



A Highly Integrated 8 mW H.264/AVC Main Profile Real-time CIF Video Decoder on a 16 MHz SoC Platform

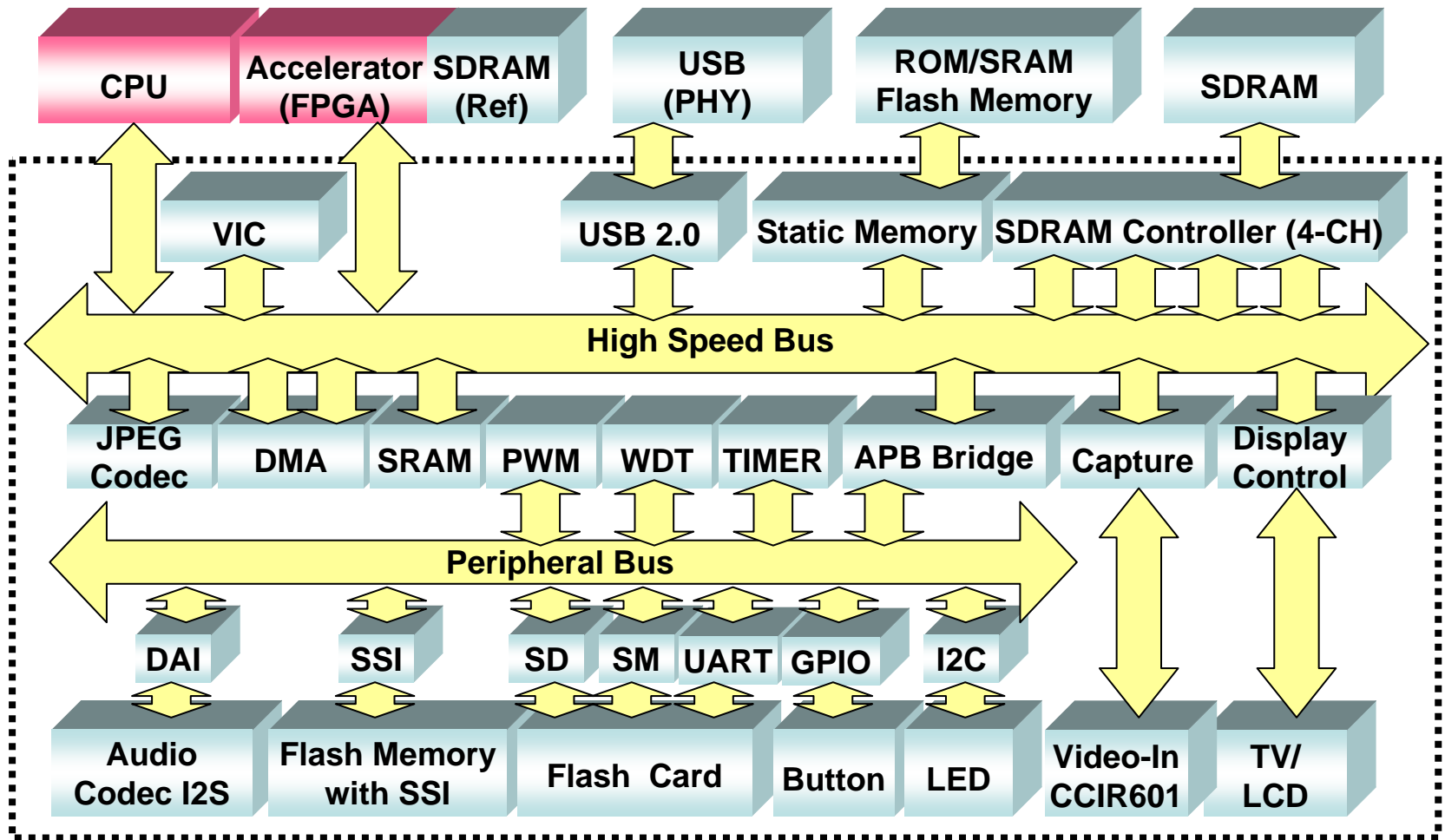
*Huan-Kai Peng, Chun-Hsin Lee, Jian-Wen Chen, Tzu-Jen Lo,
Yung-Hung Chang, Sheng-Tsung Hsu, Yuan-Chun Lin, Ping
Chao, Wei-Cheng Hung, Kai-Yuan Jan, Youn-Long Lin*

Department of Computer Science
National Tsing Hua University

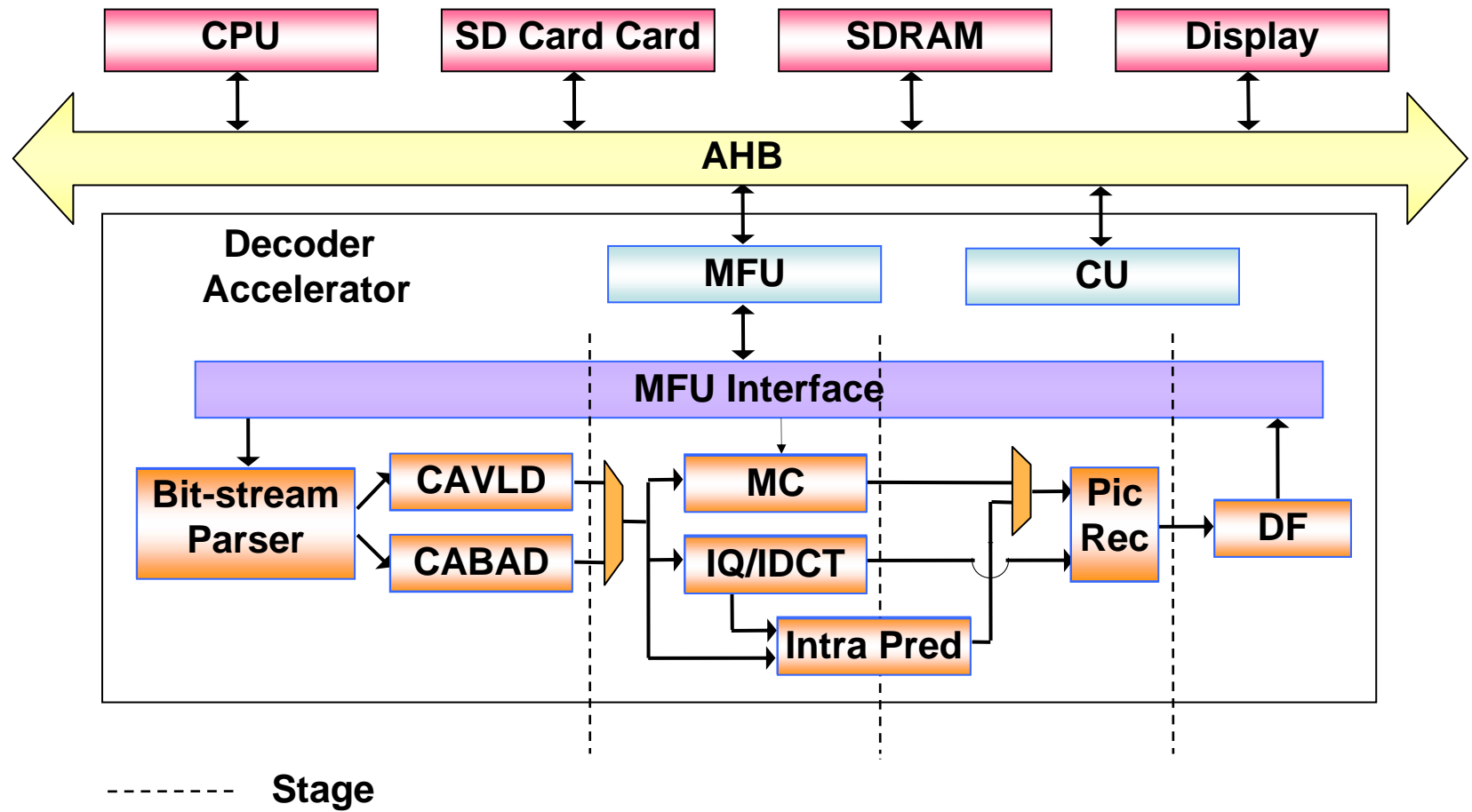
Our Contribution

- Highly integrated H.264 main profile decoder
- World-leading performance
 - CIF 45 fps @ 16MHz
 - 8mW @ 16MHz (core)
- FPGA Demonstrable

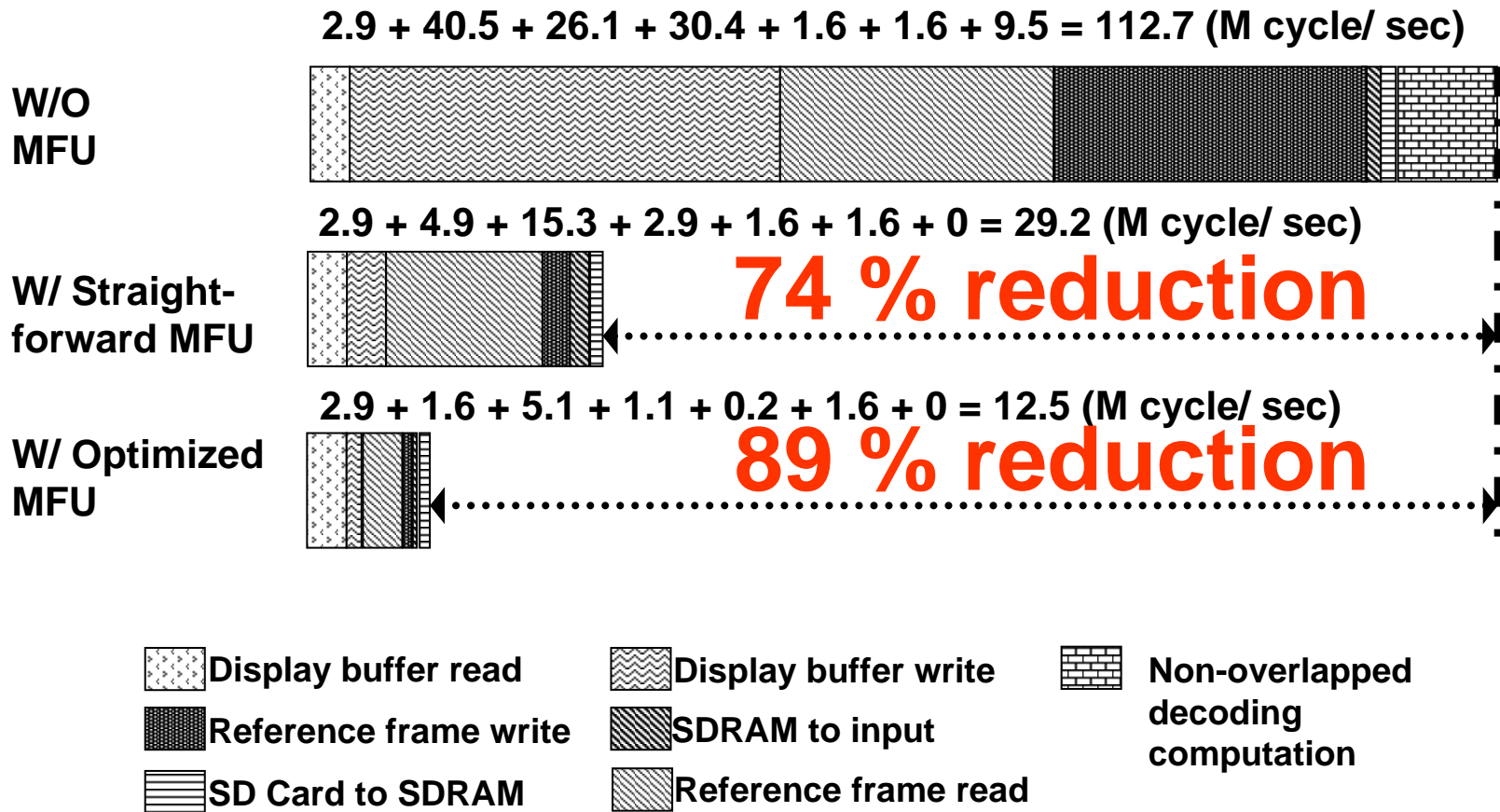
Multimedia SOC Platform



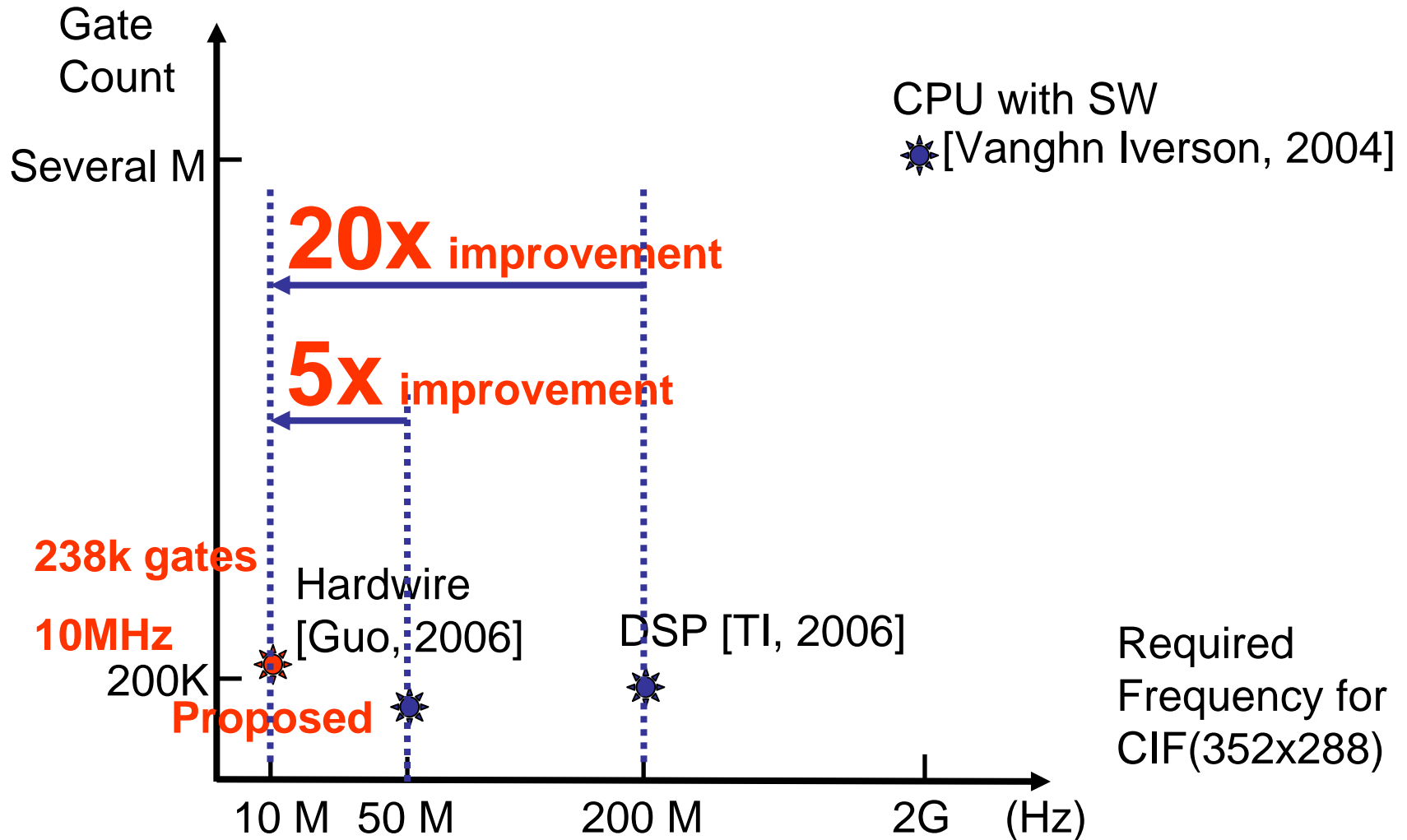
Proposed Video Decoder Architecture



External Memory Management



Results and Comparison



Demonstration System Status



NTHU H.264 Main Profile Decoder System		
Resolution	CIF	D2
Frame Rate	45FPS	16FPS
Clock Rate	16MHz	16MHz

Thank You
