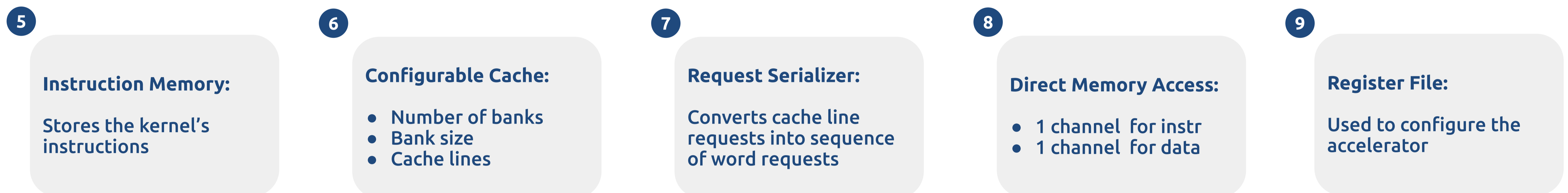
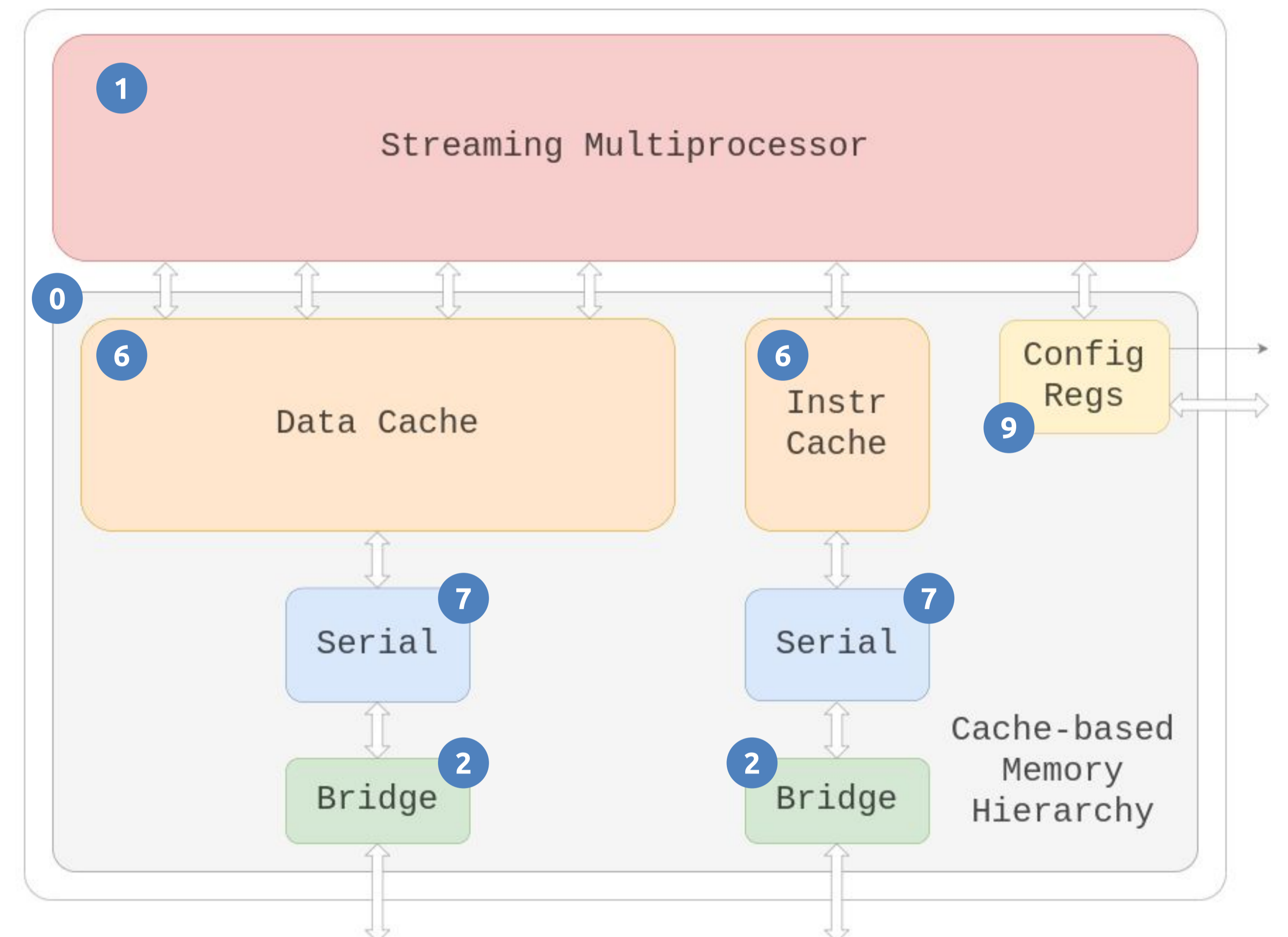
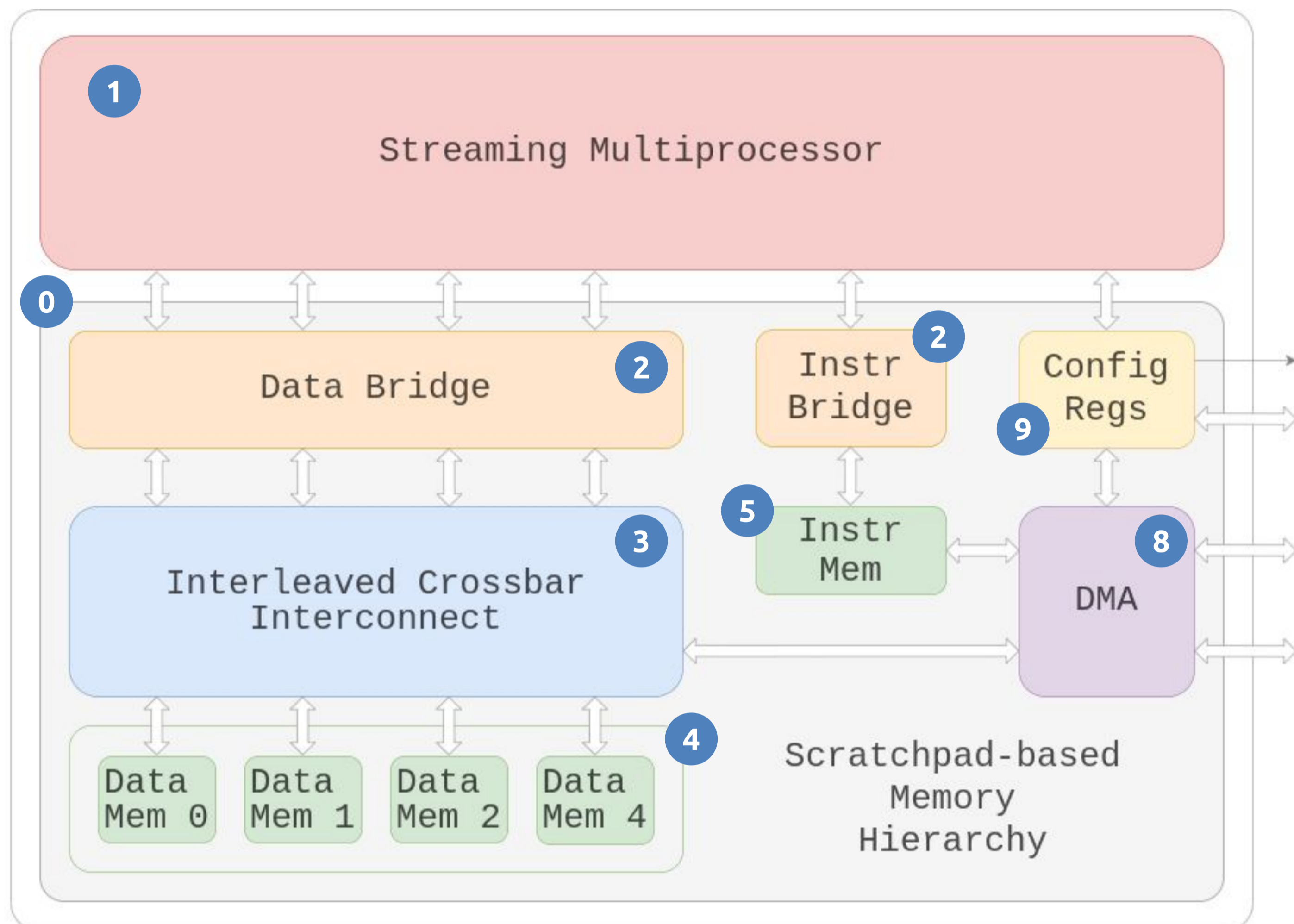
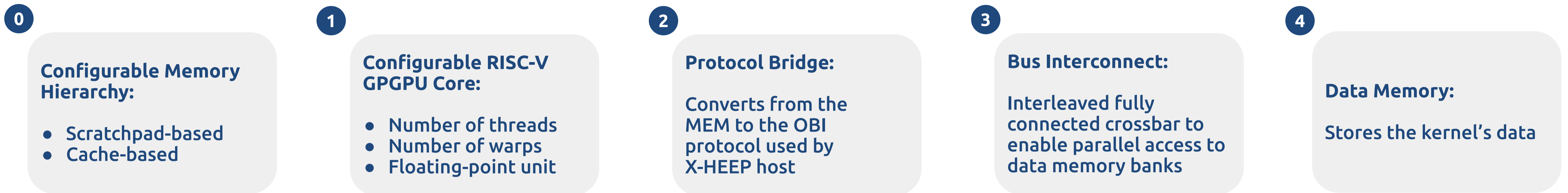
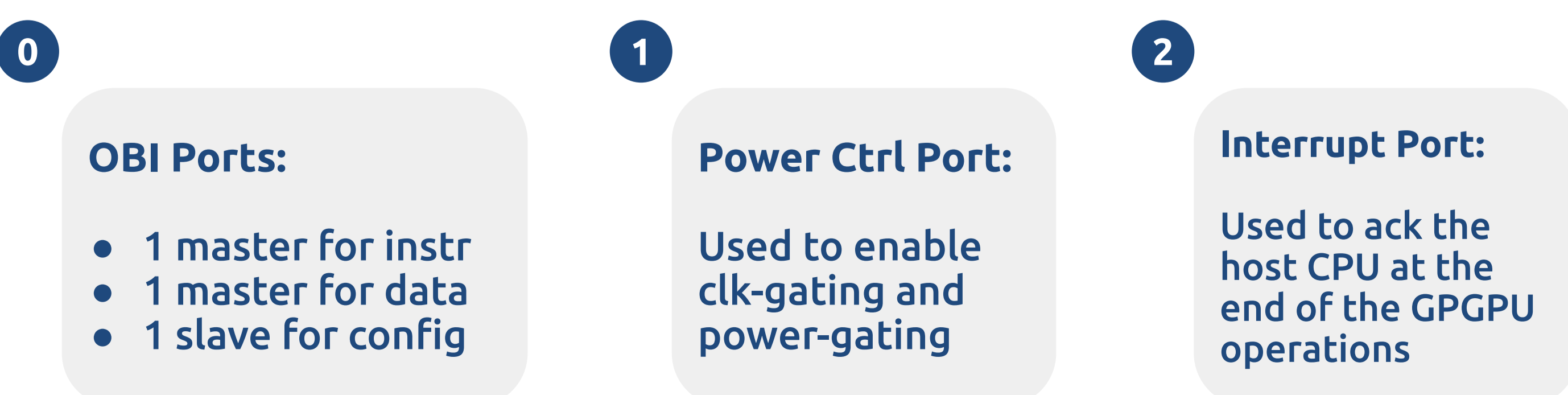
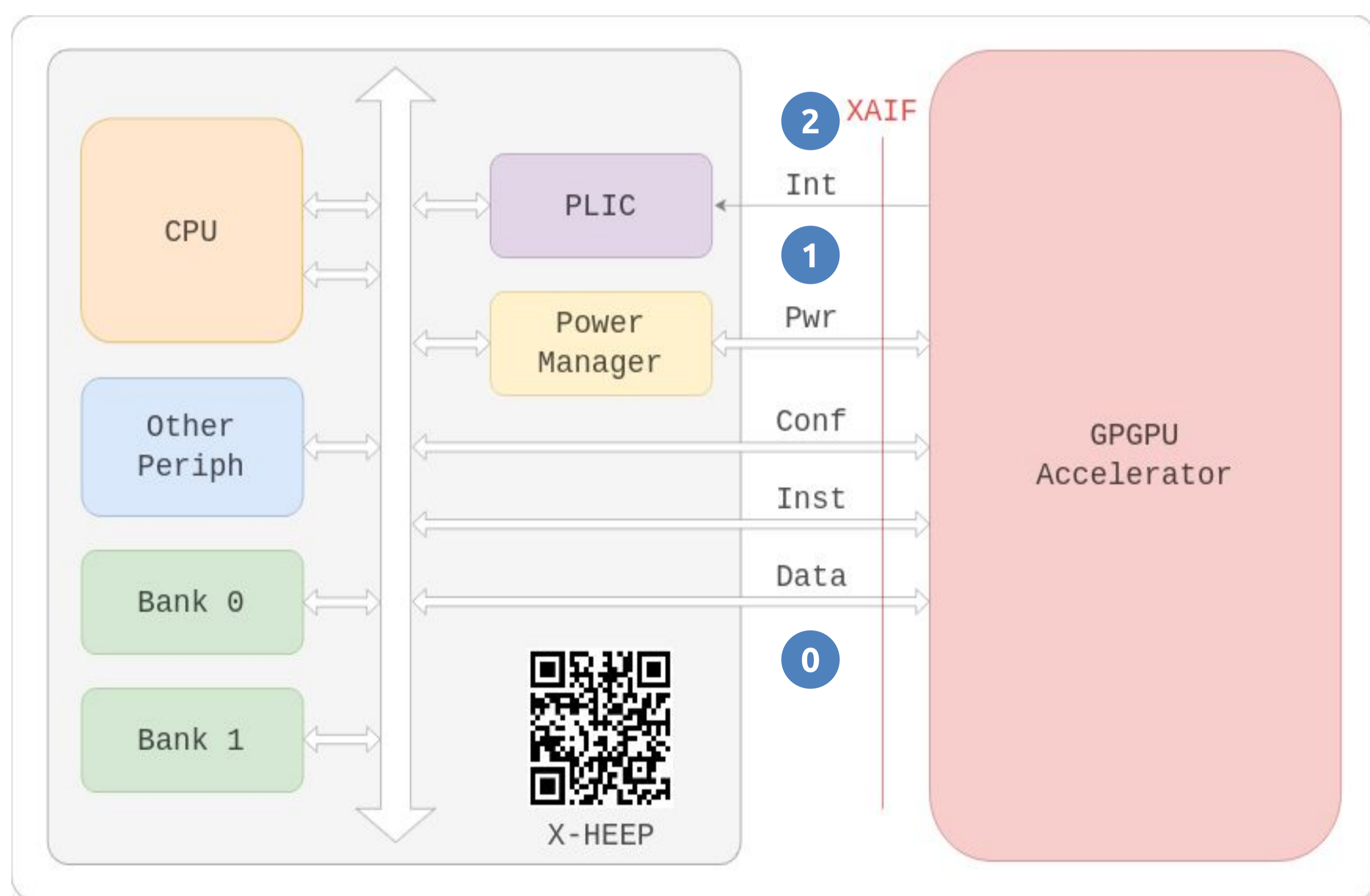


## GPGPU Accelerator: Scratchpad-based and Cache-based Architectures



## APU: X-HEEP Host + GPGPU Accelerator



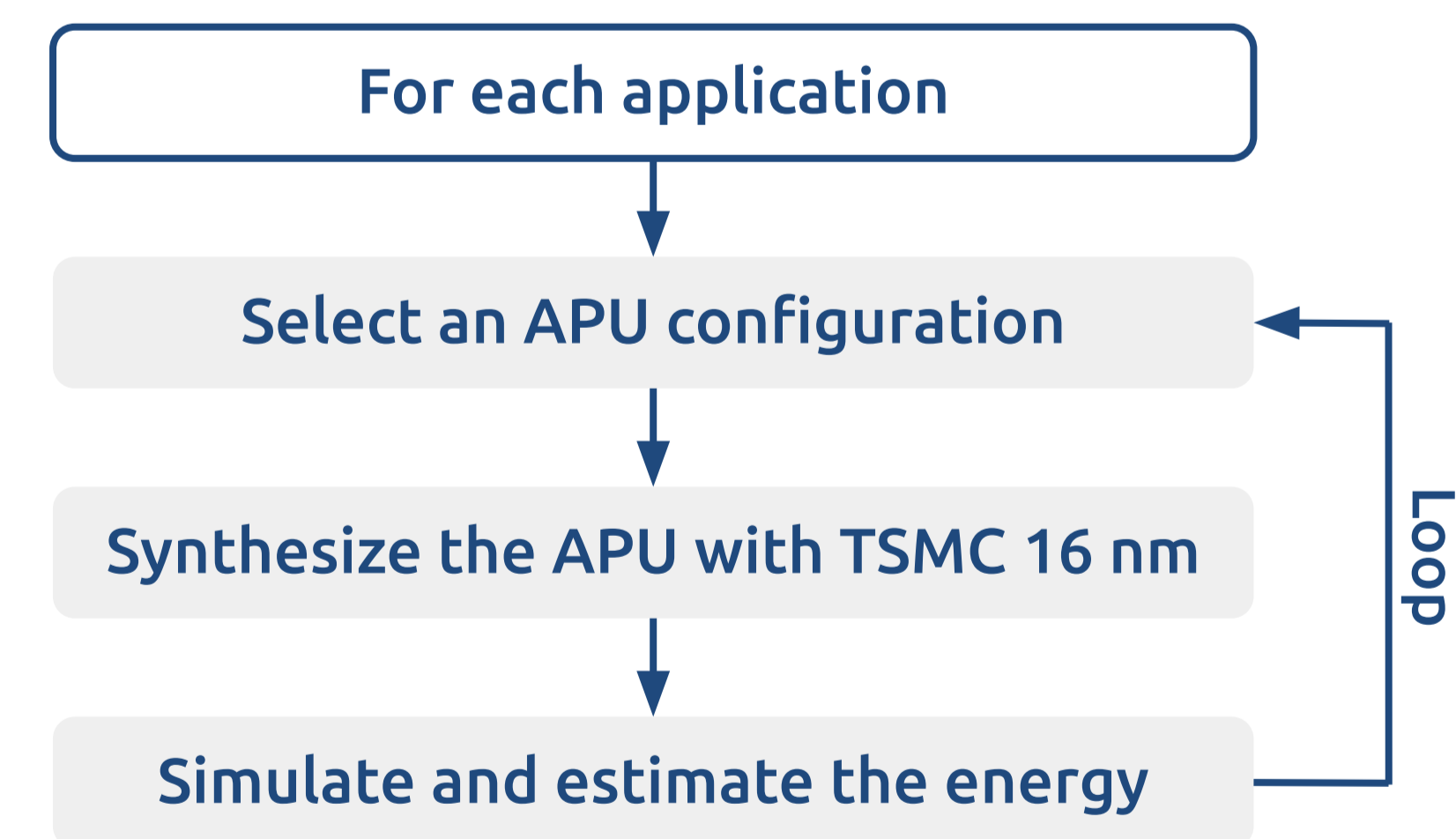
## Design Methodology

**Target domain:**

Bio-signal processing

**Goal:**

Find the most energy-efficient configuration of the presented Accelerated Processing Unit for each bio-signal application.



## Takeaways

- We present the first open-source and configurable GPGPU accelerator specifically designed for ultra-low-power wearable devices.
- We integrate the presented GPGPU accelerator with our in-house-designed X-HEEP host microcontroller to realize an APU for exploring CPU/GPGPU interactions.
- We propose a design methodology to select the most energy-efficient configuration of the presented APU for each bio-signal application.