

Spectral-AI MemoryIP™ Compilers

Product Overview

Spectral Design is developing a family of advanced Memory Compilers in the 16nm and 14nm FinFET processes. The designs are optimized for low dynamic power consumption while attaining fast access & cycle times. Supporting Artificial Intelligence, Machine Learning and Deep Learning applications where low power and high speed are essential.

Advanced A.I. Memory Solutions

- ▶ Neural RAM IP
- ▶ TCAM High Speed Search IP
- ▶ NVM Memory Compilers
- ▶ Custom Memory IP

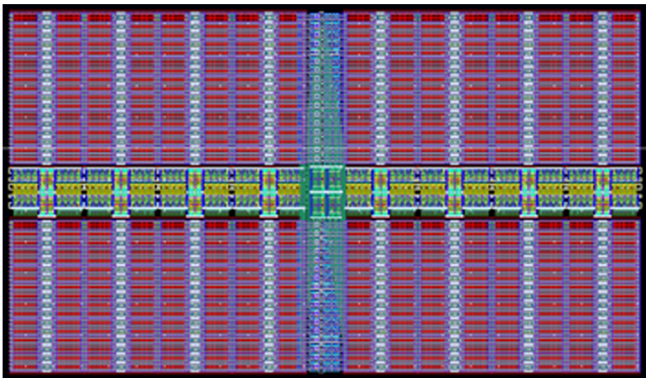


Figure 1 - Spectral High Speed/Low Power Neural RAM

Neural RAM Features:

- ✓ High-Speed & Ultra Low Power Architecture
- ✓ Standard Foundry Bitcell
- ✓ Fast: Multiple GHz cycle time
- ✓ Test Mode Support
- ✓ Silicon Proven Architecture



Spectral is focused on Emerging A.I. FinFET applications

Targeted A.I. Markets and Applications

- ▶ Autonomous Vision Computing
- ▶ High-Speed Data Analysis
- ▶ Bioinformatics
- ▶ Pattern Recognition Applications
- ▶ Robotics
- ▶ Natural Language Processing
- ▶ Blockchain

Targeted A.I. Implementations

- ▶ Neural-Network Inference
- ▶ A.I. Accelerators
- ▶ Deconvolutional Neural Networks - DNN
- ▶ Convolutional Neural Networks - CNN

