

Accelerating Development of Surgical Robotics & AI through NVIDIA's Ecosystem

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Who are we?

KARL STORZ VentureONE

New spin-off to develop robotics & AI applications for surgery

Our Parent: KARL STORZ

If you had surgery, something from KS likely touched you.

75+ years led by the Storz family (not publicly traded)

Worldwide leading in scopes for minimally invasive surgery

Not leading in software development.

A close-up photograph of a surgeon's face. The surgeon is wearing a white surgical mask, blue surgical caps, and blue scrubs. They are looking down intently at their work. The background is dark, suggesting an operating room environment.

Let's understand our problem:
What makes a great surgeon?

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What makes a great surgeon?

- Knows his patient inside-out
- Have a good teacher by your side
- Confidently reacts in emergencies
- Patient satisfaction
- Practice every day
- Perfect execute with precision
- Knows how to react in emergencies
- Understand the operation

Why is this important to understand?

Experience and knowledge contributes
to great surgical outcomes.

How are medical devices built today?

As simple tools or gadgets.
Painfully slow and risk-averse.

Today's main challenges

- Regulations & Quality
- Hardware & Certifications
- Complexities when developing software
- Clinical Testing
- Cost & Timelines



How can we drive innovation in surgery?
Build on the shoulders of giants &
focus on disruption.

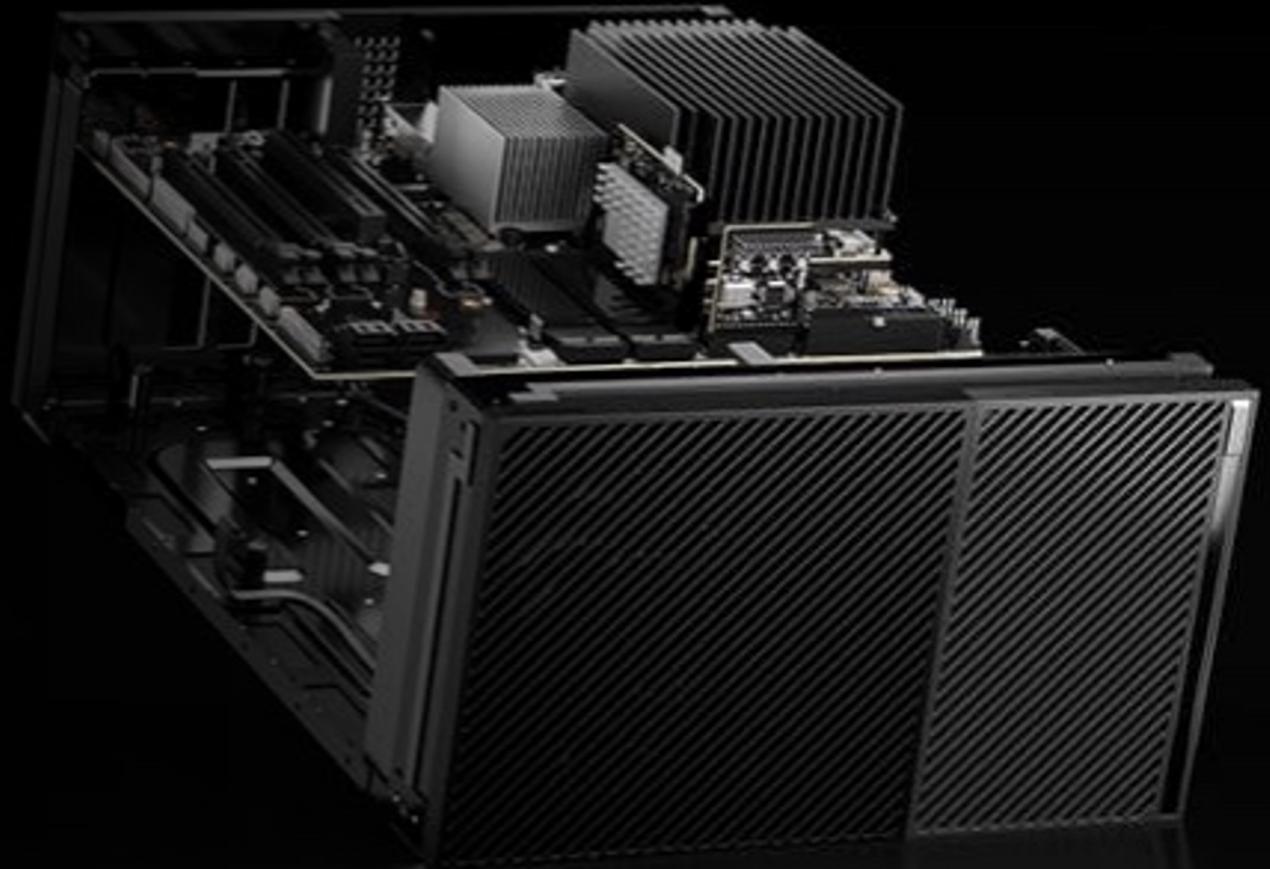
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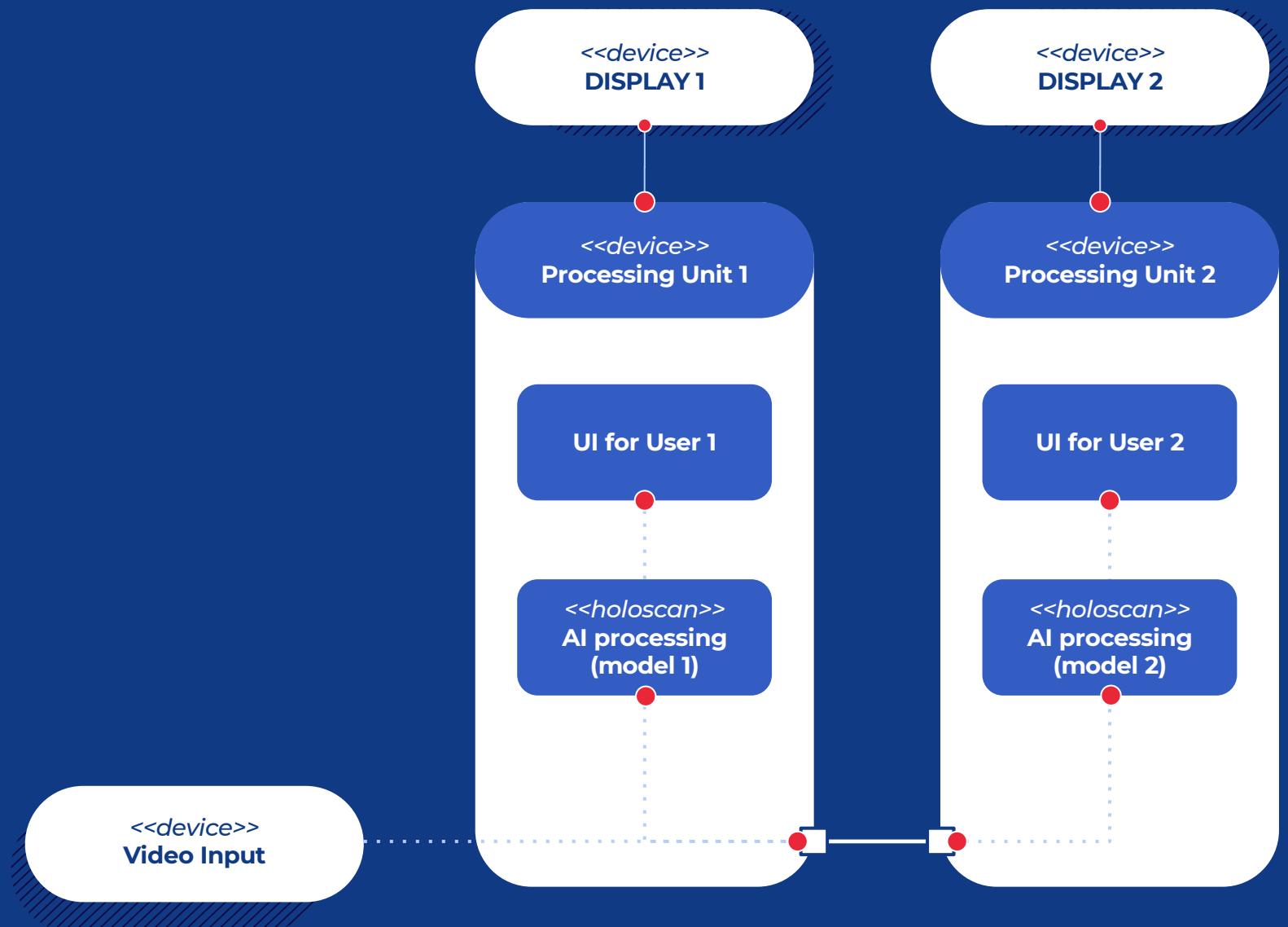
Every Medical Device is Becoming Smart & Robotic

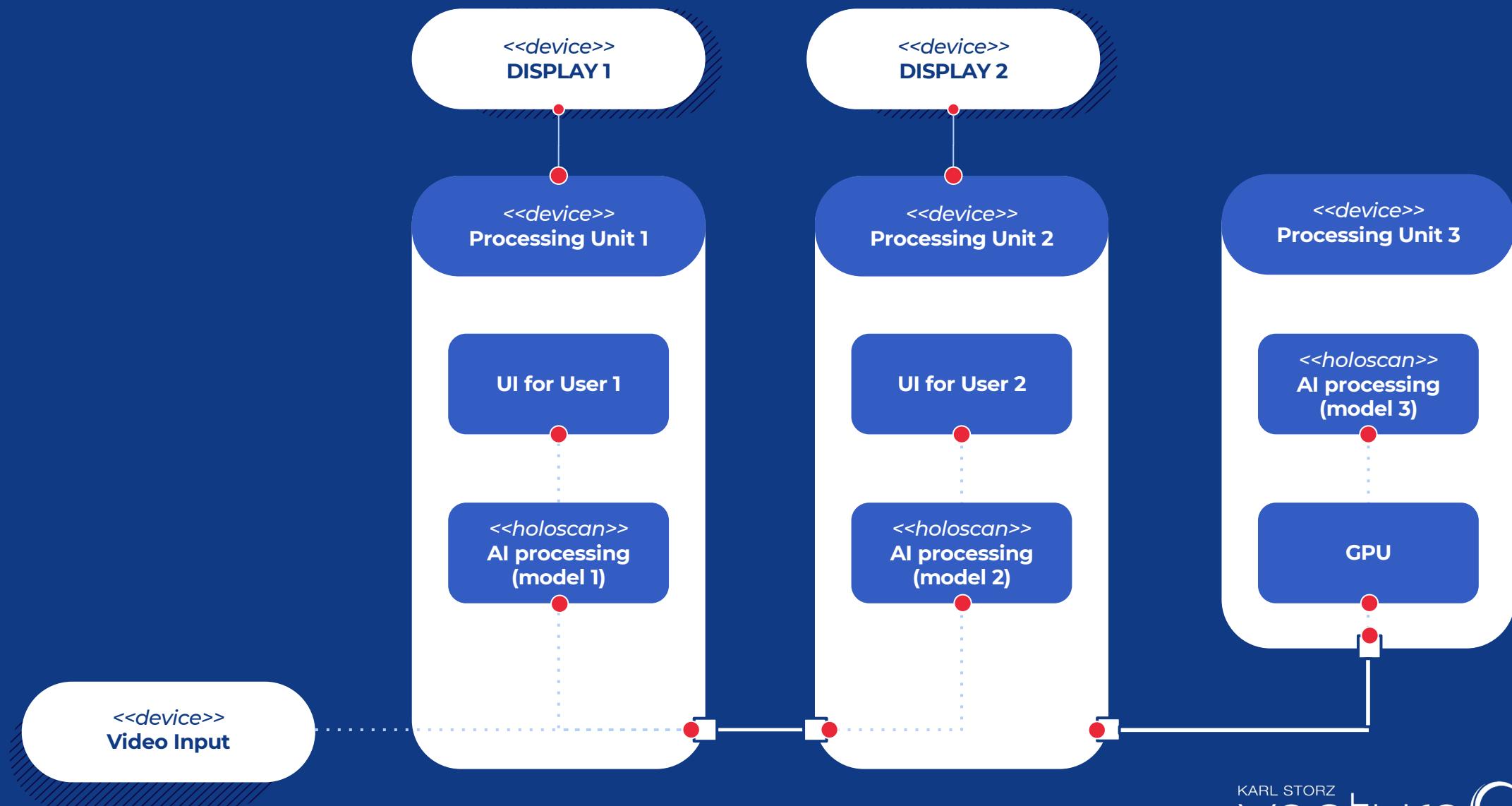


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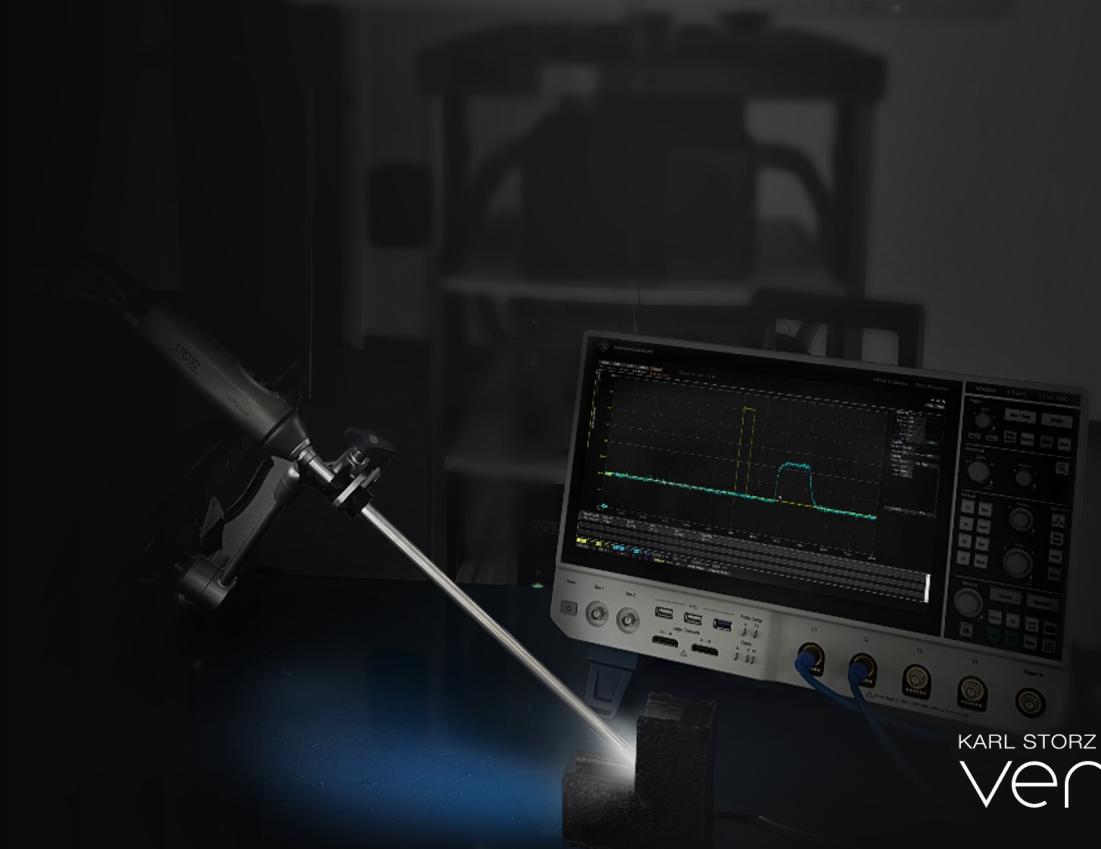
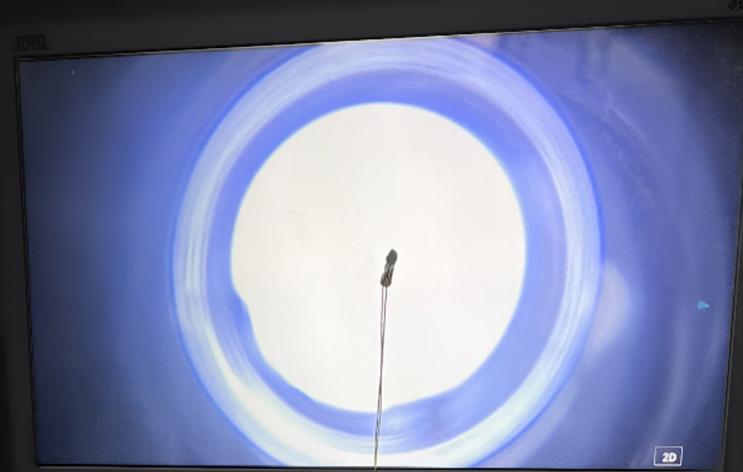
Why do we want to build on IGX + HoloScan?







Video Latency



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Regulatory & Quality

- Allows for separation of medical device and non-medical device functions
- Support FDA's guidance on multiple function device products

Hardware & Certifications

- Major advantage of using hardware that is already compliant with medical device standards
- Leveraging documentation to accelerate the development and shorten time to market

Software Development

- Development is made easier thanks to Operators (abstraction, separation,...)
- High versatility in connecting Operators in local and fragmented apps
- Easy development of distributed application
- Any AI models can easily be integrated
- Enhancing performance by using GPU via many different approaches





What is about to come?

Upcoming systems will not just be better tools to manipulate tissue, but be **ground-up designed for AI during surgery, acquire knowledge** and provide it back to the surgeons