- VR/AR IDC Spending Guide Forecasts Strong Growth for Augmented and Virtual Reality The five-year compound annual growth rate (CAGR) for AR/VR spending will be 32.3%. Virtual reality will account for more than 70% of all AR/VR spending throughout the 2022-2026 forecast
- Cloud Services Gartner Forecasts Worldwide Public Cloud End-User Spending to Reach Nearly \$500 Billion in 2022 2021:\$419m 2023 \$600m
- Al IDC Forecasts 18.6% Compound Annual Growth for the Artificial Intelligence Market in 2022-2026
- IoT https://www.statista.com/statistics/1183457/iot-connected-devices-worldwide/
- **e-commerce** Global Ecommerce Growth Forecast 2022 | Morgan Stanley Over the long term, the e-commerce market has plenty of room to grow and could increase from \$3.3 trillion today to \$5.4 trillion in 2026.
- 5G Services Market Global 5G Services Market Size is Anticipated to Reach
 (globenewswire.com) The global size to grow from USD 53.0 billion in 2020 to USD 249.2
 billion by 2026, at a Compound Annual Growth Rate (CAGR) of 29.4% during the forecast
 period.





Non-GAAP Metrics

See Alternative Performance Measures section in FY 2023 Results at https://awavesemi.com/financial-results/

Bookings and backlog

Management monitors bookings and backlog as indicators of future revenue from contracts with customers.

Bookings

Bookings is a non-IFRS measure and represents legally binding and largely non-cancellable commitments by customers. Bookings comprise licence fees, non-recurring engineering support, orders for silicon products, financing components and estimated future royalties (based on contractually committed royalty prepayments or on volume estimates provided by customers).

Bookings are recorded at the point the contract has been signed by both Alphawave and the customer. These are released to the market each quarter within our quarterly trading update. Infrequently, customers request to cancel bookings. At the time of cancellation, these are recorded as debookings after taking into account any pertinent cancellation charges.

Bookings during the year were as follows:

	real ended 31 December	
	2023 US\$m	2022 US\$m
Preliminary bookings (including royalties)	364.4	247.6
Adjustment	19.5	(19.5)
Bookings ¹	383.9	228.1
Royalties	_	(15.1)
Bookings (excluding royalties)	383.9	213.0

 ²⁰²² bookings exclude a contract of US\$19.5m that was signed by the acquired OpenFive business, but not considered a booking until 2023 when project
viability was established.

Backlog

Backlog is a non-IFRS measure that represents cumulative bookings (excluding royalties) that have not yet been recognised as revenue and which we expect to be recognised in future periods.

Backlog at the end of the year is calculated based on our backlog as at the beginning of the year, plus new bookings during the year and backlog acquired in business combinations, less revenue recognised during the year.

Movements on backlog during the year were as follows:

	Year ended 31 December	
	2023 US\$m	Restated¹ 2022 US\$m
Backlog at the beginning of the year	379.7	183.8
Add: Bookings during the year (excluding royalties)	383.9	213.0
Add: Backlog acquired in business combinations	_	168.3
Less: Net adjustments/debookings during the year (excluding royalties)	(87.3)	_
Less: Revenue recognised during the year (excluding royalties)	(321.4)	(185.4)
Backlog at the end of the year	354.9	379.7

^{1. 2022} opening backlog figure restated to include a WiseWave booking of US\$15.2m previously omitted.

Our closing backlog at the end of 2023 is US\$354.9m (2022: US\$379.7m) and includes US\$87.3m of net adjustments/debookings. Nearly half of this balance includes debookings related to the acquired backlog from OpenFive.

	Year ended 3	Year ended 31 December	
	2023 US\$'000	202 US\$'00	
Net loss	(51,002)	(1,08	
Add/(deduct):			
Finance income	(3,448)	(1,68	
Finance expense	8,836	3,58	
Loss from joint venture	14,730	18,48	
Income tax expense	11,532	18,32	
Depreciation of property and equipment – owned	11,212	2,47	
Depreciation of property and equipment – leased	4,612	3,03	
Amortisation of intangible assets	13,294	6,15	
EBITDA	9,766	49,29	

Adjusted EBITDA

Adjusted EBITDA may be reconciled to EBITDA as follows:

	Year ended 31 December	
	2023 US\$'000	2022 US\$'000
EBITDA	9,766	49,294
Add/(deduct):		
Acquisition-related costs	831	12,713
Compensation element of Banias Labs deferred cash rights	8,352	1,703
Remeasurement of contingent consideration payable for Precise-ITC	_	4,260
Share-based compensation expense	40,691	15,695
Currency translation (loss)/gain	2,983	(36,838)
Adjusted EBITDA	62,623	46,827



Non-GAAP Metrics

See Alternative Performance Measures section in FY 2023 Results at https://awavesemi.com/financial-results/

Vegranded 31 December

Adjusted earnings per share

We monitor basic and diluted earnings per share (EPS) on an IFRS basis and on an adjusted basis. We consider that adjusted EPS measures are useful to investors in assessing our ability to generate earnings and provide a basis for assessing the value of the Company's shares (for example, by way of price earnings multiples).

Adjusted net income/(loss) for calculating adjusted EPS measures may be reconciled to net income/(loss) determined in accordance with IFRS as follows:

	rear ended a	rear ended 31 December	
	2023 US\$'000	2022 US\$'000	
Net loss	(51,002)	(1,086)	
Add/(deduct):			
Acquisition-related costs	831	12,713	
Compensation element of Banias Labs deferred cash rights	8,352	1,703	
Remeasurement of contingent consideration payable for Precise-ITC	_	4,260	
Amortisation of acquired intangible assets	12,657	5,519	
Share-based compensation expense	40,691	15,695	
Currency translation (loss)/gain	2,983	(36,838)	
Tax effect of above adjustments	(2,623)	4,708	
Adjusted net income	11,889	6,674	

Adjusted basic and diluted earnings per share were as follows:

	Year ended 31 December	
	2023 US\$ cents	2022 US\$ cents
Adjusted basic earnings per share	1.69	0.98
Adjusted diluted earnings per share	1.69	0.98

Adjusted basic and diluted earnings per share have been calculated by taking the adjusted net income/(loss) for the year and dividing it by the weighted average number of common shares that are used in calculating the equivalent measures under IFRS as presented in note 27 to the consolidated financial statements.

