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# **camera\_rotate**

Lab Project

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# Task

Automatically rotate live frames so they are always displayed upright, independent of the actual camera orientation.

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## **Steps**

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# **Steps**

- Record camera image

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## **Steps**

- Record camera image
- Read orientation sensor

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## Steps

- Record camera image
- Read orientation sensor
- Rotate image using FPGA

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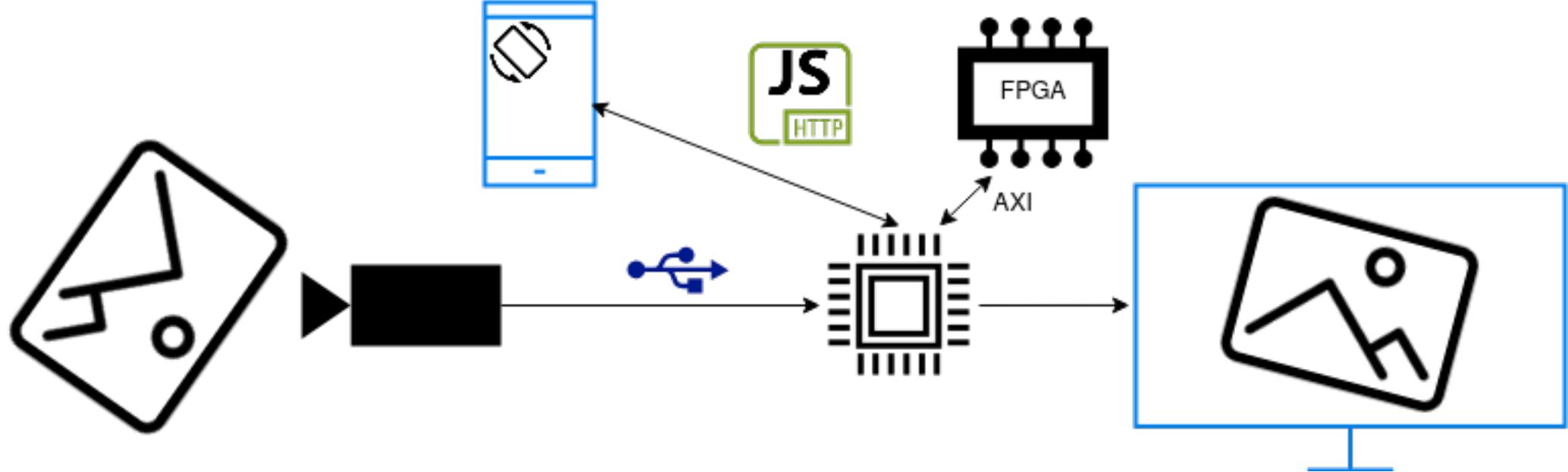
# Task

Automatically rotate live frames so they are always displayed upright, independent of the actual camera orientation.

## Steps

- Record camera image
- Read orientation sensor
- Rotate image using FPGA
- Output rotated image

# Architecture



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# Limitations

- Only square picture (aspect ratio 1 : 1)

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# Limitations

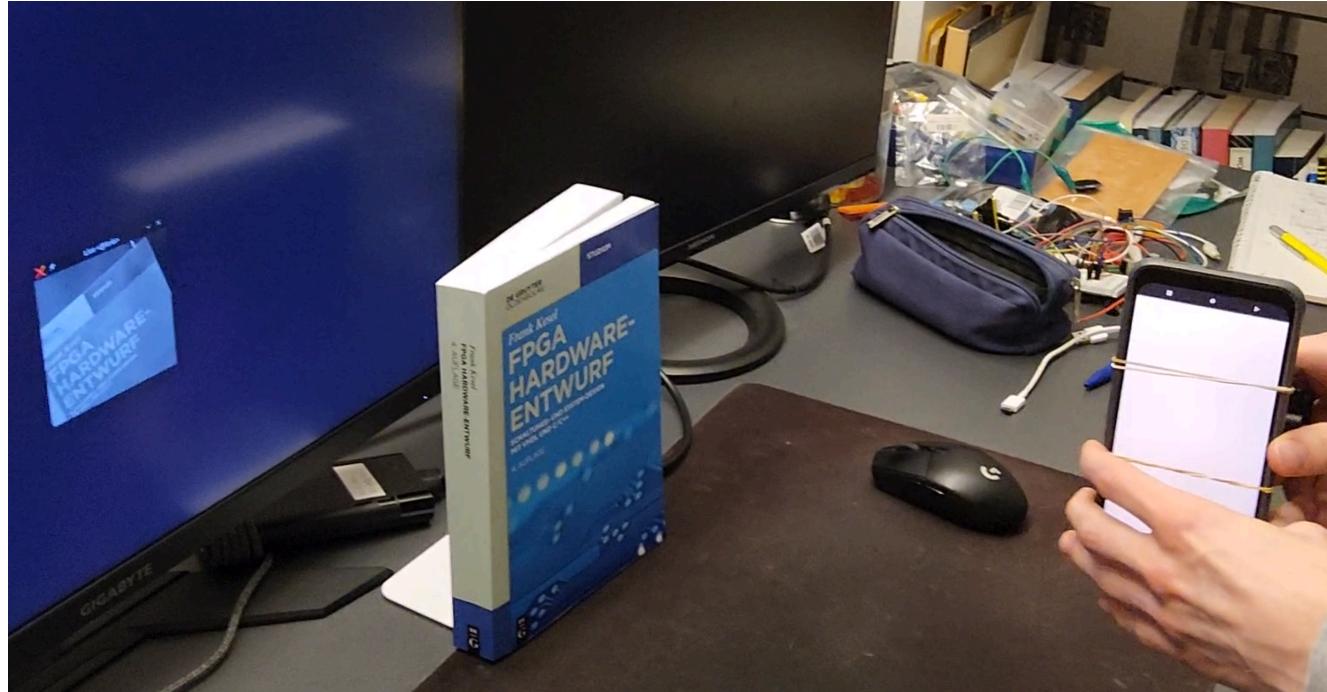
- Only square picture (aspect ratio 1 : 1)
- At most  $\leq 512 * 512$  pixels per image

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# Limitations

- Only square picture (aspect ratio 1 : 1)
- At most  $\leq 512 * 512$  pixels per image
- Rotation only in multiples of  $\pm 90^\circ$

# Demo



**Thank you for your attention!**

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