DSP Option for ARCv1 Cores

Highlights

- Separate memory banks for X and Y operands
- DMA moves data in and out of XY memory
- Deliver data at register speed
- Eliminate main memory fetch cycles
- High performance address generators
- Address generators operate in several addressing modes
- Fast pointer accesses
- 10% of size of DSP coprocessor
- Single processor solution
- Can replace separate DSP
- Up to 32KB/bank (600 family)
- Up to 64KB/bank (700 family)
- Support for multiple memory banks
- Consolidated development environment for both CPU and DSP

Overview

The DesignWare® ARC® XY option gives designers the ability to add the power of a true DSP engine to ARCv1 CPU cores, enabling conventional and signal processing computation within a single unified architecture. The ARC XY option may be applied

Applications

- Multimedia codecs
  - Audio/Video decoding andencoding
  - Still image manipulation

Synopsys, Inc. • **690 East Middlefield Road** • **Mountain View, CA 94043** • **www.synopsys.com**

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