



These prepared remarks contain forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934. Any statements that are not statements of historical fact may be deemed to be forward-looking statements. Forward-looking statements include, but are not limited to, statements regarding Synopsys' business, projected business results, business objectives, acquisitions, products, technologies, business model, new markets, customer demand for our technology, our planned stock repurchase activity, expected benefits and financial impact of the acquisition of Black Duck Software, the expected revenue impact of new accounting pronouncements to be adopted by us, and the expected impact of recent U.S. tax reform. These statements involve known and unknown risks, uncertainties and other factors that could cause our actual results, time frames or achievements to differ materially from those expressed or implied in our forward-looking statements. Accordingly, we caution stockholders and prospective investors not to place undue reliance on these statements. Such risks, uncertainties and factors include, but are not limited to: our ability to operate or integrate Black Duck Software's business and technologies with our own successfully; our ability to estimate and predict the treatment of contract-specific terms and our customer's usage patterns as we assess the impact of Accounting Standard Topic 606; uncertainty in the growth of the semiconductor and electronics industry; consolidation among our customers and our dependence on a relatively small number of large customers; uncertainty in the global economy; our ability to realize the potential financial or strategic benefits of acquisitions we complete; fluctuation of our operating results; our highly competitive industries and our ability to meet our customers' demand for innovative technology at lower costs; our ability to carry out our new product and technology initiatives; cybersecurity threats or other security breaches; risks and compliance obligations relating to the global nature of our operations; our ability to protect our proprietary technology; investments of more resources in research and development than anticipated; increased risks resulting from an increase in sales of our hardware products; changes in accounting principles or standards; changes in our effective tax rate; liquidity requirements in our U.S. operations; claims that our products infringe on third-party intellectual property rights; litigation; product errors or defects; the ability to obtain licenses to third-party software and intellectual property on reasonable terms or at all; the ability to timely recruit and retain senior management and key employees; evolving corporate governance and public disclosure regulations; the inherent limitations on the effectiveness of our controls and compliance programs; the impairment of our investment portfolio by the deterioration of capital markets; the accuracy of certain assumptions, judgments and estimates that affect amounts reported in our financial statements; and the impact of catastrophic events. More information on potential risks, uncertainties and other factors that could affect Synopsys' results is included in filings it makes with the Securities and Exchange Commission from time to time, including in the sections entitled "Risk Factors" in its Annual Report on Form 10-K for the fiscal year ended October 31, 2017 and Quarterly Report on Form 10-Q for the fiscal quarter ended January 31, 2018. The information provided herein is as of May 23, 2018. Although these Prepared Remarks are expected to remain available on Synopsys' website through the date of the earnings results call for the third quarter of fiscal year 2018, their continued availability through such date does not mean that Synopsys is reaffirming or confirming its continued validity. Synopsys undertakes no duty, 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.

These prepared remarks also contain non-GAAP financial measures as defined by the Securities and Exchange Commission in Regulation G. Reconciliations of the non-GAAP financial measures to their comparable GAAP measures are included in the second quarter fiscal year 2018 earnings release and financial supplement, each dated May 23, 2018, and available on Synopsys' website at www.synopsys.com. Additional information about such reconciliations can be found in Synopsys' Current Report on Form 8-K, filed with the Securities and Exchange Commission on May 23, 2018.

Good afternoon.

I am happy to report that our second quarter results were excellent. We delivered double-digit revenue and non-GAAP earnings per share growth. Revenue came in at \$777 million, with strength across all product groups; and non-GAAP EPS was \$1.08. We repurchased \$35 million of our stock, bringing the total so far this year to \$235 million, and we are raising our revenue and non-GAAP earnings guidance for the year.

Trac will discuss the financials in more detail.

The landscape around us continues to thrive, with semiconductor growth pegged at 10% -plus for 2018. We see new chip and systems companies entering the market, as big data and AI are driving new compute- and chip-architectures optimized for machine learning. Substantial investments are being made as the AI-digital intelligence push is increasingly evident in verticals such as automotive, medical, industrial, and growing networks of connected IoT devices.

The automotive vertical is particularly interesting, as AI-enabled autonomous driving has the potential to revolutionize the very notion of car ownership, while simultaneously requiring massive amounts of electronics and software in cars. These deep transformations rattle the well-established safety practices in one of the most sophisticated supply chains ever built, and software security is rapidly becoming paramount to shipping modern vehicles.

Synopsys is ideally positioned in these evolutions. The three customer groups we serve – semiconductors, systems companies and software developers – are all investing significantly in very advanced chips, massively complex systems, and large amounts of software. Consequently, it's imperative that they increase their efforts to test for, or better – pre-emptively avoid – security vulnerabilities.

Over our entire history, Synopsys has invested in the most advanced technologies, paired with unmatched global customer support, and has been privileged to team up with customers who have changed the world. This is happening again now; our EDA design solutions are helping design brand-new AI engines; Our IP is broadly used in the most advanced silicon technologies ever built; our verification and emulation tools help bring up and test software on prototypes long before silicon is available; and our software security and quality tools assist in making that very software less vulnerable to threats.

This quarter, all of our product groups did well; EDA revenue growth continues to outpace the competition, and we've begun to roll-out breakthrough digital design capabilities through our new Fusion Technology; IP continues its double-digit growth, driven by our broad portfolio that is already on pace to

enable the 5nm IP needed in the near future. And lastly, our software security and quality group, which has reached economic critical mass and is executing very well with the integration of Black Duck, continues to deliver excellent organic growth.

Let me provide some highlights from the quarter, beginning with EDA.

In Q2, our EDA revenue was strong across the board. Synopsys is the essential partner for the most advanced designs: customers rely on us for more than 95% of their FinFET designs. Our track record at 7nm is unrivaled, with nearly all of the 120-plus designs we're tracking impacted by our digital tools. At 5nm, our deep collaborations with customers and ecosystem partners are resulting in early successes. Here too, customers are relying on Synopsys digital for nearly all designs. Our expertise and influence reach down to 3 and 2nm, where we're already involved in preparing for still more advanced technology nodes.

Foundry support and ecosystem partnerships are critical to enabling joint customers. During Q2, TSMC certified our full digital and custom flows for their 7nm FinFET Plus and emerging 5nm processes. Together with Arm, we announced a multi-year extension of our long-tenured collaboration, spanning all Synopsys tools, to best enable advanced Arm-based SoCs.

In digital design, we saw revenue growth accelerate over the last two quarters. In Q2, we announced our new Fusion Technology, which represents a completely new level of integration of our market-leading products in synthesis, place & route, and signoff. A systematic sharing of algorithms, code, and data representations across multiple tasks opens the door to previously unachievable levels of performance and quality-of-results by redefining conventional product boundaries. An example of the power of our Fusion solution is from Samsung Electronics, which experienced 10% better quality-of-results and significant reductions in turnaround time. They joined ST, Toshiba, and our product partner Ansys to share the benefits of Fusion Technology with fellow customers at our Silicon Valley user conference.

Our digital design vision and roadmap are already driving expanding customer relationships, including a key long-term agreement with a very high-profile global systems company.

We delivered strong growth in custom as well, and launched an enhanced custom design platform, with 2X faster simulation for FinFET and automotive designs.

In verification, we continue to see outstanding results and a strong outlook for the year. Demand is high for our Verification Continuum Platform, built upon the fastest engines in the industry and our #1 position in both software and hardware-based verification. Q2 was a record quarter for hardware. Customer

adoption of ZeBu emulation was broad-based, with substantial growth in existing accounts and a competitive win at a top 10 semiconductor company, driven by ZeBu's significant speed advantage. Cambricon, a global leader in intelligent processors, adopted our FPGA prototyping solution for its AI processor product. HAPS-80 delivers the performance, capacity, and scalability needed to enable Cambricon to accelerate software development and system validation.

Now to IP, which had another strong quarter and is poised for an excellent year. Our strength is driven by multiple customers, regions, and application segments. For example: several key agreements were for mobile chips focused on next-generation processes; we saw excellent success in cloud computing; a number of important deals were with automotive companies, for interface IP and our new safety-certified ARC embedded vision processor; and overall business is strong worldwide, notably in China, where many companies look to third-party IP to maximally speed up their time to market.

In order to ensure that the latest IP titles are available from Synopsys in the customers' desired manufacturing processes, ecosystem partnerships and intense bleeding-edge investments are critical. During the quarter, we announced a collaboration with TSMC to deliver key memory IP and logic libraries for TSMC's 22nm Ultra-Low Power processes. We're also collaborating with Samsung Foundry to develop DesignWare IP for its 8nm FinFET process, particularly benefitting low-power, high-performance applications.

To address the growing needs in data-intensive applications such as machine learning, cloud computing and networking, we continued our investment in high-speed SerDes IP with the acquisition of Silicon and Beyond.

At this point, it is worthwhile to note that we continue to make excellent progress in the automotive vertical as well. One of the requirements to participate in this market is product certification for a number of safety standards. We offer the broadest portfolio of IP that is certified for safety and reliability, ranging from embedded vision processors to embedded memories to the industry's widest selection of interface IP.

In EDA, our design portfolio achieved the industry's most comprehensive ISO 26262 certification by exida, the leading automotive functional safety certification company. Certification spans our custom, analog/mixed signal, digital implementation, signoff and library development flows.

And, of course, automotive safety also implies software security!

Which brings me to our Software Integrity Group, which serves a third customer base: software developers across many industries including, but also well beyond, semiconductors and systems. We provide products and services that help developers build security into the software development lifecycle and across the entire cyber supply chain. Software Integrity is a key differentiator for Synopsys, and has substantially expanded our TAM. In recent quarters, we have reached critical mass with significant growth both organically and through acquisitions.

Our software integrity platform is making good progress. We are step-by-step combining key technologies and will continue to roll out incremental advances over the next 12 months and beyond. We're excited about the very positive impact that our broad solution will have on our customers' efforts. The addition of Black Duck provides another compelling set of products addressing the ever-expanding open source content in today's software. While still early, the integration is proceeding very well. The combined team is energized, the roadmap planning is on track, we are benefitting from the brand recognition of Black Duck, and we're beginning to see some cross-selling benefits.

Finally, for the second year in a row, Synopsys was named a Leader in Gartner's Magic Quadrant for application security testing. The Magic Quadrant is an important indicator for customers, who often use it to narrow their list of potential vendors. We've seen a definite increase in our customer interest since first being recognized last year.

To summarize: the company is hitting on all cylinders. We had a very strong quarter. We are raising revenue and non-GAAP EPS guidance for the year. We are making excellent progress with our leading products in design and verification. And our investments in IP and Software have broadened our market reach, TAM, and company outlook.

Let me now turn the call over to Trac.

Thanks, Aart. Good afternoon everyone.

In delivering another excellent quarter, we achieved record revenue with strong growth across all geographies and product groups; we delivered double-digit non-GAAP earnings growth; and we returned cash to shareholders by repurchasing \$235M of stock in the first half of 2018.

Based on the strength of our first half results and better visibility to an increasingly favorable second half, we're raising our 2018 revenue and non-GAAP EPS guidance.

Now to the numbers. As I talk through the results and targets, all comparisons will be year-over-year unless I specify otherwise.

Total revenue increased 14 percent to \$777 million, reflecting strength across our product portfolio.

The weighted average license duration was approximately 2.6 years, and we expect the annual average to be about 3 years.

Total GAAP costs and expenses were \$650 million. Total non-GAAP costs and expenses were \$587 million, resulting in an operating margin of 24.5 percent.

GAAP earnings per share were 67 cents. Non-GAAP earnings per share were \$1.08, a 23 percent increase over the prior year.

We're in the process of preparing our 2019 plan and will not have more definitive guidance for next year's tax rate until after Q4. Based on what we know at this point, we currently expect our non-GAAP rate to be below our previous 19 percent, but higher than our 2018 rate of 13 percent.

Operating cash flow was \$63 million for the quarter, including one-time tax payments totaling \$33 million related to our 2017 repatriation of offshore cash.

We ended the quarter with cash and cash equivalents of \$571 million – 23 percent of which is onshore – and total debt of \$524 million.

We're committed to investing in the business to drive sustainable growth, and managing our balance sheet to increase long-term shareholder value. In Q2, in addition to completing our previous \$200 million ASR, we also repurchased \$35 million of stock in the open market. On a trailing-12-month basis, we've returned more than 100 percent of our free cash flow to shareholders through buybacks. We have \$490 million available on our current repurchase authorization.

Black Duck, which we acquired in Q1, has been a very successful addition to our Software Integrity Group. It's on track to meet our 2018 target of \$55-60 million in revenue, which reflects a purchase accounting deferred revenue haircut of about \$20 million. Consistent with previous guidance, we project Black Duck to be approximately 12 cents dilutive to 2018 non-GAAP EPS, and to reach breakeven in the second half of 2019.

In addition, we closed two small acquisitions in the quarter that will enhance our photonic design and high-speed SerDes IP solutions.

Finally, before moving on to guidance, a reminder regarding the transition from Accounting Standard Topic 605 to Topic 606, which will go into effect for us in fiscal 2019, beginning in November. Because

of the new rules, we do expect a loss of backlog at the time of transition. However, based on our current estimates, we expect the impact on revenue to be immaterial. The precise impact will be affected by future bookings and business transactions through the rest of the year, and we will provide more definitive commentary with our fiscal 2019 guidance.

Now to third quarter and fiscal 2018 guidance. For Q3, the targets are:

- Revenue between \$760 and \$785 million;
- Total GAAP costs and expenses between \$669 and \$685 million;
- Total non-GAAP costs and expenses between \$605 and \$615 million;
- Other income and expense between minus \$3 million and minus \$1 million;
- A non-GAAP normalized tax rate of 13 percent;
- Outstanding shares between 153 and 156 million;
- GAAP earnings of 65 to 75 cents per share; and
- Non-GAAP earnings of 89 to 93 cents per share.

For 2018, the targets are:

- Revenue of \$3.07 to \$3.1 billion.
- Other income and expense between minus \$6 million and minus \$2 million;
- A non-GAAP normalized tax rate of 13 percent;
- Outstanding shares between 153 and 156 million;
- GAAP earnings of \$1.66 to \$1.76 per share;
- Non-GAAP earnings of \$3.76 to \$3.83 per share;
- Capital expenditures of about \$110 million;
- And cash flow from operations of \$500 to \$550 million.

As we look to the remainder of fiscal 2018, you'll note that our guidance implies higher revenue in Q3 than in Q4. This reflects the inherent variability associated with hardware and IP, and is based on our best

visibility at this point. Earnings will also be higher in the third quarter reflecting seasonally higher operating expenses in Q4.

To summarize, we delivered our strongest revenue quarter to date, and we're on-track for a record revenue and earnings year. We continued to complement our investments in our core businesses with incremental spending in our newer higher-growth products – to support sustainable long-term growth. Finally, we have achieved these results while maintaining our commitment to a balance of organic investment, M&A, and the return of capital to deliver strong results for our shareholders.

Let me now turn it over to the operator for questions.