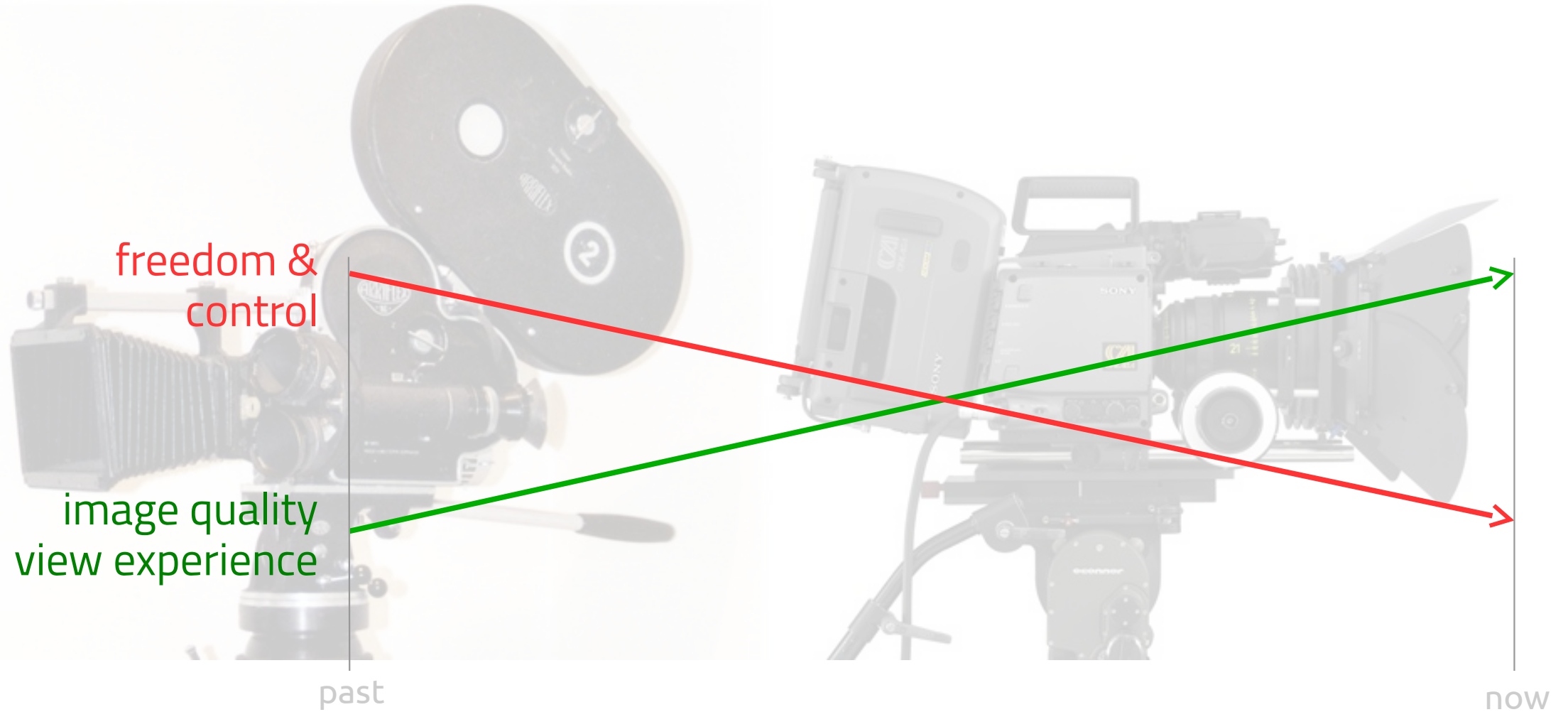


apertus<sup>o</sup>  
open source cinema

„I grew up as a photographer in a dark room, and I miss the intimacy of watching the image slowly appear on the paper in red of the safe light. The beauty of an open source camera to me is a step back toward the dark room, in which making the tools is part of the joy of making the art.“

Lee Parker – IMAX Cinematographer



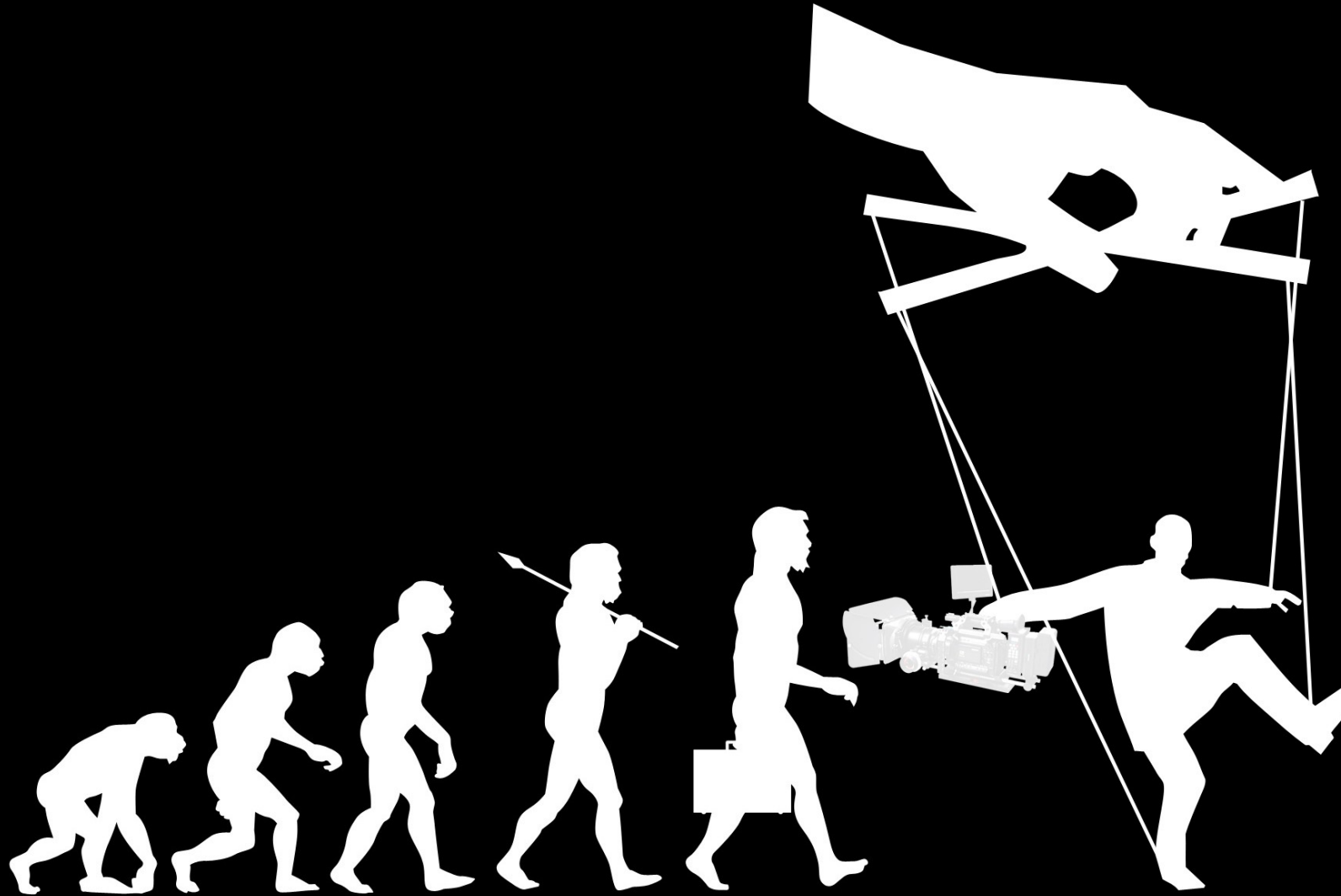




**WELCOME**  
**HANDS ON**



**DANGER**  
**HANDS OFF**



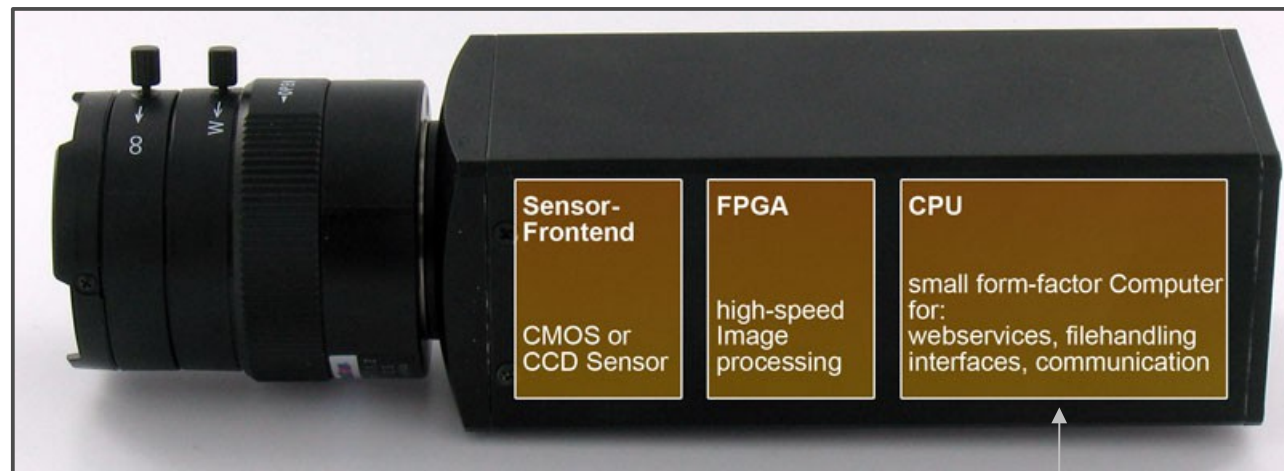




**revolution**

"Apertus" – Latin: open; free; public; frank; clear





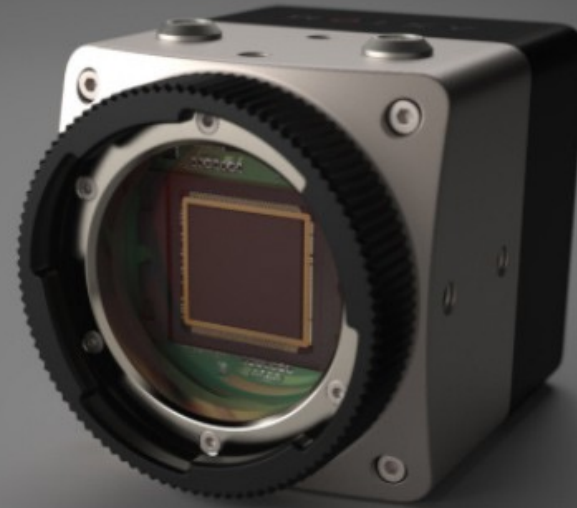
## DIY – Do It Yourself





Stereo 3D Rig: Nathan Clark and Winnie Young (Australia)

4K Resolution  
Super 35mm Sensor  
Global Shutter  
Up to 15 F-Stops Dynamic Range  
High Speed at Full Resolution  
Cinema DNG Raw Recording  
Well below 10.000\$ Target Price  
Crowdfunding this year

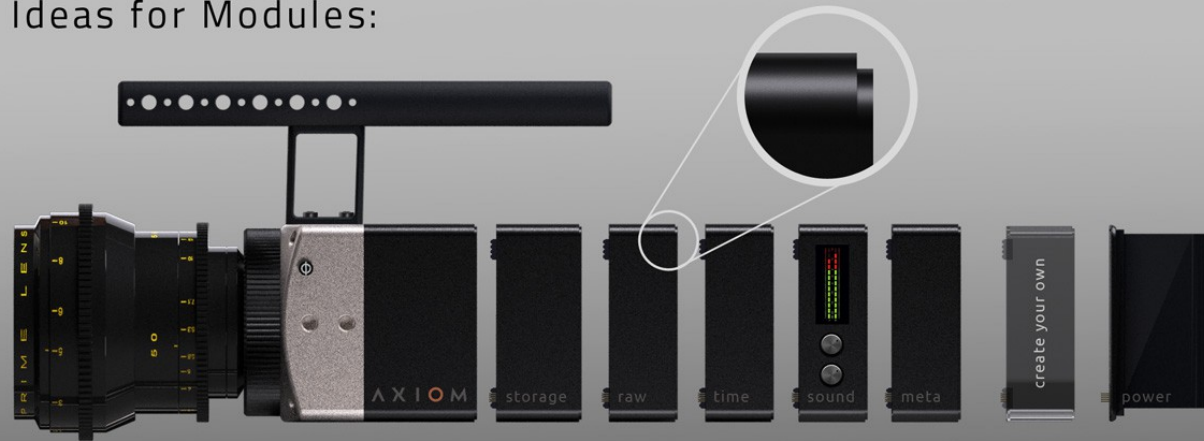


Concept Image  
(work in progress)

AXIOM



## Ideas for Modules:



FullHD cleanfeed  
Viewfinder out  
Power in  
wired and wireless  
camera control

Write 4K  
high speed  
video to  
storage  
media.

Output  
raw footage  
over high  
bandwidth  
connectors.

Genlock  
MocoBus  
Trigger  
Sync

phantom  
powered  
2x XLR  
+ phones

gyro sensor  
compass  
GPS  
UMTS modem  
proxy gen.

Template  
designs  
available  
for your  
own  
module.

battery mounts for:  
Sony NP-X  
V-mount  
Anton Bauer  
etc.



**swappable lens mount**

PL, P+S IMS (C-mount, Leica M, Leica R, B4, PL, Canon EF, Canon FD, F-mount, panavision, BNC-R)



**swappable filters**

IR-cut-off, OLPF, etc.



**swappable image sensor**

diameter, resolution, stereo 3D optimized, etc.



maximum flexibility



maximum reparability



maximum usability



**Open Module Concept**

Build your dream camera, one module after the other.

Disclaimer:

This is a concept! It's a snapshot of the current ideas, it does not mean everything will end up exactly like it is described here.

It does show however in which direction we want to go in the future.

AXIOM

[axiom.apertus.org](http://axiom.apertus.org)

by apertus<sup>o</sup>  
open source cinema

# Axiom Alpha

proof of concept prototype

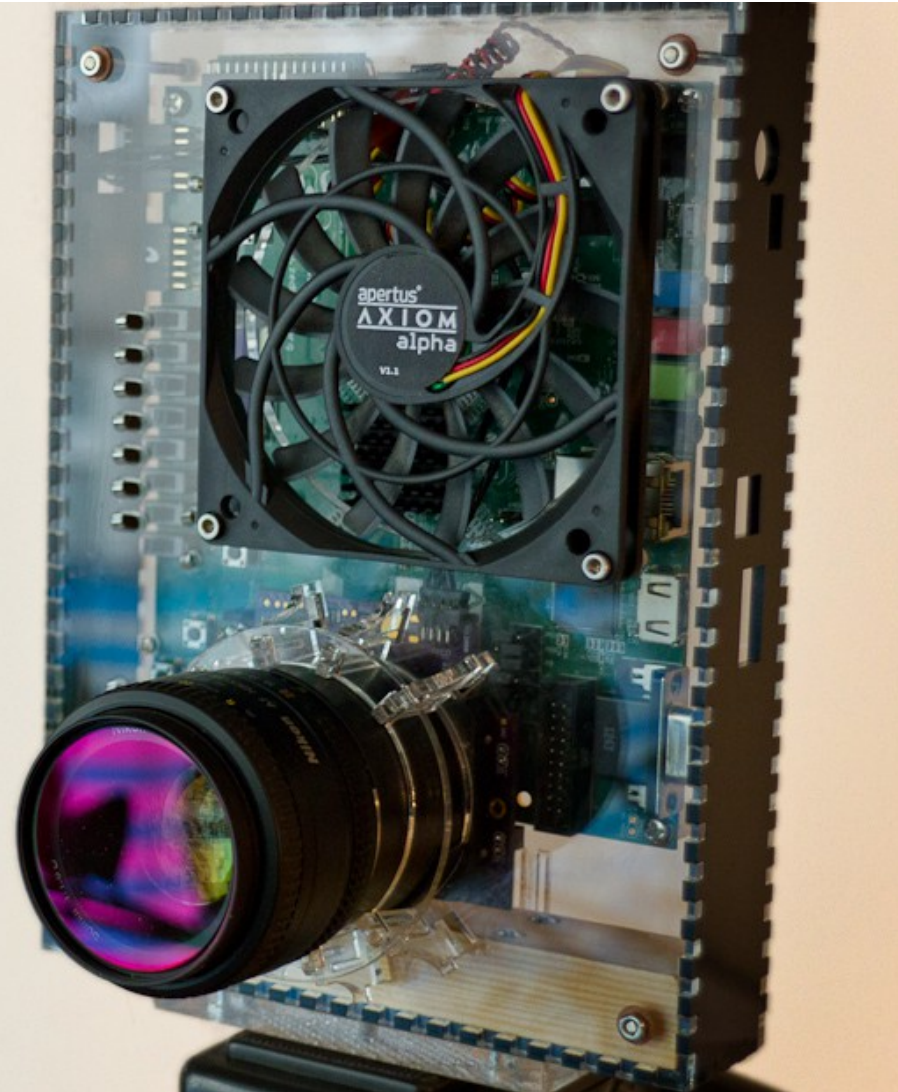
super35 image sensor

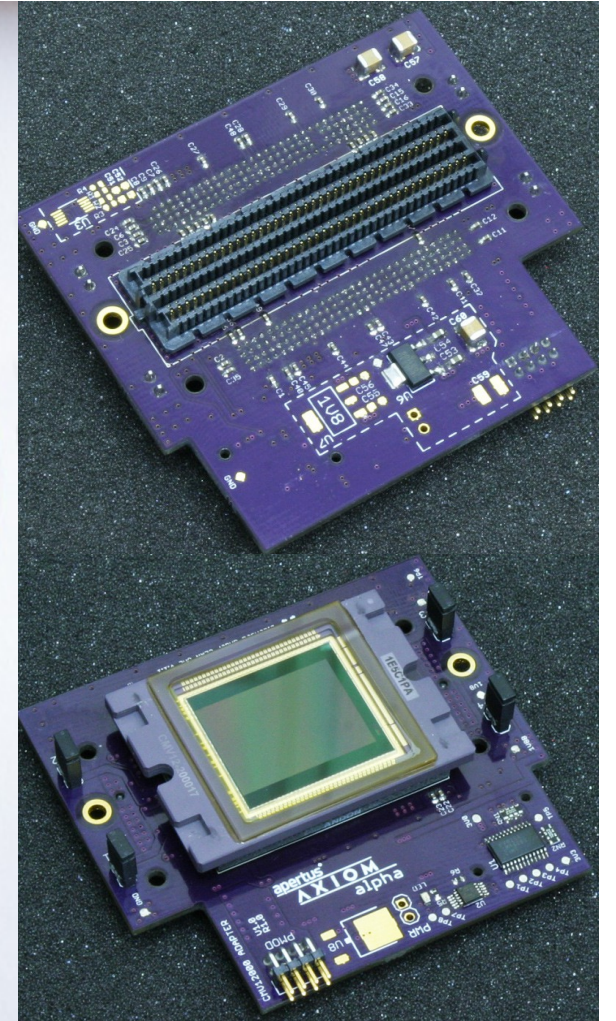
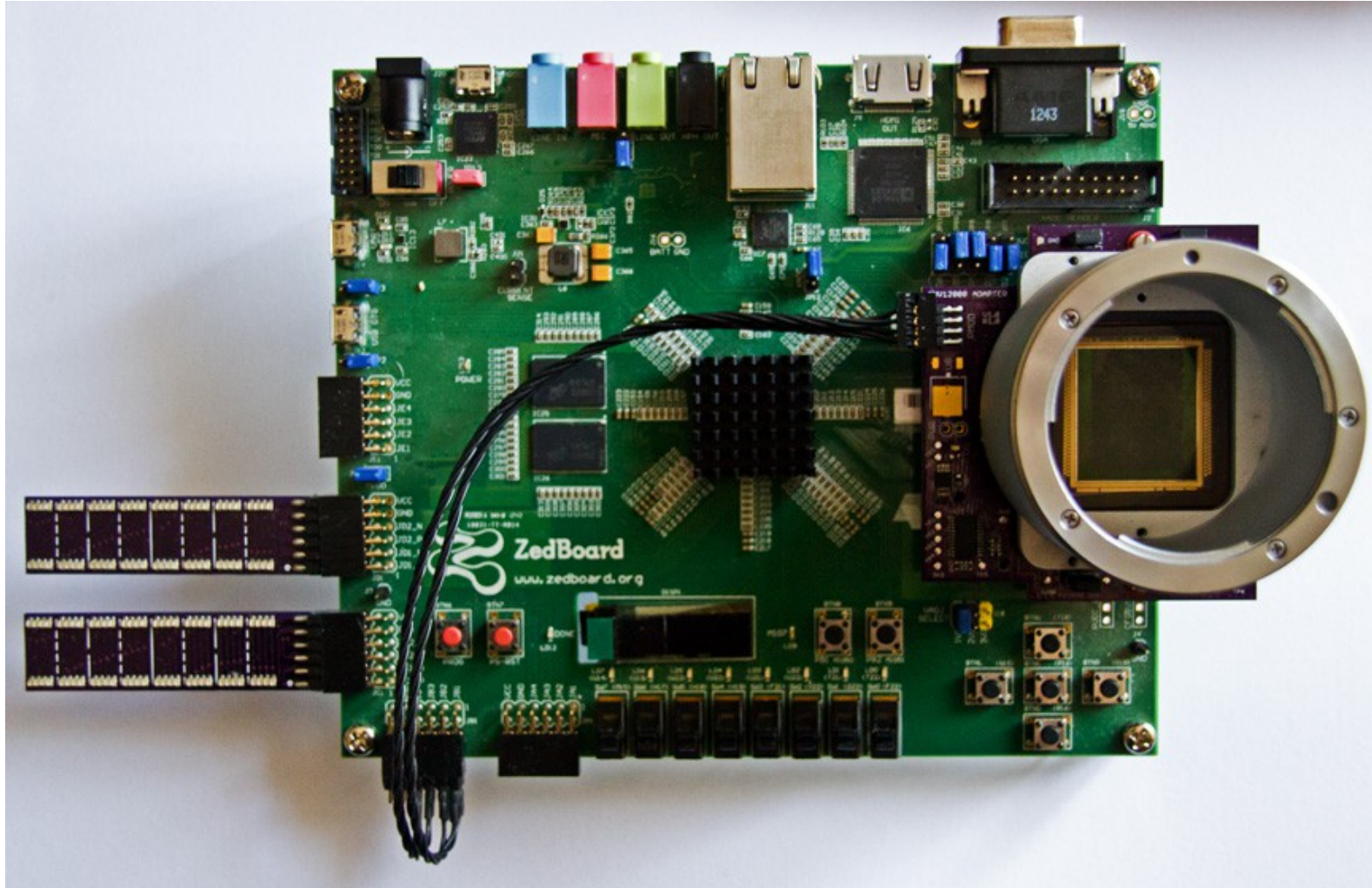
Full HD HDMI video from 4K

uncompressed 4K raw still images

Nikon F-mount

Zedboard, embedded Linux







# Axiom Alpha Prototype

image acquisition pipeline:

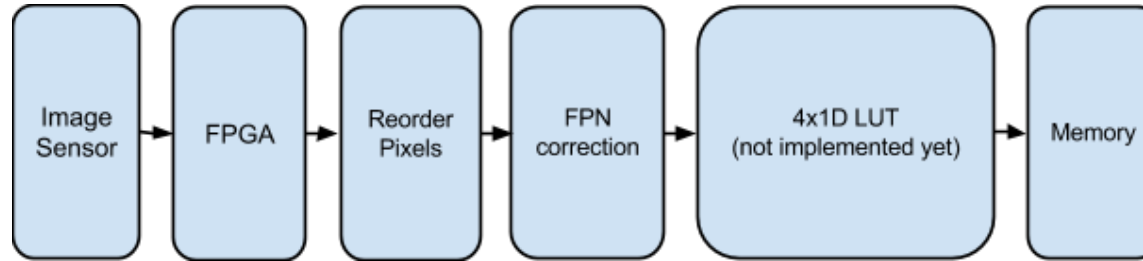
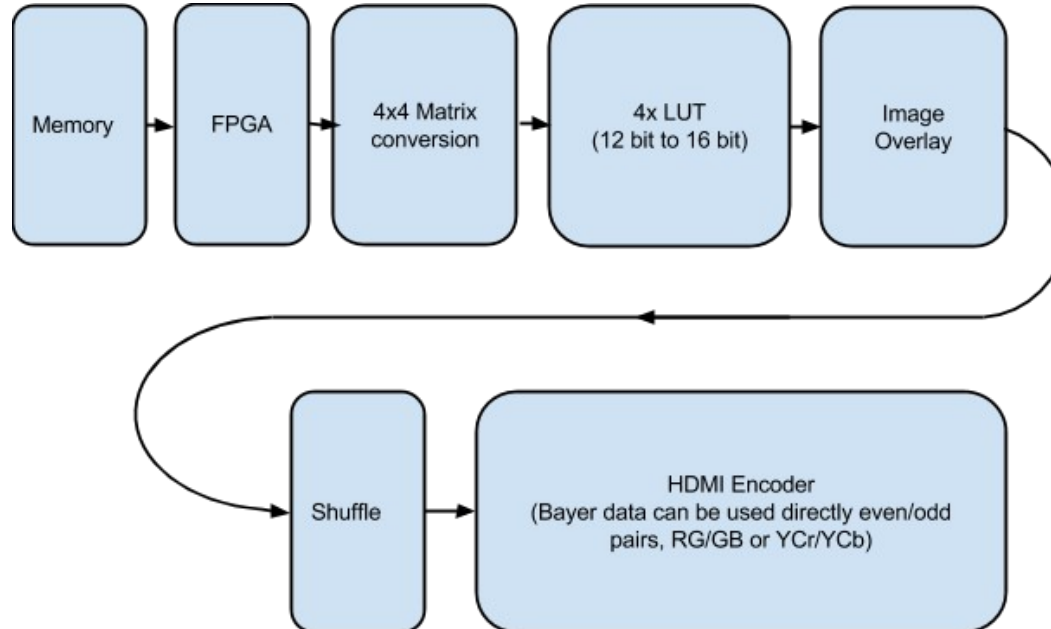


image processing pipeline:



# the future

even filmmakers are getting more „open source“-aware

sustainable & socially responsible manufacturing

camera service/hardware/software ecosystem

# immediate next steps

prototype miniaturization

Horizon 2020 EU grant application

crowd funding

join us!

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team@apertus.org

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Photo Credits:

Nathan Clark

R. Cao (Creative Commons – flickr.com)

Sebastian Pichelhofer