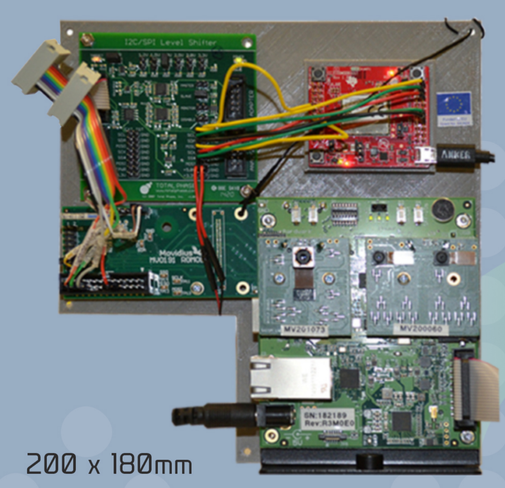
EYES OF THINGS

To be "smart everywhere"
we will need to have
"eyes everywhere"

HARDWARE

February 2015

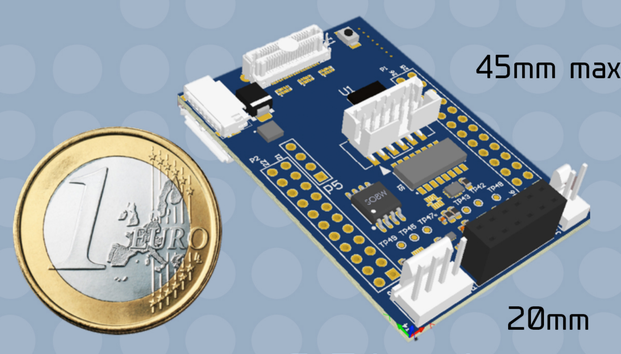


200 x 180mm

November 2015

100 x 100mm

September 2016



EoT board

SOFTWARE

MAIN AVAILABLE LIBRARIES

Library/API	Type	Local or Cloud processing
OpenCV	Computer vision	Local and Cloud
MvCv	Computer vision	Local
Libccv	Computer vision	Local
Google Cloud Vision API	Computer vision	Cloud
Quirc	QR code recognition	Local
MvCNN	Convolutional Neural Networks	Local
MvBot	Robotics applications	Local
Opus	Audio	Local
RTSP	Video streaming	Local
MicroPython	Scripting	Local
MQTT	Messaging	-

DEMONSTRATORS

PEEPHOLE SURVEILLANCE

HANDS-FREE AUTOMATIC MUSEUM AUDIO GUIDE

DOLL THAT RECOGNIZES CHILD EMOTIONS

WEARABLE LIFELOGGING CAMERA

Vision is the most demanding sensor in terms of power consumption and required processing power. Our objective in this project is to build an optimized core vision platform that can work independently and also embedded into all types of artefacts. The envisioned open hardware, featuring the Movidius Myriad 2 SoC as well as power, size and cost optimized camera and WiFi components, is combined with carefully designed APIs that maximize inferred information per milliwatt and adapt the quality of inferred results to each particular application.

This will not only mean more hours of continuous operation, it will allow to create novel applications and services that go beyond what current vision systems can do, which are either mobile or "always-on" but not both at the same time. Thanks to the underlying MQTT-based middleware, metadata can be efficiently streamed in and out of the device. Video streaming is also available. Besides, in EoT the vision application can be uploaded and configured wirelessly from an external PC or tablet.

THE FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION
HORIZON 2020

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 643924

UCLM · Movidius · THALES · German Research Center for Artificial Intelligence · fluxguide · evercam.io · nviso imaging people · AWAIBA

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