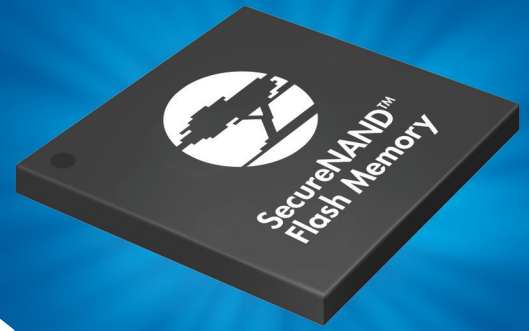


CYPRESS

1Gb to 4Gb SECURENAND™ FLASH MEMORY

ENHANCED PROTECTION FEATURES FOR APPLICATIONS
WHICH NEED THE HIGHEST SECURITY



PRODUCT OVERVIEW

INTRODUCTION

The Cypress SecureNAND Flash Memory family offers enhanced protection features for applications where security is a priority. Standard SLC NAND Flash Memory products do not provide security features required for storage of sensitive boot code, system firmware and applications. Cypress SecureNAND Flash Memory offers enhanced protection features making them ideal for storing sensitive information.

They provide volatile and nonvolatile block protection features that you can use to protect boot code, system firmware and applications. With volatile block protection, a single block or a range of blocks can be chosen to lock the specified area until the next power cycle. With nonvolatile block protection, an individual block, a range of blocks or an expandable range of blocks can be locked permanently. This provides a greater amount of flexibility without having to worry about limitations on the number of blocks that need to be protected.

Cypress SecureNAND products are available in densities from 1Gb to 4Gb and in the industry-standard 63-ball BGA package. These products support the ONFI 1.0 NAND interface and include volatile and nonvolatile block protection features. They are thoroughly tested and qualified to meet Cypress's world-class quality requirements.

BENEFITS

Reduced system costs

- High-security systems use SPI NOR Flash Memory for sensitive boot code storage and standard SLC NAND Flash Memory for system firmware and application storage.
- Cypress SecureNAND Flash Memory reduces system cost by moving from a dual-chip flash memory solution to a single-chip flash memory solution.

Improved system security

- Standard SLC NAND Flash Memory provides a limited capacity of nonvolatile block protection which do not make it suitable for protecting system firmware and applications.
- Cypress SecureNAND Flash Memory provides full-capacity nonvolatile block protection enabling system firmware and application protection.

System life greater than five years

- Cypress SecureNAND Flash Memory supports an endurance of 100,000 Program/Erase cycles to achieve the longest system life.

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FEATURES

SECURITY

- Full-capacity block protection
- Volatile block protection
 - One range of block granularity for unlock/lock
 - Option for range lock-down until the next power cycle
- Nonvolatile block protection
 - One fixed permanent block lock range
 - One expandable permanent block lock range
 - Individual block permanent lock option

ERROR CORRECTION

- 4 bit ECC NAND

SUPPLY VOLTAGE

- 2.7V to 3.6V

POWER

- 2.7V to 3.6V
 - Read/Program/Erase: 32mA (max)
 - Standby: 70uA (max)

TEMPERATURE RANGE

- Industrial (-40°C to +85°C)

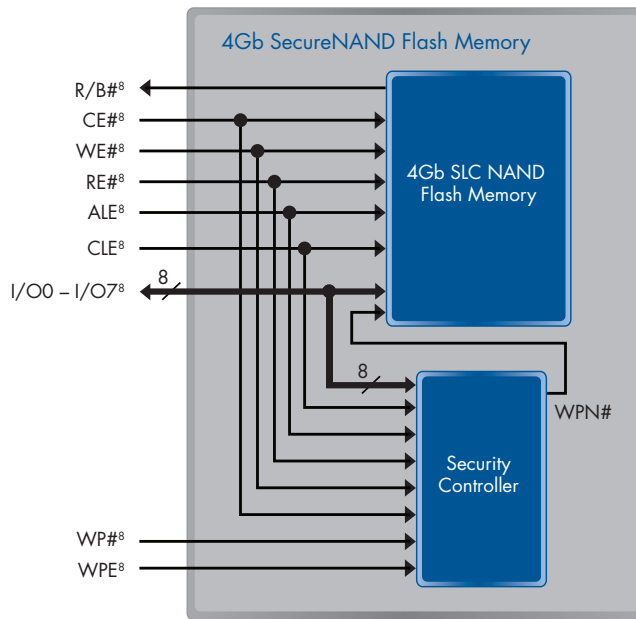
PACKAGES (ALL PB-FREE)

- 63-Ball BGA 9 x 11 x 1 mm



TARGET APPLICATIONS

SecureNAND is ideal for applications that need enhanced and flexible security features, such as Set Top Boxes, Point of Sale (POS) systems and Wearable Devices.



4Gb SecureNAND Flash Memory Block Diagram

SECURENAND FLASH MEMORY PRODUCT SELECTOR GUIDE

S34SL Part Number	Density	Interface	Voltage	Bus	Temp	Package
S34SL01G200BHI000	1Gb	NAND	3.0V	x8	-40°C to 85°C	63-ball BGA
S34SL02G200BHI000	2Gb	NAND	3.0V	x8	-40°C to 85°C	63-ball BGA
S34SL04G200BHI000	4Gb	NAND	3.0V	x8	-40°C to 85°C	63-ball BGA

GET STARTED NOW

To learn more about the SecureNAND Flash Memory products, visit www.cypress.com/SecureNAND
 Or write to us at nandflashmemory@cypress.com

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