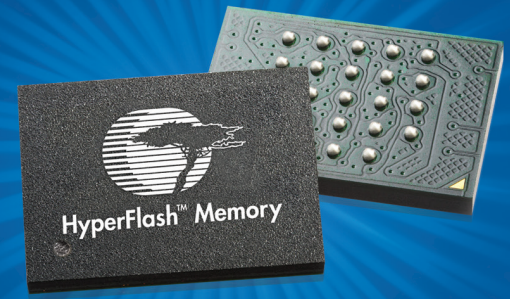CYPRESS

128Mb TO 512Mb KS-S (1.8-V) / KL-S (3.0-V) HYPERFLASH™ MEMORY

INTRODUCTION

The Cypress HyperFlash NOR Flash Memory product family offers higher bandwidth than parallel NOR Flash Memory with one-third the number of pins. HyperFlash offers a 166-MHz DDR mode providing a read bandwidth of up to 333-MBps. HyperFlash uses a small 48-mm^2 24-ball package, sharing a common footprint with Quad SPI and Dual-Quad SPI parts, to simplify board layout. On-chip ECC is included to ensure high system reliability. For systems requiring higher temperature ranges, an extended operating temperature range of -40°C to +125°C is offered. Cypress applies stringent testing and qualification processes to ensure all parts meet our world-class quality requirements, and offers AEC-Q100 qualification.

HIGH READ BANDWIDTH

- High read bandwidth is necessary to enable instant-on systems and quick execution of program code for execute in place (XIP) requirements

- HyperFlash offers a 166-MHz DDR mode which provides a high read bandwidth of 333-MBps

HYPERBUS™ INTERFACE

- HyperBus is a high-bandwidth, 12-signal interface that transfers information over 8 I/O signals at double data rate (DDR), delivering bandwidth of up to 333 MBps

- Low-pin-count interfaces reduce the number of signal layers required on PCBs, reducing cost

- The HyperBus interface also enables a small 48-mm^2 24-ball package, which shares a common footprint with Quad SPI and Dual-Quad SPI products

- HyperBus is supported by a wide ecosystem of host controllers and memory types

HIGH RELIABILITY

- On-chip ECC prevents single-bit soft error data corruption

- An extended temperature range of -40°C to +125°C is offered

- AEC-Q100-qualified parts and PPAP support available

FEATURES

CLOCK RATE
- 166 MHz (KS-S)
- 100 MHz (KL-S)

READ BANDWIDTH
- 333 MBps (KS-S)
- 200 MBps (KL-S)

ON-CHIP ECC
- Single-bit Soft Error correction

PROGRAM AND ERASE TIMES (TYP)
- 475-µs Page Program (512 Bytes)
- 930-ms 256KB Sector Erase

SUPPLY VOLTAGE
- 1.70-V to 1.95-V Supply Voltage (KS-S)
- 2.7-V to 3.6-V Supply Voltage (KL-S)

TEMPERATURE RANGES
- Industrial: -40°C to +85°C
- Industrial-plus: -40°C to +105°C
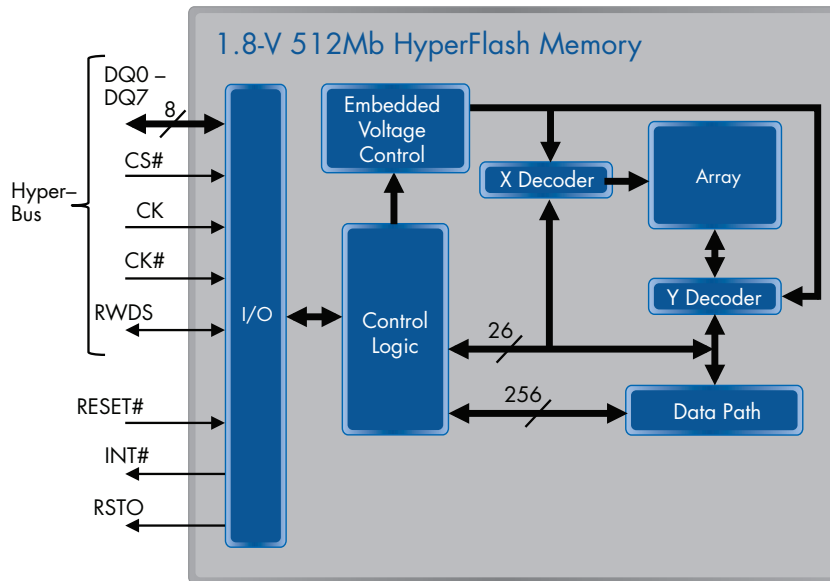- Extended: -40°C to +125°C

AUTOMOTIVE SUPPORT
- AEC-Q100 Qualification
- PPAP Support

PACKAGE
- 24-ball BGA (6 mm x 8 mm)

CYPRESS
PERFORM

TARGET APPLICATIONS

Advanced driver assistance systems (ADAS) | Automotive instrument clusters and infotainment systems | Networking devices | Digital Cameras | Industrial applications

1.8-V 512Mb HyperFlash Memory Block Diagram

HYPERFLASH MEMORY DEVICE PORTFOLIO

MPN	Density	Voltage	Speed (DDR)	Package	Temperature Range
S26KS128S	128 Mbit	1.8-V	166 MHz	24-ball BGA (6 mm x 8 mm)	I = Industrial (–40°C to +85°C) V = Industrial-plus (–40°C to +105°C) N = Extended (–40°C to +125°C)
S26KS256S	256 Mbit				
S26KS512S	512 Mbit				
S26KL128S	128 Mbit	3.0-V	100 MHz		
S26KL256S	256 Mbit				
S26KL512S	512 Mbit				

GET STARTED NOW

To learn more about HyperFlash Memory products, visit http://www.cypress.com/HyperFlash

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