Semiconductors & Microelectronics

A strategic industry sector for California

GO-Biz is California's lead agency supporting job creation and business assistance

Our organization is primed to help:

- **Provide direct assistance,** including incentive navigation, site selection, and permitting support
- **Support your international sales** and entry to global markets
- **Help international companies** land and grow successfully in our state
- **Streamline permits, navigate regulatory issues**, and help companies create jobs

California is the established leader in Semiconductors & Microelectronics

#1

US State for semiconductor manufact. jobs

47K semiconductor mfg jobs in CA, 24% of US total[1]

2K

Semiconductor businesses

Includes all related businesses incl. design, manufacturing, packaging, etc.[2]

$8.7B

Semiconductor exports

Total CA semiconductor exports, 2025[3]

79%

of US VC Investment

#1 US State for semiconductor VC, 2025[2]

47%

of all US Semiconductor patents

California share from 2021-2024[5]

1. BLS Quarterly Census of Employment & Wages, Q2 2025 dataset, NAICS 334413
2. Pitchbook Data Inc., Semiconductors industry, Company & Deal searches
3. US Census Bureau via USA Trade Online
4. GO-Biz analysis of US Patent and Trademark Office data published by PatentsView.org, 2021-2024 Annualized Data Tables

California has a rich history of innovation in Semiconductors & Microelectronics

1947
The transistor is invented at Bell Laboraties in New Jersey by 3 co-inventors, including William Shockley

1955
William Shockley opens Shockley Semiconductor Laboratory to develop & produce transistors in Mountainview

1957
A group of employees leave Shockley to found the Fairfield Semiconductor Corporation in Palo Alto

1959
Robert Noyce of Fairfield Semiconductor invents silicon-based integrated circuit

1971
The term “Silicon Valley” first appears in print in an article chronicling the rise of the semiconductor industry

1976
Founding of Apple Computer, which creates one of the first mass-produced personal computers the following year

1981
IBM releases a personal computer with an Intel processor, a design which would become an industry standard

1993
Nvidia is founded in CA with a vision to bring 3D graphics to gaming & multimedia industries

2013
Nvidia pivots focus from gaming graphics to AI processing, positioning itself for leadership in AI chip market

California's Semicondctor business ecosystem is second to none

Leading companies across the value chain

- **Fabless** PsiQuantum, Nvidia, Xilinx
- **EDA & IP** Cadence, Synopsis, Arteris
- **Equipment & Test Products** Advantest, EUV Tech
- **Integrated Device Manufacturers** Intel, Qualcomm
- **Packaging & OSAT** Lam Research, Xperi, Intel

Vibrant Startup Ecosystem

- **$7B in Venture Capital** raised by CA Semiconductor companies in 2025[1]
- **Startup incubators/accelerators** including:
  - Silicon Catalyst
  - Plug and Play Tech Center

1. Pitchbook Data Inc., Semiconductors VC deal search

California's labs and facilities are supporting the Semiconductor industry of the future

Key Labs & Facilities

1. Lawrence Berkeley National Laboratory
2. UC Berkeley NanoLab
3. Stanford Nonofabrication Facility
4. SLAC National Accelerator Laboratory
5. DOD Microelectronics Commons (Stanford & USC)
6. UC Davis Center for Nano-MicroManufacturing
7. Lawrence Livermore National Laboratory
8. UC Santa Barbara Nanofabrication Facility
9. UC Riverside Joint Center for ESD Protection Design
10. UC San Diego NanoEng. Materials Research Center

Raw Materials Mining

1 2 3 Mining Sites (Boron, Lithium, Rare Earth Minerals)

Each of California's regions each boast unique clusters of institutions, companies and universities

Bay Area

Lawr. Berkeley Nat'l Lab, Nanofab Facility

Stanford, UC Berkeley, San Jose State, Santa Clara

BROADCOM NVIDIA AMD Lam RESEARCH

Central Coast

Google Quantum AI Campus

Cal Poly SLO, UC Santa Cruz, UC Santa Barbara

Google Quantum AI OpenLight PseudolithIC

Orange County

MicroSystems Lab @ UC Irvine

UC Irvine, Cal State Fullerton

Microsemi TOSHIBA SYNTIANT

Inland SoCal

UC Riverside Joint Center for ESD Protection Design

UC Riverside, Cal State San Bernardino

BOURNS ARTECH INDUSTRIES INC.

Capital

Center for Nano-MicroManufacturing (UC Davis)

UC Davis, Sacramento State

SOLIDIGM blaize BOSCH

California's workforce pipeline includes the largest higher education system in US

Top Electrical Engineering Programs

Stanford, UC Berkeley and **Caltech** were among US News & World Report's **Top 10 Best Electrical Engineering Programs** in 2025

Top Computer Engineering Programs

UC Berkeley and **Stanford** were among US News & World Report's **Top 10 Best Computer Engineering Programs** in 2025

54 Research Universities[1]

- **14 R1 Universities** (Very High research spending/PhDs)
- **16 R2 Universities** (High research spending/PhDs)

Public colleges & universities[2]

University of California

- **10 universities** (e.g. UC Berkeley, UC San Diego)
- **211K** undergraduate students
- **37K** graduate students

California State University

- **23 campuses** (e.g. CalPoly, San Diego State, Fullerton)
- **343K** undergraduate students
- **30K** graduate students

California Community Colleges

- **116 colleges**
- **1.11M** students
- **training & apprenticeship** programs

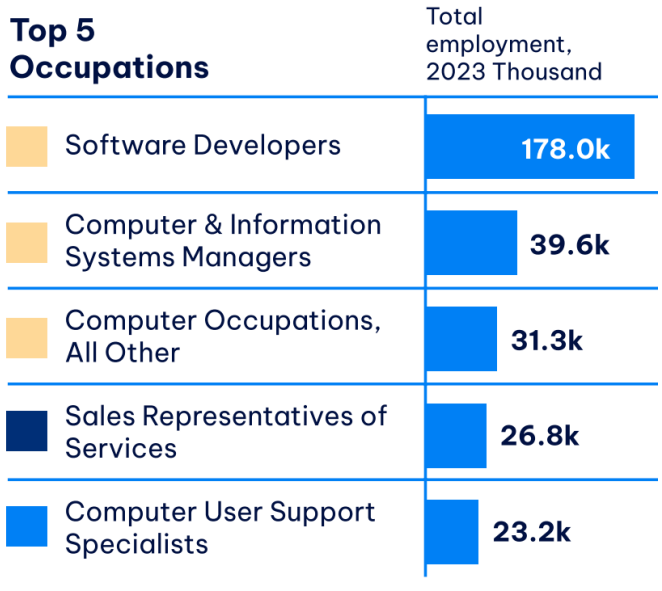
1. Carnegie Classification of Institutions of Higher Education
2. Legislative Analyst's Office, January 2025

California colleges & universities are training the next generation of Semiconductor talent

Graduates of Relevant Degree Programs[1]				
Degree Program	Total annual graduates	Bach	Masters	PhD
Electrical & Electronics Engineering	**4.3K**	2.3K	1.6K	340
Computer Engineering	**2.5K**	1.8K	660	30
Software Engineering/ Development	**20K**	12K	5.5K	360

Industrial Electronics/Electromechanical Technician Programs		
Sierra College	Mechatronics	Rocklin
Allan Hancock College	Engineering Technology	Santa Maria
Chaffey College	Mechatronics, Industrial Electrical Tech	Rancho Cucamonga

High Tech Workforce in CA



1. GO-Biz Regional Data Tool, National Center for Education Statistics, Updated Sep 2024

California has a new Economic Blueprint to drive growth in key industries

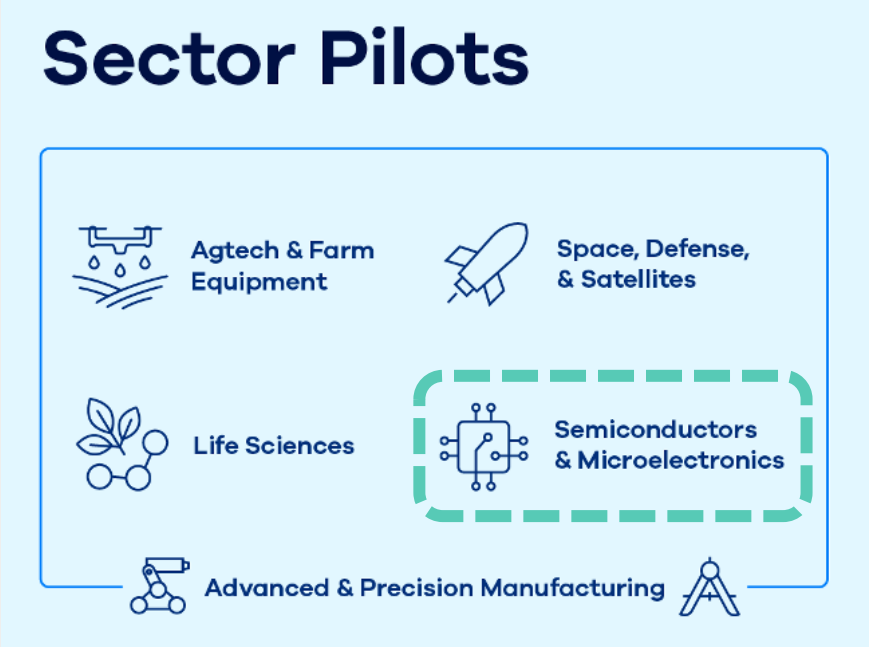
What is the CA Economic Blueprint?

- Launched February 2025
- Business and workforce strategy for industry development & job creation
- Statewide planning effort informed by California's 13 Jobs First regions
- Priority sectors identified for every region – including **Semiconductors & Microelectronics**
- **$268M** committed to strategic projects & planning

The State of California is providing special support for Semiconductors & Microelectronics

Semiconductors & Microelectronics is one of four "pilot" industry sectors to receive special state support, including:

- **Jobs First Council** – State agency leaders convene quarterly to tackle roadblocks to industry growth
- **Sector Working Groups** – Regional and state representatives meet monthly to discuss industry needs & issues
- **Incentives & funding** – Coordination of state incentives, including new Regional Investment Initiatives (RII) grant program



Various incentives are available to support industry growth

Income & Property Tax Credits

- **California Competes Tax Credit** for job creation
- **R&D Tax Credit** to offset qualifying R&D expenses
- **Property Tax Abatement** for mfg facilities >$25M value

Sales Tax Incentives

- **Partial Sales Tax Exemption** for basic mfg equipment
- **Full Sales Tax Exemption** for qualifying mfg equipment

Streamlined Approvals

- **CEQA exemption** for qualifying advanced manufacturing projects to bypass environmental review

Hiring & Training Programs

- **Free customized training** via online Calbright platform
- **Wage reimbursement** (50%) for upskill training
- **Hiring Tax credits** for homeless, veteran & other hiring

Loans & Bonds

- **Manufacturers:** Up to $10M in low-interest, tax-free financing for facility construction/acquisition and eqpmt.
- **Small businesses:** Loan guarantees (80% of loan value)

Energy & Energy Storage Savings

- **Up to 20% utility savings** over 5 years to businesses at risk of closure or relocation due to energy costs
- **Rebates for self-generation** of distributed energy

Here are just a few companies that have received state incentives

Atomic Machines - $15M tax credit

- Microelectronics manufacturer
- Awarded 2025
- Santa Clara & Emeryville, CA
- Committed **$156M** investment and **305 new jobs**

Robert Bosch Semiconductor - $25M tax credit

- Semiconductor manufacturer
- Awarded 2023
- Roseville, CA
- Committed **$1.25B** investment and **140 new jobs**

Akash Systems - $20M tax credit

- Semiconductor manufacturer
- Awarded 2023
- Oakland, CA
- Committed **$62M** investment and **339 new jobs**

EUV Tech - $1.3M tax credit

- Semiconductor manufacturer
- Awarded 2023
- Martinez, CA
- Committed **$13M** investment and **64 new jobs**

California deep commercial and cultural connections with Japan support business success

California is Japan's largest U.S. trade partner

- $39.9 billion in goods traded, including transportation equipment, computer and electronic products, and non-electrical machinery
- Over 3,300 Japanese businesses supporting over 127,000 jobs, paying $14.6 billion in annual wages to Californians

Home to an Expansive Japanese Community

29% of Japanese-Americans live in California.

- Japan towns in San Francisco, San Jose, and Los Angeles.
- HQ of the Japanese American Citizens League.
- Over 100 California cities have Sister Cities in Japan.

Japanese semiconductor leaders choose California

Silicon Valley fuels Renesas' global expansion

California provides Renesas with direct access to the world's largest semiconductor design ecosystem in Silicon Valley. The state's deep engineering talent pool and acquisition pipeline helped Renesas integrate U.S. semiconductor leaders like Intersil and Integrated Device Technology.

Advantest tests next generation chips in the Bay

Advantest located its Americas headquarters in California to serve the largest concentration of fabless semiconductor companies in the world, such as NVIDIA, AMD, and Broadcom. By operating in San Jose, Advantest can collaborate directly with companies developing AI, data centers, and chips.

We attended Semicon Japan and will lead delegations to Semicon Taiwan and Semicon West

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