

SYNOPSYS®

Corporate Overview for Investors

November 2023

Forward-Looking Statements

This presentation contains forward-looking statements, including, but not limited to, statements regarding Synopsys' short-term and long-term financial targets, expectations and objectives; strategies related to our products, technology and services; business and market outlook, opportunities, strategies and technological trends, such as artificial intelligence; the expected impact of U.S. and foreign government actions and regulatory changes, including export control restrictions on our financial results; the potential impact of the uncertain macroeconomic and geopolitical environment on our financial results; customer demand and market expansion; our planned product releases and capabilities; industry growth rates; software trends; planned acquisitions and stock repurchases; our expected tax rate; and the impact and result of pending legal, administrative and tax proceedings. These statements involve risks, uncertainties and other factors that could cause our actual results, time frames or achievements to differ materially from those expressed or implied in such forward-looking statements. Such risks, uncertainties and factors include, but are not limited to: macroeconomic conditions and geopolitical uncertainty in the global economy; uncertainty in the growth of the semiconductor and electronics industries; the highly competitive industry we operate in; actions by the U.S. or foreign governments, such as the imposition of additional export restrictions or tariffs; consolidation among our customers and our dependence on a relatively small number of large customers; risks and compliance obligations relating to the global nature of our operations; and more. Additional information on potential risks, uncertainties and other factors that could affect Synopsys' results is included in filings we make with the SEC from time to time, including in the sections entitled "Risk Factors" in our latest Annual Report on Form 10-K, and in our latest Quarterly Report on Form 10-Q. The financial information contained in this presentation should be read in conjunction with the consolidated financial statements and notes thereto included in Synopsys' most recent reports on Forms 10-K and 10-Q, each as may be amended from time to time. Synopsys' financial results for its fourth quarter and fiscal year 2023 are not necessarily indicative of Synopsys' operating results for any future periods. The information provided herein is as of November 29, 2023. Synopsys undertakes no duty to, and does not intend to, update any forward-looking statement, whether as a result of new information, future events or otherwise, unless required by law.

Regulation G

In addition to financial results prepared in accordance with Generally Accepted Accounting Principles, or GAAP, this presentation also contains certain non-GAAP financial measures. When possible, Synopsys provides a reconciliation of non-GAAP financial measures to their most closely applicable GAAP financial measures. Reconciliations of certain of the non-GAAP financial measures (either contained in this presentation or given verbally) to their most comparable GAAP measures are included in the table at the end of this presentation, along with the fourth quarter of fiscal year 2023 earnings release and financial supplement, dated November 29, 2023, and available on Synopsys' website at https://investor.synopsys.com/overview/default.aspx. Synopsys is unable to provide a reconciliation of certain non-GAAP guidance measures to the corresponding GAAP measures on a forward-looking basis because doing so would not be possible without unreasonable effort due to, among other things, the potential variability and limited visibility of the excluded items. For the same reasons, Synopsys is unable to address the probable significance of the unavailable information. Investors are encouraged to review Item 2.02 of Synopsys' Current Report on Form 8-K filed on November 29, 2023, for additional information about the measures Synopsys uses to evaluate its core business operations.

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Synopsys: The Market & Technology Leader

Broad Product Portfolio

Electronic Design Automation (EDA)

Semiconductor Intellectual Property (IP)

Software Security and Quality

	FY23	FY24 Targets[1, 2]
Revenue:	$5.84B	$6.57B – $6.63B
Growth Rate:	15.0%	12.4–13.5%
Non-GAAP Operating Margin:	35.1%	~37.0%* *Midpoint of range
Non-GAAP Diluted EPS:	$11.19	$13.33–$13.41
Growth Rate:	25.7%	19.1–19.8%
Operating Cash Flow:	$1.70B	~$1.4B
Business Model:	Time-based, recurring revenue model; Non-cancellable backlog	

[1] These targets are being provided by Synopsys as of November 29, 2023.
[2] Assumes no further changes to export control restrictions or the current U.S. government “Entity List” restrictions.

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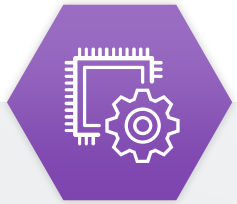
Synopsys: The Market & Technology Leader

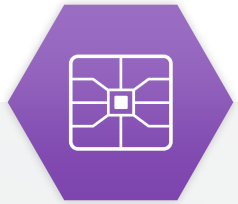


Design Automation

~35 years

~65% of revenue

Market Leader



Design IP

>25 years

~25% of revenue

#2 IP Vendor



Software Integrity

~9 years

~10% of revenue

Industry Leader, Broadest Portfolio

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Long-term Financial Objectives[1]

While the results in any given period will vary due to timing of product deliverables, acquisitions or other near-term priorities, our long-term, multi-year objectives[2] are:

Revenue

Annual double-digit growth

- Design Automation: double digits
- Design IP: mid-teens

Margin

Annual non-GAAP operating margin expansion of more than 100 bps

Earnings

Annual non-GAAP EPS growth in the mid-teens range

Utilize our strong cash flow for organic investments, M&A and stock buybacks

[1] These multi-year objectives are provided as of November 29, 2023.
[2] Period to period fluctuations are a normal element of our business, driven particularly by timing of hardware and IP deliveries.

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Synopsys: Leading Silicon to Systems Design Solutions

Uniquely Positioned for Growth and Stability

Robust End Markets

Clear Technology Leadership

Financial Strength and Growth



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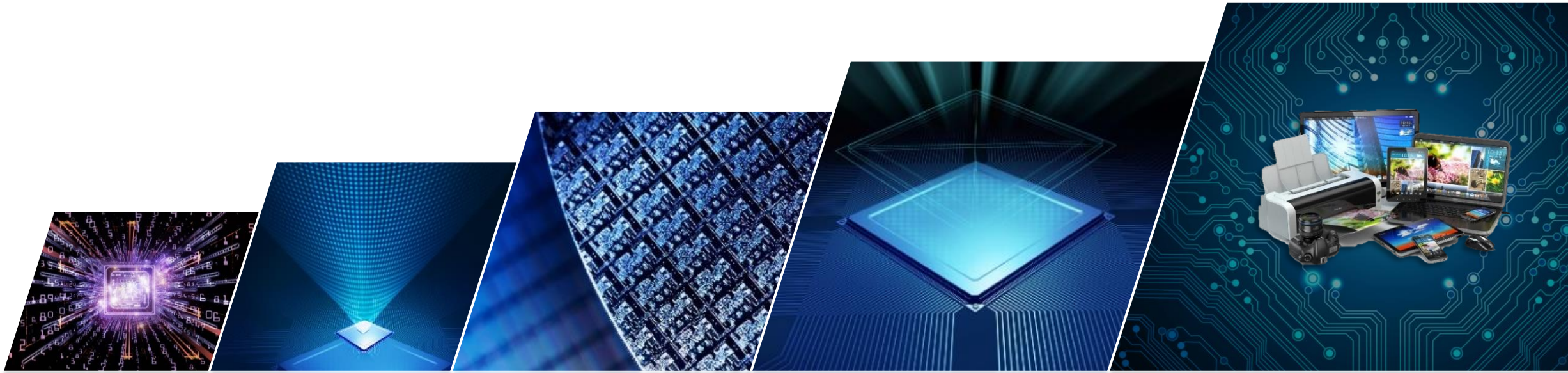
Global Value Chain—2023E

EDA & IP—At the Heart of Accelerating Electronics Innovation



EDA & IP
$17.8B

Embedded Software
$15.9B

Foundry
$125B

Semiconductors
$569B

Electronic Systems
$1.88T

Sources: ESD Alliance, Ipnest, MarketsandMarkets, IC Insights (2023)

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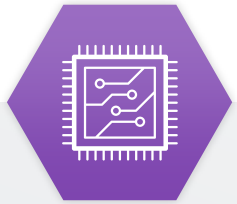
Blue Chip, Diversified Customer Base



Semiconductors

- Semi R&D (including EDA) is a top investment priority for semi and system customers in all phases of the business cycle
- Consists of virtually all semiconductor companies in the world, including all of the top 20
- One >10% customer in FY23



Systems

- ~45% of our revenue comes from systems companies
- Systems companies develop chips as an input to an end product, rather than selling the chip itself
- Verification challenges are rapidly growing at the intersection of hardware and software



Software Developers

- Key function across all industries: semis and systems, to enterprises in segments such as financial services, medical devices, automotive, and industrial
- Targeting software developers, DevOps groups, corporate security teams

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Dynamic Change in Many Markets Drives Opportunity















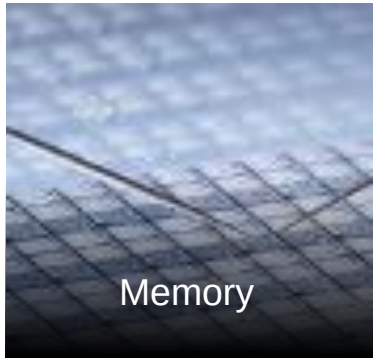









Silicon Proliferation
Driven by demand for Smart Everything

Software-defined Systems
New applications, new methodologies

Artificial Intelligence
Exponential productivity and efficiency gains

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Synopsys: Leading Silicon to Systems Design Solutions

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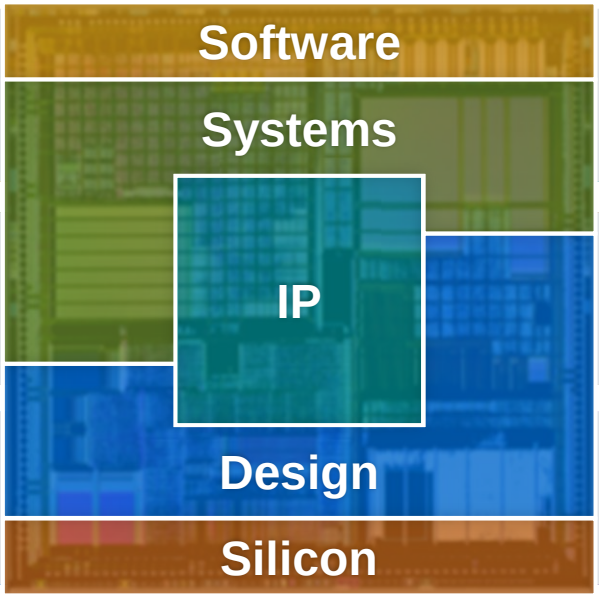
Synopsys at the Heart of Chip Design, From Silicon to Systems Design Solutions

Software: Application security & quality testing

System: HW/SW verification, virtual prototyping, VIP and models

Software: Digital & AMS, Best QoR, Highest productivity



IP: Broadest portfolio of interface, foundation & physical IP

Silicon: Tools for process optimization, CAD, lithography & yield optimization

Solutions: Automotive, low power, SLM, multi-die, DTCO, memory, photonic IC

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Leader in EDA

- Market and technology leader in EDA, the tools and technologies used to design semiconductor chips and systems
  - ~$10.6 billion market*; generally tracks semiconductor R&D spend over time
- Growth drivers: all aspects of chip and system complexity
- All leading semiconductor companies in the world use Synopsys technology
- State-of-the-art design and verification solutions with unmatched global support



* 2023; Source: ESD Alliance, Internal estimates

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Synopsys.ai™: Industry's First Full-Stack, AI-Driven EDA Suite

For design, verification, testing & manufacturing of digital and analog chips



- System Architecture
- Design Capture
- Verification
- Implementation
- Signoff
- Test & SLM
- Silicon Manufacturing

Design Space Optimization	Achieve power, performance and area (PPA) targets, and boost productivity with DSO.ai
Verification Space Optimization	Faster functional testing closure, higher coverage and predictive bug detection with VSO.ai
Test Space Optimization	Automated test generation resulting in fewer, optimized test patterns with TSO.ai
Analog and Manufacturing	Rapid migration of analog designs and development of lithography models

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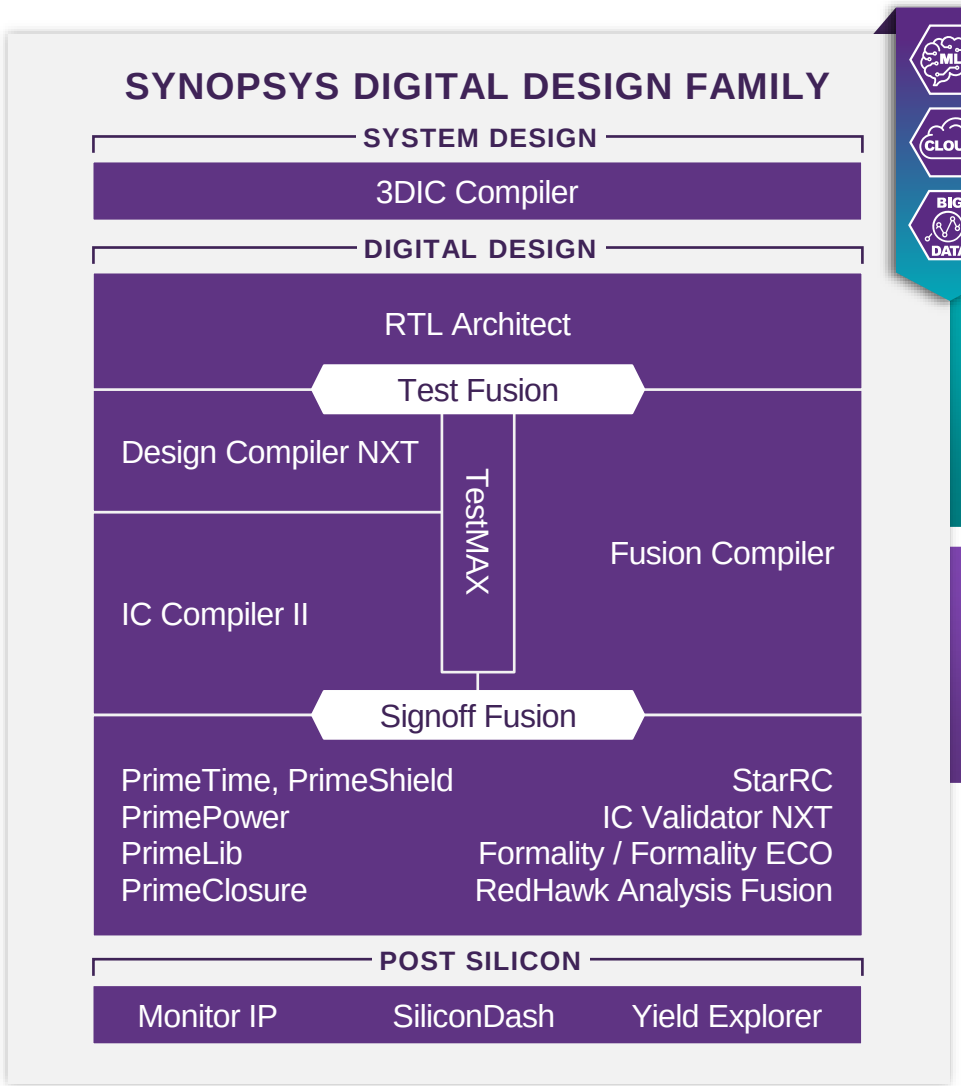
Synopsys Digital Design



Fusion Architecture

- #1 Anchors: synthesis, P&R, signoff
- Fusion of algorithms, engines, data model
- Two fusion types: test and signoff

Innovative Products

- Industry-unique Fusion Compiler
- Design Compiler NXT, TestMAX, IC Validator NXT
- PrimeShield, PrimeClosure, RTL Architect

Market Leadership

- ML-enhanced tools, AI-driven apps: DSO.ai and TSO.ai
- Accelerating AI, automotive, and multi-die systems
- Cloud-ready

20% Better QoR
2X Faster TAT

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Verification Hardware:
ZeBu® Server 5

Highest performance for large workloads

Performance and throughput 2X higher than prior generation

Ready for largest, multi-die designs

Unmatched reliability

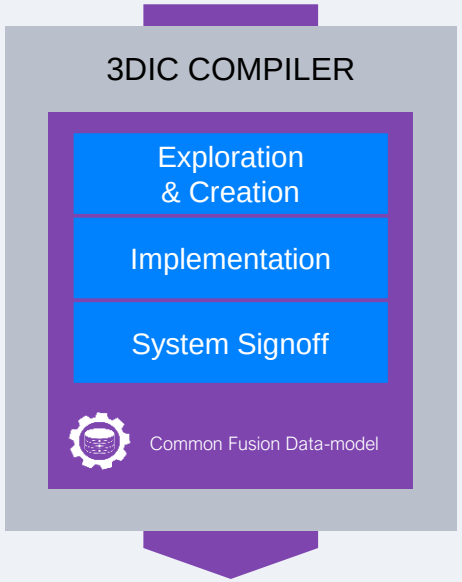
99.9+% projected uptime

Best datacenter scalability through power and footprint



Efficient Design Implementation for Multi-Die Systems

UNIFIED EXPLORATION-TO-SIGNOFF



Complete architecture-to-signoff solution in a consolidated user environment

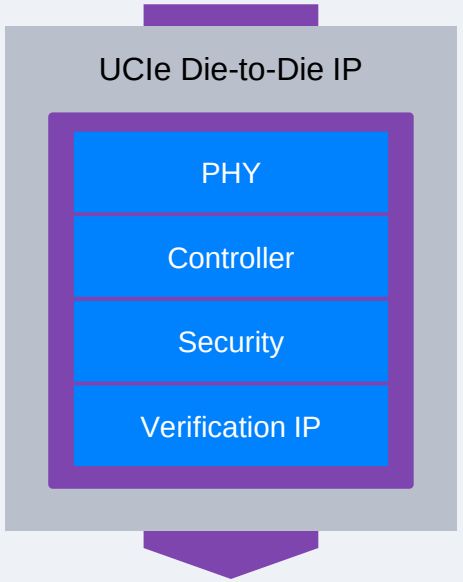
End-to-end solution for efficient 2.5D and 3D multi-die system integration

Scalable
100s of billions of transistors

Productive
Fast exploration & design

Golden Signoff
Convergence to optimal PPA/mm3

DIE-TO-DIE IP



Delivers up to 4Tbps bandwidth in a multi-module configuration

Enables ultra-low latency link between two dies

Complete
PHY, Controller, VIP…

Secure
Opt. Authentication Engine

Robust
Based on Proven IP

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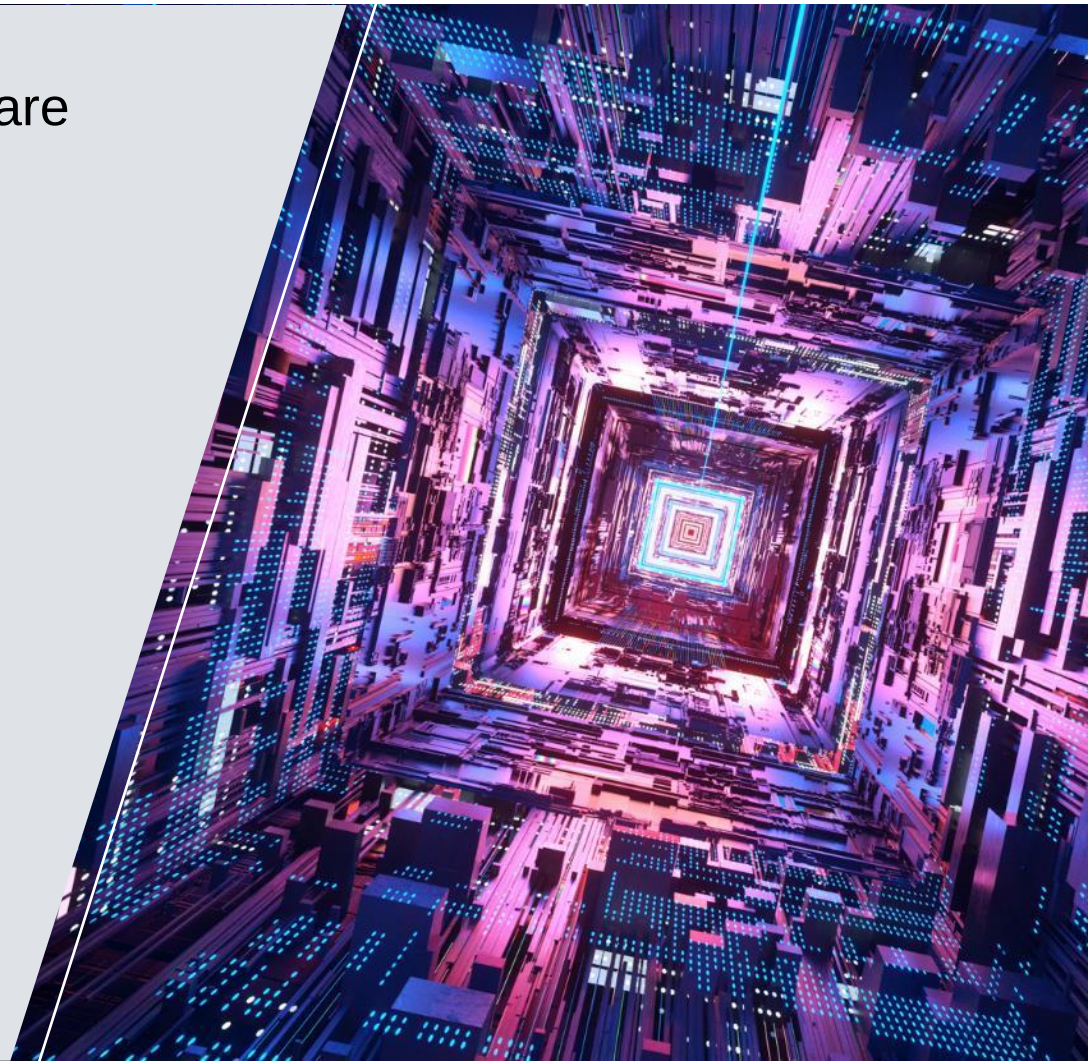
Leader in Design IP

- #2 market share in IP, the reusable building blocks that are used for chip designs
  - Leading supplier of interface, memory, analog and physical IP
  - ~$7.2 billion market*, benefitting from our customers' move to outsourcing more and more complex IP
- IP reuse reduces our customers' chip design costs, lowers risk and speeds time to market
- Serving high impact, growing markets (IoT, Automotive, Security, Cloud Computing), advanced processes & protocols
- ~25 years of investment and commitment resulting in unmatched portfolio breadth, quality and reliability



* 2023; Source: IPnest , Internal estimates

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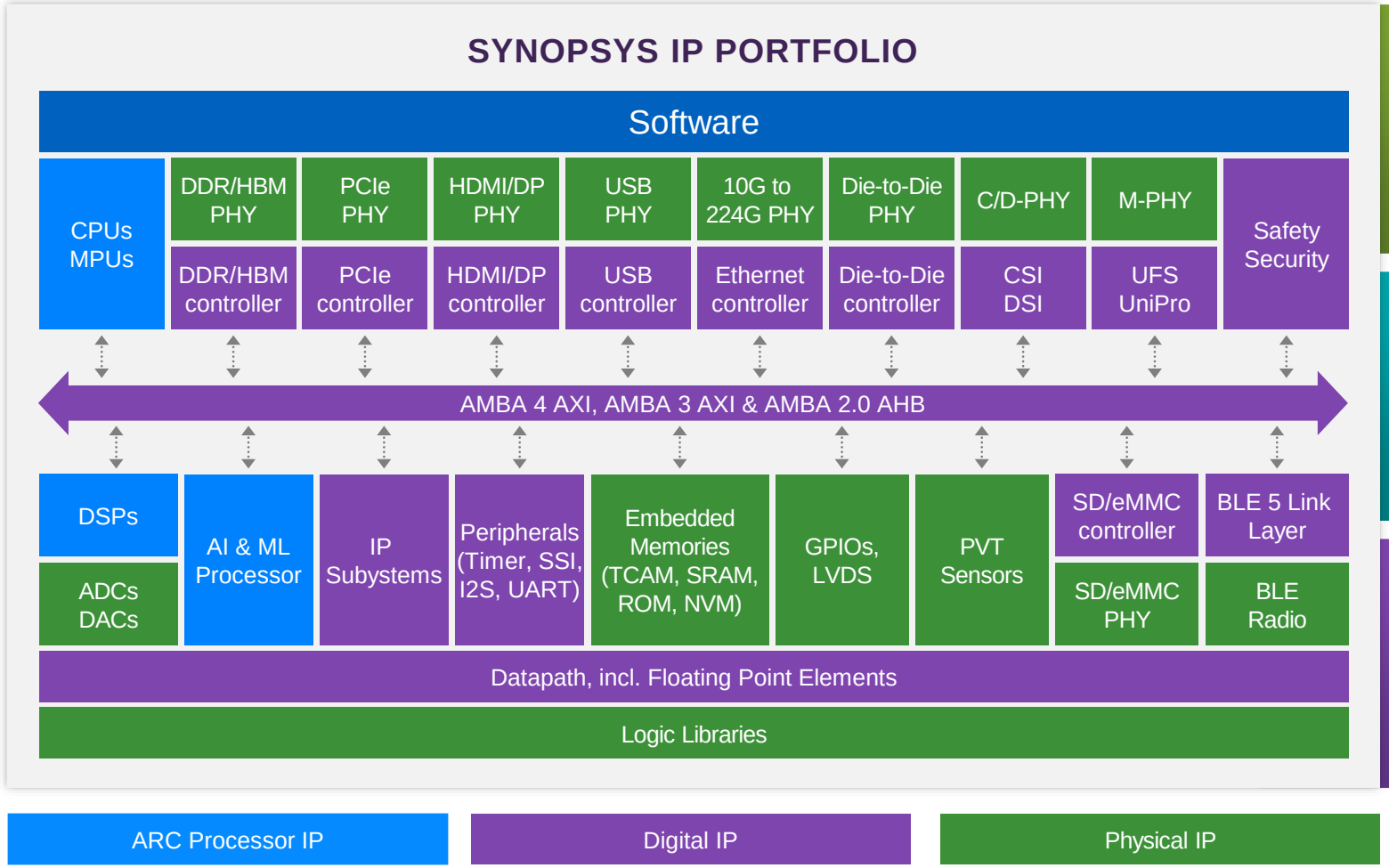
Broadest and Most Comprehensive IP Portfolio



Broadest Portfolio

Foundation IP, analog, interfaces, security, processors, subsystems

Highly Differentiated

Delivering IP at the cutting edge of technology and functionality across key markets

Competitive Differentiation

Unmatched global engineering team dedicated to quality

ARC Processor IP | Digital IP | Physical IP

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High-Impact Markets: Increasing Technology Complexity

Driving Growth in Third-Party IP Demand



AI

Machine Learning, Deep Neural Networks



Automotive

ADAS, Infotainment, Connected Vehicle



Cloud

Networking, Servers AI Accelerators



IoT

Smart Home, Industrial, Wearables

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Leader in Software Integrity

- Assembled and developed the broadest portfolio of solutions on the market; >$0.5 billion TTM revenue
- Solutions that enable organizations to manage application security, quality and compliance risks at the speed their business demands
- Approximately $2.5–3 billion served market: fragmented, with numerous point solutions; recognition of cost of software failure has increased dramatically
- Serving organizations in sectors ranging from embedded (including semis, systems) to enterprise (including financial services, medical, industrial, automotive)



Source: Gartner, Forrester, IDC, other external and internal analyses (2023)

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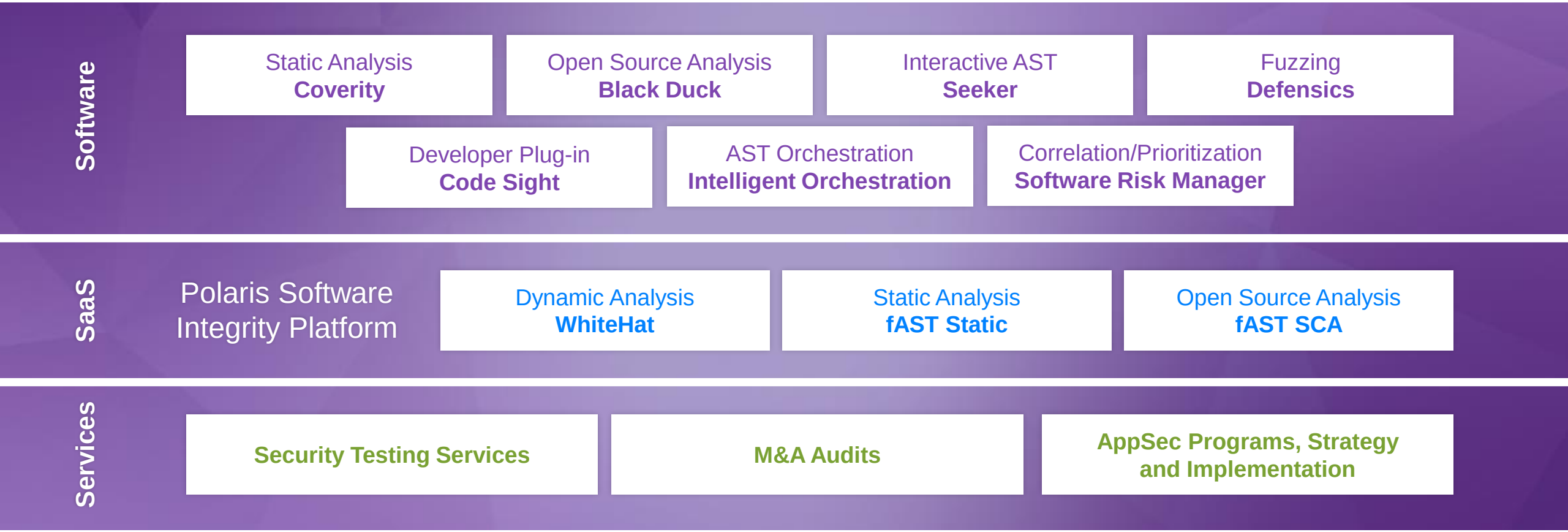
Software Integrity Portfolio



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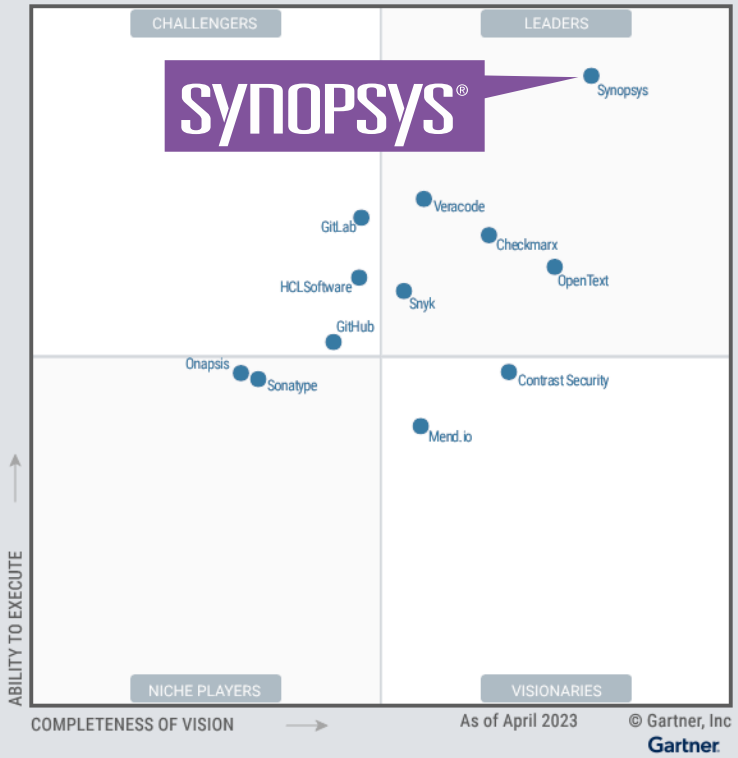
The Recognized Leader in Application Security Testing

Gartner

Magic Quadrant for
Application Security Testing



FORRESTER

Forrester Wave™:
Static Application Security Testing



Forrester Wave™:
Software Composition Analysis



Sources: Gartner, Forrester.

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Synopsys: Leading Silicon to Systems Design Solutions

Uniquely Positioned for Growth and Stability

Robust End Markets

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Financial Strength and Growth



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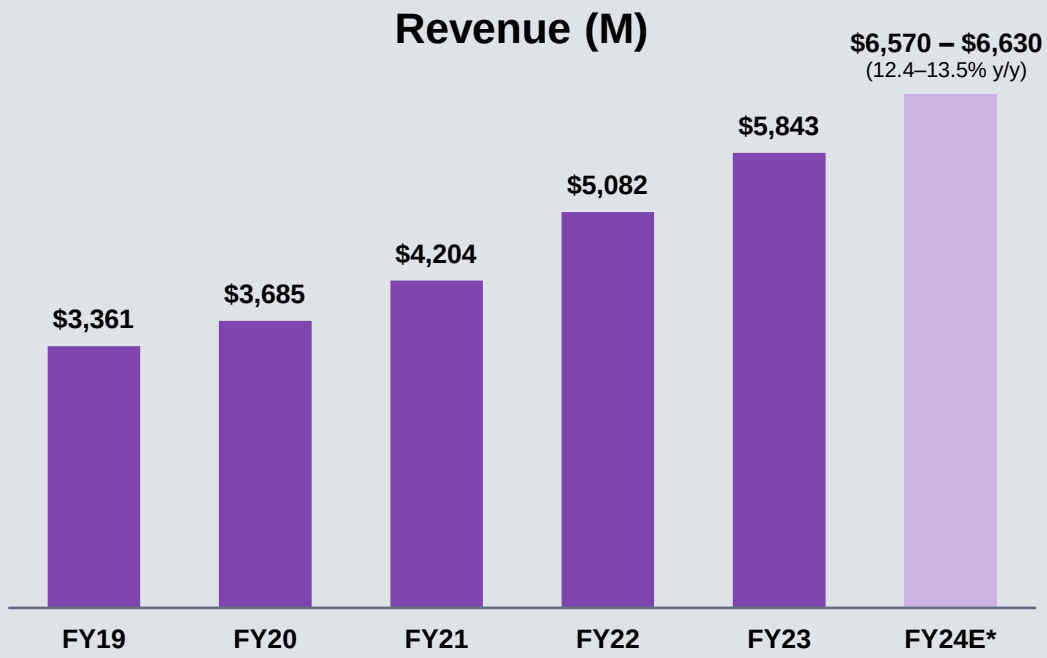
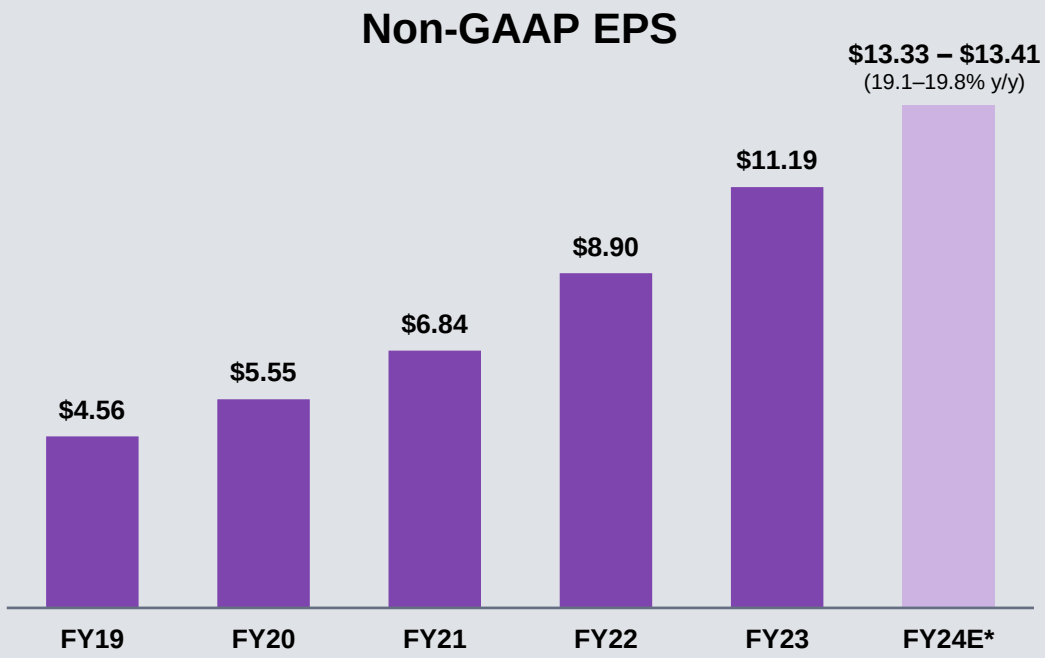
Excellent Financial Execution



Recurring revenue model with $8.6B non-cancellable backlog



Strong financial execution while investing for long term growth

* FY24E reflects guidance provided as of November 29, 2023

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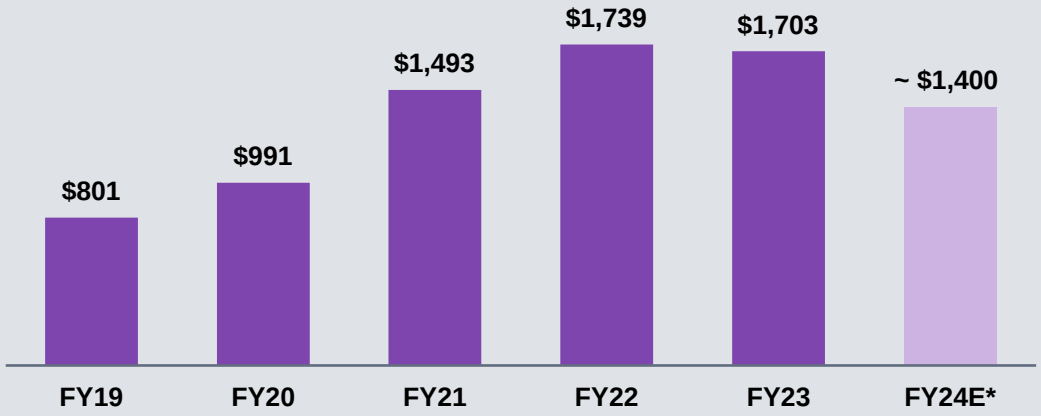
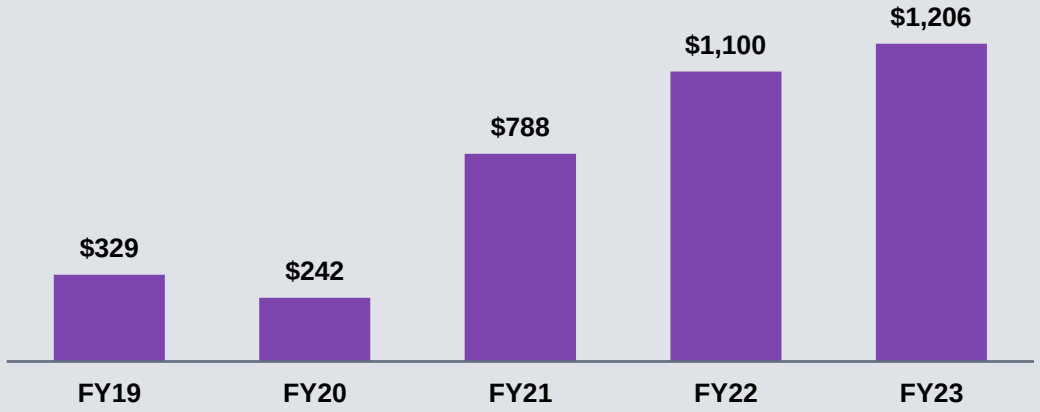
Cash Flow & Capital Allocation

Operating Cash Flow (M)



- Roughly tracks EBITDA less cash taxes on multi year basis
- It is important to consider multi-year averages, as operating cash flow is inherently lumpy

Stock Repurchases (M)



- Repurchased ~$3.7B in stock since 2019
- Capital allocation priorities:
  - Internal investments
  - Buybacks and acquisitions

* FY24E reflects guidance provided as of November 29, 2023

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GAAP to Non-GAAP Reconciliation[1]

Earnings Per Share—Full Fiscal Year 2024 Targets

	Range for Fiscal Year Ending October 31, 2024	
	Low	High
Target GAAP earnings per diluted share attributed to Synopsys	$ 9.07	$ 9.25
Adjustments:		
Amortization of intangible assets	0.69	0.66
Stock compensation	4.90	4.82
Tax adjustments	(1.33)	(1.32)
Target non-GAAP earnings per diluted share attributed to Synopsys	$ 13.33	$ 13.41
Shares used in non-GAAP calculation (midpoint of target range)	156,000	156,000

[1] Synopsys' fiscal year 2024 has one extra week and will end on November 2, 2024. For presentation purposes, we refer to the closest calendar month end.

For additional information about the measures Synopsys uses to evaluate its core business operations, please review the earnings press release and Item 2.02 of the Current Report on Form 8-K filed on November 29, 2023.

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GAAP to Non-GAAP Reconciliation[1, 2]

Operating Margin—Midpoint of Fiscal Year 2024 Targets

	Twelve Months Ending October 31, 2024
At midpoint of revenue and expense guidance ranges	
GAAP operating margin	23.9 %
Amortization of intangible assets	1.6 %
Stock compensation	11.5 %
Target non-GAAP operating margin	37.0 %

[1] Synopsys' fiscal year 2024 has one extra week and will end on November 2, 2024. For presentation purposes, we refer to the closest calendar month end.

[2] These numbers represent the midpoint of targets in the prepared remarks provided on November 29, 2023, and do not represent official guidance for fiscal year 2024.

For additional information about the measures Synopsys uses to evaluate its core business operations, please review the earnings press release and Item 2.02 of the Current Report on Form 8-K filed on November 29, 2023.

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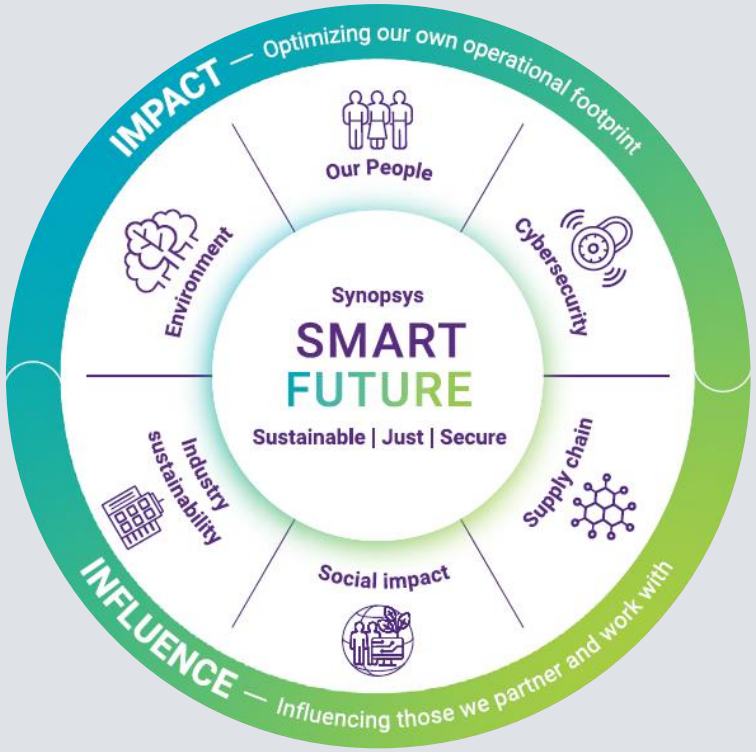
Smart Future ESG Strategy

Our Smart Future ESG strategy provides a framework to assess and manage the ESG matters that are relevant to our business, generate value for our stockholders, and at the same time, make meaningful progress with respect to environmental and social issues within our ecosystem, such as climate action, inclusion and diversity in our workforce, and social impact in our communities.

- Our strategy considers the recommended disclosures in the Sustainability Accounting Standards Board (SASB) Software & IT Services Standard and the 2021 GRI Standards
- Reporting aligns with the Task Force on Climate-related Financial Disclosures (TCFD), the United Nations Sustainable Development Goals (UN SDGs)
- Synopsys reports to the CDP as part of our disclosure efforts



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Synopsys ESG Progress Highlights

Environment

- We are committed to taking climate action to limit global warming to 1.5ºC above preindustrial levels by reducing our company-wide greenhouse gas (GHG) emissions and mitigating our environmental impacts. Recent efforts include:
  - Obtaining validated Science Based Targets initiative (**SBTi**) GHG emissions targets for Scope 1, 2 and 3
  - Joining the U.S. Environmental Protection Agency's (EPA) Green Power Partnership to show our commitment to renewable energy
  - Mitigating approximately 50% of our calendar year 2022 North America energy demand through the Azure Sky Wind Farm VPPA
- Our low power platform of products and solutions enables our customers to achieve an additional 25% power reduction for the systems-on-a-chip (SoCs) they design

Social

- ~30% representation of women on the Board of Directors
- Increased total representation of women globally to 24.9% in FY 2022
- Donated $4.7M to charities in calendar year 2022, focused on STEM education, communities in which we work, and environmental sustainability

Governance

- Obtained ISO 22301 certification, the international standard for Business Continuity Management Systems to help safeguard our business operations

For more details, please visit www.synopsys.com/smartfuture



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Thank You