Datasheet

HC-NAND4v2

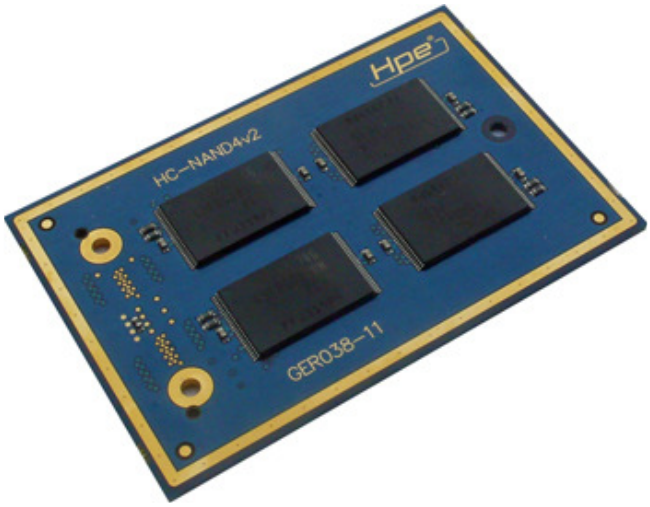
NAND FLASH Memory Board

Usable for Hpe_midiv2 or Hpe_IRP

General Description:

The HC-NAND4v2 child board is populated by four NAND- Flash memories.

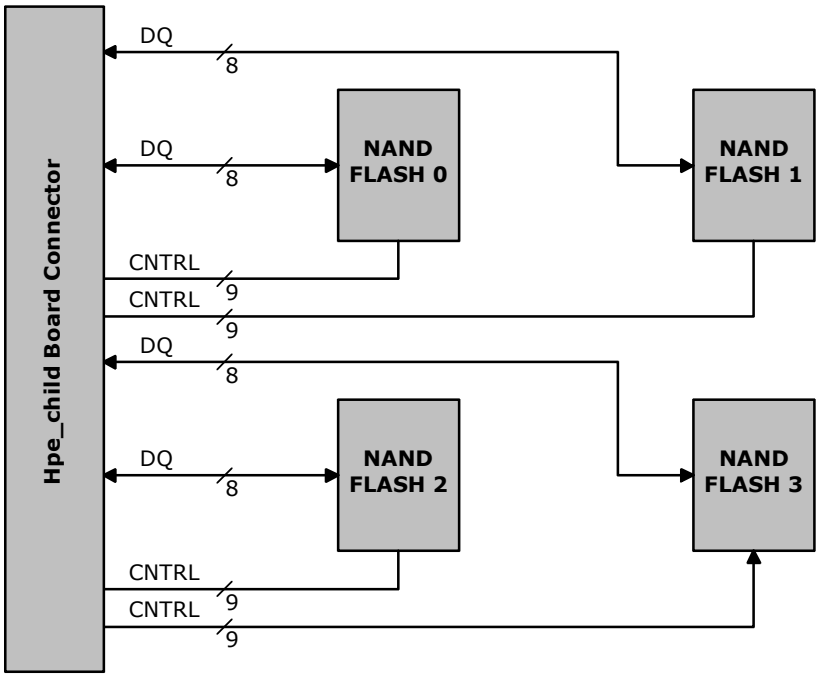
The Flash memories are organized as 1 Giga by 8 bit. Each memory is connected individually to the child board connector, so the user has independent access to the devices. There are design variants using another NAND-Flash memories from different semiconductor vendors, different memory sizes and different memory organizations (SLC/MLC).



For more details refer to the datasheet of the Samsung K9F8G08U0M-PCB0.

- Organization
  - Memory Cell Array : (1G + 32M) x 8bit
  - Data Register : (4K + 128) x 8bit
- Automatic Program and Erase
  - Page Program : (4K + 128)Byte
  - Block Erase : (256K + 8K)Byte
- Page Read Operation
  - Page Size : (4K + 128)Byte
  - Random Read : 25µs(Max.)
  - Serial Access : 25ns(Min.)
- Fast Write Cycle Time
  - Page Program time : 200µs(Typ.)
  - Block Erase Time : 1.5ms(Typ.)

Block Diagram:



Pin description:

A1		A2		B1		B2	
A3		A4		B3		B4	
A5	GND	A6	GND	B5	GND	B6	GND
A7	NAND0_FLASH_ALE	A8	NAND0_FLASH_DQ0	B7	NAND2_FLASH_ALE	B8	NAND2_FLASH_DQ0
A9	NAND0_FLASH_CLE	A10	NAND0_FLASH_DQ1	B9	NAND2_FLASH_CLE	B10	NAND2_FLASH_DQ1
A11	NAND0_FLASH_REN	A12	NAND0_FLASH_DQ2	B11	NAND2_FLASH_REN	B12	NAND2_FLASH_DQ2
A13	NAND0_FLASH_WEN	A14	NAND0_FLASH_DQ3	B13	NAND2_FLASH_WEN	B14	NAND2_FLASH_DQ3
A15	NAND0_FLASH_WPN	A16	NAND0_FLASH_DQ4	B15	NAND2_FLASH_WPN	B16	NAND2_FLASH_DQ4
A17	NAND0_FLASH_CEN	A18	NAND0_FLASH_DQ5	B17	NAND2_FLASH_CEN	B18	NAND2_FLASH_DQ5
A19	NAND0_FLASH_CE2N	A20	NAND0_FLASH_DQ6	B19	NAND2_FLASH_CE2N	B20	NAND2_FLASH_DQ6
A21	NAND0_FLASH_RBN	A22	NAND0_FLASH_DQ7	B21	NAND2_FLASH_RBN	B22	NAND2_FLASH_DQ7
A23	NAND0_FLASH_RB2N	A24		B23	NAND2_FLASH_RB2N	B24	
A25		A26		B25		B26	
A27		A28		B27		B28	
A29	VCC3V3	A30	GND	B29		B30	GND
A31	VCC3V3	A32	GND	B31		B32	
A33	VCC3V3	A34	GND	B33		B34	
A35	VCC3V3	A36	GND	B35		B36	GND
A37	VCC3V3	A38	GND	B37		B38	GND
A39	VCC3V3	A40	GND	B39		B40	
A41	VCC3V3	A42	GND	B41		B42	
A43	VCC3V3	A44	GND	B43		B44	GND
A45		A46		B45		B46	
A47	NAND1_FLASH_ALE	A48	NAND1_FLASH_DQ0	B47	NAND3_FLASH_ALE	B48	NAND3_FLASH_DQ0
A49	NAND1_FLASH_CLE	A50	NAND1_FLASH_DQ1	B49	NAND3_FLASH_CLE	B50	NAND3_FLASH_DQ1
A51	NAND1_FLASH_REN	A52	NAND1_FLASH_DQ2	B51	NAND3_FLASH_REN	B52	NAND3_FLASH_DQ2
A53	NAND1_FLASH_WEN	A54	NAND1_FLASH_DQ3	B53	NAND3_FLASH_WEN	B54	NAND3_FLASH_DQ3
A55	NAND1_FLASH_WPN	A56	NAND1_FLASH_DQ4	B55	NAND3_FLASH_WPN	B56	NAND3_FLASH_DQ4
A57	NAND1_FLASH_CEN	A58	NAND1_FLASH_DQ5	B57	NAND3_FLASH_CEN	B58	NAND3_FLASH_DQ5
A59	NAND1_FLASH_CE2N	A60	NAND1_FLASH_DQ6	B59	NAND3_FLASH_CE2N	B60	NAND3_FLASH_DQ6
A61	NAND1_FLASH_RBN	A62	NAND1_FLASH_DQ7	B61	NAND3_FLASH_RBN	B62	NAND3_FLASH_DQ7
A63	NAND1_FLASH_RB2N	A64		B63	NAND3_FLASH_RB2N	B64	
A65		A66		B65		B66	

Remark: The pins without any name are still driven from the main board with signals, Vdd or GND. Which signal levels or types, please refer to the manual of the base board.