



Cypress Semiconductor Corporation, 198 Champion Court San Jose, CA 95134. Tel: (408) 943-2600

## PRODUCT CHANGE NOTIFICATION

**PCN:** PCN155107

**Date:** December 20, 2015

**Subject:** 4Mb FAST and Micropower (MoBL®) Asynchronous SRAM Products: Technology Transition from 250-, 180-, 130- and 90-nanometer to 65-nanometer Technology.

**To:**

**Change Type:** Major

### **Description of Change:**

Cypress is pleased to announce the transition of 4Mb FAST / Micropower (MoBL®) Asynchronous SRAM from the technology nodes listed below to the 65-nanometer technology node at our partner fab- United Micro Electronics Corporation (UMC) in Tainan, Taiwan. This change is consistent with Cypress's product roadmap of moving to the latest technology.

FAST Asynchronous SRAM - 90-nanometer  
FAST Asynchronous SRAM - 180-nanometer  
FAST Asynchronous SRAM - 250-nanometer  
Micropower (MoBL®) Asynchronous SRAM - 90-nanometer  
Micropower (MoBL®) Asynchronous SRAM - 130-nanometer

The new 65-nanometer products are drop-in replacement parts and form, fit, and function compatible with the 250-, 180-, 150- and 90-nanometer products.

4Mb FAST Asynchronous SRAM: Cypress will be discontinuing the 4Mb FAST Asynchronous SRAM 250-, 180- and 90-nanometer products. The new 65-nanometer products are drop-in replacement parts and form, fit, and function compatible with the older technology products. The list of affected part numbers, replacement part numbers, next best alternatives, Last Time Buy (LTB) and Last Time Ship (LTS) dates are provided in the attached 'Affected Parts List' file.

4Mb Micropower (MoBL®) Asynchronous SRAM: Cypress will continue to support the existing 130- and 90-nanometer 4Mb Micropower (MoBL®) Asynchronous SRAM products but encourages our customers to migrate to newer technology products.

Non-ECC (Error-Correcting Code) option for select 4Mb FAST & Micropower (MoBL®) Asynchronous SRAMs which are form, fit, and function compatible with the older technology devices are also available in 65-nanometer. Refer to attached 'Affected Parts List' file for the offerings.

Datasheets and models for both the old and the new part numbers can be downloaded from the Cypress Website ([www.cypress.com](http://www.cypress.com)).

**Benefit of Change:**

65-nanometer 4Mb Asynchronous SRAM devices use (38 and 32) Hamming Code for single-bit error detection and correction. A hardware ECC block performs all ECC-related functions in line, without the user intervention and without affecting the access-time performance of the devices. The single-bit error detection and correction capability is supplemented by an 8-bit interleaving scheme to prevent the occurrence of multi-bit errors. Together, these features provide significant improvement in Soft Error Rate (SER) performance and product reliability, resulting in FIT rates less than 0.1 FIT/Mbit.

Migration to the 65-nanometer technology will result in improved product reliability and product availability.

**Affected Part Numbers:** 58 (28 FAST Asynchronous SRAM + 30 Micropower (MoBL®) Asynchronous SRAM)

**Affected Parts:** Please refer to attached 'Affected Parts List' file.

**Qualification Status:**

The 65-nanometer products have been qualified through a series of tests identified in the Qualification Test Plan (QTP) Report 145003. The QTP report can be found in the attachment to this notification or by visiting [www.cypress.com](http://www.cypress.com) and typing the QTP number in the keyword search window.

**Sample Status:**

Qualification samples are not built ahead of time for all part numbers affected by this change. Please refer to attached 'Affected Parts List' file for the list of older technology parts and their corresponding 65-nanometer replacement parts. If you require qualification samples, please contact your sales representative as soon as possible, but within 30 days of the date of this PCN.

**Approximate Implementation Date:**

4Mb FAST Asynchronous SRAM: The 250-, 180- and 90-nanometer parts listed in attached file are subject to End of Life (EOL) with the Last Time Buy (LTB) and Last Time Ship (LTS) dates. Please refer to attached 'Affected Parts List' file for LTB/LTS dates

4Mb Micropower (MoBL®) Asynchronous SRAM: Products on 65-nanometer process technology are available immediately for sampling and production. 130-nanometer and 90-nanometer products will continue to be available for order entry. No EOL is planned for these parts.

**Anticipated Impact:**

The 65-nanometer product are completely compatible with existing product from a functional, parametric, quality and reliability performance perspective, however the customer will need to update their ordering process for the 65-nanometer ordering part numbers as found in the attached 'Affected Parts List' file.

Cypress also recommends that customers take this opportunity to review the product datasheet and any applicable application notes to their system design and environment conditions to assess any impact to their application.

**Method of Identification:**

The letter “G” affixed after the base part number designates the 65-nanometer technology with the ECC functionality. The marketing part numbers with “GN” after the base part number indicate non ECC devices.

For example, the 90-nanometer 4Mb FAST Asynchronous SRAM part CY7C1041D-10ZSXI will be replaced by the following 65-nanometer parts:

CY7C1041G-10ZSXI with ECC

CY7C1041GN-10ZSXI without ECC

Similarly, the 90-nanometer 4Mb Micropower (MoBL®) Asynchronous SRAM part CY62146ESL-45ZSXI will be replaced by the following 65-nanometer parts:

CY62146G-45ZSXI with ECC

CY62146GN-45ZSXI without ECC

Please refer to [www.cypress.com/products](http://www.cypress.com/products) for datasheets and a complete listing of the 65-nanometer 4Mb FAST / Micropower (MoBL®) Asynchronous SRAM Products.

Cypress maintains traceability of product to wafer level, including wafer fabrication location, through the lot number marked on the package.

**Response Required:**

Please refer to LTB/LTS dates and request samples within 30 days of this notice.

For additional information regarding this change, contact your local sales representative or contact the PCN Administrator at [pcn\\_adm@cypress.com](mailto:pcn_adm@cypress.com).

Sincerely,

Cypress PCN Administration