

512MB(64Mx64) SODIMM Solution

Samsung's proposal is **DDP 512Mb based 512MB SODIMM!!**

	Solution I	Solution II	Solution III
Based Component	Mono 512Mb	DDP 512Mb	Stacked 512Mb
Package Type	TSOP2	TSOP2	Stacked TSOP2
No. of Dies	8pcs	16pcs of 256Mb	16pcs of 256Mb
Component Bit Org.	32Mx16, one /CS	64Mx8, two /CS	64Mx8, two /CS
No. of Row	2	2	2
Loading per CLK, CKE, /CS	4	8	8
PCB Size	67.56 x 31.75 (mm x mm) 2660 x 1250 (mil x mil)		
Module Thickness	3.80 mm Max. (150mil Max.)	3.80 mm Max. (150mil Max.)	6.18 mm Max. (244mil Max.)
Availability	2Q' 02	NOW	No Plan

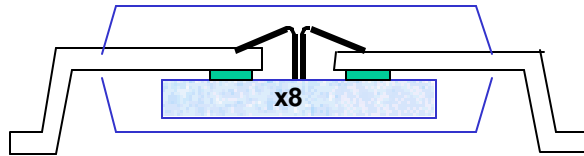
256MB(128Mb sTSOP) vs 512MB(DDP 512Mb)

Totally compatible with 256MB SODIMM based on 128Mb sTSOP!!

	256Mbyte(133MHz)	512Mbyte(133MHz)
Based component	128Mb(16Mx8) sTSOP	DDP 512Mb(64Mx8) TSOP2
No. of Dies	16pcs of 128Mb 0.19um	16pcs of 256Mb 0.17um
No. of Row	2	2
Loading per CLK, CKE, /CS	8	8
PCB Size	31.75 x 67.56(mm x mm) 1250 x 2660 (mil x mil)	
Module Thickness	3.80 mm Max. (150mil Max.)	3.80 mm Max. (150mil Max.)

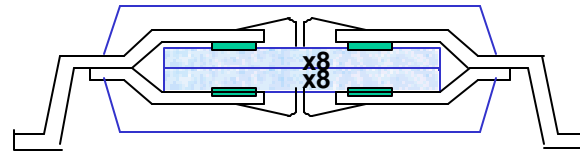
Pin Configuration of DDP 512Mb

VDD	1	54	VSS
DQ0	2	53	DQ7
VDDQ	3	52	VSSQ
N.C	4	51	N.C
DQ1	5	50	DQ6
VSSQ	6	49	VDDQ
N.C	7	48	N.C
DQ2	8	47	DQ5
VDDQ	9	46	VSSQ
N.C	10	45	N.C
DQ3	11	44	DQ4
VSSQ	12	43	VDDQ
N.C	13	42	N.C
VDD	14	41	VSS
N.C	15	40	N.C/RFU
WE	16	39	DQM
CAS	17	38	CLK
RAS	18	37	CKE
CS	19	36	A12
BA0	20	35	A11
BA1	21	34	A9
A10/AP	22	33	A8
A0	23	32	A7
A1	24	31	A6
A2	25	30	A5
A3	26	29	A4
VDD	27	28	VSS



< Normal 400mil TSOP2 >

VDD	1	54	VSS
DQ0	2	53	DQ7
VDDQ	3	52	VSSQ
N.C	4	51	N.C
DQ1	5	50	DQ6
VSSQ	6	49	VDDQ
N.C	7	48	N.C
DQ2	8	47	DQ5
VDDQ	9	46	VSSQ
N.C	10	45	N.C
DQ3	11	44	DQ4
VSSQ	12	43	VDDQ
N.C	13	42	N.C
VDD	14	41	VSS
CS1	15	40	CKE1
WE	16	39	DQM
CAS	17	38	CLK
RAS	18	37	CKE0
CS0	19	36	A12
BA0	20	35	A11
BA1	21	34	A9
A10/AP	22	33	A8
A0	23	32	A7
A1	24	31	A6
A2	25	30	A5
A3	26	29	A4
VDD	27	28	VSS



< DDP 400mil 512Mb TSOP2 >

DDP 512Mb is exactly same size and thickness with that of normal 54pin TSOP2.
(400mil x 875mil, 0.8mm pin pitch)

DDP 512Mb based 512MB SODIMM

- **DDP 512Mb Component Status**

- Die-stacked 64Mx8 component(32Mx8 *2) within the TSOP2.
- The only difference from normal TSOP2 type is **2 /CS & 2 CKE pins.**
(For the better thermal dispersion)

- **512MB SODIMM Status**

- Consist of eight DDP 64Mx8(32Mx8 *2) components.
- JEDEC compliant PCB Size(2,260mil x 1,200mil x 150mil).
- PC133 compliant specification
- Built as Option Memory by Most Major Notebook OEMs
- Totally compatible with 256MB SODIMM based on 128Mb sTSOP.

Due to technology licensing terms, Samsung Semiconductor, Inc. (Samsung) offers SODIMM products made up of DDP DRAM for use ONLY in mobile computer application (laptop or notebook computers), telecommunication (such as cellular phones), or non-computer applications (such as televisions or monitors). This SODIMM based on DDP DRAM product may NOT be used as a component in general and scientific computers such as mainframes, servers, workstations or desktop computers.

Violation may subject the customer to legal claims and also excludes any warranty against infringement from Samsung.

512MB SODIMM Picture

512MB with DDP is exactly same as 256MB SODIMM with TSOP2!!

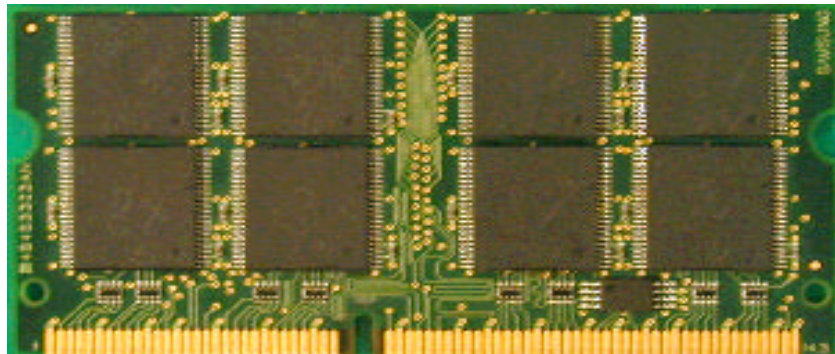
512MB SODIMM (TSOP2)
(31.75 x 67.56 x 3.8 mm)



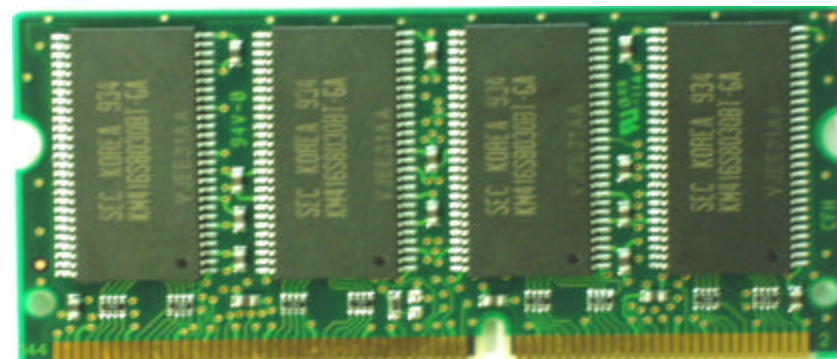
< Front >



< Back >



256MB SODIMM (sTSOP)
(31.75 x 67.56 x 3.8 mm)



256MB SODIMM (TSOP2)
(31.75 x 67.56 x 3.8 mm)