

FEATURE OVERVIEW:

PCB INFORMATION:

- Board size: 5250 x 1181 mil.
- Thickness: 50 ± 4mil.
- Panel: 5 pieces PCB per panel.
- 6-layer board.
- Impedance: 40/60(Single-ended) Ohm ± 10%, 62/88(differential) Ohm ± 15%.
- Pin count: 240 PIN.

IC INFORMATION:

- 64MBx8,
SAMSUNG, 10.0 x 11.5 mm,
QIMONDA, 10.0 x 16.0 mm,
ELPIDA, 9.8 x 10.8 mm,
1.5V, 8K Refresh, FBGA, 106(78+28) Ball, 8 BANKS DDRIII SDRAM based.
- 128MBx8,
MICRON, 9.0 x 15.5 mm,
12.5 x 22.1 mm (MAX),
1.5V, 8K Refresh, FBGA, 106(78+28) Ball, 8 BANKS DDRIII SDRAM based.

MODULE INFORMATION:

- PC3-6400U and PC3-8500U and PC3-10660U UNBUFFERED DDRIII SDRAM DIMM
- Assembled DIMM capacity: 512MB, 1024MB.
- Non-ECC DIMM organizations: 64MBx64, 128MBx64.
- For PC3-6400U and PC3-8500U and PC3-10660U system.

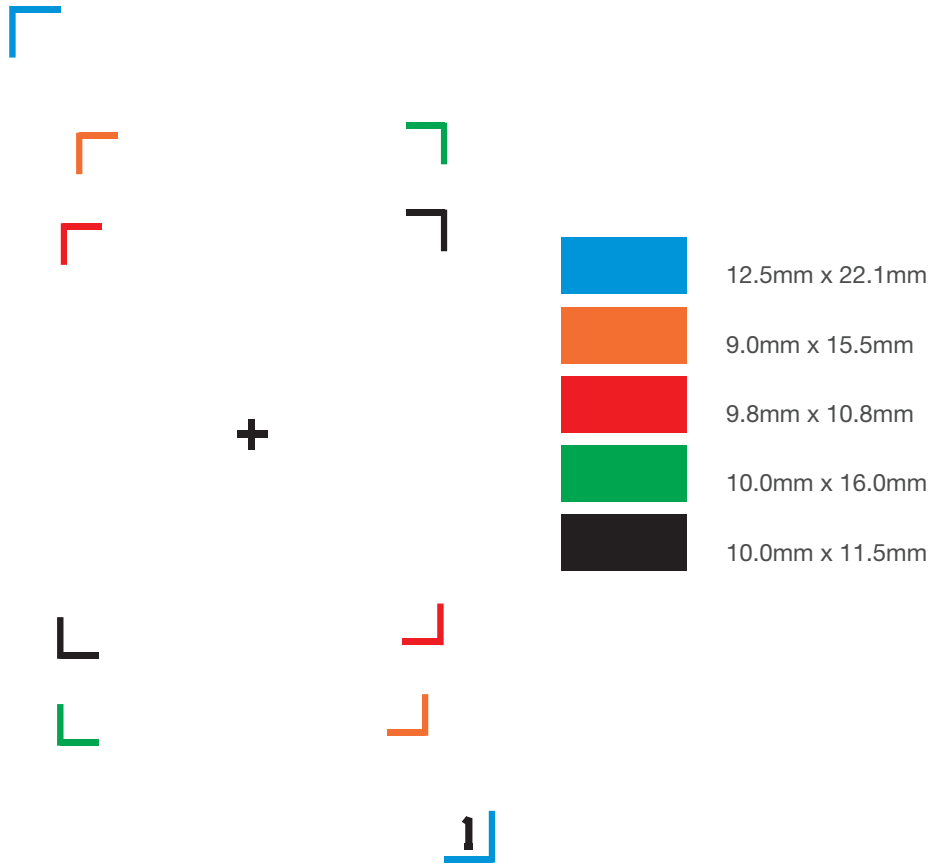
STENCIL INFORMATION:

- Top Side stencil: B63URCA 0.71.
- Bottom Side stencil: N/A.
- SINGLE SIDE ASSEMBLY.

X8 DEVICE BALL PATTERN

	1	2	3		7	8	9	
NC	NC		NC		NC		NC	NC
NC	NC		NC		NC		NC	NC
NC	VSS	VDD	NC	A	NU/ TDQS-	VSS	VDD	NC
	VSS	VSSQ	DQ0	B	VSS	VSSQ	VDDQ	
	VDDQ	DQ2	DQS	C	DQ1	DQ3	VSSQ	
	VSS	DQ6	DQS-	D	VDD	VSS	VSSQ	
	VREFDQ	VDDQ	DQ4	E	DQ7	DQ5	VDDQ	
	NC	VSS	RAS-	F	CK	VSS	NC	
	ODT	VDD	CAS-	G	CK-	VDD	CKE	
	NC	CS-	WE-	H	A10/AP	ZQ	NC	
	VSS	BA0	BA2	J	A15	VREFDQ	VSS	
	VDD	A3	A0	K	A12/BC-	BA1	VDD	
	VSS	A5	A2	L	A1	A4	VSS	
	VDD	A7	A9	M	A11	A6	VDD	
NC	VSS	RESET-	A13	N	A14	A8	VSS	NC
NC	NC		NC		NC	NC		NC
NC	NC		NC		NC	NC		NC

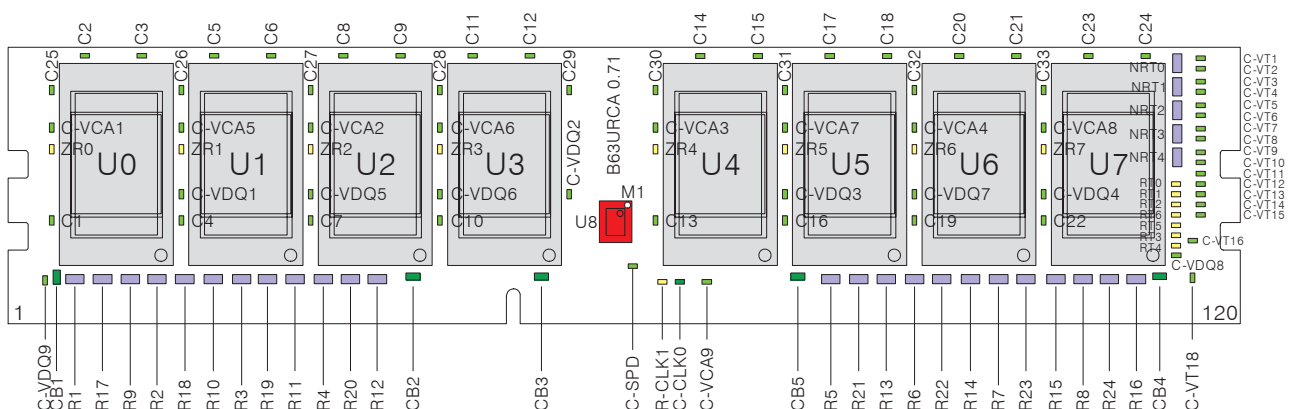
X8 DEVICE IC OUTLINE



**64MBx64, 512MB, by 64MBx8 DDRIII SDRAM, 1-RANK, WITHOUT ECC;
128MBx64, 1024MB, by 128MBx8 DDRIII SDRAM, 1-RANK, WITHOUT ECC;**

Item#	Q'ty	Reference	Parts
1	8	U0~U7	DDRIII SDRAM 64MBx8, SAMSUNG, 10.0 x 11.5 mm, QIMONDA, 10.0 x 16.0 mm, ELPIDA, 9.8 x 10.8 mm, 1.5V, 8K Refresh, FBGA, 106(78+28) Ball, 8 BANKS DDRIII SDRAM based. 128MBx8, MICRON, 9.0 x 15.5 mm, 12.5 x 22.1 mm (MAX), 1.5V, 8K Refresh, FBGA, 106(78+28) Ball, 8 BANKS DDRIII SDRAM based.
2	1	M1 or U8	M1: EEPROM 24LC02 TSSOP IC U8: EEPROM CAT34RC02VP21-TE13 1.90 x 2.90 mm TDFN-8 Package.
3	1	C-CLK0	Capacitor, 2.2pF, NPO ± 0.25pF, 0402 size, 50V
4	69	C1~C33, C-VT1~C-VT16, C-VT18, C-SPD, C-VCA1~C-VCA9, C-VDQ1~C-VDQ9	Capacitor, 100nF, +80%-20%, Y5V, 0402 size, 16V.
5	5	CB1~CB5	Capacitor, 2.2uF, +80%-20%, Y5V, 0603 size, 10V.
6	2	RT3, RT4	Resistor, 36 Ohm, ± 5%, 1/16W, 0402 size.
7	5	RT0~RT2, RT5, RT6	Resistor, 39 Ohm, ± 5%, 1/16W, 0402 size.
8	1	R-CLK1	Resistor, 75 Ohm, ± 5%, 1/16W, 0402 size.
9	8	ZR0~ZR7	Resistor, 240 Ohm, ± 5%, 1/16W, 0402 size.
10	24	R1~R24	Resistor Array, 15 Ohm, ± 5%, 1/16W, 0402 8P4R size, (R-PACK).
11	5	NRT0~NRT4	Resistor Array, 39 Ohm, ± 5%, 1/16W, 0402 8P4R size, (R-PACK).
12	1		P.C.B B63URCA 0.71, 5250 x 1181 mil, 5 PCS/PNL

TOP SIDE 1-RANK WITHOUT ECC



UNBUFFERED DDRIII SDRAM DIMM MODULE 512M/1024M BYTE (MODULE SIZE BY 64MBx64, 128MBx64) BY 64MBx8, 128MBx8 DDRIII SDRAM CHIPS

COMPONENTS#:

Item#	64MBx8 DDRIII SDRAM	128MBx8 DDRIII SDRAM
MODULE SIZE	512MB 64MBx64	1024MB 128MBx64
EEPROM, 24LC02	U8 or M1 1 piece	U8 or M1 1 piece
Capacitor, 2.2pF, 0402	C-CLK0 1 piece	C-CLK0 1 piece
Capacitor, 100nF, 0402	C1~C33, C-VT1~C-VT16, C-VT18, C-SPD, C-VCA1~C-VCA9, C-VDQ1~C-VDQ9 69 pieces	C1~C33, C-VT1~C-VT16, C-VT18, C-SPD, C-VCA1~C-VCA9, C-VDQ1~C-VDQ9 69 pieces
Capacitor, 2.2uF, 0603	CB1~CB5 5 pieces	CB1~CB5 5 pieces
Resistor, 36 Ohm, 0402	RT3, RT4 2 pieces	RT3, RT4 2 pieces
Resistor, 39 Ohm, 0402	RT0~RT2, RT5, RT6 5 pieces	RT0~RT2, RT5, RT6 5 pieces
Resistor, 75 Ohm, 0402	R-CLK1 1 piece	R-CLK1 1 piece
Resistor, 240 Ohm, 0402	ZR0~ZR7 8 pieces	ZR0~ZR7 8 pieces
Resistor, Array 8P4R, 15 Ohm, 0402	R1~R24 24 pieces	R1~R24 24 pieces
Resistor, Array 8P4R, 39 Ohm, 0402	NRT0~NRT4 5 pieces	NRT0~NRT4 5 pieces
PCB	1 piece	1 piece

B63URCA 0.71 DQ MAP:

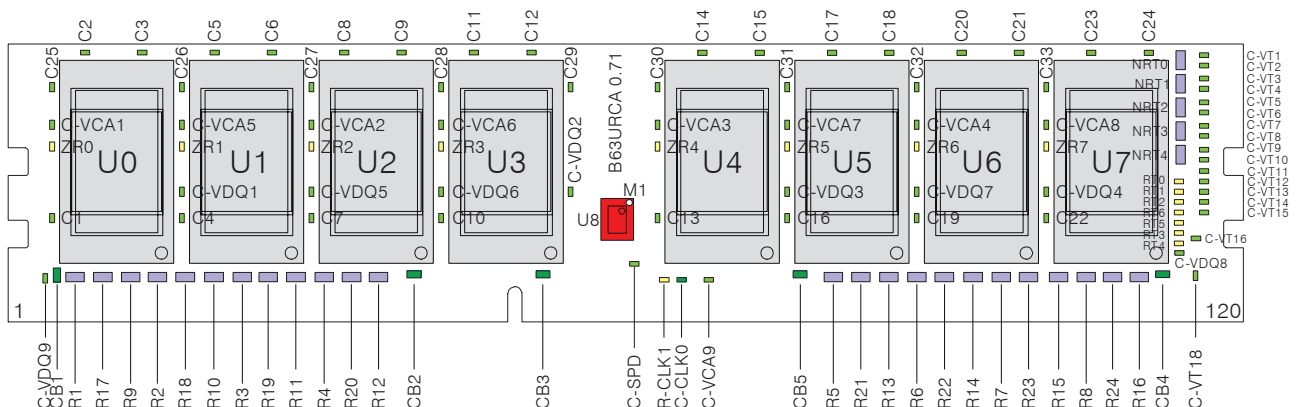
Description: DDRIII SDRAM, Single-Rank, x8-FBGA106(78+28)-based, x64 Unbufferd, 240-pin DIMM 1.0

Component No.	Component DQ	Module DQ	Module Pin No.	Component No.	Component DQ	Module DQ	Module Pin No.
U0	0	7	129	U1	0	15	DQ9
	1	5	123		1	13	DQ10
	2	6	128		2	14	DQ13
	3	0	3		3	8	DQ11
	4	3	10		4	11	DQ12
	5	4	122		5	12	DQ15
	6	2	9		6	10	DQ8
	7	1	4		7	9	DQ14
U2	0	23	147	U3	0	31	DQ29
	1	21	141		1	29	DQ26
	2	22	146		2	30	DQ25
	3	16	21		3	24	DQ31
	4	19	28		4	27	DQ24
	5	20	140		5	28	DQ30
	6	18	27		6	26	DQ28
	7	17	22		7	25	DQ27
U4	0	39	207	U5	0	47	DQ45
	1	37	201		1	45	DQ42
	2	38	206		2	46	DQ44
	3	32	81		3	40	DQ46
	4	35	88		4	43	DQ40
	5	36	200		5	44	DQ47
	6	34	87		6	42	DQ41
	7	33	82		7	41	DQ43
U6	0	55	225	U7	0	63	234
	1	53	219		1	61	228
	2	54	224		2	62	233
	3	48	99		3	56	108
	4	51	106		4	59	115
	5	52	218		5	60	227
	6	50	105		6	58	114
	7	49	100		7	57	109

First check the SPD data and EEPROM. Then check the following components for other problem.

1-RANK	Clock loading	Boot failure
	C-CLK0	SPD data, U8 or M1

TOP SIDE:



PART NUMBER DECODER

