

SYNCHRONOUS HIGH-SPEED SINGLE-PORT MEMORY COMPILER

Version 1.0 | May 2007

Key Features

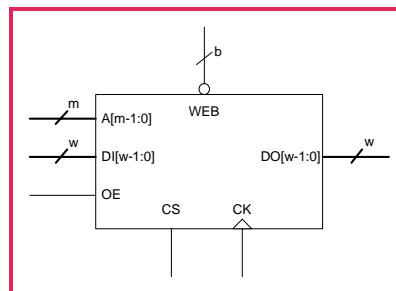
- Operating voltage range:
1.62 V ~ 1.98 V
- Operating junction temperature range: -40 °C ~ 125 °C
- Minimum metal requirement:
4 metal layers
- Synchronous read and write operations
- Fully customized layout density per customer configuration
- Automatic power-down mechanism to eliminate the DC current
- Clocked address inputs and CS to the RAM at the CK rising edge
- Clocked WEB input pin to the RAM at the CK rising edge
- Clocked DI input pins to the RAM at the CK rising edge
- Byte write and word write operations available
- Verilog/VHDL timing simulation model generator
- SPICE netlist generator
- GDSII layout database
- Memaker preview UI
- Supports the BIST code
- Multi-block options for the best aspect ratio

General Description

The FSA0M_A_SU is a high-speed, synchronous single-port RAM compiler. It is implemented by using UMC's 0.18 μm Mixmode/RFCMOS process and can be incorporated with Faraday's 0.18 μm standard cells. Different combinations of words, bits, and aspect ratios can be used to generate the most desirable configurations.

Given the desired size and timing constraints, the FSA0M_A_SU compiler is capable of providing the suitable synchronous RAM layout instances in minutes. It automatically generates the data sheets, Verilog/VHDL behavioral simulation models, SCS or ViewLogic symbols, place & route models, and the test patterns to be used in the ASIC designs. The length of the duty cycle can be neglected as long as the setup/hold times and the minimum high/low pulse widths are satisfied. This allows a more flexible clock falling edge in each operation. Both the word write and byte write operations are supported

Block Diagram



Quick Reference

Maximum capacity	512K bits
Maximum words	64K
Minimum words	64
Maximum bits	128
Minimum bits	1
Bit increment	1
Aspect ratio (Block Mux)	1, 2, 4, 8, 16





HEADQUARTERS

Hsinchu, Taiwan,
Tel: 886-3-578-7888
Fax: 886-3-578-7889
twsales@faraday-tech.com

USA OFFICE

Sunnyvale, USA
Tel: 1-408-522-8888
Fax: 1-408-522-8889
ussales@faraday-tech.com

EUROPE OFFICE

Hoofddorp, Netherlands
Tel: 31-2356-20496
Fax: 31-2356-36297
eusales@faraday-tech.com

JAPAN OFFICE

Tokyo, Japan
Tel: 81-3-5214-0070
Fax: 81-3-5214-0076
jpsales@faraday-tech.com

CHINA OFFICE

Shanghai, P. R. China
Tel: 86-21-6406-7523
Fax: 86-21-6406-5327
cnsales@faraday-tech.com