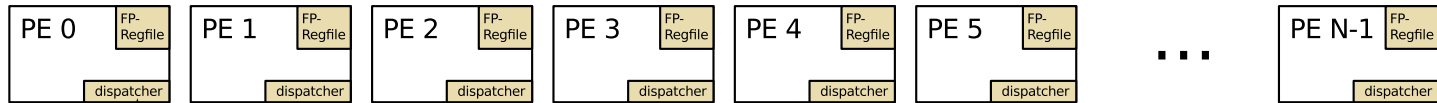


TCDM - Tightly-Coupled Data Memory

N RISC-V Cores



APU - Interconnect

K_1, K_2

K_3, K_4, K_5, K_6

K_7, K_8, K_9

$K_1 \times N/K_1:1$ arbiter

$K_2 \times N/K_2:1$ arbiter

$K_1 \times \text{Mult.}$

$K_2 \times \text{ALU}_{\text{ext}}$

1 cycle Latency

$K_3 \times N/K_3:1$ arbiter

$K_4 \times N/K_4:1$ arbiter

$K_5 \times N/K_5:1$ arbiter

$K_3 \times \text{FP-AddSub}$

$K_4 \times \text{FP-Mult}$

$K_5 \times \text{FP-Cast}$

1-2 cycle Latency

$K_6 \times N/K_6:1$ arbiter

$K_7 \times N/K_7:1$ arbiter

$K_8 \times N/K_8:1$ arbiter

$K_6 \times \text{FP-Mac}$

$K_7 \times \text{FP-Div}$

$K_8 \times \text{FP-Sqrt}$

3-6 cycles Latency

$K_9 \times N/K_9:1$ arbiter

$K_9 \times \text{Int-Div}$

Iterative units

APU cluster

Fine grained sharing
1 arbiter/FP-subunit