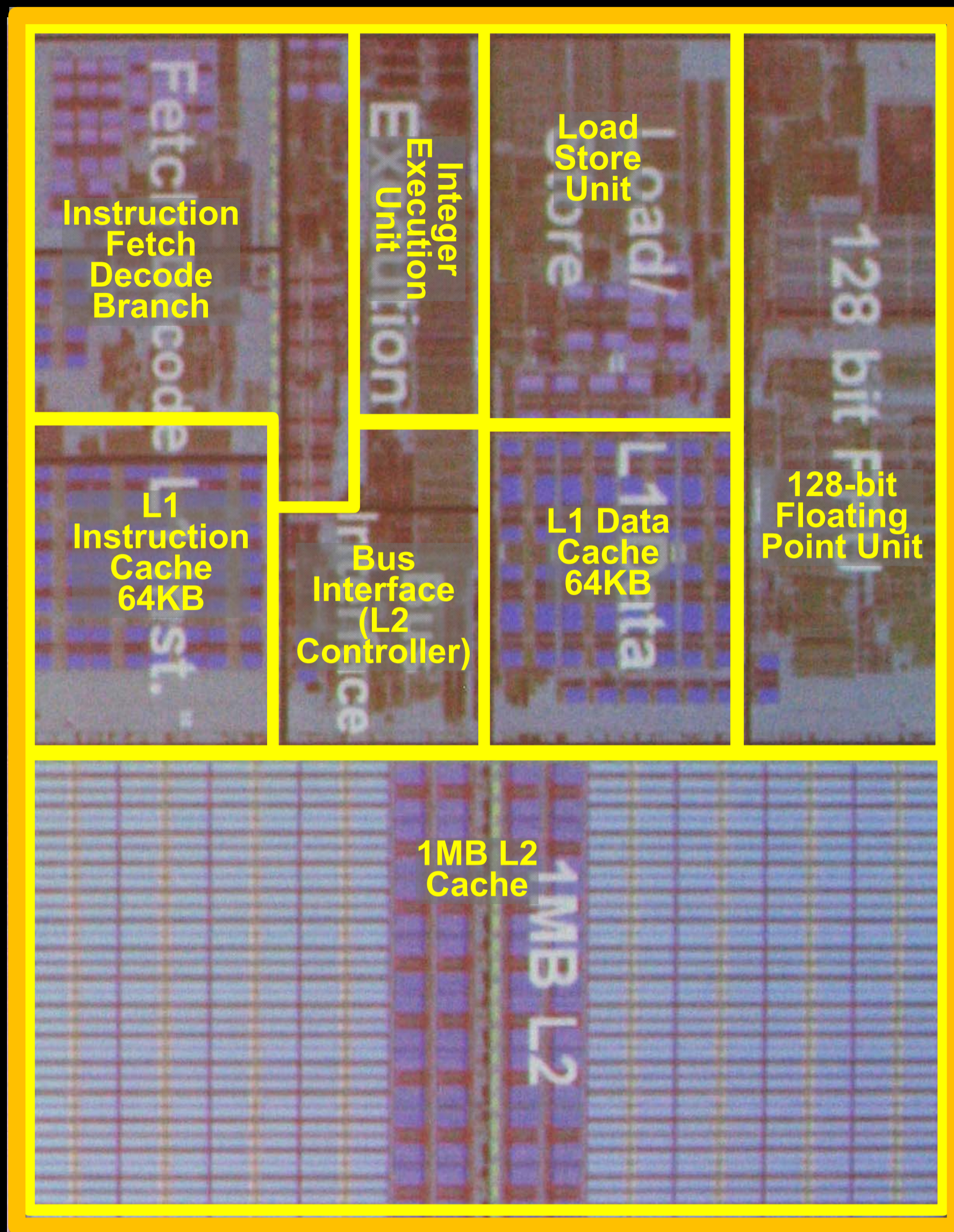


AMD 32nm K10 CPU Core



Process
32nm high-k metal-gate (HKMG) SOI Process

Core
9.69mm²
35 M Transistors

Core + 1MB L2 + Power-Gate Ring
17.7mm²
110 M Transistors

Voltage
0.8 - 1.3V

Power
2.5 - 25W

Frequency
>3GHz

Architectural Improvements

- Bigger instruction window For more integer/FP execution throughput (72-entry to 84-entry)
- Hardware integer divide
- Lower latency FP instructions
- Enhanced data prefetching
- Faster memory fills and cache state transitions
- I/O-based C-states including full processor state save
- Enhanced TLB residency for virtualization