

Semiconductor Industry in New York

How the Empire State is Jump-starting America's Microchip Resurgence

Decades of private and public investment — dating back to the opening of IBM's Watson Computing Laboratory at Columbia University in 1945 — have positioned New York as a leader in the semiconductor industry.

The Empire State is ready to meet this moment. Manufacturers are impacted by a global semiconductor shortage, and America's share of production has shrunk from 37% in 1990 to 12% today. With its workforce, infrastructure, and industry networks in place, the Empire State is poised to jump start the semiconductor industry for the U.S. economy and consumers around the world.

Talent powering an industry



- **88 semiconductor companies** operating in New York State, including global leaders GlobalFoundries, Wolfspeed, onsemi and IBM
- **34,000 direct jobs** supporting every stage of the semiconductor industry, from cutting-edge R&D to manufacturing and distribution
- **43,000 STEM-related college graduates** produced by NY's higher ed institutions every year

Nation-leading infrastructure



- New York is home to the **Albany NanoTech Complex** — the most advanced, publicly owned 300mm semiconductor R&D facility in the United States
- **Hundreds of millions invested in 4 shovel-ready mega-sites** — more than any other state in the nation — for new fabs in the Mohawk Valley, Central New York and Western New York, all with plentiful power, water, sewer and workforce capacity

World-class breakthroughs and partnerships



- **2nm chip** — the world's smallest — developed by IBM in Albany, NY; other notable innovations include Wolfspeed's silicon carbide chips, NexGen Power's gallium nitride chips, Odyssey Semiconductor's gallium nitride chips and Danfoss Silicon Power's electronics packaging
- **30+ partners** in Albany NanoTech's national coalition, including MIT and Yale
- **8 NYSTAR-funded centers** supporting industry innovation in semiconductors, microelectronics and photonics:
 - FlexMed *at Binghamton University*
 - Center for Advanced Technology in Nanomaterials and Nanoelectronics (CATN2) *at SUNY Polytechnic Institute*
 - Integrated Electronics Engineering Center (IEEC) *at Binghamton University*
 - Center of Excellence in Nanoelectronics and Nanotechnology (CENN) *at SUNY Polytechnic Institute*
 - Small Scale Systems Integration (S3IP) *at Binghamton University*
 - Center for Emerging and Innovative Sciences (CEIS) *at University of Rochester*
 - Center for Future Energy Systems (CFES) *at Rensselaer Polytechnic Institute*
 - Center for Integrated Electric Energy Systems (CIEES) *at Stony Brook University*

75+
YEARS

of innovation and investment building NY's cutting-edge semiconductor industry

\$64.6
MILLION

in NYSTAR funding for semiconductor- & microelectronic-related innovation support since 2015

#2
IN THE NATION

in academic R&D expenditures

#2
IN THE NATION

for semiconductor patents

\$3.7
BILLION

in gross regional product (GRP) — semiconductor and other electronic component manufacturing

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