

Serial Presence Detect

Byte	Function described	UH TL		VK TN	
		Function support	HEX	Function support	HEX
0	Number of Serial PD Bytes Written / SPD Device Size	SPD Bytes Used : 384 / SPD Bytes Total : 512	23	SPD Bytes Used : 384 / SPD Bytes Total : 512	23
1	SPD Revision	Rev. 1.2	12	Rev. 1.2	12
2	Key Byte / DRAM Device Type	DDR4 SDRAM	0C	DDR4 SDRAM	0C
3	Key Byte / Module Type	RDIMM	01	RDIMM	01
4	SDRAM Density and Banks	4BGx4Kx8Gb	85	4BGx4Kx8Gb	85
5	SDRAM Addressing	16/10	21	16/10	21
6	Primary SDRAM Package Type	Flipchip SDP	00	Flipchip SDP	00
7	SDRAM Optional Features	Unlimited MAC	08	Unlimited MAC	08
8	SDRAM Thermal and Refresh Options	Reserved	00	Reserved	00
9	Other SDRAM Optional Features (PPR)	hPPR, sPPR supported	60	hPPR, sPPR supported	60
10	Secondary SDRAM Package Type	Blank	00	Blank	00
11	Module Nominal Voltage, VDD	1.2V	03	1.2V	03
12	Module Organization	2Rx8	09	2Rx8	09
13	Module Memory Bus Width	LPx72	0B	LPx72	0B
14	Module Thermal Sensor	Thermal sensor incorporated	80	Thermal sensor incorporated	80
15	Extended Module Type	Reserved	00	Reserved	00
16	Reserved	Blank	00	Blank	00
17	Timebases	MTB : 125ps, FTB : 1ps	00	MTB : 125ps, FTB : 1ps	00
18	SDRAM Minimum Cycle Time (tCKAVGmin)	0.833ns	07	0.75ns	06
19	SDRAM Maximum Cycle Time (tCKAVGmax)	1.6ns	0D	1.6ns	0D
20	CAS Latencies Supported, First Byte	14, 13, 12, 11, 10	F8	10, 11, 12, 13, 14	F8
21	CAS Latencies Supported, Second Byte	18, 17, 16, 15	0F	15, 16, 17, 18, 19, 20	3F
22	CAS Latencies Supported, Third Byte		00		00
23	CAS Latencies Supported, Fourth Byte		00		00
24	Minimum CAS Latency Time (tAmin)	13.75ns	6E	13.75ns	6E
25	Minimum RAS to CAS Delay Time (tRCdmin)	13.75ns	6E	13.75ns	6E
26	Minimum RAS to CAS Delay Time (tRPmin)	13.75ns	6E	13.75ns	6E
27	Upper Nibbles for tRASmin and tRCmin	32ns / 45.75ns	11	32ns / 45.75ns	11
28	tRASmin, Least Significant Byte	32ns	00	32ns	00
29	tRCmin, Least Significant Byte	45.75ns	6E	45.75ns	6E
30	tRFC1min, LSB	350ns	F0	350ns	F0
31	tRFC1min, MSB	350ns	0A	350ns	0A
32	tRFC2min, LSB	260ns	20	260ns	20
33	tRFC2min, MSB	260ns	08	260ns	08
34	tRFC4min, LSB	160ns	00	160ns	00
35	tRFC4min, MSB	160ns	05	160ns	05
36	Upper Nibble for tFAW	21ns	00	21ns	00
37	tFAWmin LSB	21ns	A8	21ns	A8
38	tRRD_Smin	3.3ns	1B	3ns	18
39	tRRD_L_min	4.90ns	28	4.90ns	28
40	tCCD_Lmin, same bank group	5.0ns	28	5ns	28
41	tWRmin Upper Nibbles	15ns	00	15ns	00
42	tWRmin	15ns	78	15ns	78
43	tWtmin Upper Nibbles	2.5ns/7.5ns	00	2.5ns/7.5ns	00
44	tWTR_Smin	2.5ns	14	2.5ns	14
45	tWTR_Lmin	7.5ns	3C	7.5ns	3C
46~59	Reserved	Blank	00	Blank	00
60	Connector to SDRAM Bit Mapping	DQ0-3	0C	DQ0-3	0C
61	Connector to SDRAM Bit Mapping	DQ4-7	2C	DQ4-7	2C
62	Connector to SDRAM Bit Mapping	DQ8-11	0C	DQ8-11	0C
63	Connector to SDRAM Bit Mapping	DQ12-15	2C	DQ12-15	2C
64	Connector to SDRAM Bit Mapping	DQ16-19	0C	DQ16-19	0C
65	Connector to SDRAM Bit Mapping	DQ20-23	2C	DQ20-23	2C
66	Connector to SDRAM Bit Mapping	DQ24-27	0C	DQ24-27	0C
67	Connector to SDRAM Bit Mapping	DQ28-31	2C	DQ28-31	2C
68	Connector to SDRAM Bit Mapping	CB0-3	0C	CB0-3	0C
69	Connector to SDRAM Bit Mapping	CB4-7	2C	CB4-7	2C
70	Connector to SDRAM Bit Mapping	DQ32-35	0C	DQ32-35	0C
71	Connector to SDRAM Bit Mapping	DQ36-39	2C	DQ36-39	2C
72	Connector to SDRAM Bit Mapping	DQ40-43	0C	DQ40-43	0C
73	Connector to SDRAM Bit Mapping	DQ44-47	2C	DQ44-47	2C
74	Connector to SDRAM Bit Mapping	DQ48-51	0C	DQ48-51	0C
75	Connector to SDRAM Bit Mapping	DQ52-55	2C	DQ52-55	2C
76	Connector to SDRAM Bit Mapping	DQ56-59	0C	DQ56-59	0C
77	Connector to SDRAM Bit Mapping	DQ60-63	2C	DQ60-63	2C
78~116	Reserved	Blank	00	Blank	00
117	Fine offset for tCCD_Lmin, same bank group	5.0ns	00	5ns	00
118	tRRD_L_min offset	4.90ns	9C	4.90ns	9C
119	tRRD_Smin offset	3.3ns	B5	3.0ns	00
120	Fine offset for tRCmin	46.75ns	00	45.75ns	00
121	Fine offset for tRPmin	13.75ns	00	13.75ns	00
122	Fine offset for tRCdmin	13.75ns	00	13.75ns	00
123	Fine offset for tAmin	13.75ns	00	13.75ns	00
124	Fine offset for tCKAVGmax	1.6ns	E7	1.6ns	E7
125	Fine offset for tCKAVGmin	0.833ns	D6	0.75ns	00
126	CRC for Base Configuration Section, LSB	CRC cover 0~125 byte	35	CRC cover 0~125 byte	0B
127	CRC for Base Configuration Section, MSB	CRC cover 0~125 byte	89	CRC cover 0~125 byte	39
128	RC Extension, Module Nominal Height	31.25	11	31.25	11
129	Module Maximum Thickness	1.4/1.2	11	1.4/1.2	11
130	Reference Row Card Used	E2	44	E2	44
131	DIMM Module Attributes	DDR4RCD02, 1rows, 1register	15	DDR4RCD02, 1rows, 1register	15
132	RDIMM Thermal Heat Spreader Solution	Not incorporated	00	Not incorporated	00
133	Register Manufacturer ID Code, LSB	Inphi	04	Inphi	04
134	Register Manufacturer ID Code, MSB	Inphi	B3	Inphi	B3
135	Register Revision Number	A0	11	A0	11
136	Address Mapping from Register to DRAM	Mirrored	01	Mirrored	01
137	Register Output Drive Strength for Control	Light/Std/Light/Light	10	Light/Std/Light/Light	10
138	Register Output Drive Strength for Clock	Light/Light	00	Light/Light	00
139	Reserved	Must be coded as 0x00	00	Must be coded as 0x00	00
140~154	Reserved	Must be coded as 0x00	00	Must be coded as 0x00	00
155~253	Reserved	Must be coded as 0x00	00	Must be coded as 0x00	00
254	CRC for Module Specific Section, LSB	CRC cover 128~253 byte	25	CRC cover 128~253 byte	25
255	CRC for Module Specific Section, MSB	CRC cover 128~253 byte	60	CRC cover 128~253 byte	60
256~319	Reserved	Blank	00	Blank	00
320	Module Manufacturer's ID Code, LSB	SK hynix	80	SK hynix	80
321	Module Manufacturer's ID Code, MSB	SK hynix	AD	SK hynix	AD
322	Module Manufacturing Location	SK hynix (Icheon)	01	SK hynix (Icheon)	01
323	Module Manufacturing Date	Variable	00	Variable	00
324	Module Manufacturing Date	Variable	00	Variable	00
325~328	Module Serial Number	Undefined	00	Undefined	00
329	Module Part Number	H	48	H	48
330	Module Part Number	M	4D	M	4D
331	Module Part Number	A	41	A	41
332	Module Part Number	8Gb	38	8Gb	38
333	Module Part Number	16GB	32	16GB	32
334	Module Part Number	16GB	47	16GB	47
335	Module Part Number	RDIMM	52	RDIMM	52
336	Module Part Number	LPx72	37	LPx72	37
337	Module Part Number	C die	43	C die	43
338	Module Part Number	Flipchip SDP	4A	Flipchip SDP	4A
339	Module Part Number	Lead & Halogen Free	52	Lead & Halogen Free	52
340	Module Part Number	x8	38	x8	38
341	Module Part Number	Commercial Temp & 1.2V	4E	Commercial Temp & 1.2V	4E
342	Module Part Number	-	2D	-	2D
343	Module Part Number	2400T	55	2666V	56
344	Module Part Number	2400T	4B	2666V	4B
345	Module Part Number	Blank Space	20	Blank Space	20
346	Module Part Number	Blank Space	20	Blank Space	20
347	Module Part Number	Blank Space	20	Blank Space	20
348	Module Part Number	Blank Space	20	Blank Space	20
349	Module Revision Code	Revision 0	00	Revision 0	00
350	DRAM Manufacturer's ID code, LSB	SK hynix	80	SK hynix	80
351	DRAM Manufacturer's ID code, MSB	SK hynix	AD	SK hynix	AD
352	DRAM Stepping	Undefined	FF	Undefined	FF
353~381	Reserved	Blank	00	Blank	00
382	Reserved	Blank	00	Blank	00
383	Reserved	Blank	00	Blank	00
384~511	End User Programmable		00		00