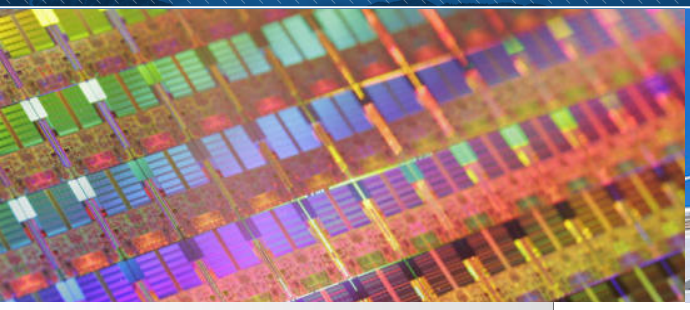
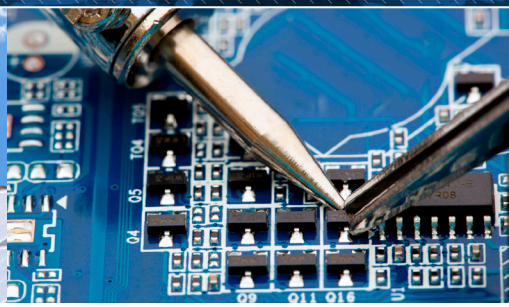
COLORADO

ADVANCED INDUSTRY ELECTRONICS





INDUSTRY FACTS

2013 TOTAL EXPORTS

$2.6 BILLION

TOP 3 EXPORT MARKETS

1. Canada
2. Malaysia
3. Philippines

NUMBER OF COMPANIES

1.4K

AVERAGE ANNUAL EMPLOYMENT

28.1K

Colorado's electronics industry is an important and growing part of Colorado's economy and supports a number of key industries ranging from aerospace and bioscience to advanced manufacturing.

Companies in this industry provide electronics products, components and services to a variety of sectors. Specifically, the electronics industry includes businesses engaged in design, manufacture, wholesale and repair of electronic equipment including computer storage devices, computer peripheral equipment, semiconductors, electronic components, audio and video recording equipment, and magnetic and optical recording media. Companies in the electronics industry also manufacture optical instruments and lenses, and navigational, measuring, electromedical, and control instruments. Examples of products made by these companies include light emitting diodes (LEDs), remote radiation sensors, optical disks, tape storage and backup units, hard disk drives, magnetic tapes, integrated circuits and transistors.

Electronics Assets

Colorado is an ideal location for electronics design and manufacturing firms to locate with a highly skilled workforce, strong technological innovation, a business friendly environment and a large consumer market. Electronics companies in Colorado also benefit from proximity to customers in related key industries. The electronics industry is also bolstered by strong manufacturing activity in Colorado and across the nation. In fact, a significant part of this growth stems from computer and electronic products manufacturing that represents about 16 percent of total manufacturing employment in Colorado. Electronics companies also represent top private employers across the state including Arrow Electronics, Hewlett Packard, Seagate and Intel. Arrow Electronics, the Colorado-based electronics distribution and services company, was recognized by Fortune as one of the world's most admired companies for the 14th consecutive year in 2014. Arrow Electronics supplies about 40 percent of the electronic components and services globally, and is Colorado's largest revenue generating company.

Major Employers

- Arrow Electronics
- Ball Aerospace & Technologies Corp.
- The Boeing Company
- Integrated Defense Systems
- Hewlett Packard
- IBM Corporation
- Lockheed Martin
- Northrop Grumman
- Oracle Corporation
- Raytheon Company
- Seagate Technology

Workforce

Colorado's electronics industry includes a large pool of talented, well-educated and highly skilled workers. Compared with the age distribution across all industries, the electronics industry has a larger share of employees between the ages of 35 and 64 years old.

TOP OCCUPATIONS BY EMPLOYMENT

1. Sales Representatives, Wholesale & Mfg., Except Technical & Scientific Products
2. Electrical & Electronic Equipment Assembler
3. Software Developers, Systems Software
4. Sales Representatives, Wholesale & Mfg., Technical & Scientific Products
5. Software Developers, Applications

ANNUAL PAYROLL $3.2 BILLION

DID YOU KNOW?

CO Electronics exports grew 55.5% between 2009 -2013
(WISERTrade, 2014)

STEM-related occupations are expected to grow 18.6% by 2023 in CO, exceeding national projections by more than 7%. (CO Innovation Network, 2013)

CO had the third-highest tech-worker concentration in 2012.
(TechAmerica Foundation, 2013)

Note: An establishment is defined as a single physical location that produces some form of economic activity. One company can have multiple establishments.

Sources: QCEW Employees, Non-QCEW Employees, Self-Employed, & Extended Proprietors – EMSI 2014.2 Class of Worker; WISERTrade.

Nearly 44 percent of electronics-related occupations in Colorado require a high school diploma or equivalent, while 38 percent require a bachelor's degree or higher. Of the electronics-related occupations, about 52 percent require some sort of on-the-job training.

Education and Training

The higher education system in Colorado provides an excellent support system for the electronics industry in the state and offers a broad range of technical, scientific, and specialized degrees. There are 28 public institutions of higher education in Colorado, consisting of 13 four-year and 15 two-year public institutions offering electronics-related programs. In addition, there are more than 30 private and religious accredited institutions and nearly 15 private occupational and technical schools offering nearly 200 electronics-related programs throughout the state.

Key Locational Factors

1. The ability to attract and retain high quality electronics professionals and technical talent

- Of Colorado's adult population, more than 37 percent has completed a bachelor's or higher-level degree, making Colorado the second-most highly educated state in the nation behind Massachusetts. (U.S. Census Bureau, 2012 American Community Survey)
- Colorado ranked ninth in the number of science and engineering graduate students per 1,000 individuals ages 25-34 years old in 2011. (National Science Foundation, 2014)

2. Proximity to colleges/universities

- Colorado has consistently awarded a larger share of degrees in Science, Technology, Engineering and Mathematics (STEM) fields than the U.S. on average. In 2012, Colorado awarded 12.5 percent of degrees in STEM fields, compared with 11.6 percent nationwide.(Colorado Innovation Network, 2013)
- Electrical, computer and energy engineering programs at the University of Colorado at Boulder attract research support from NASA, DARPA, NSF and NOAA. Research expenditures total about $6 million annually. (University of Colorado, 2014)

3. Direct access to a large and growing customer base

- Colorado companies in the electronics industry attracted 26 deals totaling more than $152.7 million in venture capital over the past ten years. This high level of investment signals abundant opportunities for growth, innovation and job creation. (PricewaterhouseCoopers, MoneyTree Report, 2014)
- Colorado's export portfolio relies heavily on electronics and accounted for 30 percent of the state's total exports in 2013, compared with about 24 percent of U.S. exports. (WISERTrade, 2014)

4. A central location and easy global access

- Colorado's central U.S. location allows convenient access as air travelers can easily reach two-thirds of the nation within two hours and is within four hours flying time of every North American city with a population of 1 million or more. Further, Colorado's position on the 105th meridian—the exact midpoint between Tokyo and Frankfurt—favorably serves growing world markets. (Metro Denver Economic Development Corporation)
- DIA was the fifth-busiest airport in the nation and 15th-busiest worldwide in terms of passenger traffic in 2013. DIA is home to 16 commercial carriers that offer scheduled nonstop service to nearly 180 destinations worldwide. (U.S. Bureau of Transportation Statistics, 2014; Airports Council International 2014; and Denver International Airport, 2014)

Colorado's advanced industries include aerospace, advanced manufacturing, bioscience, electronics, energy and natural resources (including Cleantech), technology and information and infrastructure engineering. For more information about available grants, visit www.advancecolorado.com/aiprograms.

Learn more about Colorado's bioscience industry at www.advancecolorado.com/electronics.

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Rev. 100714