Conclusive Engineering Inc
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Who are we?

We are a group of experts who share a passion for development of full stack software systems. We love working on projects at a cross-section of backend, data pipeline, security and devops. We can carry out complex projects, where design, development and deployment of complex products needs to happen in the cloud or on premises.

Team & Experience

Counclusive Engineering was founded by Jakub Klama and Wojciech Kloska after years of working together, and soon after joined by several of Poland's best systems software experts. Our team has worked with companies such as iXSystems, Cadence Design System and Bombardier Transportation. Large part of our portfolio has been published as Open Source, making a reference check much easier. Together with our 10 colleagues we have 62 years of collective experience, which we'd like to offer to our customers.

How we do business

We apply an agile work methodology within Conclusive Engineering. We write specifications together with a customer, and iterate often to make sure you get what you anticipate. We're all mobile-enabled, and use Slack, GitHub, JIRA and other standard tools. We issue milestone reports to our customers, so that you feel comfortable with the progress of your project. We supply our team with a great office, the best equipment money can buy, and use the best software methodologies (continuous testing, continuous integration) to ensure we deliver a product of outstanding quality.

Contact us

We offer a free 8 hour consultation to understand the details of your projects and can come up with an estimate of time required to deliver it. Take the next step!

CONCLUSIVE ENGINEERING

Software services

Firmware

We understand the specifics of real-time programming and resource constrained environments. Our experience in writing bare metal applications includes for various families of microcontrollers, such as ARM Cortex M and R, TI PRU and Cadence Tensilica cores.

OS & Bootloader

Our expertise in kernel-level code includes Linux and FreeBSD operating systems and multiple bootloaders, including U-Boot and Barebox. We offer Base Support Packages (BSP) for your custom SoC and SoM designs. We work with the open-source community to make embedded operating systems safer and better for everyone. We embrace the power and simplicity of UNIX.

Device Drivers

We specialize in a broad range of device driver classes, including, but not limited to PCI-Express, Ethernet, NAND, USB, SATA, SPI, I2C as well as audio and video protocols and stacks. We use techniques such as zero-copy DMA to make sure our driver code has the best possible performance.

Application Layer & Middleware

Our promise to deliver end-to-end solutions of course includes application and middleware pieces. We use state-of-the-art programming techniques and technologies to deliver fast, safe and reliable code. We use C, C++11 and Rust programming languages to write maintainable and readable code and concurrent lockless data structures to make sure applications created by us offer outstanding performance and scalability. On less resource restricted systems we supplement our toolkit with Python and Cython programming languages to speed up the development.

Embedded User Interfaces

Whether it's through a web browser, desktop application or built-in touch display, we make sure that interaction with our software is always seamless. Our primary UI/UX toolkit consists of GTK+ and Qt, because we target most efficient solutions.

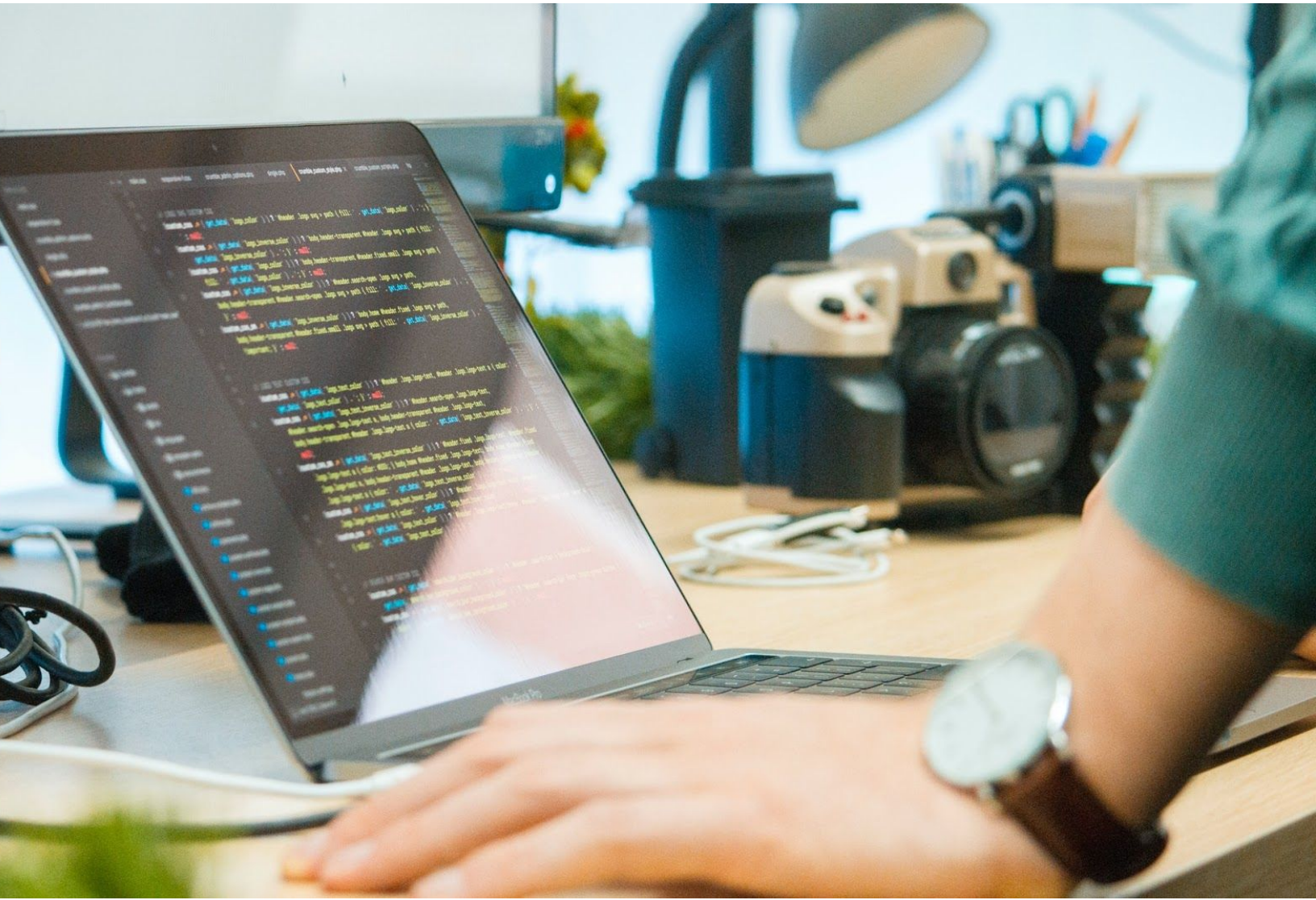
When necessary, we also provide the command line tools for interacting with our software.

Connectivity

Modern embedded systems are becoming more and more dependent on connectivity to the outside world. Whether the device is a piece in a larger local system, or depends on a cloud service, we can provide a vast variety of short and long distance wired and wireless solutions. Knowledge of IEEE 802, USB, Bluetooth, ZigBee and 6LoWPAN protocols helps us create connected IoT solutions that are safe and reliable.

Techniques

- Concurrent programming using lockless data structures and memory reclamation mechanisms
- Hardware and software transactional memory
- Reproducible software builds



CONCLUSIVE ENGINEERING

Hardware Services

PCB Design

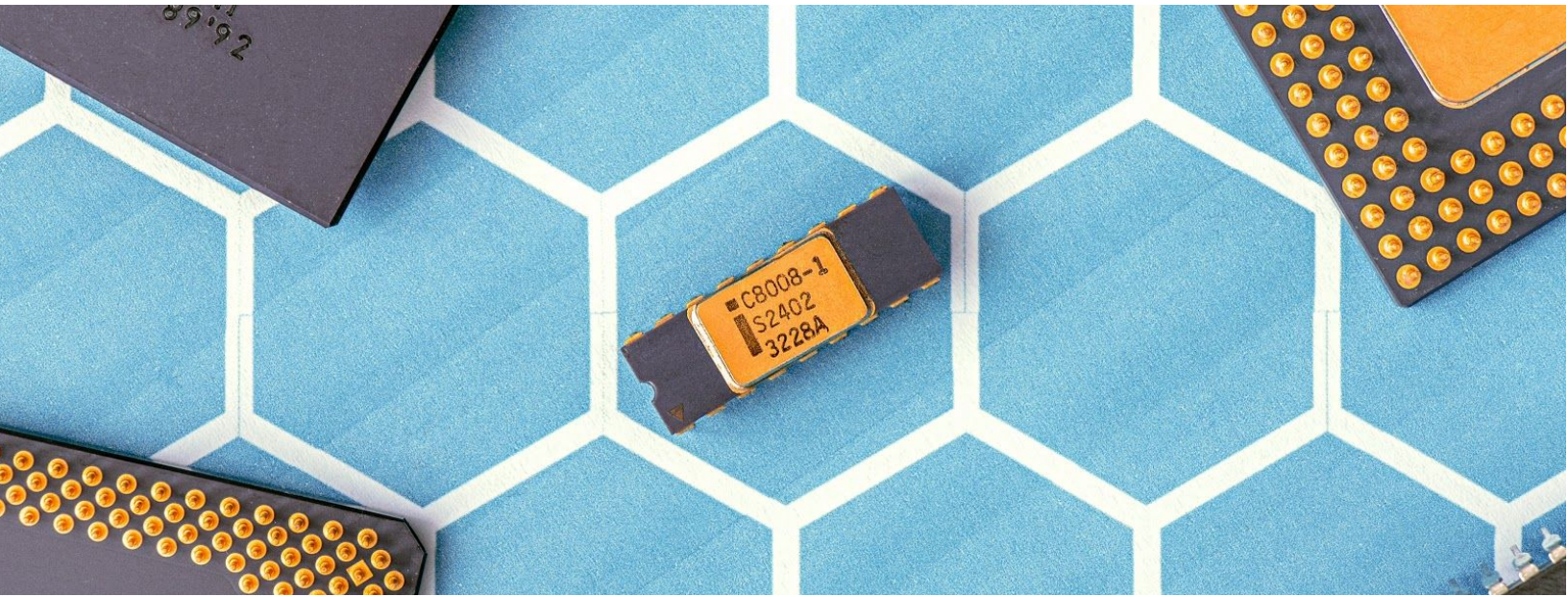
Each and every software stack requires a solid hardware platform to run on. While we are used to programming and debugging of the embedded systems provided by a different vendor, we can also offer our own digital PCB design. Hardware systems we are designing usually utilize an ARM CPU, SOC, SOM, or an FPGA, additional pieces of a discrete digital logic, appropriate power circuit and connectors providing required external connectivity.

Hybrid Solutions

Sometimes a regular software stack is not enough to deal with either very restrictive time constraints of the system, nature of the application requiring a large number of concurrent processes, high throughputs of input data that require preprocessing, or all of the three above combined. In such situations we provide our customers with custom solutions, utilizing not only a CPU running UNIX, or bare metal software stack, but also an FPGA, or even an SOC like Xilinx Zynq, that encapsulates both in a single chip. That way we're able to develop efficient and flexible hardware platforms.

Debugging and Profiling

We can help you make your code fast, safe and reliable. We offer software verification services that include debugging and profiling. We can also help you make your code maintainable and readable. Our static and dynamic code analysis methods help find even the most hard to find bugs.



CONCLUSIVE ENGINEERING

Conclusive Engineering is a group of specialists that specializes in embedded systems. We provide a full stack of embedded system services, including hardware, firnware, operating systems, applications and user interface. We also understand that modern embedded systems are dependent on connection to the outside world. So we provide a vast variety of short and long distance wired and wireless solutions. We also offer software verification services that include debugging and profiling. We can make your code fast, safe, reliable and readable.

We're a group of skilled engineers and developers. We are focusing on delivering high-quality service alway on time. We have experience and wide knowledge gained during working for a large variety of different companies.

Contact us:

Send us an e-mail:
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and fill the form on our website:
https://conclusive.pl/