



POLITÉCNICA

“Engineering the future”

INTERNATIONAL
CAMPUS OF
EXCELLENCE

citSem

POLITÉCNICA

Centro de Investigación en Tecnologías
del Software y Sistemas Multimedia
para la Sostenibilidad

Energy Consumption Reduction on High Performance Embedded Systems for Hyperspectral Imaging Cancer Detection

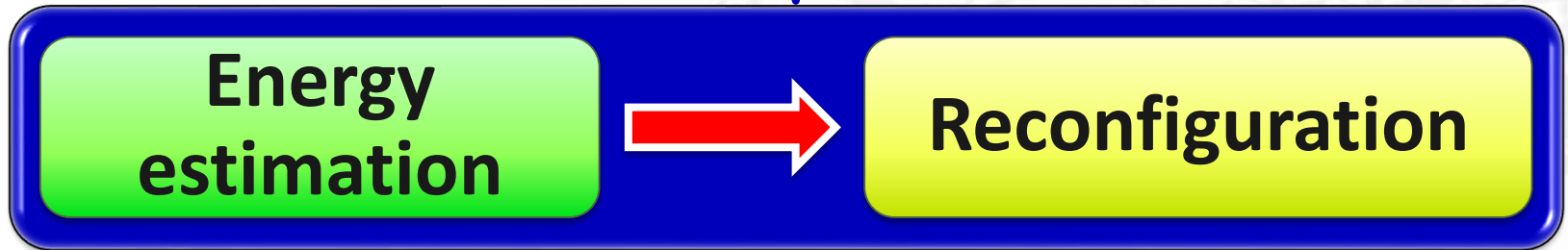
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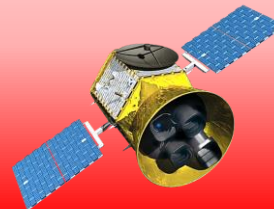
*CPS Summer School, Alghero
Monday 25th September, 2017*

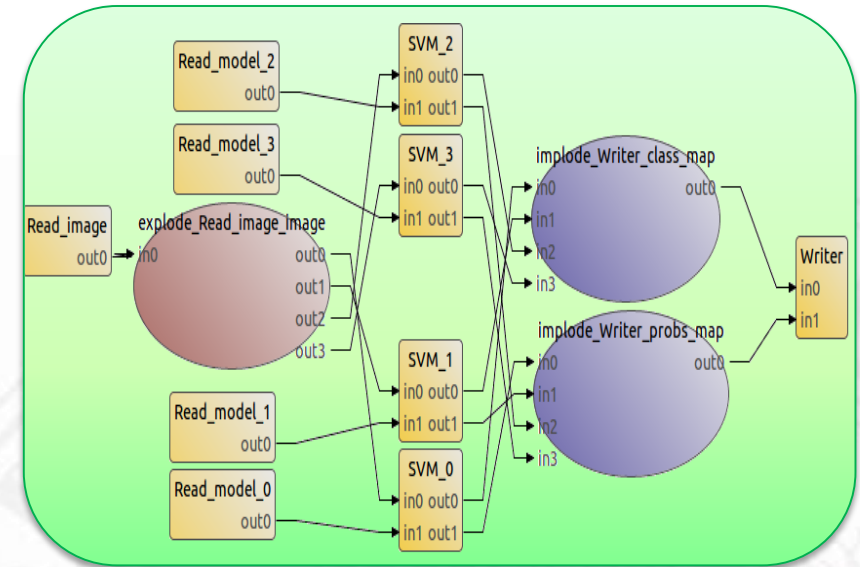
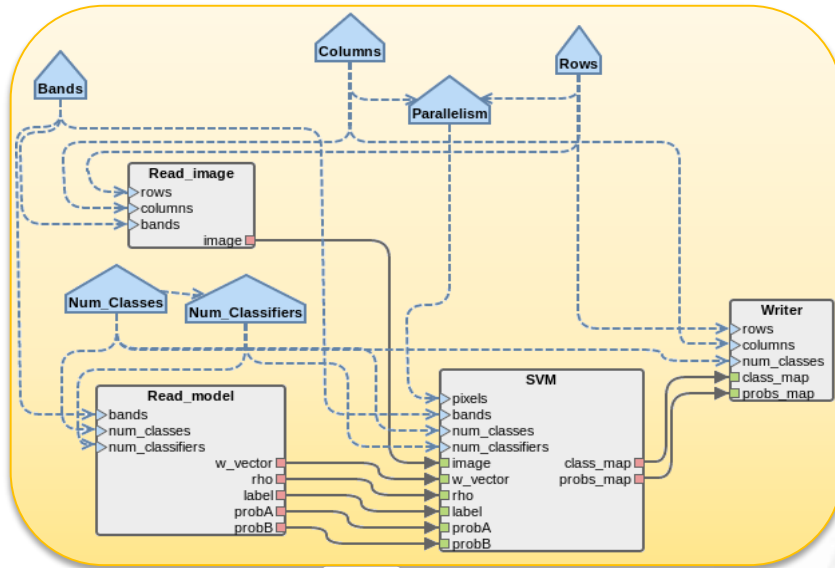


Real time



Energy awareness





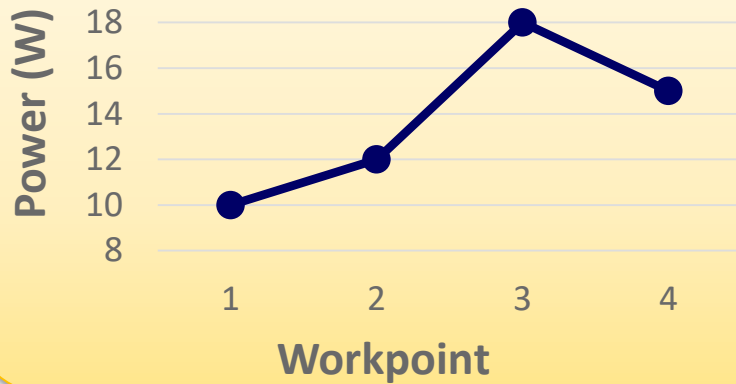
PAPI registers

Total instructions

Type of operations

Memory usage

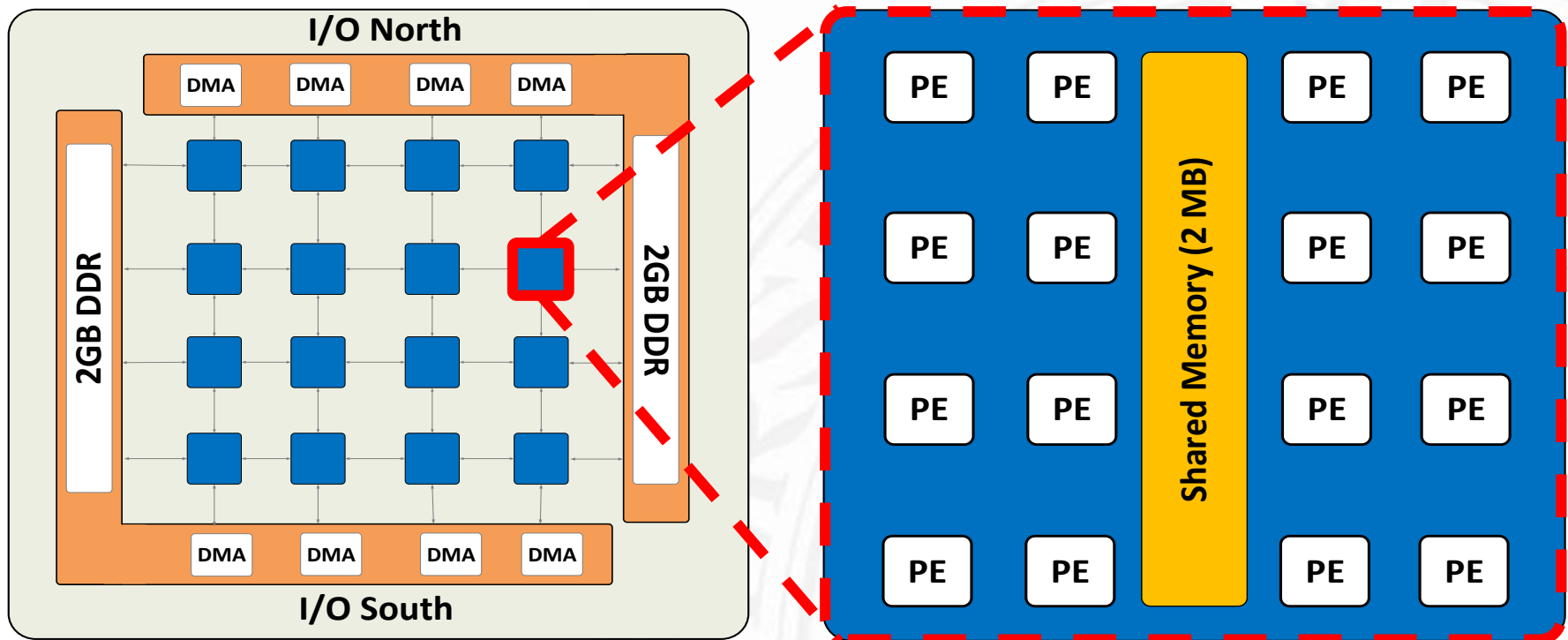
PAPI estimation



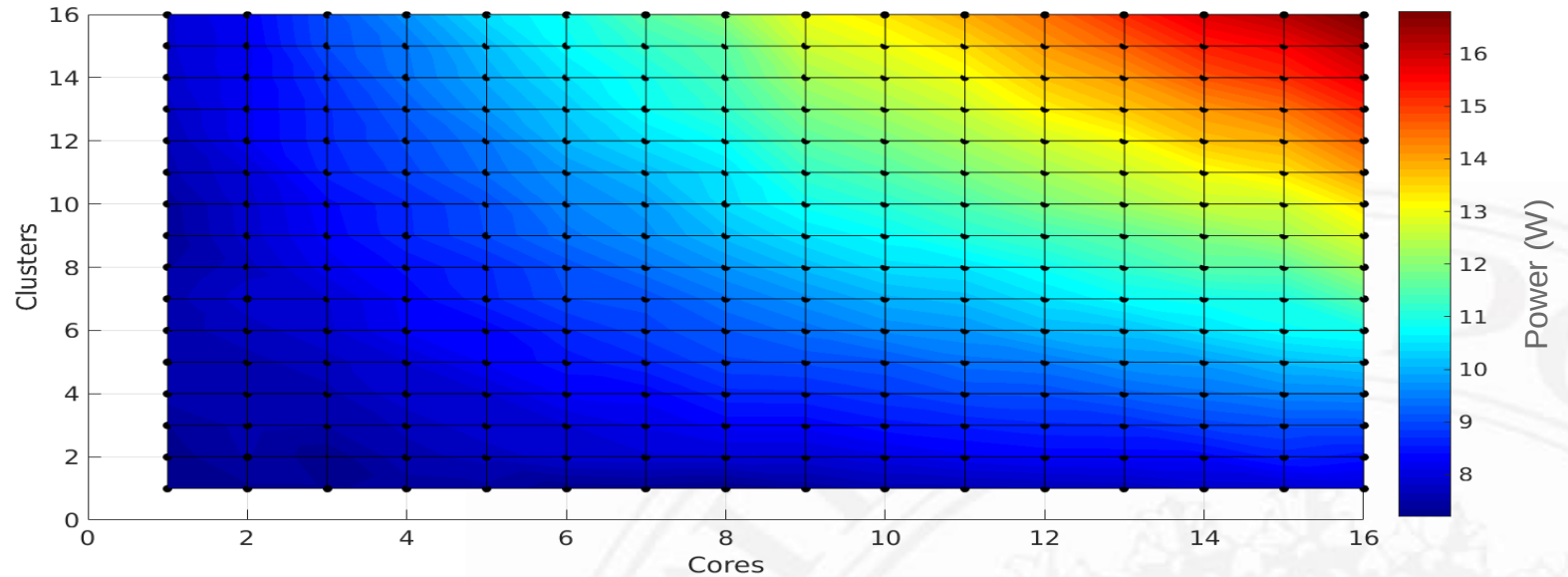
Real measurements

**Reconfiguration****UltraSCALE™**
Architecture

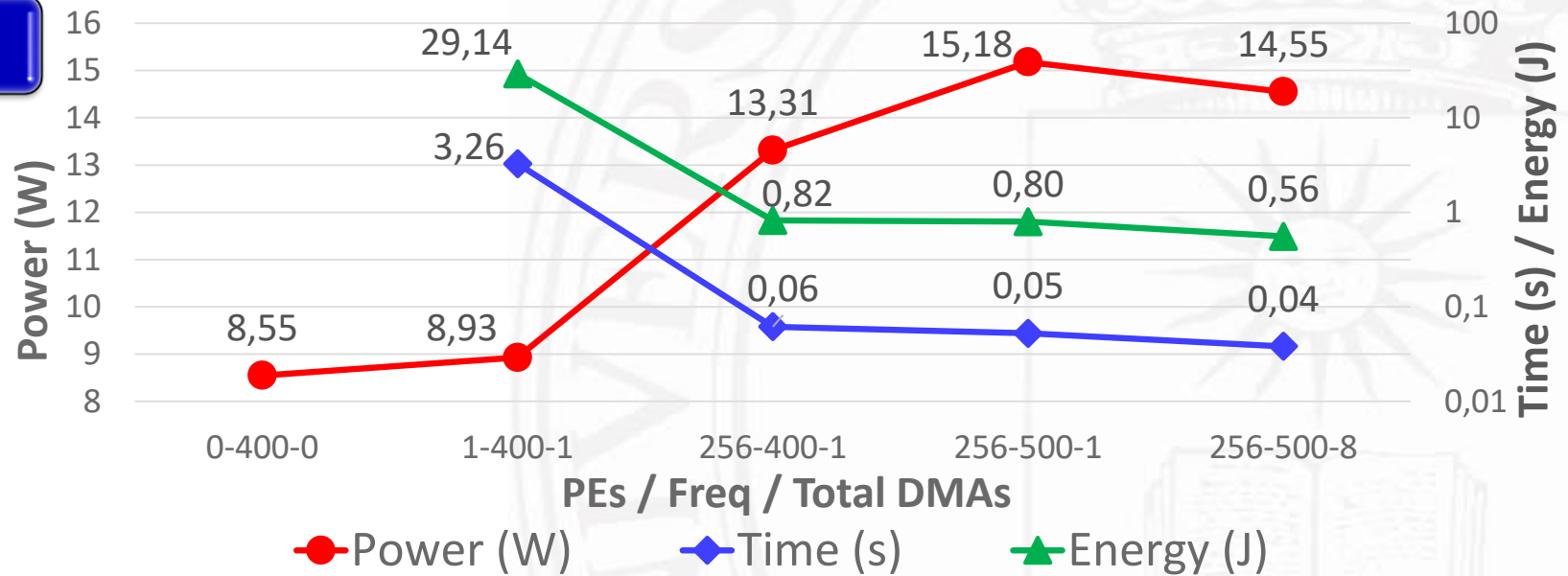
2 I/O (8 DMAs) $\rightarrow$ 16 Clusters $\rightarrow$ 256 PEs @ 400-500MHz



STRESS



SVM





Thank you for your attention

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