

# Colorado Digital Labs, Inc.

Precision Product Engineering & Development Resources

(800) 806-4908

[www.cdlttek.com](http://www.cdlttek.com)

Colorado Digital Labs, Inc. is a research and development company providing everything you need for building electronic and computer based components, products, and instruments. Saving you time and money, CDL delivers quick turn engineering services to get your design into production fast.



**We transform your product ideas,**

**← from concept to production →**



## What CDL can do for you...

Mechatronics & Mechanical	Single Chip Applications	Portable Applications	Scientific & Industrial	Medical Applications	OEM & Consumer
Motion Control	Embedded RTOS	Mobile	Data Acquisition	Imaging	Video & Audio
Robotics	Consumer	Wireless RF	Process Control	Perioperative	Telecom
Intelligent Mechanisms	Photonic	Measurement	Instrumentation	Telemetry	Security
3D Printed Parts	Distributed Systems	Remote Sensing	Aviation & Spacecraft	Diagnostics	Alternative Energy, SPV
Molded Parts	Networked Sensors	Telematics	Power Control	Database	Education

MADE IN USA

### Electronic Hardware Design

From functional specification to printed circuit boards and more, Colorado Digital Labs does it all. Our advanced computer aided design tools provide quick turns to meet aggressive schedules and keep costs low. Our digital, analog and RF design experience ensures manufacturability, reliability and conformance to all domestic & international regulatory standards.

### Programmable Logic & Integrated Circuit Design

Colorado Digital Labs uses VHDL & CUPL based logic design synthesis for a variety of programmable components, from simple PLD's to very large FPGA devices. This allows high bandwidth algorithms and digital state machines to be implemented in hardware for maximum system throughput. These devices allow significant system cost / performance gains by integrating complex functions and providing a migration path towards custom silicon for high volume manufacturing.

### Software & Firmware Design

We use object-oriented languages such as Java, C++ / C#, and Visual Basic. Our code development environments include Open Source RTOS, LINUX, MS Visual Studio and Vendor Specific tool chains. All software that we generate is structured, modular, extensively tested and documented. Our design process emphasizes software development strategies that ensure maximized code reusability and portability.

## Mechanical Design

Colorado Digital Labs provides 2D & 3D mechanical design services for machine development, test fixtures, instrument enclosures, high vacuum components, photonic assemblies, 3D printed parts and more. We create precision motion control systems for instruments, optical and mechanical assemblies. By combining sensors, microcontrollers and real time software algorithms with precision machined parts, we build advanced mechatronic devices that deliver unparalleled performance at a remarkably low cost.

## Development & Support Services

We offer a complete range of services that get you to mass production and beyond for the life of your product. This includes: Engineering Project Management; Specification Development; System Architecture Development; Technology Evaluation; Purchasing & Alternative Component Selection; Prototype Development; Regulatory Compliance; Contract Manufacturing; Customer Technical Support; Technical & DoD Manual Preparation and more.

## Platforms & Technologies

The following table lists some of the processor platforms and system components we have utilized in developing customer applications.

<b>Advanced Micro Devices (AMD)</b> SC520	<b>Advanced RISC Machines (ARM)</b> ARM7, ARM9E	<b>Atmel</b> ATF1500, AVR Series, & More	<b>Cypress Semiconductor</b> U37000 Series
<b>Intel</b> PXA250, SA-1110, SA110, 80C51, 80C186, 8080, 8086, 80X86 & More	<b>Microchip</b> PIC12Fxx, PIC16Fxx, PIC24Fxx, & More	<b>Motorola</b> MC680X0, MPC823, M68HC11 & More	<b>National Semiconductor</b> COP8, & More
<b>Renesas</b> M3087BFL	<b>Texas Instruments</b> MSP430x, MSP470x TMS320C54xx, TMS320C55xx	<b>Xilinx</b> XC4000, XC9500 Series	<b>Zilog</b> Z80180, Z86Exx

**Backplanes & Sockets:** PCI, Compact PCI, PC-104, PCMCIA, SCSI, VXI-VME-Euro, ISA & More

**Interfaces:** Ethernet, SATA, AUI, CAN, ARINC 429, T1/E1, IEEE 488/1284/1394, RS-232/485/488, Modbus, USB, I<sup>2</sup>C, SPI, McBSP & More

## About Colorado Digital Labs, Inc.

Since 1990, Colorado Digital Labs has been providing engineering services to clients in the U.S., Europe and East Asia. Our clients rely on us to complement their existing engineering resources or for their entire product development efforts. Please visit [www.cdltek.com](http://www.cdltek.com) for a comprehensive look at the precision engineering capabilities we offer.

Contact us today to find out how we can save you time and money on your current or future project.

Steve Navratil, President  
Email: [steve@cdltek.com](mailto:steve@cdltek.com)

# Colorado Digital Labs, Inc.

PO Box 235  
Fort Garland, Colorado 81133 USA  
(800) 806-4908

[www.cdltek.com](http://www.cdltek.com)

© 2000 - 2014, Colorado Digital Laboratories, Inc.