

# SERIAL PRESENCE DETECT

## M392B5170EM1-CF701/CF801/CH901

Organization : 512M x 72  
 Composition : 512M x 4(st)\* 18ea  
 Used component part # : K4B2G0446E-MCF7/MCF8/MCH9  
 # of rows in module : 2 Row  
 # of banks in component : 8 Banks  
 Feature : 18.75mm height & double sided component  
 Refresh : 8K/64ms  
 Bin Sort : F7(DDR3 800@CL=6), F8(DDR3 1066@CL=7), H9(DDR3 1333@CL=9)  
 RCD Vendor and Revision : Inphi GS-04 B2

Byte #	Function Described	Function Supported			Hex Value			Note
		CF701	CF801	CH901	CF701	CF801	CH901	
0	Number of Serial PD Bytes Written / SPD Device Size / CRC Coverage	CRC coverage 0~116Byte, SPD Byte Total :256Byte, SPD Byte Use : 176Byte			92h			
1	SPD Revision	Version 1.0			10h			
2	Key Byte / DRAM Device Type	DDR3 SDRAM			0Bh			
3	Key Byte / Module Type	Registered DIMM			01h			
4	SDRAM Density and Banks	1Gb 8banks			02h			
5	SDRAM Addressing	Row : 14, Column : 11			12h			
6	Module Nominal Voltage, VDD	1.5V only			00h			
7	Module Organization	2Rank / x4			08h			
8	Module Memory Bus Width	ECC, 64bit			0Bh			
9	Fine Timebase Dividend and Divisor	2.5ps			52h			
10	Medium Timebase Dividend	1/8 (0.125ns)			01h			
11	Medium Timebase Divisor	1/8 (0.125ns)			08h			
12	SDRAM Minimum Cycle Time (tCKmin)	2.5ns	1.875ns	1.5ns	14h	0Fh	0Ch	
13	Reserved	Reserved			00h			
14	CAS Latencies Supported, Least Significant Byte	6	6, 7, 8	6, 7, 8, 9	04h	1Ch	3Ch	
15	CAS Latencies Supported, Most Significant Byte	6	6, 7, 8	6, 7, 8, 9	00h			
16	Minimum CAS Latency Time(tAAmin)	15ns	13.125ns	13.125ns	78h	69h	69h	
17	Minimum Write Recovery Time (tWRmin)	15ns			78h			
18	Minimum RAS# to CAS# Delay Time (tRCDmin)	15ns	13.125ns	13.125ns	78h	69h	69h	
19	Minimum Row Active to Row Active Delay Time (tRRDmin)	10ns	7.5ns	6ns	50h	3Ch	30h	
20	Minimum Row Precharge Time (tRPMmin)	15ns	13.125ns	13.125ns	78h	69h	69h	
21	Upper Nibbles for tRAS and tRC	-			11h			
22	Minimum Active to Precharge Time (tRASmin), Least Significant Byte	37.5ns	37.5ns	36ns	2Ch	2Ch	20h	
23	Minimum Active to Active/Refresh Time (tRCmin), Least Significant Byte	52.5ns	50.625ns	49.125ns	A4h	95h	89h	
24	Minimum Refresh Recovery Time (tRFCmin), Least Significant Byte	110ns			70h			
25	Minimum Refresh Recovery Time (tRFCmin), Most Significant Byte	110ns			03h			
26	Minimum Internal Write to Read Command Delay Time (tWTRmin)	7.5ns			3Ch			
27	Minimum Internal Read to Precharge Command Delay Time (tRTPmin)	7.5ns			3Ch			
28	Upper Nibble for tFAW	40ns	37.5ns	30ns	01h	01h	00h	
29	Minimum Four Activate Window Delay Time (tFAWmin), Least Significant Byte	40ns	37.5ns	30ns	40h	2Ch	F0h	
30	SDRAM Output Drivers supported	DLL off Mode, RZQ/6, RZQ/7			83h			
31	SDRAM Thermal and Refresh Options	No ODTS, No ASR			01h			
32	Module Thermal Sensor	with TS			80h			
33	SDRAM Device Type	Non-Standard Device			80h			
34-59	Reserved, General Section	-			00h			
60	Module Nominal Height	18.75mm			04h			
61	Module Maximum Thickness	DDP Double sides(With Flat Type H/S)			33h			
62	Reference Raw Card Used	R/C N, 0.0			0Ch			
63	DIMM Module Attributes	1 Row of DRAM / 1 Register used			05h			

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		CF701	CF801	CH901	CF701	CF801	CH901	
64	Heat Spreader Solution	with HS			80h			
65	Register vendor ID code(LSB)	Inphi			04h			
66	Register vendor ID code(MSB)	Inphi			B3h			
67	Register Revision Number	Inphi GS-04 B2			03h			
68	Register Type	SSTE32882			00h			
69	Register Control Word Functions(RC0/RC1)	Default			00h			
70	Register Control Word Functions(RC2/RC3)	R/C N			A0h			
71	Register Control Word Functions(RC4/RC5)	All others			55h			
72	Register Control Word Functions(RC6/RC7)	Default			00h			
73	Register Control Word Functions(RC8/RC9)	Default			00h			
74	Register Control Word Function(RC10, RC11)	Default			00h			
75	Register Control Word Function(RC12, RC13)	Default			00h			
76	Register Control Word Function(RC14, RC15)	Default			00h			
77-116	Reserved	-			00h			
117	Module Manufacturer ID Code, Least Significant Byte	Samsung			80h			
118	Module Manufacturer ID Code, Most Significant Byte	Samsung			CEh			
119	Module ID: Module Manufacturing Location	Onyang Korea			01h			
120	Module ID: Module Manufacturing Date	-			00h			
121	Module ID: Module Manufacturing Date	-			00h			
122-125	Module ID : Module Serial Number	-			00h			
126	Cyclical Redundancy Code	-	-		02h	9Ah	D8h	
127	Cyclical Redundancy Code	-	-		E5h	BC	15h	
128	Module Part Number	M			4Dh			
129	Module Part Number	3			33h			
130	Module Part Number	9			39h			
131	Module Part Number	2			32h			
132	Module Part Number	B			42h			
133	Module Part Number	5			35h			
134	Module Part Number	1			31h			
135	Module Part Number	7			37h			
136	Module Part Number	0			30h			
137	Module Part Number	E-die			45h			
138	Module Part Number	M			4Dh			
139	Module Part Number	1			31h			
140	Module Part Number	-			2Dh			
141	Module Part Number	C			43h			
142	Module Part Number	F	F	H	46h	46h	48h	
143	Module Part Number	7	8	9	37h	38h	39h	
144	Module Part Number	Blank			20h			
145	Module Part Number	Blank			20h			
146-147	Module Revision Code	-			00h			
148	SDRAM Manufacturer's JEDEC ID Code	Samsung			80h			
149	SDRAM Manufacturer's JEDEC ID Code	Samsung			CEh			
150-175	Manufacturer's Specific Data	-			00h			
176-255	Open for customer use	-			00h			