



Cadence Design Systems, Inc.

Computational Software for Intelligent System Design

Company Overview Presentation

October 23, 2023

Safe Harbor Statement and Regulation G

Safe Harbor Statement

The following discussion contains forward-looking statements, including our outlook on future business and operating results. Due to risks, uncertainties and other factors, many of which are outside our control, actual results may differ materially from expectations expressed or implied in the forward-looking statements. You should not rely on forward-looking statements as predictions of future events. All forward-looking statements in this discussion are made only as of October 23, 2023, are based on estimates and information available to us at that time, and we do not intend, and disclaim any obligation, to update them.

Additional information concerning factors that could cause actual results to differ can be found in our SEC filings, including our most recent Forms 10-K and 10-Q, and the cautionary statements regarding forward-looking statements in our October 23, 2023 earnings release, as well as our future filings.

Non-GAAP Measures

In addition, the following discussion contains certain non-GAAP measures, which should not be considered in isolation from, or as a substitute for, GAAP results. Reconciliations of non-GAAP measures with their most directly comparable GAAP results, including those set forth in our October 23, 2023 earnings release and CFO Commentary for the quarter ended September 30, 2023, are available in the quarterly earnings section of the investor relations portion of our website at [cadence.com](https://www.cadence.com).

Cadence at a Glance

Computational technology for designing today's electronic systems

Leader
COMPUTATIONAL
SOFTWARE FOR
**Intelligent
System Design™**

\$1.023B

Q3 2023
REVENUE

Culture

INNOVATION: CREATED
BY ENGINEERS,
FOR ENGINEERS

~11,100

EMPLOYEES
WORLDWIDE

Industry

SOFTWARE AND
PROGRAMMING

26

GLOBAL
DEVELOPMENT
CENTERS

Nasdaq Ticker: CDNS; S&P 500 and Nasdaq 100 Indices

Source: Cadence Earnings Press Release, Oct 23, 2023

https://www.cadence.com/en_US/home/company/newsroom/press-releases/pr-ir/2023/cadence-reports-third-quarter-2023-financial-results.html

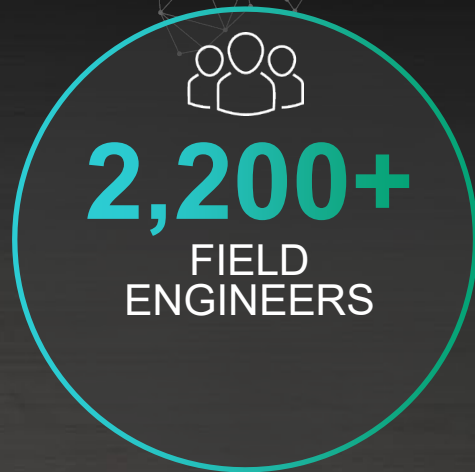
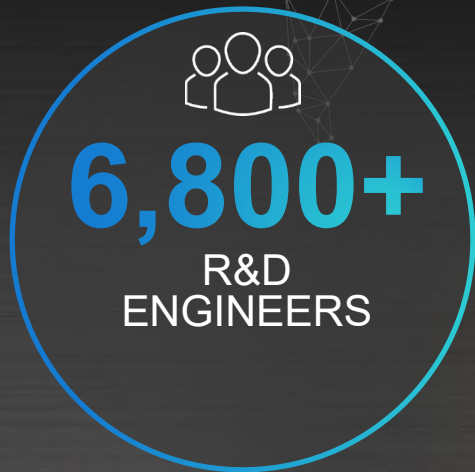
A Great Place to Work Around the Globe



Source: Cadence Sustainability Report, 2022
https://www.cadence.com/en_US/home/company/csr.html

Current as of Oct 23, 2023

Developing and Deploying Computational Software



Cadence People and Sustainability



Innovation

Launched nine significant innovative products and completed key strategic acquisitions, which we expect to be drivers of future growth and enabling the next wave of sustainable innovation



Net-Zero GHG by 2040

Formally committed to the Science Based Targets initiative and provision of our plan by 2025
Achieved CarbonNeutral® company certification across our global operations, and CarbonNeutral® product certification of our Palladium Cloud offering
Joined The Climate Pledge to partner with ~400 companies who share our commitment to reach Net-Zero by 2040



Cadence Giving

We are proud to have donated more than \$3.7 million through the Cadence Giving Foundation in 2022 to impact environmental sustainability, access to STEM education, and additional local and global initiatives

To expand our commitment to community giving, Cadence has recently joined the Pledge 1% alliance to contribute 1% of employee time, Cadence technology, and profit to drive meaningful change in our core focus areas



Diversity, Equity, and Inclusion

Our Black, Latinx, Veteran, LGBTQ+ and Women employee groups expanded participation globally and we introduced three new employee inclusion groups in the U.S.—Asian and Pacific Islander, Indian and South Asian, and employees who are neurodivergent and/or have disabilities



30+ Best Workplace Recognitions

Across 14 countries, including Fortune's 100 Best Companies to Work For, Fortune's World's Best Workplaces, and Forbes America's Best Employers



Newsweek's Most Responsible Companies

Recognized as #87 on Newsweek's 500 Most Responsible Companies and #8 among 50 companies in our industry



Best Workplace for LGBTQ+ Equity

Named one of the Best Places to Work for LGBTQ+ Equality by the Human Rights Campaign Foundation



Investor's Business Daily Top 100 ESG Companies

Recognized by Investor's Business Daily as one of IBD's 100 Best ESG Companies of 2022

Recognition for ESG Performance

Progress on Our 2022 ESG Strategies



Innovation

Cadence is a pivotal leader in electronic design, building upon more than 30 years of computational software expertise. Our advancements in computational software provide the foundation for the next-generation electronic design of chips, boards, and systems enabling smarter, smaller, and more power-efficient products. Cadence applies its underlying Intelligent System Design strategy to deliver software, hardware, and IP that enables our customers to turn design concepts into reality.

Workforce

People come to Cadence to do meaningful work with a global impact. Each day with Cadence offers exciting opportunities to create a better, more connected world. We are leading the charge to solve technology's toughest challenges. Our High-Performance Culture sets us apart as a community of passionate, bold, and creative people and outlines the values and behaviors that will enable our employees to succeed at Cadence. These values influence our practices for hiring, goal setting, development, promotion, retention, and recognition. The Great Place to Work Institute recognizes Cadence as an exceptional employer in many regions around the world. Our diverse team of passionate and talented employees go above and beyond for our customers, our communities, and each other.

Environmental Sustainability

We are committed to investing our resources to combat climate change and taking steps to lessen the environmental impact of our facilities and business operations. Cadence monitors its performance on energy, emissions, waste, and water to conserve resources and reduce costs. Our culture inspires employees to participate in environmental initiatives that improve the sustainability of communities where we operate.



Intelligent System Design Strategy

Major Electronics Industry Drivers

The semiconductor industry is rapidly growing as a result of an unprecedented combination of technology drivers impacting multiple industry segments

Data Science and Machine Learning



Hyperscale Computing



Autonomous Vehicles



5G Communications



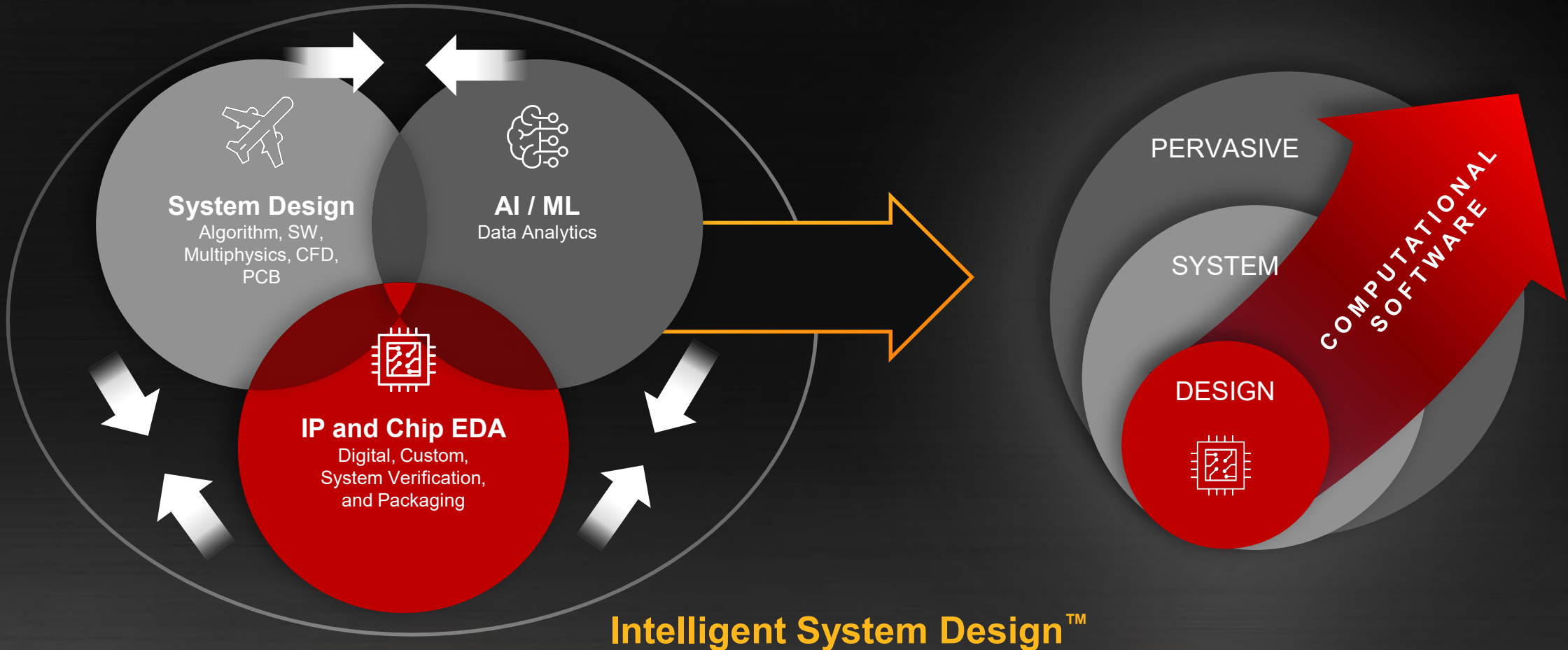
Industrial IoT



Life Sciences



Cadence Is Leading the Computational Software Convergence



Intelligent System Design™

Merger of EDA, system design, AI

Pervasive intelligence throughout design

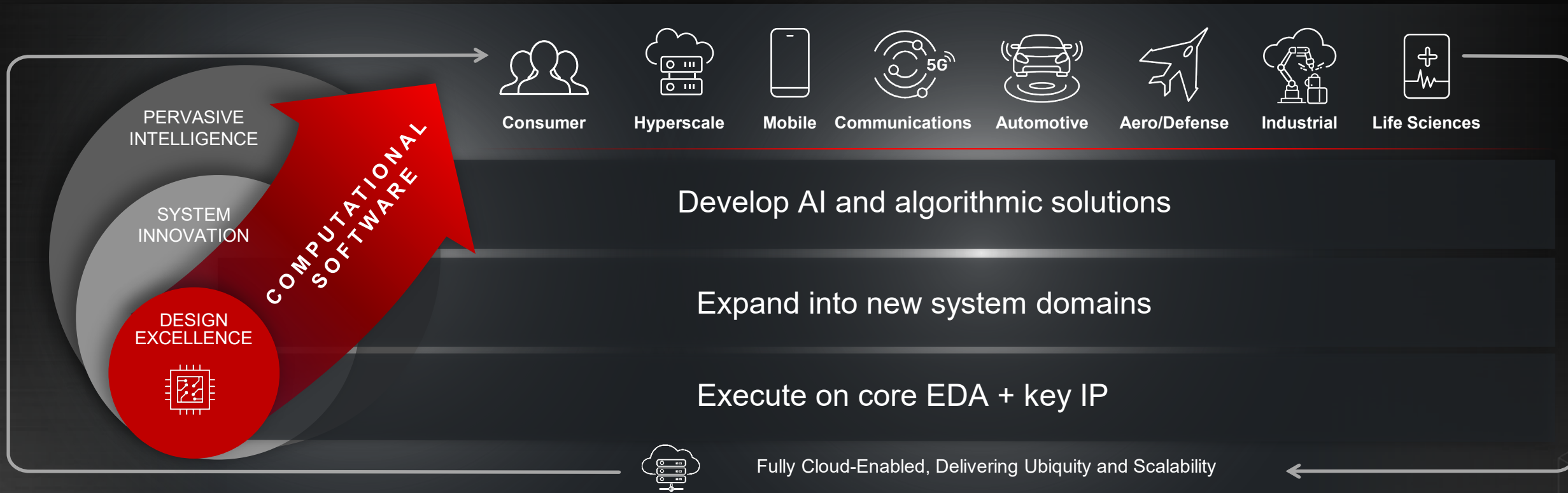
Grounded in computational engineering

Co-optimizing system, hardware, software

Spanning multiple system domains

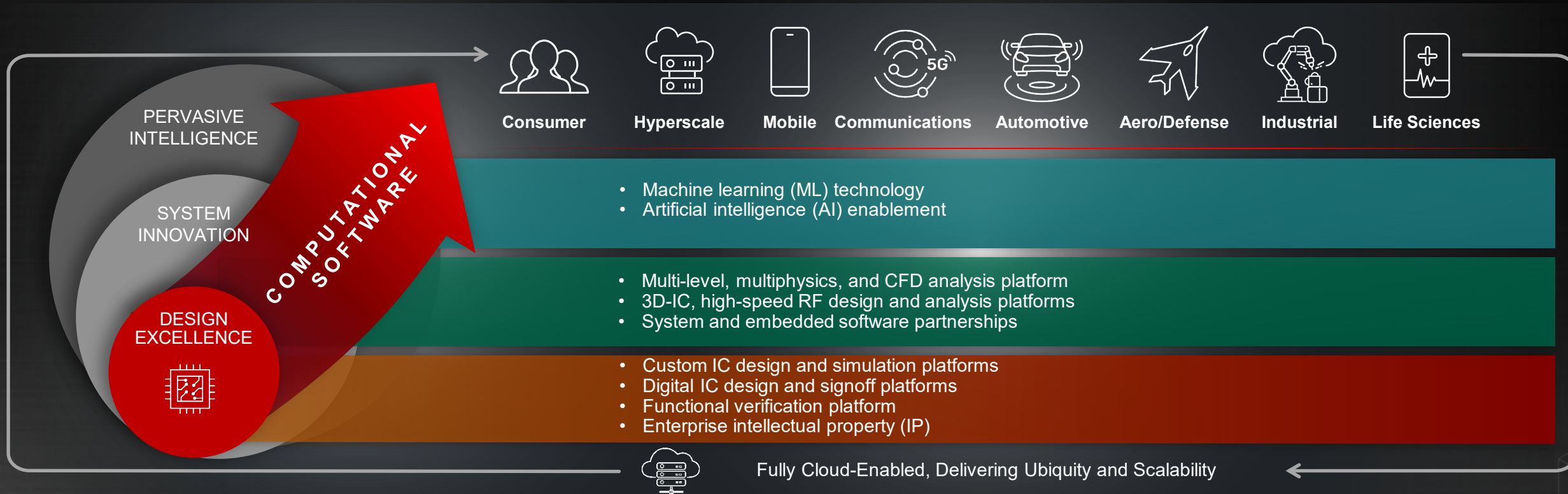
Cadence Intelligent System Design Strategy

Computational Software as a Core Competency



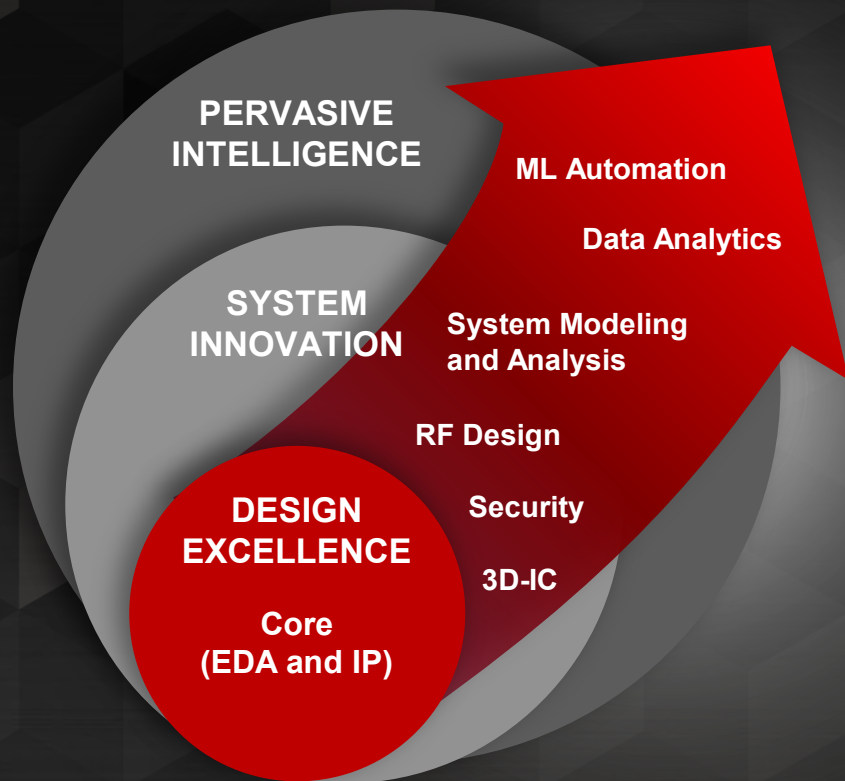
Cadence **Intelligent System Design** Strategy

Enabling end-to-end systems from devices to the cloud



Recent Product Innovation and News

**20+ significant products
in the past 3 years**



Pervasive Intelligence

- Virtuoso® Studio – Custom/analog design with broader support for systems, including RF, mixed-signal, photonics, and advanced heterogeneous designs
- Allegro® X AI – Generative AI for Allegro X-based PCB place-and-route automation
- Verisium™ AI-Driven Verification Platform – Automated verification and debug

System Innovation

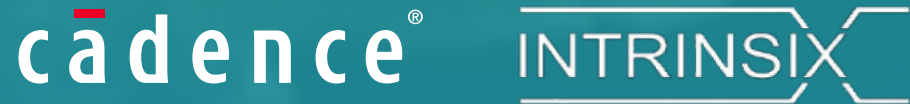
- Integrity™ 3D-IC Platform – Multi-chiplet design and advanced packaging
- Fidelity™ CFD Software – Next-generation scalable CFD solution
- Future Facilities Software – Data center thermal planning and analysis
- Cadence® OnCloud – A SaaS software platform offering easy cloud-based access to comprehensive, scalable software for electronic system design and analysis

Design Excellence

- Joules™ RTL Design Studio – Digital design analysis and debugging capabilities from a unified cockpit, enabling fully optimized RTL design prior to implementation handoff
- 224G-LR SerDes IP in TSMC N3 for 800G/1.6T networks
- Cadence Certus™ Closure Solution – Fully automated and massively distributed to support unlimited capacity SoC designs

Cadence Completes Acquisition of Intrinsix

Expanding our reach in key high-growth verticals, including aerospace and defense



- Brings highly skilled engineering teams with expertise in advanced nodes, radio frequency, mixed-signal, and security algorithms
- Expands our reach in key high-growth verticals, including aerospace and defense



LLMs to Accelerate “Correct-by-Construction” Design

Design quality innovation to reduce time and effort



“Ensuring alignment between specification and design is critical, and the cost of verification has increased with the complexity of design functions.

Renesas and Cadence have collaborated to develop a novel approach to address this challenge by leveraging generative AI’s LLM capabilities, which significantly reduce the time from specification to final design by efficiently controlling design quality.

This remarkable milestone is an achievement in the long-term collaboration between Renesas and Cadence to develop advanced AI technology that revolutionizes semiconductor design processes and accelerates time-to-market.”

Shinichi Yoshioka,
Senior Vice President and CTO, Renesas

The Best Gets Better – Virtuoso Studio

“ The new device routing technology within Virtuoso Studio, when applied to cutting-edge manufacturing processes, provides us the next level of automation with excellent results and faster time to market. ”

Ching San Wu

Corporate Vice President, MediaTek

3X Productivity

Massively scalable, cloud-ready
for 10,000s of simulations

In-design signoff and physical
verification

AI Powered

Planar/finFET-based layout
automation and optimization

Comprehensive foundry-
supported process migration

Heterogenous Integration

3D design and analysis:
Analog/RF, packaging/ modules

Integration with Integrity™,
Innovus™, Allegro®, AWR®, and
multiphysics analysis

Leverages 30 Years of Industry Leadership for All Process Technologies

Announcing Allegro X AI

Generative AI for Allegro X PCB place-and-route automation

Schneider Electric



At Schneider Electric, turnaround time and the quality of the end product are absolutely critical for business success. With the Allegro X AI technology from Cadence, we see a great potential to significantly shorten our development cycle. The hardware designer can make assessments on density and complexity—and adjust the electrical design to ensure a rapid and efficient completion of the design, as well as improved productivity.



Jean-Christophe Dejean

VP PLM Processes & Governance, Schneider Electric

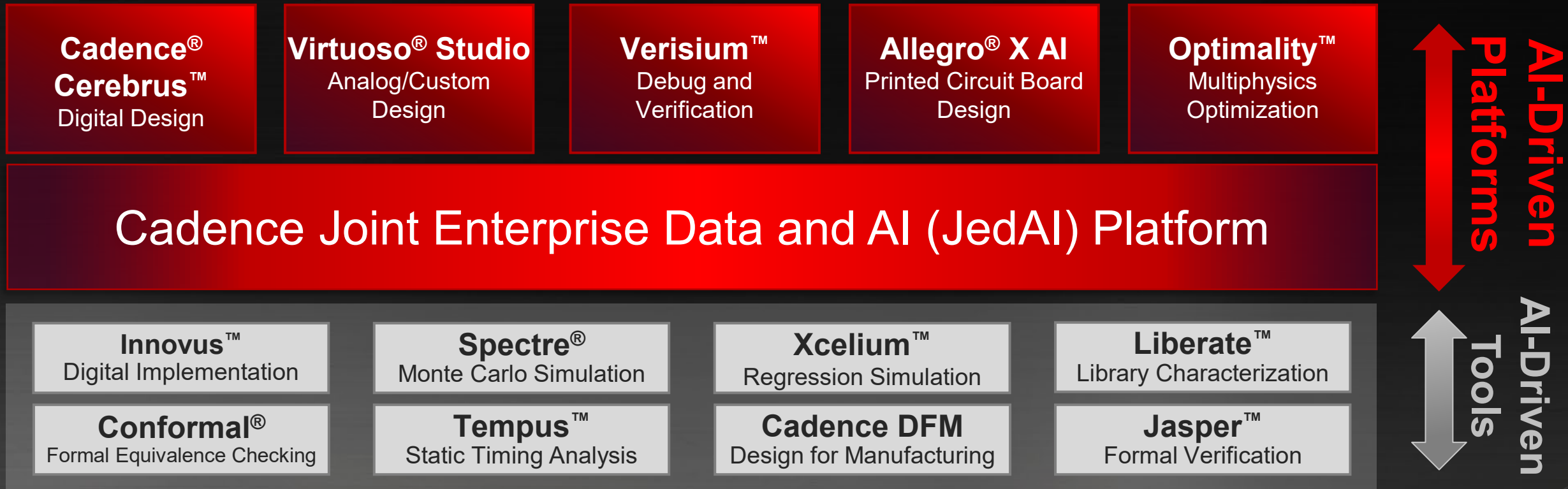
Brings the automation approach of IC digital design to PCB

Allegro[®] X AI

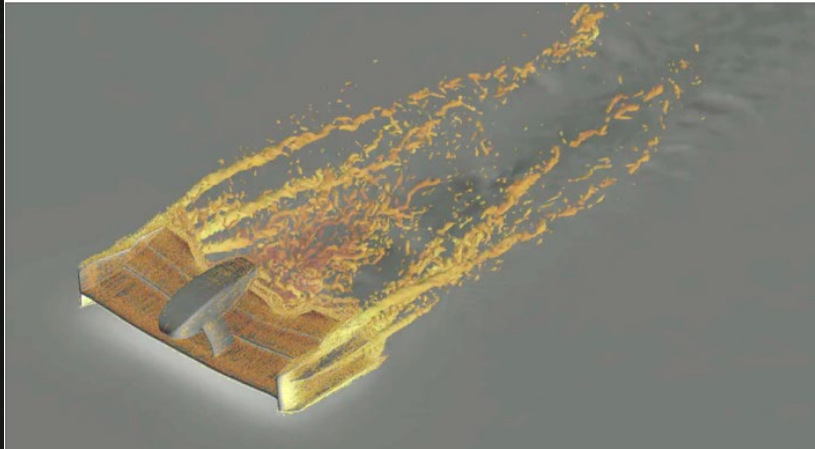


Transforms days-long manual process into hours of automated generation

The First Comprehensive “Chips to Systems” Generative AI Portfolio

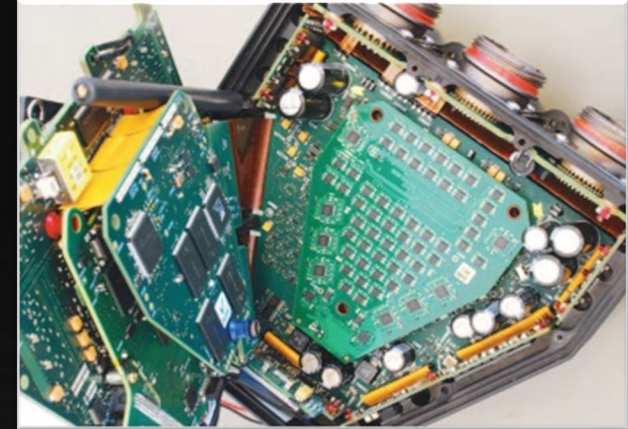


McLaren Racing: Designed with Cadence from Chips to Chassis



Fidelity™ CFD Analysis of F1 Imperial Front Wing

WMLES visualization of vortex formation, interaction, and breakdown



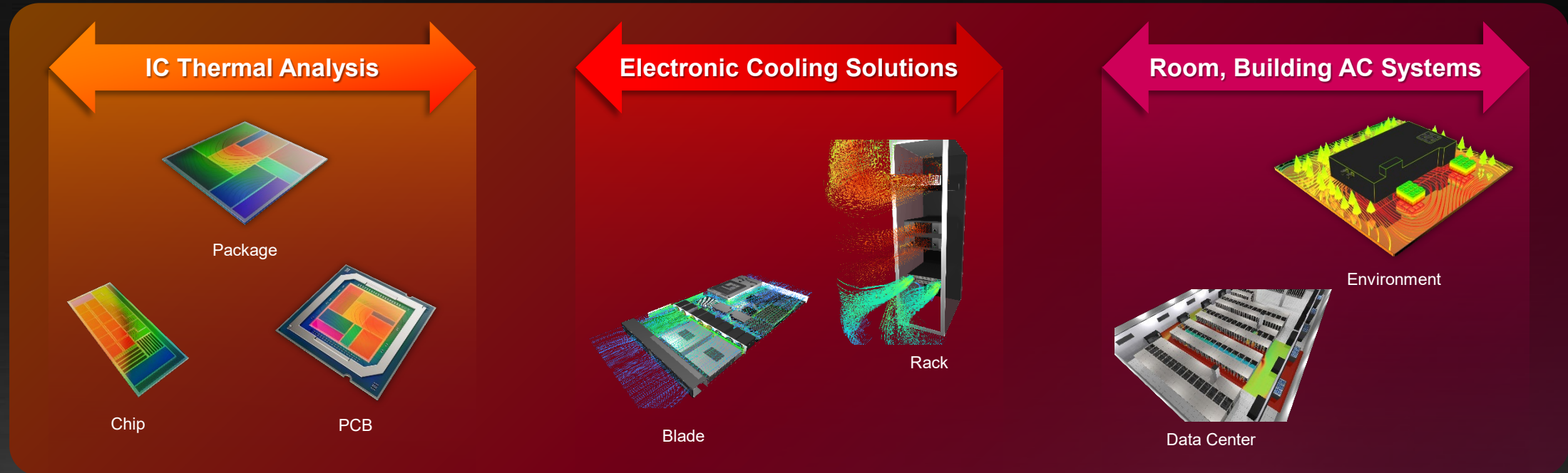
IC and PCB Design of ECU

Analog and PCB design for engine control and racing metrics



Physics-based Digital Twins for Sustainable Data Center Design

Analyze and Optimize Thermal from Chips to Buildings and the Chillers



Enable engineers to predict, visualize, and quality the impact of any change in the data center prior to implementation and during operations

Accelerating Drug Discovery with Computational Software

Industry's first SaaS-based cloud-native platform



CADENCE MOLECULAR SCIENCES

- Scientific and computational molecular design leader for nearly 25 years
- **Pioneered Orion® – the only cloud-native molecular design platform**
- Utilizing AI and 3D simulation software to explore millions of alternatives
- Overcome therapeutic complexity amid decreasing drug discovery efficiency
- **Customers include 19 of top 20 pharmaceutical companies**

Cadence Acquires Cascade Technologies

Accelerating our execution of the Intelligent System Design strategy

Acquires



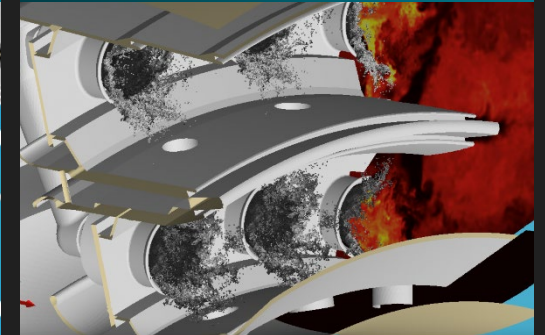
- Technology experts with a complete software solution for high-fidelity CFD
- Leaders in GPU-acceleration of multi-physics simulation, with fully GPU-resident solvers dramatically reducing turnaround time
- These advanced simulations are providing system companies the opportunity to improve the durability and performance of the systems they design and manufacture

Extending our system innovation portfolio targeting high-fidelity CFD simulation

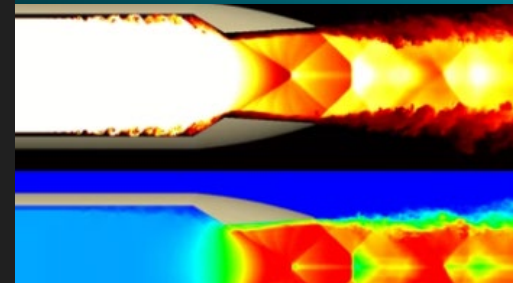
Aerodynamics



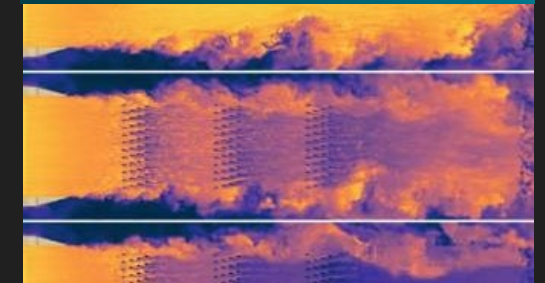
Reacting Flow



Aeroacoustics



Heat Transfer



Multiphase



49ers and Cadence Team Up on Technology Partnership Focused on Sustainability



cādence®

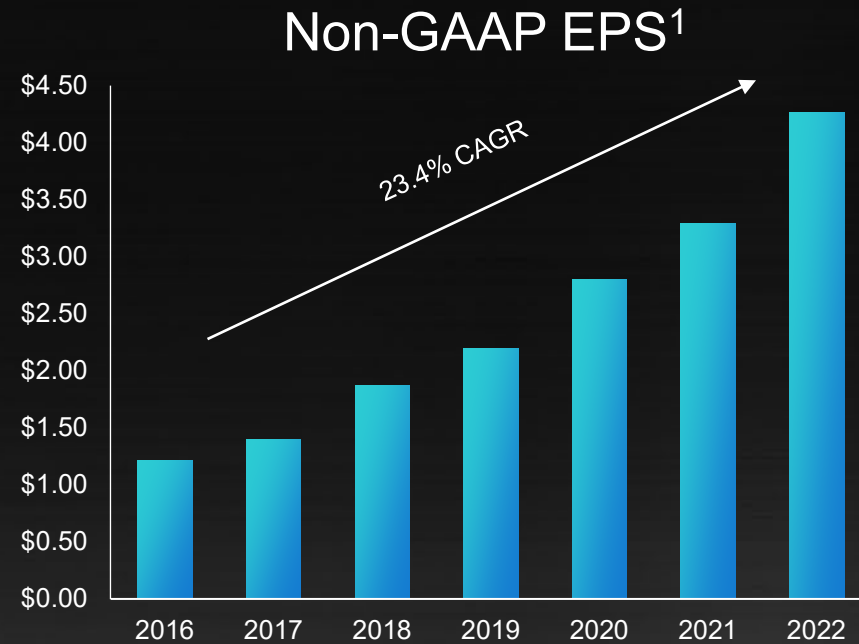
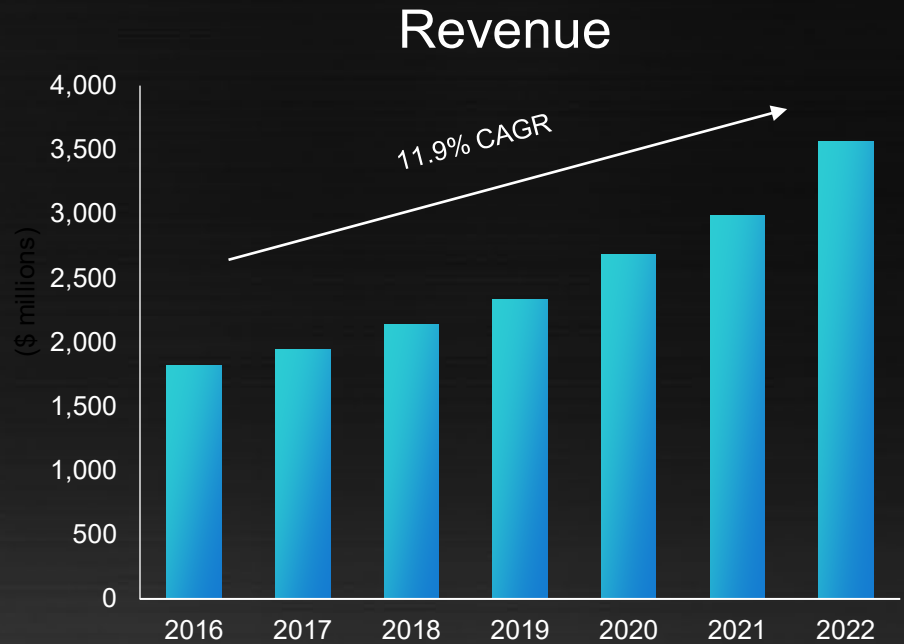
The 49ers will consult with Cadence to identify stadium energy efficiencies, enabling the 49ers to continue their long-standing commitment to green business practices.

Locally, Cadence will support and volunteer with the 49ers Foundation's 49ers EDU program presented by Chevron, which leverages the game of football and Levi's Stadium as platforms to expose Bay Area youth to STEAM education concepts.



Financial Performance

Financial Summary



Notes:

1. Non-GAAP operating margin and non-GAAP EPS (excludes amortization of acquired intangibles, stock-based compensation, non-qualified deferred compensation expenses and certain non-recurring cash expenses). See quarterly earnings releases and CFO Commentary for reconciliations to GAAP measures.

2022

\$3.562B

Revenue

40%

Non-GAAP
operating
margin¹

Free
cash flow

\$1.119B

Recurring Revenue Model

High visibility software revenue stream

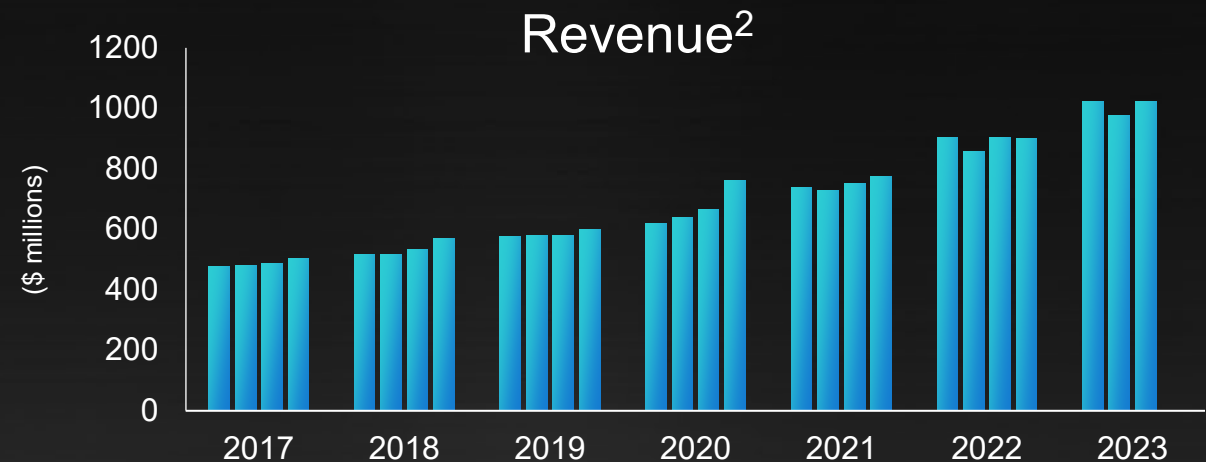
- Recurring revenue mix: ~85% for 2023
- Backlog¹: \$5.4B (Q3 2023)

Revenue growth

- 13% (Q3'23/Q3'22)

Notes:

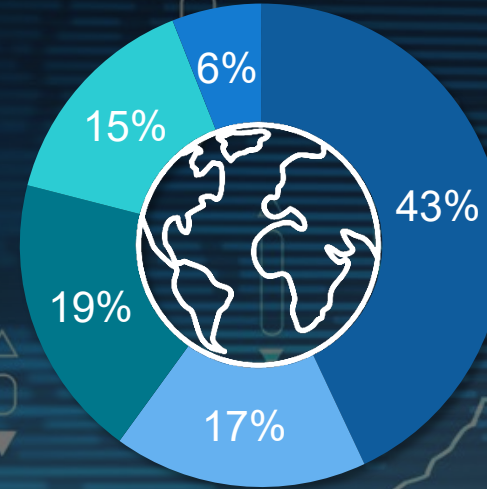
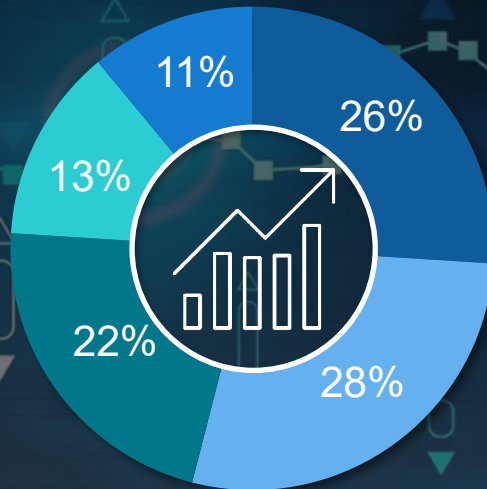
1. Backlog = Remaining Performance Obligations + Other Arrangements with Non-Cancelable Commitments
2. Q4 2020 was a 14-week quarter



Diversified Business Across Products and Regions

Revenue Mix for Q3 2023

- Functional Verification
- Digital IC Design and Signoff
- Custom IC Design and Simulation
- System Design and Analysis
- IP



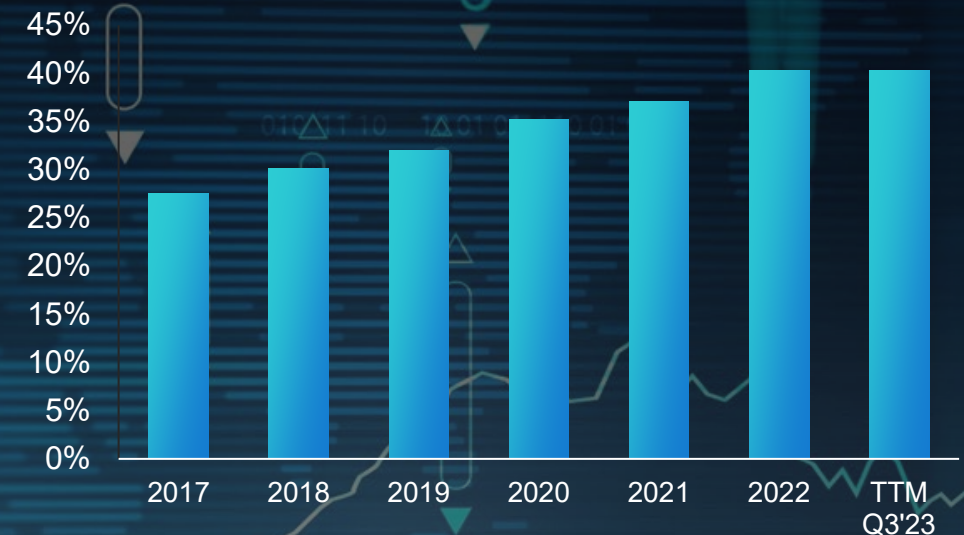
- Americas
- China
- Other Asia
- EMEA
- Japan

Driving Profitable Growth

Strong operating profitability

- Focus on growth and disciplined ROI-centric resource allocation
- Non-GAAP operating margin

Non-GAAP Operating Margin¹

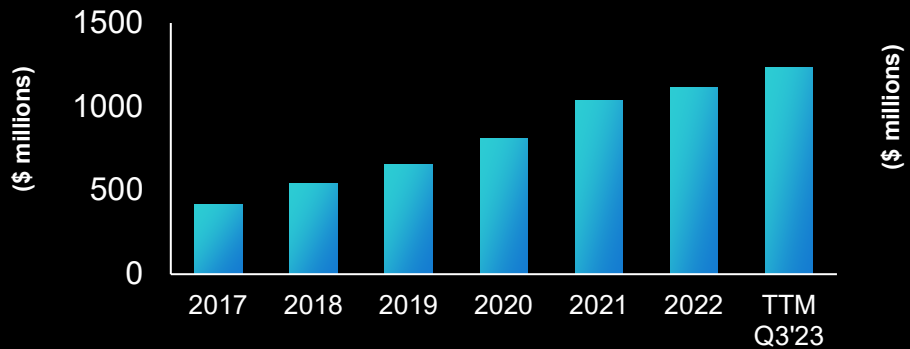


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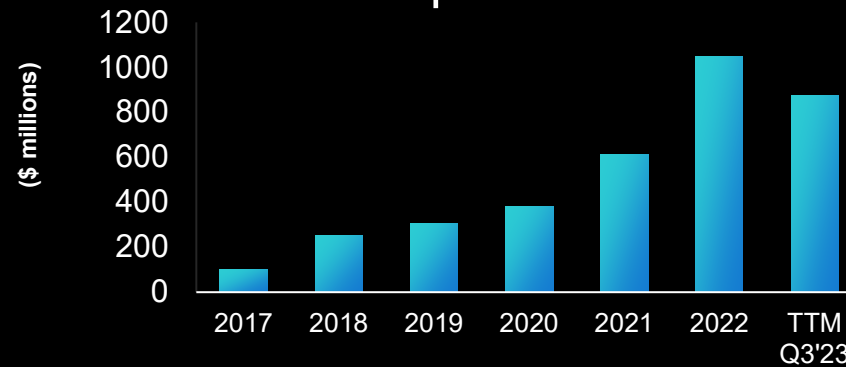
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Cash Flow, Capital Structure, and Capital Allocation

Free cash flow



Stock repurchase



Free cash flow generation

- \$1.119B (2022)

Capital structure (Q3 2023)

- Cash: \$962M
- LT debt: \$650M

Capital allocation

- Internal investment
- M&A
- Repurchase stock

The Cadence logo is centered on a dark background with a repeating pattern of light gray cubes. The word "cadence" is written in a white, lowercase, sans-serif font. A small red horizontal bar is positioned above the letter 'a'. A registered trademark symbol (®) is located to the upper right of the letter 'e'.

cadence®

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