

A single case

Power comparison - p2

- For **cache access**
- **cache energy consumption per cache access** depends on **total cache size**, 6KB(spatial cache)<8KB(traditional), 2KB(temporal cache)<8KB(traditional)
- the proposed split cache is energy saving in **each cache access**:
- **energy_per_cache_access_tradition > energy_per_cache_access_split**
- similar hit rate means **similar access numbers**.
- $\text{cache_energy} = \text{access_numbers} * \text{energy_per_cache_access}$
- Obvious: **cache_power_tradition > cache_power_split**

A single case

Power comparison - p3

- **Other energy consideration:**
- Two cache module introduced extra overhead for ctrl logic
- $\text{Cache_ctrl_overhead} = 0.0025w$