

HC-FRMEM1v2

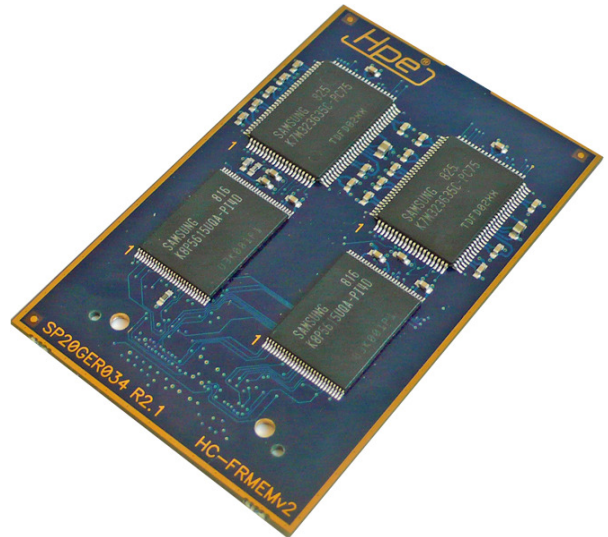
NOR FLASH & NtRAM™ Memory Board

Usable for Hpe_midiv2 or Hpe_IRP

General Description:

The HC-FRMEMv2 child board contains two synchronous Flow Through NtRAM™ with Zero Turnaround between read- and write- cycles. Also there are two 256Mb NOR Flash Memories on the board. Both memory types share a common address- and a 32- bit data- bus.

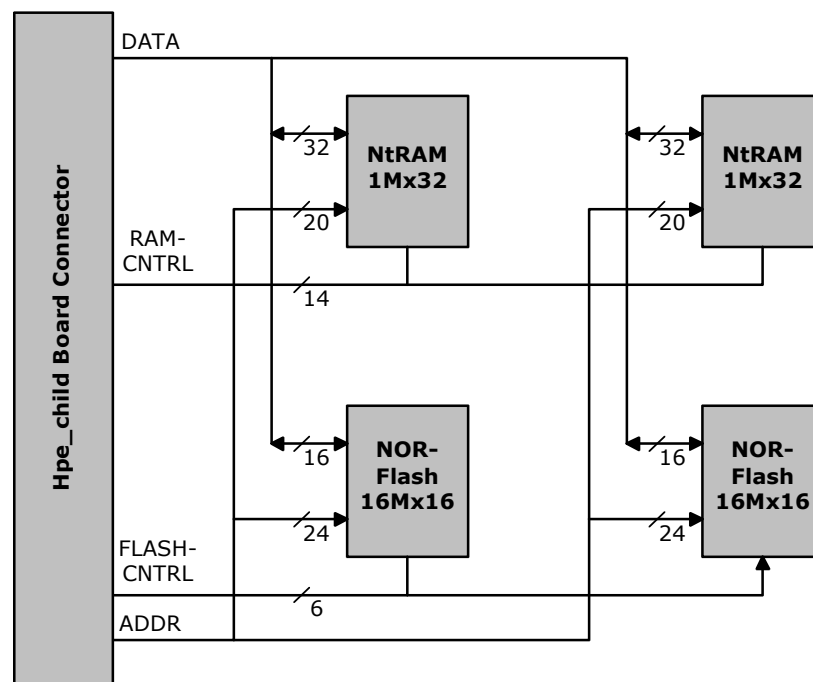
- Memory organization for the RAM's are 1Mx32 = 4Mbyte
- RAM's have a cycle time of up to 14.3nSec relates to a system frequency of 70 MHz.
- Flashes have 16Mx32 = 64Mbyte.
- Read access time for the flashes are 70nS
- Read cycle time 80nSec relates to a system frequency of 25 MHz.



For more details refer to the

- datasheet of the RAM K7M321835C
- datasheet of the FLASH K8P5615UQA.
- Constraints file on demand.

Block Diagram:



Pin description:

A1	SSRAM_CLK	A2	SSRAM_CKE#	B1		B2	
A3		A4		B3		B4	
A5	GND	A6	GND	B5	GND	B6	GND
A7	SSRAMFLASH_DQA6	A8	SSRAMFLASH_DQA7	B7	SSRAMFLASH_A6	B8	SSRAMFLASH_A7
A9	SSRAMFLASH_DQB0	A10	SSRAMFLASH_DQB1	B9	SSRAMFLASH_A8	B10	SSRAMFLASH_A9
A11	SSRAMFLASH_DQB2	A12	SSRAMFLASH_DQB3	B11	SSRAMFLASH_A10	B12	SSRAMFLASH_A11
A13	SSRAMFLASH_DQB4	A14	SSRAMFLASH_DQB5	B13	SSRAMFLASH_A12	B14	SSRAMFLASH_A13
A15	SSRAMFLASH_DQB6	A16	SSRAMFLASH_DQB7	B15	SSRAMFLASH_A14	B16	SSRAMFLASH_A15
A17	SSRAMFLASH_DQC0	A18	SSRAMFLASH_DQC1	B17	SSRAMFLASH_A16	B18	SSRAMFLASH_A17
A19	SSRAMFLASH_DQC2	A20	SSRAMFLASH_DQC3	B19	SSRAMFLASH_A18	B20	SSRAMFLASH_A19
A21	SSRAMFLASH_DQC4	A22	SSRAMFLASH_DQC5	B21	SSRAMFLASH_A20	B22	SSRAMFLASH_A21
A23	SSRAMFLASH_DQC6	A24	SSRAMFLASH_DQC7	B23	SSRAMFLASH_A22	B24	SSRAMFLASH_A23
A25	SSRAMFLASH_DQD0	A26	SSRAMFLASH_DQD1	B25	SSRAMFLASH_A0	B26	SSRAMFLASH_A1
A27	SSRAMFLASH_DQD2	A28	SSRAMFLASH_DQD3	B27	SSRAMFLASH_A2	B28	SSRAMFLASH_A3
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	SSRAMFLASH_DQA0	A46	SSRAMFLASH_DQA1	B45	SSRAMFLASH_A4	B46	SSRAMFLASH_A5
A47	SSRAMFLASH_DQA2	A48	SSRAMFLASH_DQA3	B47		B48	
A49	SSRAMFLASH_DQA4	A50	SSRAMFLASH_DQA5	B49		B50	FLASH_WE#
A51	SSRAMFLASH_DQD4	A52	SSRAMFLASH_DQD5	B51		B52	FLASH_RESET#
A53	SSRAMFLASH_DQD6	A54	SSRAMFLASH_DQD7	B53		B54	FLASH_WP#_ACC
A55	SSRAM_ADV	A56	SSRAM_BWA#	B55		B56	FLASH_RD_BY#
A57	SSRAM_CS1#	A58	SSRAM_BWB#	B57		B58	FLASH_CE#
A59	SSRAM_CS2	A60	SSRAM_BWC#	B59		B60	FLASH_OE#
A61	SSRAM_CS2#	A62	SSRAM_BWD#	B61	SSRAM_CS3#	B62	
A63	SSRAM_OE#	A64	SSRAM_LBO#	B63	SSRAM_DQPA	B64	SSRAM_DQPB
A65	SSRAM_ZZ	A66	SSRAM_WE#	B65	SSRAM_DQPC	B66	SSRAM_DQPD

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.

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