



Accelerate your **computer** **vision** solution



The global computer vision market is developing rapidly

Machine understanding of the world enables businesses to design new and creative solutions for automation.

THE ISSUE

Most of the existing applications rely on CPU/GPU technologies and are not fast and energy-efficient enough to reap the full spectrum of technological benefits.

Even more so, not every technology provider has the necessary skills to accelerate their solutions.



SILHOUSE SOLUTION

SilHouse can help to overcome your performance and skill gap. Our team has developed a unique acceleration technology for image processing to achieve next-generation high-performance computer vision for applications such as quality assurance, manufacturing, UAVs, medical imaging, robotics, and others.

It is accomplished by utilizing our library of image transformation and processing IP Cores utilizing MPSoC and FPGA technologies. The flexibility of FPGA technology joined with our expertise provides the opportunity to create ideal solutions suited for specific applications.

SilHouse is also a great solution if you already have your computer vision product, but would like to advance it even further.

Step 1



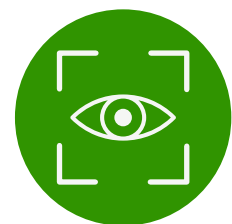
Acquiring an image

Step 2



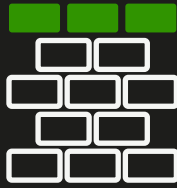
SilHouse
processing the image

Step 3



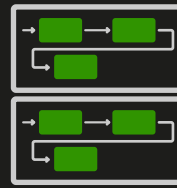
Understanding the image

HOW DOES THE SYSTEM WORK?

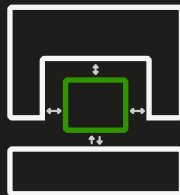


During our research in computer vision, we have developed a collection of specialized components, e.g. lens distortion correction, perceptive transformation, feature extraction.

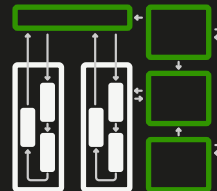
These components are made as building blocks with a common data exchange interface, allowing for easy interconnection between them.



We pick from our ready-made building blocks and (if needed) design the missing ones to create an image processing pipeline for your specific task/use-case, therefore reducing the design time and costs.

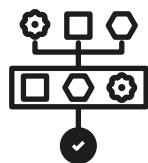


We deliver you the designed accelerator platform with the necessary software libraries and documentation, which ensures straightforward and simple integration in your existing image processing system.

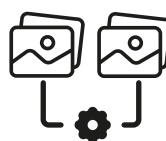


We design an accelerator platform tailored for your current computer vision system with a suitable communication interface (PCIe, USB, Ethernet) for easy integration or we can design a new, standalone solution for your needs.

KEY FEATURES



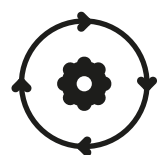
Tailored processing pipeline for your application



Accelerated image processing for your computer vision solution

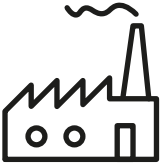


Lower power consumption with increased performance



Easy to implement/ ready to use out of the box.

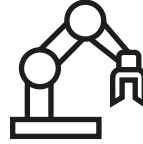
SOLUTION APPLICATIONS



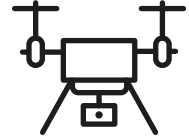
Manufacturing



Safety



Robotics



UAVs



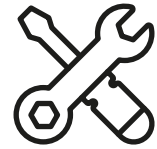
Transportation



Healthcare



Agriculture



+ other applications
where image processing
latency is important

CORE BENEFITS

01

Reduced time to market for your new or upgraded computer vision solution

02

Competitive advantage due to unique accelerated solution

03

No need for FPGA engineering staff

04

Scalability of the processing pipeline

WE WILL HELP YOU TO OVERCOME YOUR PERFORMANCE BOTTLENECKS



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WHY US?

Our team has vast experience in cooperation with Industry through a multitude of European projects (AI4DI, APPLAUSE, COMP4DRONES, I-MECH, PRYSTINE, 3Ccar). Our expertise ranges from most demanding real-time control systems to the design of silicon intellectual property.

We have expertise in:

- RTL design workflow using HDLs,
- Application-Specific Integrated Circuit (ASIC) development,
- Computer vision algorithms,
- Artificial Intelligence-based algorithms and their acceleration,
- Linux system and kernel development,
- PCB design.