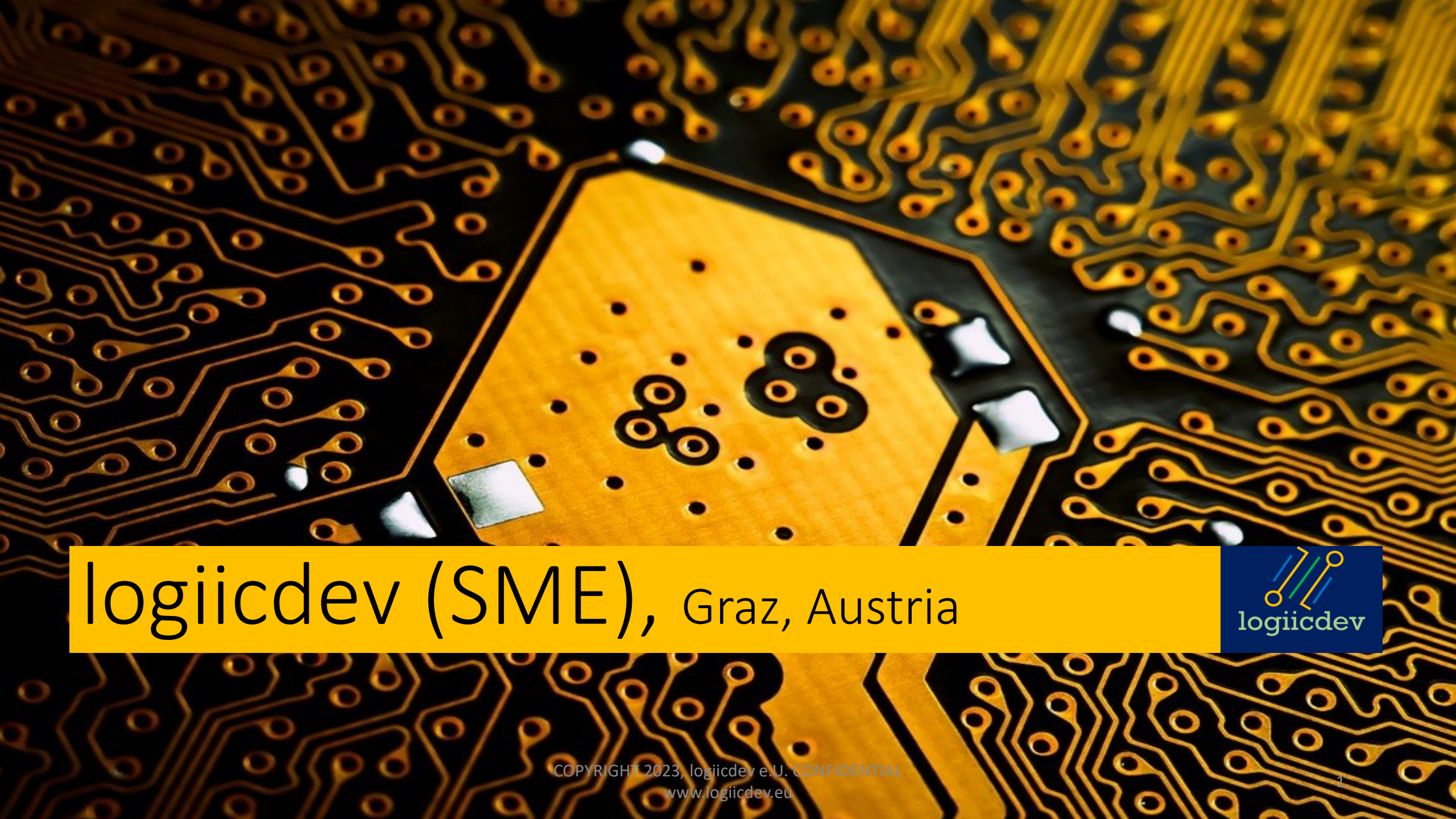
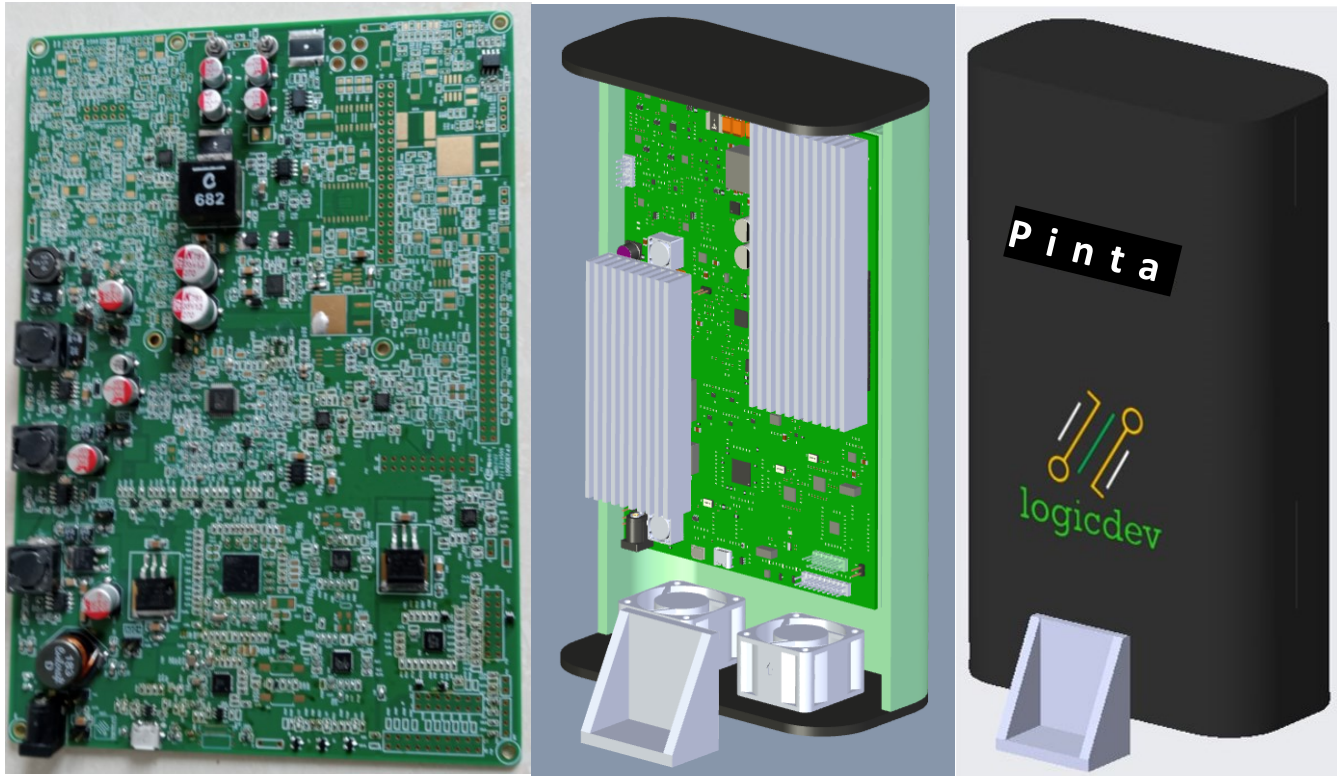


logiicdev (SME), Graz, Austria

Inhouse design

Energy monitoring/modelling/testing using AI (Patented)

- 70% power saving
- High speed switching(<1us)
- uA-microampere control in discharging
- remote working
- low Cost
- Improving AI based test coverage
- Real time -Digital twin
- **FPGA based -Hardware in Loop (HIL)**



Reached TRL6

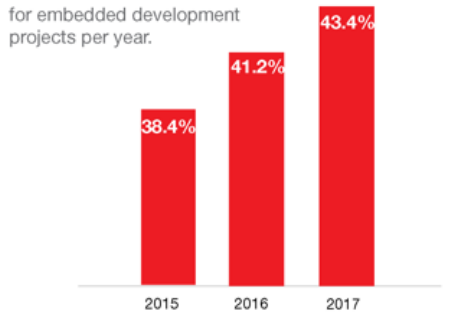
HiL in production, energy, automation market

Challenge

A rapidly evolving grid is making it more difficult for smart inverter manufacturers to complete projects on time. This rising complexity makes projects delays an ongoing challenge for embedded industries. The demand for greater system functionality increases with high-power systems becoming more common. Engineering teams need design and test automation tools to improve schedule performance, functionality and quality.

Projects Behind Schedule

for embedded development projects per year.



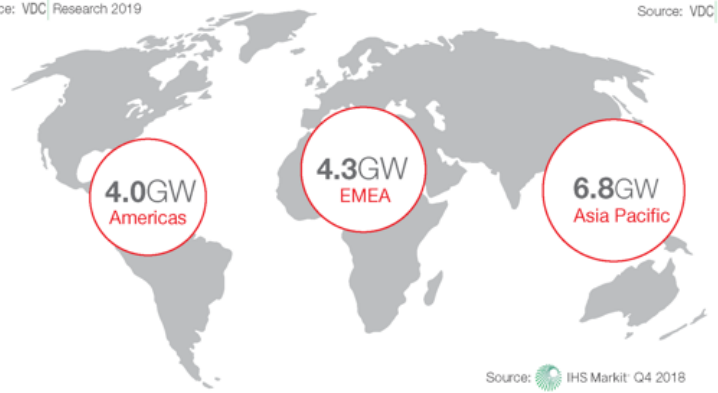
Source: VDC Research 2019

Top 5 Factors

causing delays in current projects not using HIL.

1. Technical Obsctacles
2. Changes in Specifications
3. Complexity of Application
4. Lack of Manpower
5. Emergence of Higher Priority Projects

Source: VDC Research 2019



Source: IHS Markit Q4 2018

Utility-Scale Battery Storage Pipeline

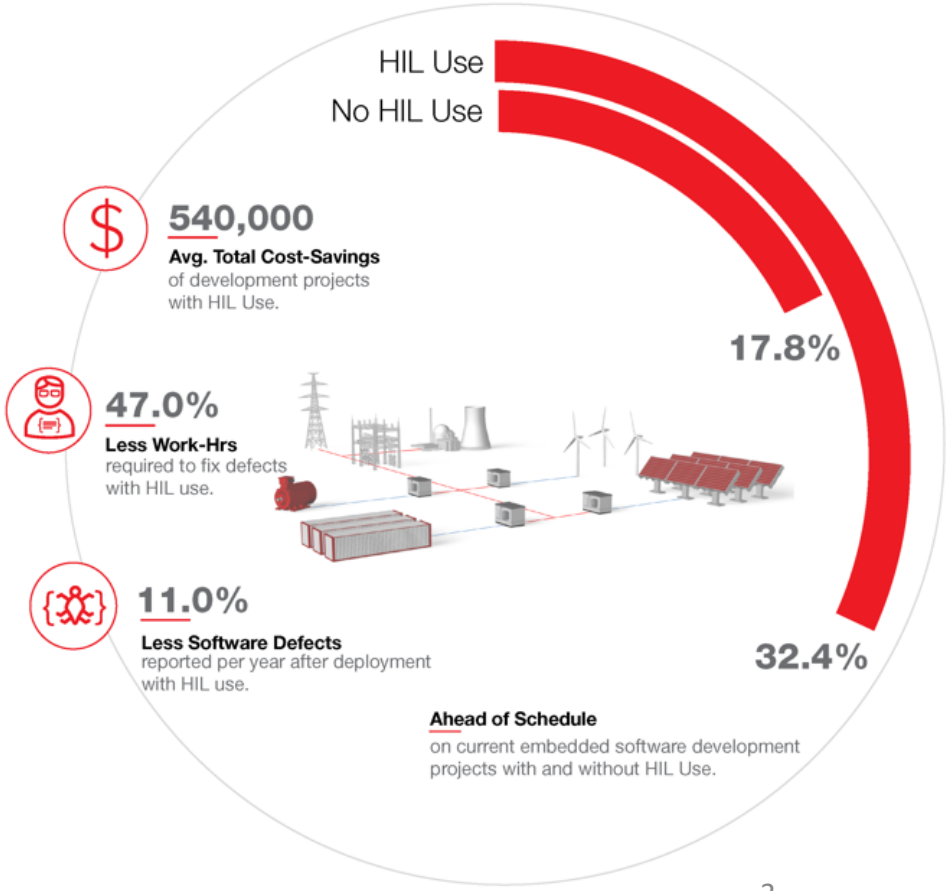
The global grid-connected battery storage pipeline will total 15GW in 2018. With 100MW systems occuring more frequently.

https://www.typhoon-hil.com/solution/section-01-introduction-to-hil/

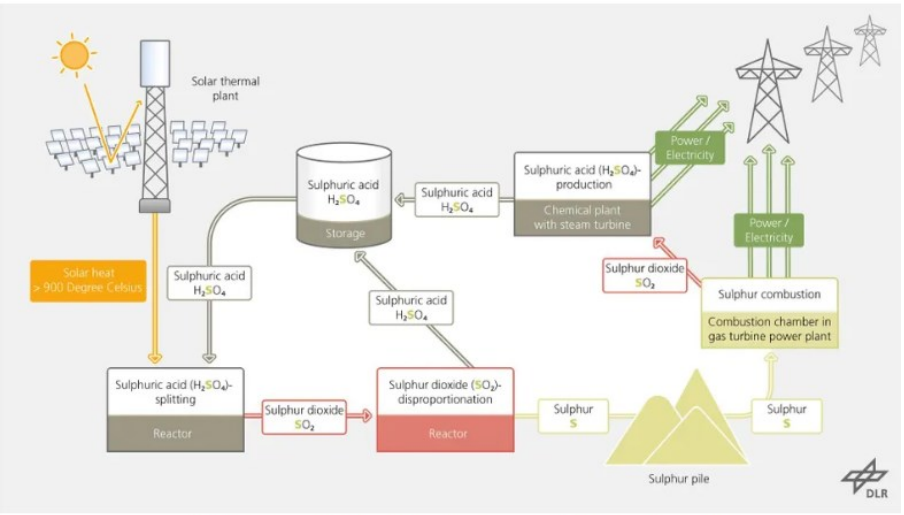
Source: VDC Research 2019

Solution

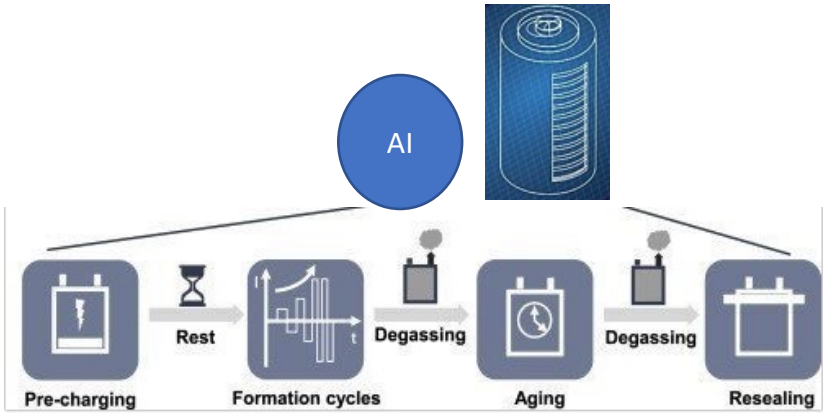
A closed-loop model-based testing solution can improve project schedule performance, decrease developmenet costs, software defects and work-hours required to fix defects. Hardware-in-the-Loop technology allows a direct interface between the system under test and a real-time simulation of the power hardware. It increases engineering effieciency by enabling parallel development of software and hardware. HIL technology provies an effiecient and accurate system development which is essential for meeting schedule and budget goals.



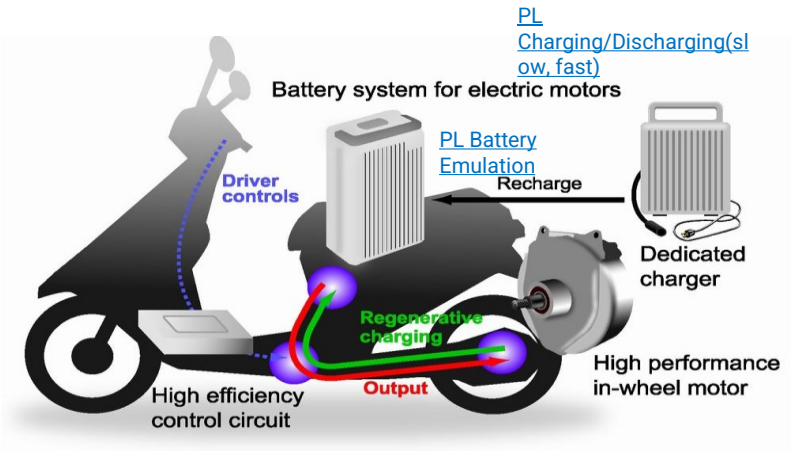
HIL and Digital twin



Simplified representation of the sulphur storage cycle. Credit: DLR (CC BY-NC-ND 3.0)



Digital Twin Production Architecture

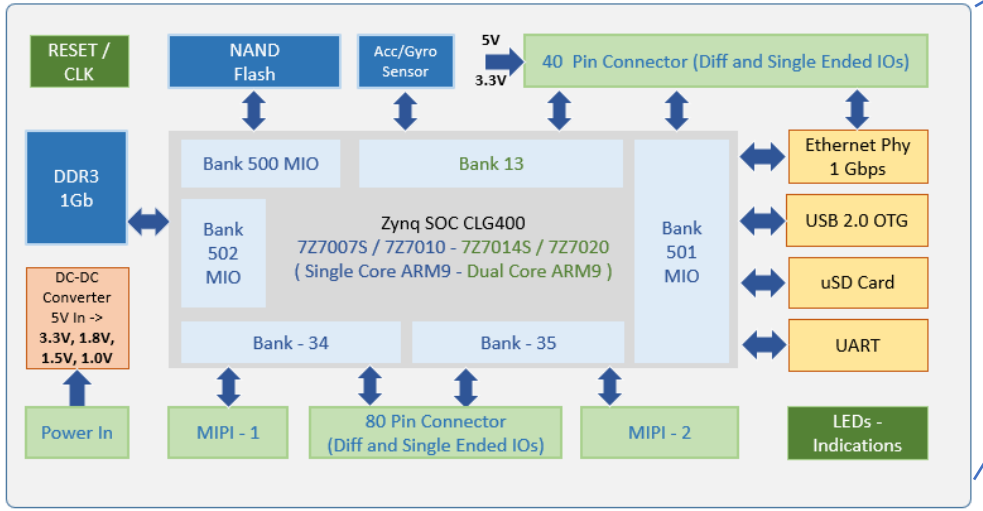


Hardware based Digital Twin is a virtual representation of a physical object or system. Where HIL testing is a type of simulation-based testing that combines physical hardware with virtual components in a controlled environment.

Pinta-HIL is a system that can perform various tasks regardless of the energy source being used. It can monitor and predict energy usage, increase efficiency, and create a real-time digital twin of the system.

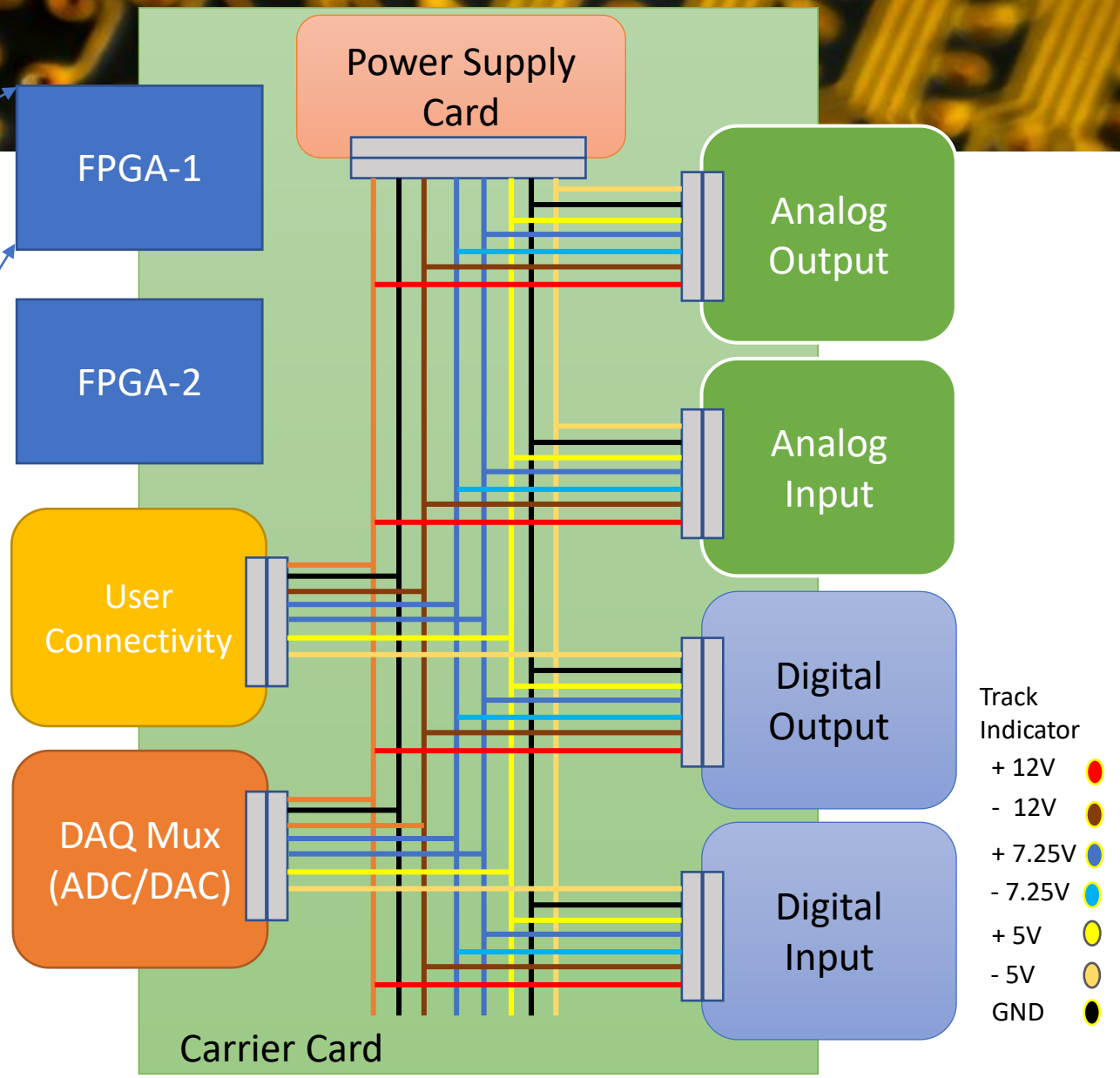
Source: VDC Research 2019

HIL FPGA Architecture



FPGA-based digitization solution for sensor, image, video and analysis.

This approach offers customization, parallel processing capabilities, low latency, and potential energy efficiency benefits.



Passion is success

Founder,
MSc Deepak v Katkoria

CTO,
MSc Thoe Hatzis

Investor,
Mr. Ian Macnamara

Supported by:

Science Park
The High Tech Incubator
Graz

esa
business incubation centre
Austria

UPPSALA UNIVERSITET

Presented the Battery challenges on AIMday Materials 2023 /Sweden to academic researchers.

MSc students

x2

Full time

Firmware Developer x1
Power Electronics Engineer x2
PCB and test engineer x1
FPGA engineer x1

x5

Manager,
Ms Darshana D K

logiicdev

Company Intro

Austrian-based high-tech SME company is working on AI-based test equipment and FPGA IP. we have a strong team of FPGA, SW, HW, FW, and python-based algorithm developments.

A team made up of Theo H., Ian M., and Deepak V. K. founded logiicdev in January 2020 in Graz, Austria. Combined, the company brings over 100 years of experience of electronics domain. Our primary goal is to establish ourselves as a leader in sustainable and AI-based eco-friendly electronics design. With a strong team of industry experts, logiicdev is well-equipped in simulation (logic, die, package, PCB), design (HDL & PCB), commercialization, and sales.

The founder of logiicdev, MSc Deepak V. Katkoria, brings a wealth of experience, having worked with over 22 industry leaders, contributing to various stages of design and sales processes.Currently, logiicdev has a highly experienced team in place to drive its success. This includes Mr. Theo Hatzis, the Chief Technology Officer, who possesses over 40 years of Power electronics and sensor experience. Mr. Ian Macnamara, also with over 40 years of experience in RFID, NFC, and management. logiicdev continually seeks out experts in various fields to solves the industry challenges. By expanding our team, we aim to accelerate our researched based business growth and build strong customer relationships.
logiicdev's emphasis is to lead engineers and designers to develop cutting-edge electronics based solution. A prioritised environmental sustainablity, efficiency, reliability, digitalised, performance optimisation, recyclabity, and integration with new technologies is key to going forward.
Company has provided sucessfully the FPGA, AI testing, IOT, & BLE solution for laboratary monitoring, and car parking.

Customers

Industrial AI based FPGA Controller (joint development- IOT client)

Thank You

Contact Us

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