



## CZERO, INC

### Job Opening – Contract Position: Controls Engineer – Embedded Controls Specialist

**Posting#:** 2017-007

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**Date of posting:** February 17, 2017

**Location:** Fort Collins, Colorado 80524

*\*\*\*Please note: Must live within commuting distance of Fort Collins\*\*\**

**Time commitment:** Contract

**Travel requirements:** Possible occasional travel for onsite work with clients

**Reporting structure:** Reports to VP of Engineering

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#### JOB DESCRIPTION

Czero seeks an experienced controls engineer with deep expertise in software and programming, for contract work developing embedded systems for complex machines.

The engineer in this role will work as part of an agile, highly collaborative R&D team that designs and develops first- and second-stage prototype systems for advanced automotive, oil and gas, clean tech, aerospace, transportation and other industries.

An R&D partner for companies large and small, Czero specializes in first-ever technologies, energy efficiency, and integrating novel technologies into existing systems. Our projects range from high-efficiency powertrain systems to mobile and industrial hydraulics to large-scale system integration.

As part of our R&D work, we frequently develop embedded controls for mechanical, electromechanical, and electrohydraulic systems and subsystems.

This includes:

- Rapid controls prototyping (RCP) of real-time systems
- Development of automotive controls and testing systems
- System integration of industrial and process controls
- Test system development including data acquisition
- Developing supervisory control and data acquisition (SCADA) systems
- Generation of system validation plans and their execution

## Representative tasks

- Work with clients and other stakeholders to define system objectives and specifications.
- Develop new concepts and designs to solve challenging R&D projects.
- Develop control solutions for diverse devices, machines and applications that incorporate various control strategies.
- Select and implement hardware (rapid prototyping systems, data acquisition, PLCs, etc.) and software platforms to support desired architecture.
- Develop and test algorithms to meet system objectives.
- Model systems to determine expected performance.
- Apply established tools for software documentation, adherence to requirements, version control, and meeting system objectives for performance and quality.
- Hands-on testing, validation and implementation of control systems in laboratory environments and in the field.

## QUALIFICATIONS

### Education

Bachelor's degree in mechanical or electrical engineering with specialization in controls (advanced degree preferred).

### Experience required

5+ years of experience developing embedded controls systems.

### Essential for this position

- Expertise in all phases of embedded software development – emphasis in Automotive domain.
- Strong background in developing embedded software in C/C++ and Matlab/Simulink for a wide range of microprocessors.
- Experience with various automotive and industrial communication protocols such as Modbus, CAN, and XCP.
- Practical knowledge of LabVIEW and its use for data acquisition and control.
- Proficiency in controls design, software development, embedded code generation, and data analysis.
- Ability to apply skills to modeling, simulation, code development, and implementation in the test cell and laboratory.
- Strong verbal and written communication and interpersonal skills.
- A passionate interest, shared with everyone on the Czero team, in developing profitable innovations that make a positive global impact.
- Commitment to Czero's goals and a desire for continuous improvement.

**Additional consideration given to those with experience in these areas**

- Automotive, oil and gas, aerospace, heavy industrial or clean tech industries.
- Development of new hybrid architectures and intelligent control systems to update traditional technologies for higher performance and greater efficiency.

**Residency requirements**

- Must be U.S. citizen

**The right fit for our team**

Beyond technical ability, we're looking for someone who is smart, creative, innovative, hardworking, able to handle multiple projects at a time, and tenacious when it comes to a tough challenge. Everyone at Czero enjoys the challenge of tackling hard problems and is willing to put in the time and effort to solve them. Additionally, we have a true team environment, so it's crucial that you can collaborate effectively with diverse team members.

If you join our extended team, you will find Czero an interesting, challenging, and rewarding place to work. Your contributions will make a significant impact on high-profile projects that are positive for our clients, the environment and the economy.

**HOW TO APPLY**

Please email a PDF of your cover letter and résumé to [careers@czero-solutions.com](mailto:careers@czero-solutions.com)

**ABOUT CZERO**

An established, fast-growing mechanical engineering firm located in Fort Collins, Colorado, Czero specializes in early-stage R&D in the areas of automotive, commercial vehicles, oil and gas, and clean technologies. Our team takes on wide-ranging engineering challenges for both private and public sector clients, developing new technologies and delivering high-quality proof-of-concept prototype systems.

We are passionate about the environment, and our work centers on scalable, cost-effective solutions to increase energy efficiency, improve energy storage and decrease harmful emissions. Co-located at the Powerhouse Energy Campus of the Colorado State University (CSU) Energy Institute, we also work closely with CSU researchers.

**RECRUITERS**

Please do not contact us regarding this or other positions at Czero; we already have an established relationship with a great recruiting team. Thanks!