

HARDWARE

CLUSTER PROFILE | FORT COLLINS, CO

The Hardware Cluster is part of Fort Collins' larger technology sector. Companies in this cluster are involved in the research, design, and production of computers, computer storage devices, computer peripherals, and other related equipment. This sector is one of the most established sectors in Fort Collins, with Hewlett Packard opening a facility in 1978. Now, Hewlett Packard, Intel, Avago, AMD, and Texas Instruments all conduct research and development activities in their Fort Collins locations. This private-sector research expertise combined with the talent from Colorado State University makes Fort Collins a computer hardware innovation hub.



The City of Fort Collins is an active supporter of the Hardware Cluster. Between 2011 and 2012, the City provided \$6.6 million in direct business assistance to companies in this cluster. This support was in the form of manufacturing use and property tax rebates, as well as integrated design assistance, energy efficiency implementation, and job training assistance.

The City's investment of \$6.6 million resulted in private investment of \$253 million and the creation of 227 high-wage jobs in Fort Collins.

In other words, for every \$1 the City spent, the private sector spent \$38.

2011-2012 NEWS & ACHIEVEMENTS

- **HP** constructed a state-of-the-art research facility in Fort Collins to advance sustainable data center technologies. The 50,000 square foot facility was built in collaboration with HP Labs. Research there will focus on gaining efficiencies around data center cooling and capacity.
- **Avago** completed an \$82 million expansion, adding wafer fabrication capacity and 92 jobs. The company announced another \$165 million expansion of its Fort Collins facility, adding another 135 jobs.
- **Texas Instruments** completed its acquisition of National Semiconductor and now has offices in Fort Collins.

SPECIALTIES: CHIP DESIGN • DATA STORAGE • SYSTEMS ON A CHIP • RF I/C & MICROWAVES • REMOTE SENSING •

RESOURCES & ASSETS

RESEARCH

- ♦ CSU – Information Science & Technology Center
- ♦ CSU – Extreme Ultraviolet Science and Technology Center
- ♦ Intel's Fort Collins Design Center
- ♦ HP (R&D and Design)
- ♦ AMD (R&D and Design)
- ♦ Avago (R&D and Design)
- ♦ Texas Instruments (R&D and Design)

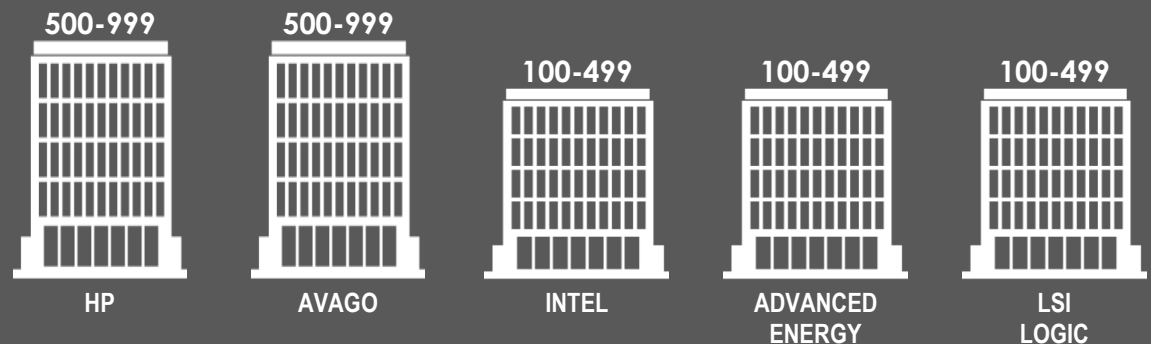
INCUBATION & COMMERCIALIZATION

- ♦ CSU Ventures
- ♦ Rocky Mountain Innosphere

FUNDING & TECHNICAL ASSISTANCE

- ♦ NoCo Capital

TOP 5 EMPLOYERS (BY NUMBER OF EMPLOYEES)



Source: QCEW

BY THE NUMBERS

AS OF JUNE 30, 2012:

OF FIRMS



19

EMPLOYMENT



2,866

EMPLOYMENT
CHANGE 2011-12



-493

EARNINGS PER
WORKER



\$113,793

PRIVATE \$ TO CITY \$
INVESTED



\$38

Source: QCEW, City of Fort Collins

INNOVATION

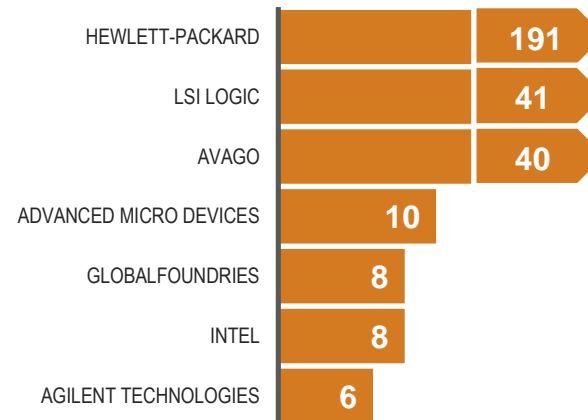
The Hardware Cluster is one of the most prolific producers of intellectual property in Fort Collins. With five Fortune 500 companies conducting their R&D and design work in the region and a major research university with a strong engineering program, it is no wonder.

The 327 patents granted covered a wide range of topics from cryptography to heat exchange. The largest number of patents granted over the 2011 and 2012 time frame were for inventions related to electrical computers and digital processing systems. Computer-aided design and analysis of circuits and semiconductor masks was another area with a large number of patents. Error detection/correction and fault detection/recovery was another area of focus.

PATENTS AWARDED 2011-2012



Top Patent Producers 2011-2012



Note: Patent Producers are identified based on the assignee name.

Source: US Patent Office

BUSINESS FORMATION & EXPANSION

INCUBATION & ACCELERATION

Companies	n/a
Employees	n/a
Venture Capital Raised	n/a
City Investment	n/a

Source: Rocky Mountain Innosphere

EXPANSION & RELOCATION:

Companies	1
New Jobs	227
Capital Investment	\$253 million
City Investment	\$6.6 million

Source: City of Fort Collins

Avago
TECHNOLOGIES

Avago Technologies is a designer, developer, and supplier of a broad range of analog, mixed signal, and optoelectronics components and subsystems. Avago originated as a unit of Hewlett Packard, becoming its own company in 2005. Over its 50 year history, it has developed and assembled a portfolio of approximately 4,200 patents and pending applications.

Avago's Fort Collins campus is one of the company's co-headquarters sites and conducts research, development and design. The recent expansions have created the company's only US wafer fabrication capacity. Currently, the company is expanding its proprietary RF processes at the Fort Collins facility as part of its global strategy to expand its RF capacity.

