These prepared remarks contain forward-looking statements, including, but not limited to, statements regarding Synopsys' short-term and long-term financial targets, expectations and objectives; business outlook, opportunities and strategies; customer demand and market expansion; strategies related to our products and technology; our planned product releases and capabilities; industry growth rates; software trends; planned acquisitions and buybacks; our expected tax rate; the expected impact of U.S. and foreign government action on our financial results; and the expected impact of the COVID-19 pandemic. 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 our forward-looking statements. Such risks, uncertainties and factors include, but are not limited to: risks from the effect of the COVID-19 pandemic and the associated economic downturn on our business, operations and financial condition; uncertainty in the growth of the semiconductor and electronics industries; 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 as well as actions by the U.S. or foreign governments, such as measures in response to the COVID-19 pandemic or the imposition of additional tariffs or export restrictions; macroeconomic conditions and uncertainty in the global economy; fluctuation of our operating results; increased variability in our revenue due to the adoption of ASC 606, including the resulting increase in recognizing upfront revenue as a percentage of total revenue; and more. Additional 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, 2019 and in its latest Quarterly Report on Form 10-Q. The information provided herein is as of December 2, 2020. Although these Prepared Remarks are expected to remain available on Synopsys' website through the date of the earnings results call for the first quarter fiscal year 2021, 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 fourth quarter and fiscal year 2020 earnings release and financial supplement, each dated December 2, 2020, 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 December 2, 2020.

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Good afternoon.

I'm pleased to report another outstanding year for Synopsys. Despite unprecedented macro challenges, we built considerable financial, technology and customer momentum. We substantially exceeded our original plan, with business strengthening through the year. We grew revenue nearly 10% to $3.685 billion, led by EDA software and IP, expanded non-GAAP operating margin by three percentage points, delivered more than 20% non-GAAP earnings growth and record cash flow of $991 million.

Contributing to these very positive results were the new EDA and IP products we've introduced over the past few years. We expect to further build on this momentum with several groundbreaking technologies that we launched this year. In addition, our re-energized Software Integrity business is on its way to scaling to the next level and reaccelerating growth.

About two years ago, we communicated a three-year financial plan to drive double-digit non-GAAP earnings growth, through a combination of topline growth and operating margin expansion to the high 20s by 2021. We achieved our initial ops margin target a year early, and have consistently delivered high-single-digit revenue growth. As we enter 2021, we expect to surpass $4B in revenue, with non-GAAP operating margin of 29-30%, low-to-mid teens non-GAAP EPS growth, and more than $1 billion in operating cash flow. Beyond 2021, we will raise our ambition to a "Rule of 45," as we drive revenue growth and further operating margin expansion. Trac will discuss the financials in more detail.

Meanwhile, design activity remains strong across the board. Opportunities in key end markets, such as AI and machine learning, high-performance computing and cloud, 5G and automotive, are massive, as all drive increased adoption of our advanced solutions at a time that Synopsys enjoys particularly strong differentiation. This includes ambitious companies such as AI start-ups and cloud hyper-scalers, as they position themselves to leverage big data, generated by the billions of cloud-connected IoT devices. They need a trusted partner who not only has the most advanced, high-impact products today, but complete solutions capable of scaling well-beyond the traditional demands of Moore's Law into the powerful intersection of hardware and software.

Let me provide some highlights.

In EDA, our unrelenting innovation push in digital design has strengthened our long-standing market leadership. More than 95% of advanced designs today rely on our Fusion Design Platform, and over the past year revenue growth has accelerated. In particular, we continue to see strong adoption momentum for our Fusion Complier product – the industry's premier digital design solution. Fusion Compiler significantly exceeded its orders target, increasing 140% in 2020. The progression from technical benchmarks, to competitive wins, to growing orders and production proliferation, is trending even better than we anticipated.

We've seen widespread adoptions from customers ranging from the largest global communications, processor and graphics firms, to high-impact cloud hyper-scalers, to influential system houses and AI startups. For our customers, production deployment yielded excellent results, as evidenced by five times the number of tape-outs in FY20 compared to last year, and for us, a rapidly growing pipeline across many market segments.

The Fusion Technology foundation also dovetails exceptionally well with the challenges inherent in the next wave of chip and system design. Specifically, Synopsys is addressing new TAM opportunities in AI-driven design flows, in 3D multi-chip design, and in the new area of Silicon Lifecycle Management.

Let me start with our DSO.ai product, where DSO stands for "Design Space Optimization." Our combination of Fusion and AI "learns" and automatically adjusts and optimizes design exploration for both better results and faster time-to-market. With it, design teams can also tackle larger blocks and more projects, thus focusing on more value-added tasks. Even in this early stage, the power and potential of DSO.ai is being widely recognized, as it received a 2020 World Electronics Achievement Award for "Innovative Product of the Year."

Next is our extremely timely 3DIC Compiler solution – with disruptive technology that enables the design and analysis of multiple die together on a chip. At the very moment that system architects are augmenting traditional chip complexity by connecting multiple chips very tightly together, our 3DIC product provides far better performance and capacity than conventional disaggregated chip-in-package approaches.

Finally, we launched the industry's first Silicon Lifecycle Management platform just last month. On-chip sensors and monitors feed into data analytics engines, integrated with leading test and yield management. This provides visibility into critical performance, reliability and security issues for the entirety of a chip's lifespan – from design to in-field operation. Early customer interest in all of these new solutions is very high.

Turning to custom design, momentum for our Custom Compiler product accelerated, with more than 30 new logos and 15+ full-flow competitive displacements during the year. This resulted in over 50% revenue growth. Having seen the power of our innovations targeting advanced FinFET designs, a number of the highest-impact semiconductor and systems companies are putting their trust in us.

Let me now move to our Verification Continuum platform, which combines market-leading anchor products into a seamless, high-efficiency solution. With the complexity increase of intersecting chips, systems and software, the need for verification continues to rise.

Our #1 market share position in both software and hardware puts us at the center of this wave, as we continue to innovate aggressively in state-of-the-art native integration of the fastest engines. Contributing to our solid growth on the software side are influential high-profile customers ranging from hyper-scalers to AI, to automotive and mobile. Our hardware-based verification products are totally focused on unmatched speed, highest capacity, lowest cost of ownership, and lowest power consumption for high-complexity designs. Building on a record year in 2019, in 2020 we again expanded our customer base, adding more than 50 new customers and well over 100 repeat orders. This includes major expansions at some of the world’s largest semiconductor and systems companies.

Now to IP, where strong market demand for our rich portfolio drove another record year, growing approximately 20% to more than $900 million in revenue. Our strength is broad-based, across all regions and key market segments, particularly high-performance compute, cloud & networking, AI and automotive.

In automotive, momentum continued in 2020, as we have achieved more than 400 wins on advanced processes across more than 30 major semiconductor companies. An area of particular automotive strength is our ARC processor. This year, we extended our lead in automotive-qualified titles by delivering the industry’s first processor IP certified for full ISO 26262 automotive safety integrity level D compliance. We also broadened our portfolio, introducing DSPs, higher-performance embedded vision, and a 64-bit processor family.

As the undisputed leader in interface IP, we continue to see very strong adoption of generation-upon-generation of important titles, including PCI Express, memory interfaces and MIPI – which had an exceptional year. In USB, we extended our leadership by introducing the industry’s first USB 4 IP. We also saw continued traction in very-high-speed SerDes with multiple 56- and 112-Gig wins.

Building on our lead in foundation IP, we expanded our portfolio to include specialty memories used in AI and cloud compute, and general purpose IOs, which had an excellent year.

Finally, our track record of being first to market with IP in advanced process nodes continues and is highly valued by our customers. We announced a full portfolio of 5-nm IP with multiple Silicon proof points, including our industry-leading PCIe 5.0 and USB 4 solutions. With already more than 50 5-nm design wins, we've started development of next-generation 3-nm products targeting high-end mobile and high-performance compute.

Now to Software Integrity – testing software code for security vulnerabilities and quality issues. This area contributed approximately 10% of our revenue. The market opportunity is vast, with the need to address critical security challenges steadily increasing in importance. As the industry leader with the broadest portfolio of products and services available today, we're well-positioned to serve this growing space.

Over the past several years, we have successfully expanded our customer base, with enterprise companies now representing about 75% of revenue. In 2020, we saw an increasing number of customers adopting multiple products and services, leveraging our broad portfolio. An important example is a Fortune 100 technology, industrial and aerospace conglomerate. The depth and breadth of our products and services allowed them to consolidate from multiple vendors to Synopsys, while significantly expanding their investment and user base.

Having said that, Software Integrity is the one area that saw an impact from Covid, as well as some near-term operational transitions. Our new general manager hit the ground running a little over three months ago, and has already made significant enhancements in three areas: first, we evolved our go-to-market strategy and customer success organization to better address and serve new and existing customers. This includes tuning our sales coverage, and building an indirect channel program; second, we are bolstering our strategic consulting capabilities; and third, we are evolving our product roadmap to capitalize on security trends in DevOps and cloud adoption.

The recent moves are encouraging, and we expect to see continuous progress toward ending the year with reaccelerated growth. We are very optimistic about the long-term opportunity,
as we work to scale past the half-billion-dollar mark next.

In summary, we are entering 2021 with significant momentum. Market demand is strong, fueled by complex technologies and a multitude of high-profile verticals. Our innovation engine continues to deliver advanced capabilities, as our product offering is increasing in differentiation while seeing strong adoption. Financially, we're executing very well and raising our long-term ambitions.

Thank you to our dedicated employees, who quickly and effectively adapted to unprecedented challenges this year, and to our customers and partners for their commitment and support.

With that, I'll turn it over to Trac.

Thanks, Aart. Good afternoon everyone.

2020 was another excellent year. We reported record results in all key metrics – including revenue, non-GAAP EPS, and operating cash flow. We finished the year well ahead of our initial expectations. Our ongoing financial success reflects: our dynamic end markets, our portfolio of best-in-class solutions, our resilient business model with nearly 90% recurring revenue, and our determined execution.

We're entering 2021 well-positioned to exceed $4 billion in annual revenue and further expand non-GAAP operating margin. As a result, we are on track to deliver strong double-digit non-GAAP earnings growth and more than $1 billion in operating cash flow.

I'll now review our full-year 2020 results.

We generated total revenue of $3.685 billion, up nearly 10% over the prior year, with strength across all geographies.

Backlog grew approximately $500 million during the year to $4.9 billion.

Total consolidated GAAP costs and expenses were $3.065 billion, and total non-GAAP costs and expenses were $2.654 billion, resulting in a non-GAAP operating margin of 28%.

GAAP earnings per share were $4.27, and non-GAAP earnings per share were $5.55, up nearly 22% over the prior year.

Semiconductor & System Design segment revenue was $3.3 billion, with particular strength in EDA software and IP. Adjusted operating margin was 30%.

Software Integrity segment revenue was $358 million, with adjusted operating margin of 11%.

While Software Integrity results were affected by Covid and our near-term operational transition, we are enthusiastic about the dynamic market and our leading industry position. Our long-term objective remains: to grow Software Integrity in the 15-20% range, exceeding market growth as we and the industry evolve. We believe operating margin can reach or exceed our corporate average over time.

For 2021, as our operational adjustments take hold, we expect business levels to ramp throughout the year and to achieve 15 to 20% orders growth for the full year. Revenue will feather in over time due to our time-based model. Our objective is to exit the year with double-digit growth in Q4, with the full year in the high-single-digit range, then accelerate in 2022. We'll increase the level of internal investment in 2021, as we implement our adjustments, and we intend to resume margin expansion in 2022.

Turning to cash, operating cash flow for the year was a record $991 million, reflecting our strong results as well as robust collections.

We ended the year with a cash balance of $1.2 billion, with total debt of $128 million.

During the year, we completed buybacks of $242 million dollars. At this time, we plan to increase our total buybacks in 2021 versus 2020.

Now to guidance, which assumes there are no changes to the current Entity List restrictions.

For fiscal year 2021:

- Revenue of $4.0 to $4.05 billion;
- Total GAAP costs and expenses between $3.226 and $3.271 billion;
- Total non-GAAP costs and expenses between $2.825 and $2.855 billion;
- A non-GAAP operating margin of 29 to 30%;
- Other income and expenses between minus $11 and minus $7 million;
- Non-GAAP normalized tax rate of 16%;
- GAAP earnings of $4.39 to $4.54 per share;
- Non-GAAP earnings of $6.23 to $6.30 per share;
- Cash flow from operations of $1.2 to $1.3 billion;
- And capital expenditures of approximately $100 million.

Now to the targets for the first quarter:

- Revenue between $935 and $965 million;
- Total GAAP costs and expenses between $767 and $785 million;
- Total non-GAAP costs and expenses between $674 and $684 million;
- GAAP earnings of $1.05 to $1.16 per share; and
- Non-GAAP earnings of $1.44 to $1.49 per share.

Longer-term, we are raising our financial objectives. We intend to manage to a Rule of 45 over the next several years, through a combination of solid revenue growth and continued operating margin expansion beyond 30%.

In conclusion, we enter 2021 with excellent momentum, reflecting: the strong markets we serve, the resiliency of our business model, and the outstanding execution of our team.

And with that, I'll turn it over to the operator for questions.