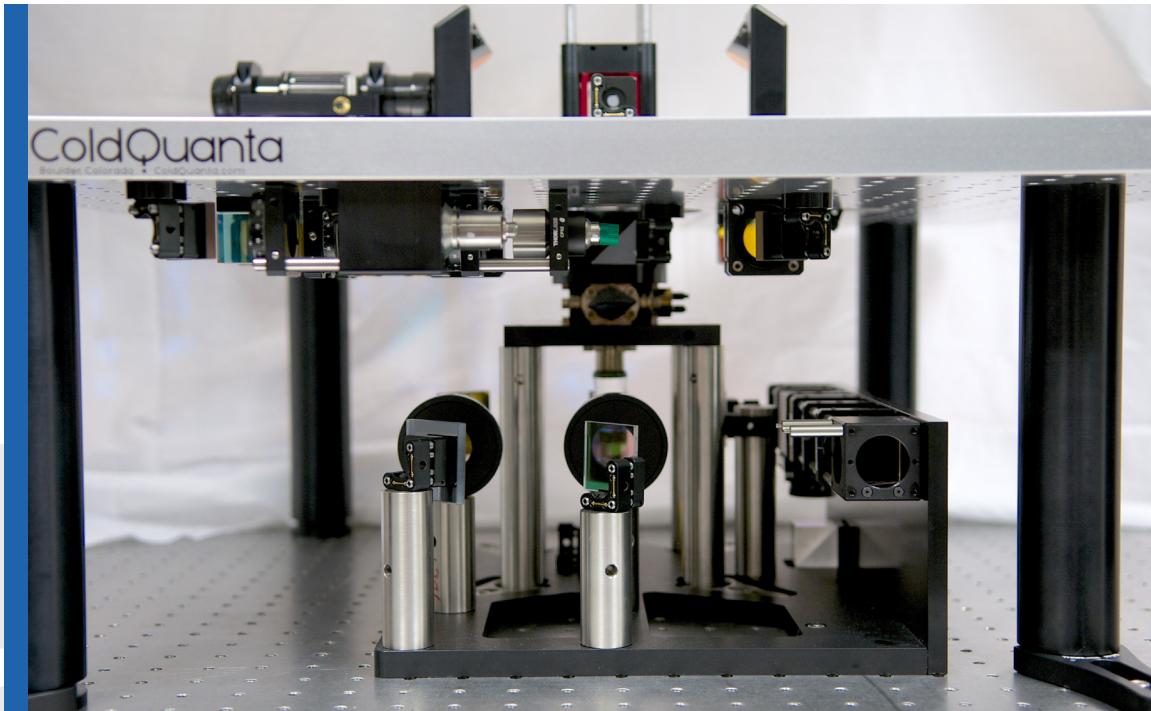


ColdQuanta

**Committed to Producing Cutting Edge
Cold and Ultracold Atom Technology**



Objective

ColdQuanta's goal is to deliver cutting edge products and technologies to customers, stimulating innovation in the applications arena of the AMO (Atomic and Molecular Optics) industry. We aim to advance the adoption of ultracold and cold atom technology (UCCAT) through strategic partnerships with academia, prime contractors and government labs.

Leadership Statement

ColdQuanta focuses on the development of BEC (Bose-Einstein Condensate), ultracold and cold atom generating devices and systems, allowing them to be accessible to a wide range of research, educational, and industrial institutions. Our products are intended for use in multi-disciplinary scientific and industrial applications requiring high performance and reliability, as well as education.

The company's mission is to simplify the production and use of ultracold and cold atoms by reducing the barriers of entry for researchers and application developers.



Core Competencies

ColdQuanta's unique scientific and engineering skills and expertise complement capabilities of researchers, government labs, and prime contractors allowing them to leapfrog into actual application development. Our AMO scientists and engineers collaborate with prime contractors and industry through all aspects of cold and ultracold atom projects, from the design of experiments to the training of in-house physicists to help foster innovative cold and ultracold atom technology capabilities.



Core Capabilities

- » Ultra-high vacuum device and system design
- » Opto-mechanical design
- » Atom chip design
- » Glass/silicon bonding techniques
- » High quality AR coated glass cells
- » Instrumentation control
- » Data acquisition
- » Analog electronics design

Production Capabilities

- » Glass/silicon atom chip production
- » Optomechanical system fabrication
- » Ultra-high vacuum glass cell fabrication
- » High quality AR coated glass cells production
- » Analog electronic assembly

Education: Ultracold Atom Intensive 4 Day Training Course

- » BEC Control Systems
- » 2D&3D MOT lab work
- » BEC Production and Imaging
- » Laser Stabilization and Cooling
- » Optimization, Transport and Loading Experiments
- » Atom Chips
- » Evaporative Cooling
- » BEC Experiments

Product Lines

The RuBECi®, ColdQuanta's flagship product lies at the heart of the new BEC system. The entire system provides researchers with everything (ultrahigh vacuum, species source, opto-mechanics, laser system, control systems, current sources, atom chip) required to produce BEC and/or ultracold matter. The system permits huge savings in time, expense and space and may be configured depending on the parameters of the researchers' goals.

The miniMOT™ line is based around a miniature magneto-optical trap preprocessed and shipped under vacuum, allowing researchers with no vacuum processing equipment or previous expertise in vacuum processing to immediately dive into the creation of cold atoms and research.

Very High Optical AR coated Glass Cells semi-customizable to customer specifications.

Applications

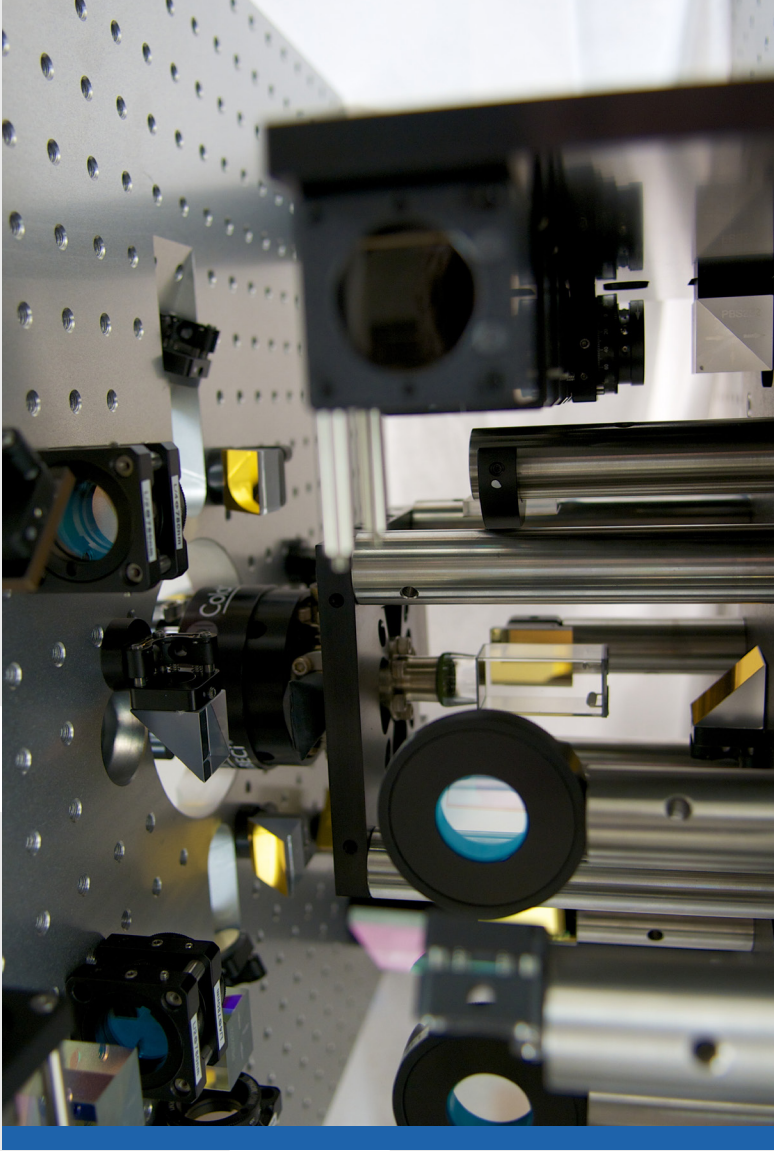
- » Precision navigation and time-keeping (PNT)
- » Simulation of novel materials
- » Gravimetry
- » Magnetometry
- » Quantum computing

ColdQuanta is currently involved in projects related to quantum computing, timekeeping, inertial sensing, optical lattices, and future experiments destined for the International Space Station.



Customers

- » Government labs
- » Academic research institutions
- » Graduate and undergraduate education
- » Aerospace & Defense industries



Profile

ColdQuanta was founded in 2007 by Rainer Kunz (CEO), Professors Dana Anderson (CTO & JILA fellow), Ted Hänsch (Nobel laureate), and Jakob Reichel (ENS). Located in Boulder, Colorado, ColdQuanta was spun out from the University of Colorado where Dr. Anderson has worked in many ultracold and cold matter related research projects over the last two decades. Three of the founders have experience with startup companies in the technology field. The founders have built a dedicated, collaborative team environment thriving and building upon the advances of AMO Physics.

Core Advantage

ColdQuanta is the leading commercial supplier and developer of cold and ultracold matter devices and systems. Our products simplify and expedite the generation and advancement of ultracold and cold matter based experiments, tools and technologies. We are the only company to routinely deliver production and customizable cold and ultracold atom generating devices and systems. A cohesive team of physicists, engineers, technicians and support staff are committed to collaborating with partners to create cutting edge and innovative technology advances.

ColdQuanta excels because of its one-of-a-kind comprehensive R&D facility dedicated to cold and ultracold atom systems consisting of multi-disciplinary engineering and assembly space, an optics lab, electronics work stations, two clean rooms (Class 10,000 and 1000), a laser lab, an in-house machine shop, and ultra-high vacuum processing facilities.



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