

Purpose

Eon Silicon Solution Inc. (hereinafter called "Eon") is going to provide its products' top marking on ICs with < cFeon > from January 1st, 2009, and without any change of the part number and the compositions of the ICs. Eon is still keeping the promise of quality for all the products with the same as that of Eon delivered before. Please be advised with the change and appreciate your kindly cooperation and fully support Eon's product family.

Eon products' New Top Marking



cFeon Top Marking Example:

cFeon

Part Number: XXXX-XXX Lot Number: XXXXX Date Code: XXXXX

Continuity of Specifications

There is no change to this data sheet as a result of offering the device as an Eon product. Any changes that have been made are the result of normal data sheet improvement and are noted in the document revision summary, where supported. Future routine revisions will occur when appropriate, and changes will be noted in a revision summary.

Continuity of Ordering Part Numbers

Eon continues to support existing part numbers beginning with "Eon" and "cFeon" top marking. To order these products, during the transition please specify "Eon top marking" or "cFeon top marking" on your purchasing orders.

For More Information

Please contact your local sales office for additional information about Eon memory solutions.



EN71PL032 Base MCP Stacked Multi-Chip Product (MCP) Flash Memory and RAM 32 Megabit (2M x 16-bit) CMOS 3.0 Volt-only Simultaneous Operation Page Mode Flash Memory and 16 Megabit (1M x 16-bit) Pseudo Static RAM

Distinctive Characteristics MCP Features

- Power supply voltage of 2.7 V to 3.3V
- High performance
- 70 ns
- Package
 - 7 x 9 x 1.2mm 56 ball FBGA

■ Operating Temperature - 25°C to +85°C

General Description

The EN71PL series is a product line of stacked Multi-Chip Product (MCP) packages and consists of:

- EN29PL032 (Simultaneous Read/Write) Flash memory die.
- Pseudo SRAM.

For detailed specifications, please refer to the individual datasheets listed in the following table.

| Device | Document |
|-------------|-----------|
| NOR Flash | EN29PL032 |
| Pseudo SRAM | ENPSL16 |

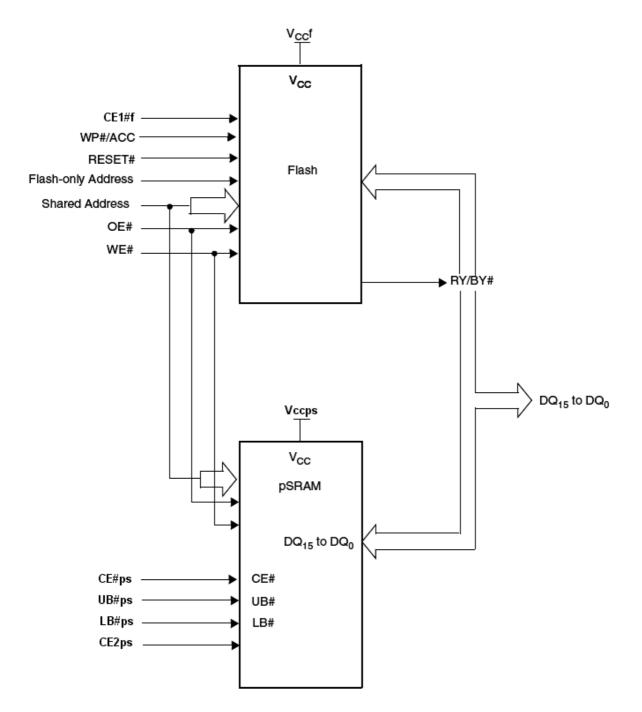
Product Selector Guide

32Mb Flash Memory

| Device-Model# | EN71PL032A0 | pSRAM density | 16M pSRAM |
|-----------------------|-------------|-----------------------------|-----------|
| Flash Access time | 70ns | pSRAM Access time | 70ns |
| Page read Access time | 25ns | pSRAM Page read Access time | 25ns |
| Package | 56 FBGA | | |

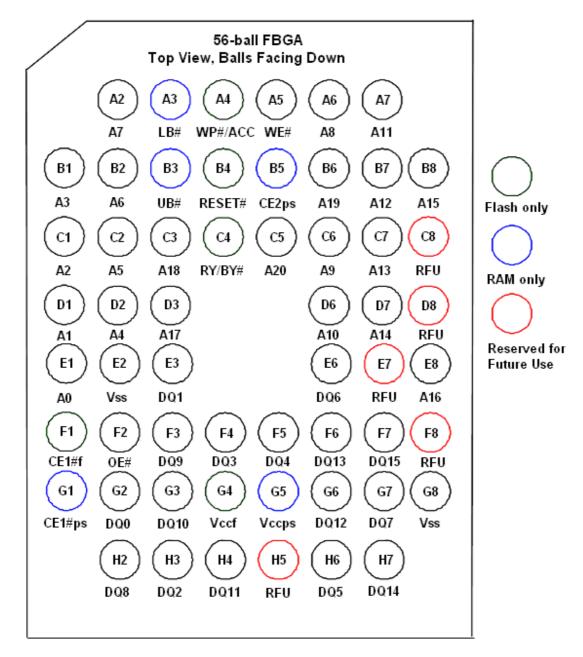


MCP Block Diagram





Connection Diagram



| МСР | Flash-only Addresses | Shared Addresses |
|-------------|----------------------|------------------|
| EN71PL032A0 | A20 | A19 – A0 |

Note: A9 = VID for HV Autoselect mode is not available for MCP product.

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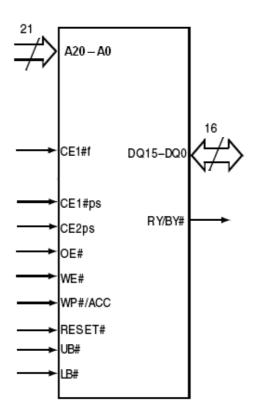


Pin Description

| Signal | Description |
|--------------------|---|
| A20–A0 | 21 Address Inputs (Common) |
| DQ15–DQ0 | 16 Data Inputs/Outputs (Common) |
| CE1#f | Chip Enable 1 (Flash) |
| CE1#ps | Chip Enable 1 (pSRAM) |
| CE2ps | Chip Enable 2 (pSRAM) |
| OE# | Output Enable (Common) |
| WE# | Write Enable (Common) |
| RY/BY# | Ready/Busy Output (Flash) |
| UB# | Upper Byte Control (pSRAM) |
| LB# | Lower Byte Control (pSRAM) |
| RESET# | Hardware Reset Pin, Active Low (Flash) |
| WP#/ACC | Hardware Write Protect/Acceleration Pin (Flash) |
| V _{CC} f | Flash 3.0 volt-only single power supply |
| V _{CC} ps | pSRAM Power Supply |
| V _{SS} | Device Ground (Common) |
| NC | Pin Not Connected Internally |

Note: A9 = VID for HV Autoselect mode is not available for MCP product.

Logic Symbol



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ORDERING INFORMATION

| EN71PL032 | A0 — 70 | С | W | Р | |
|-----------|---------|---|---|---|--|
| | | | | | PA (BI P TEI W |
| | | | | | PA C = SPE 70 |
| | | | | | pSF A0 = BAS FN |

PACKAGING CONTENT (Blank) = Conventional P = Pb Free

TEMPERATURE RANGE W = Wireless (-25°C to +85°C)

PACKAGE

C =56-Ball Fine Pitch Ball Grid Array (FBGA) 0.80mm pitch, 7mm x 9mm package

SPEED

70 = 70ns

pSRAM density

A0 = 16M pSRAM

BASE PART NUMBER

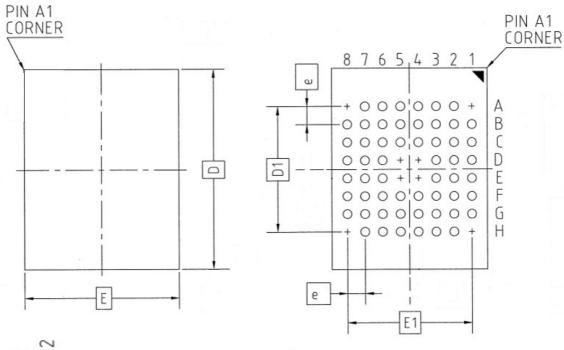
EN = Eon Silicon Solution Inc. 71PL = Multi-chip Product (MCP) 3.0V Simultaneous Read/Write, Page Mode Flash Memory and RAM 032 = 32 Megabit (2M x 16)

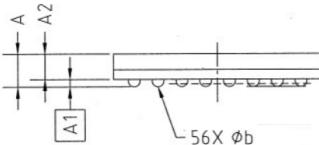




PACKAGE MECHANICAL

56-ball Fine-Pitch Ball Grid Array (FBGA) 7 x 9 mm Package, pitch: 0.8mm, ball: 0.4mm





| SYMBOL | D | MENSION IN I | MM |
|------------|------|--------------|------|
| | MIN. | NOR | MAX |
| Α | | | 1.20 |
| A 1 | 0.25 | 0.30 | 0.35 |
| A2 | 0.80 | | 0.95 |
| D | 8.95 | 9.00 | 9.05 |
| E | 6.95 | 7.00 | 7.05 |
| D1 | | 5.60 | |
| E1 | | 5.60 | |
| е | | 0.80 | |
| b | 0.35 | 0.40 | 0.45 |

Note : Controlling dimensions are in millimeters (mm).

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Revisions List

| Revision No | Description | Date |
|-------------|--|------------|
| A | Initial Release | 2008/04/08 |
| в | Update MCP Block Diagram in page 2 and Pin Description in page 4. Remove the individual datasheet descriptions of EN29PL064/032 and EN_EM566168GD from Vision A. | 2008/09/10 |
| с | Add Eon products' New top marking "cFeon" information in page 1. Rename Pseudo SRAM EN_EM1 to ENPSL16 in page 2. Add page read spec in page 2. Add A9 note in page 4 and 5. | 2009/01/13 |
| D | Update package mechanical dimension in page 7 | 2009/10/06 |