

AT THE VERY EDGE

Enabling AI

Presented by:

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GreenWaves Technologies

- Fabless Semiconductor Startup
- Founded in November 2014
- Twenty four staff
- Based in Grenoble area, France
- Partnerships with ETHZ (Switzerland) and UNIBO (Italy) labs
- Pioneer in Open Hardware with our IoT Application Processor, GAP8
- GAP8 has been sampling with customers since May 2018

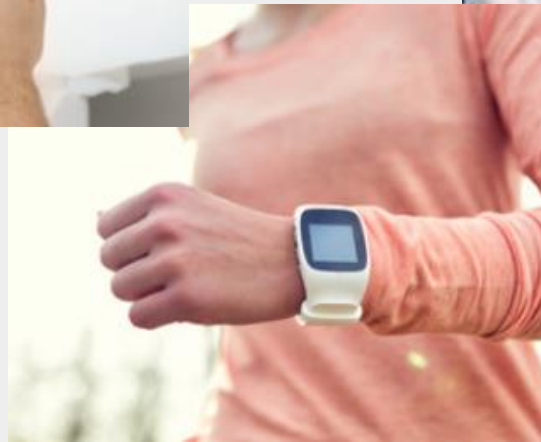
Open Source ISA



Open Source Core Design



But what happens WHEN You GET TO THE VERY EDGE?



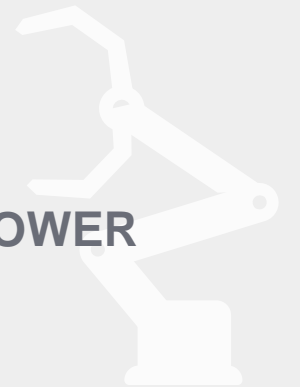
AI at the very Edge

SMALL

WEARABLE

DISTANT FROM POWER

NO POWER

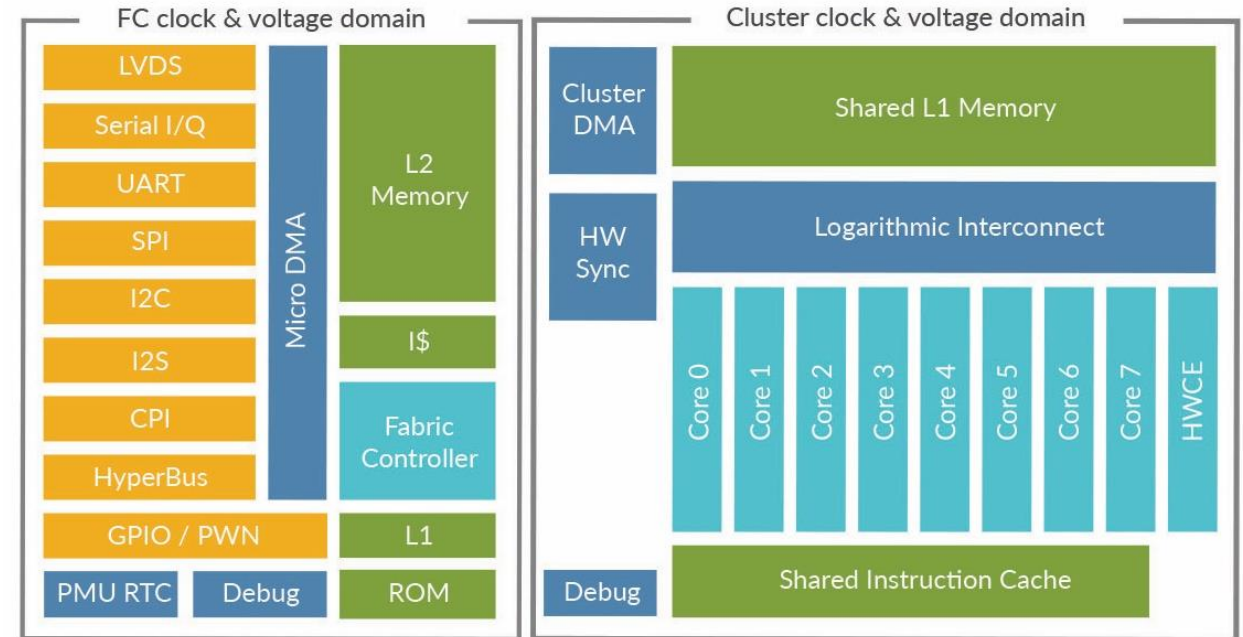


Low power vs. No power

The very edge needs Tiny ML!

GAP8 – Key attributes

- IoT Application Processor
 - Designed as a complete solution
 - Integrated power control
 - Balances flexibility / programmability versus specialization
- Exploits:
 - Lightweight core instruction set specialization
 - Parallelization
 - Hardwired accelerators
 - Explicit memory management
 - Strict scaling of energy proportional to demand



> 20X Energy reduction versus comparable solutions

Traction in multiple use cases



Pedestrian detection



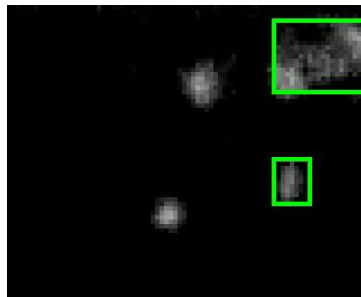
Condition monitoring



Abnormal noises identification



Hierarchical activation of surveillance cameras



Counting people in meeting room



Smart toys

Traction in multiple use cases



Smart detection



Face identification



Meter reading



Keyword/phrase spotting

GAP8 is Available Now

01

GAPuino GAP8:



GroupGets campaign running in US now

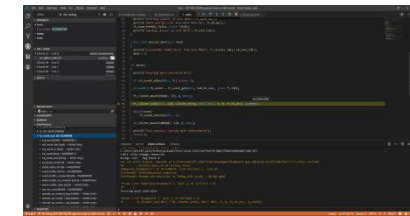
<https://groupgets.com/campaigns/576-gapuino-combo-kit>



02

Extensive, open source SDK - get it on GitHub

https://github.com/GreenWaves-Technologies/gap_sdk



03

PoC boards / modules - buy on website:

<https://greenwaves-technologies.com/store/>



04

GAP8 - Sampling now
- Mass production qualified - July 2019



Thank you!
Questions?

