

# SYNCHRONOUS DUAL-PORT SRAM COMPILER

Version 1.0 | February 2007

## Key Features

- Synchronous read and write operations
- Fully customized layout density
- Available for 1.8 V  $\pm$  10%
- Automatic power down to eliminate the DC current
- Clocked address inputs and CSA(B) to RAM at the CKA(B) rising edge
- Clocked WEA(B)N input pins to RAM at the CKA(B) rising edge
- Clocked DIA(B) input pins to RAM at the CKA(B) rising edge
- Byte write or word write operations available
- Verilog/VHDL timing/Simulation model generator
- SPICE netlist generator
- GDSII layout database
- Memaker preview UI
- BIST code supported
- Multi-block options of the best aspect ratio

## General Description

The FSAOM\_A\_SJ is a synchronous dual-port SRAM compiler. It is created according to UMC's 0.18  $\mu$ m Mixmode/RFCMOS process design rules and can be incorporated with Faraday's 0.18  $\mu$ m standard cells. Different combinations of words, bits, and aspect ratios can be used to generate the most desirable configurations.

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

## Quick Reference

Cycle time	220 MHz (Max.) under the worse case condition of 4K x 16
Address port	2 read ports/2 write ports
Variable capacity	512K bits (Max.)
Output buffer	Tri-state
Aspect ratios (Multi-block option)	1, 2, 4, 8
Applications	Configurable SRAM modules for the embedded design on the logic process



#### **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