

Project Goal

Evaluate various general-purpose processors in Radar Signal Processing

- Requires processing of complex data types
- All processors have SIMD capability

Freescale 744x (G4) is popular, but several potential alternatives have become available recently

NOT evaluated for this project: DSP chips, FPGA solutions

Configurations

	AMD Opteron	Broadcom BCM1250	IBM PowerPC 970	Motorola/ Freescale PowerPC 7447 (G4)
Frequency	1.8 GHz	800 MHz	1.8 GHz	1.0 GHz
On-chip cache (L1)	64 Kbytes	32 Kbytes	32 Kbytes	32 Kbytes
On-chip cache (L2)	1024 Kbytes	512 Kbytes (shared by processors)	512 Kbytes	512 Kbytes
L3 Cache	None	None	None	None
Memory Controller	Dual- channel on- chip	Dual-channel on-chip	Apple dual channel, external	Discovery II single channel
DRAM	128 bits, 133 MHz DDR (PC2100)	128 bits, 133 MHz DDR (PC2100)	128 bits, 200 MHz DDR (PC3200)	64 bits, 133 MHz DDR (PC2100)
Comments		Dual processors on chip	Apple dual- processor SMP configuration	

Signal Processing

