



“Networking Attributes” of Multicore SoCs

Multicores for Networking Applications

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The first order criteria to consider

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“Networking Attributes” of a Multicore solution

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“Networking Attributes” of a Multicore solution

- QoS Support
 - Sharing of resources
 - “Determinism”
 -

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“Networking Attributes” of a Multicore solution

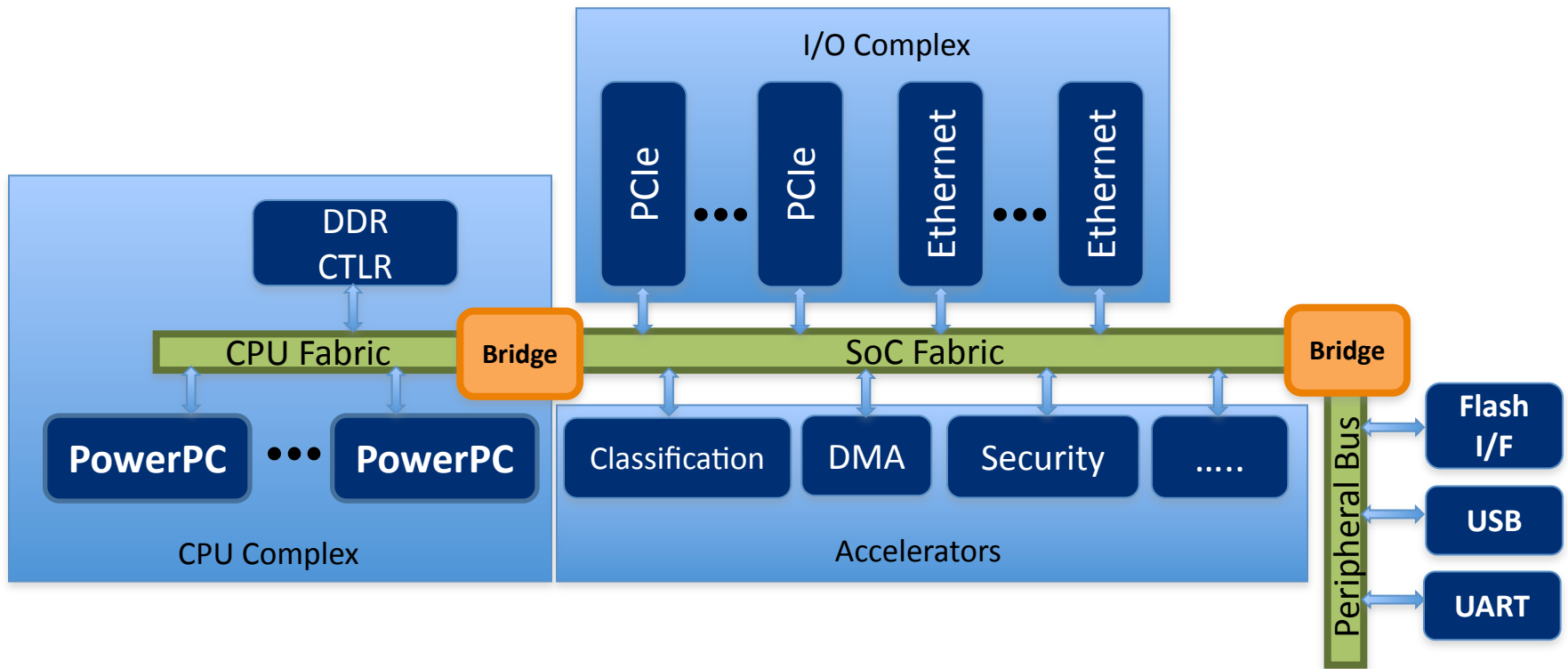
- QoS Support
 - Sharing of resources
 - “Determinism”
 -

- Packet Processing efficiency
 - Offload engines
 - Communication overhead
 - Processors, offload engines...
 - Memory sub-system features/characteristics
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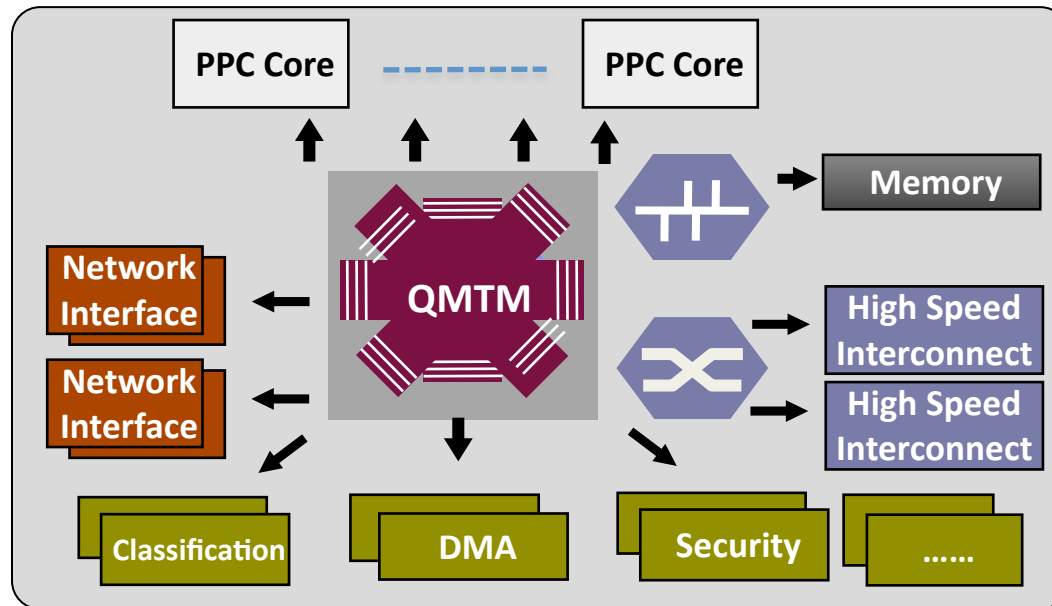
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Multi-cores for Networking Applications

- CPU Complex
 - L1, L2, L3 cache controllers
 - Multiple CPU instances
 - DDR Controller
 - High speed interconnect
- I/O Complex
 - Multiple Ethernet ports
 - Multiple PCIe ports
 - sRIOs and other ports
- Shared Accelerators
 - Classification
 - Security
 - DMA
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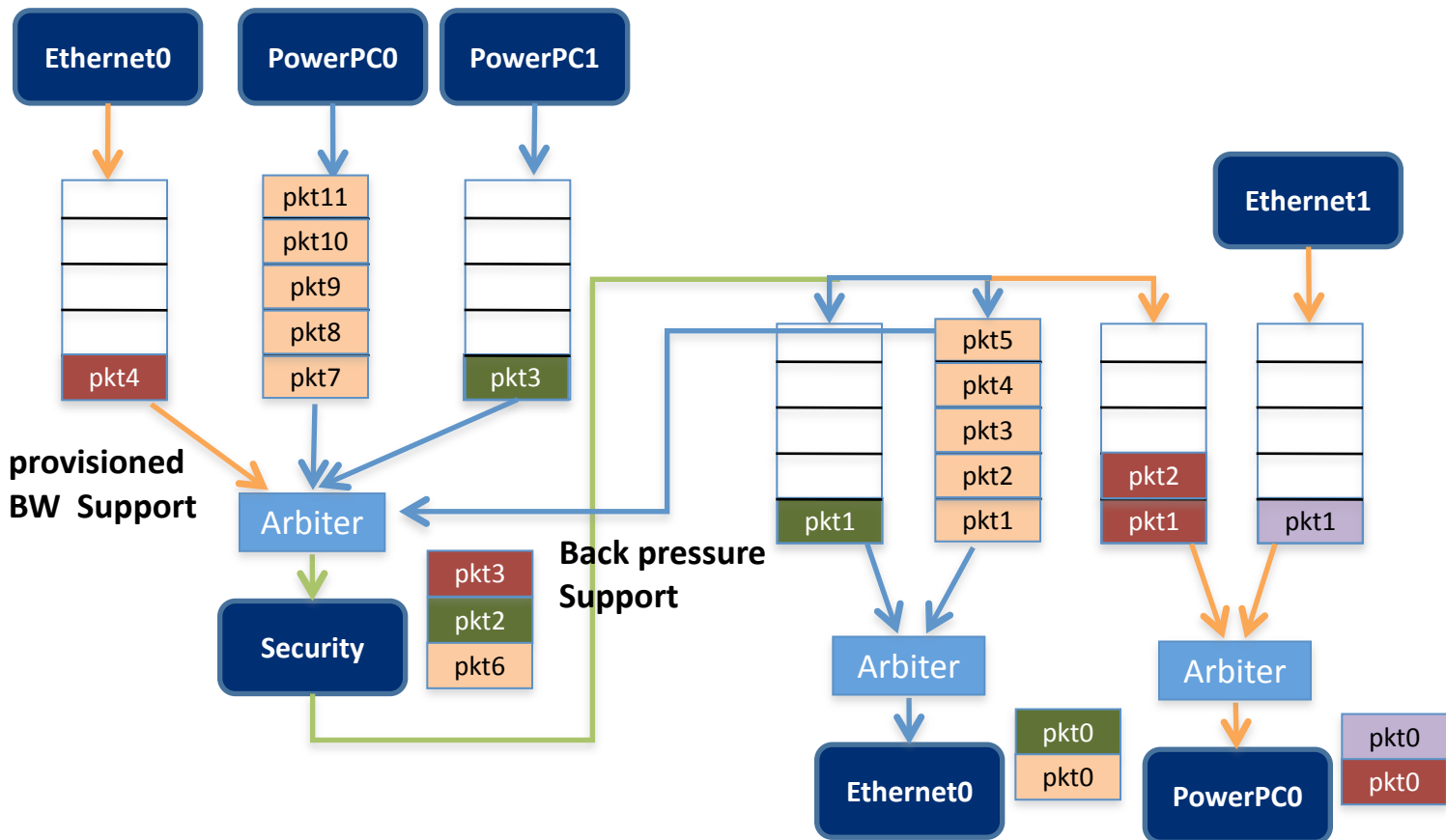
AppliedMicro's Next Generation SoCs



- High performance communication infrastructure
 - Hardware managed sequencing of processing through offload-engines
- Resource sharing management

Queue + Traffic Management Provide End-to-End QoS

- End-to-end QoS
- Multiple paths can share a resource without impacting bandwidth subscriptions



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- QoS
- Packet Processing Efficiency
- ...