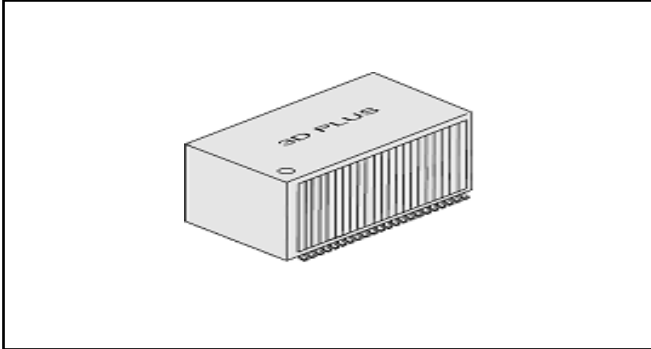




Double Data Rate SDRam MODULE

3D1D8G16TS8466

8Gbit DDR SDRam organized as 512Mx16, based on 64Mx16



Features

- Stack of eight 1Gbit DDR SDRam
- Organized as 512Mx16bit
- Power supply: V_{DD}=2.5 ± 0.2V, V_{DDQ}=2.5±0.2V
- Double-data-rate architecture; two data transfers per clock cycle
- Bidirectional data strob
- Differential Clock input (CK and #CK)
- DLL aligns DQ and DQS transition with CK transition
- Programmable Read latency 2, 2.5 (clock)
- Programmable Burst length (2, 4, 8)
- Programmable Burst Type (sequential and interleave)
- Edge aligned data output, center aligned data input
- LDM, UDM for write masking only
- Auto and self refresh
- 7.8 us refresh interval (8K/64ms refresh)
- Available temperature range :
0°C to +70°C
-40°C to +85°C
- Available with screening option for high reliability application (Space, etc ...)

General description

The 3D-Plus 3D1D8G16TS8466 is a high-speed highly integrated DDR Synchronous Dynamic RAM containing 8,589,934,592 bits.

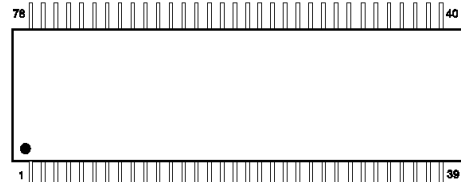
It is organized with eight banks of 16bit with #CS and CKE.

It is particularly well suited for use in high reliability, high performance and high density system applications, such as solid state mass recorder, server or workstation.

The 3D1D8G16TS8466 is packaged in a 78 pin SOP.

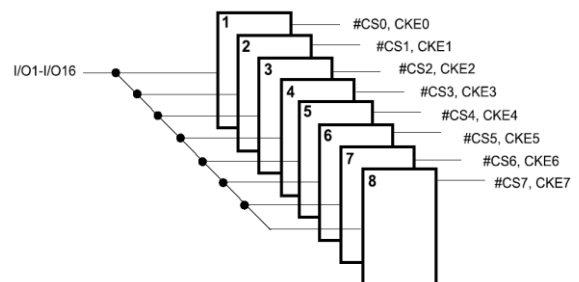
Pin Assignment (Top View)

SOP 78 (Pitch : 0.65 mm)



1	#CS1	27	#CS0	53	CKE0
2	#CS2	28	#CS7	54	CK
3	#CS3	29	BA0	55	#CK
4	V _{DD}	30	BA1	56	UDM
5	DQ0	31	AP/AI0	57	V _{SS}
6	V _{DDQ}	32	A0	58	V _{REF}
7	DQ1	33	A1	59	DNU
8	DQ2	34	A2	60	UDQS
9	V _{SSQ}	35	A3	61	V _{SSQ}
10	DQ3	36	VDD	62	NC
11	DQ4	37	#CS4	63	DQ8
12	V _{DDQ}	38	#CS5	64	V _{DDQ}
13	DQ5	39	#CS6	65	DQ9
14	DQ6	40	CKE1	66	DQ10
15	V _{SSQ}	41	CKE2	67	V _{SSQ}
16	DQ7	42	CKE3	68	DQ11
17	NC	43	V _{SS}	69	DQ12
18	V _{DDQ}	44	A4	70	V _{DDQ}
19	LDQS	45	A5	71	DQ13
20	A13	46	A6	72	DQ14
21	V _{DD}	47	A7	73	V _{SSQ}
22	DNU	48	A8	74	DQ15
23	LDM	49	A9	75	V _{SS}
24	#WE	50	A11	76	CKE4
25	#CAS	51	A12	77	CKE5
26	#RAS	52	CKE7	78	CKE6

FUNCTIONAL Block Diagram



(All other signals are common to the devices)

Double Data Rate SDRam
MODULE

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	Min	Max
A	11.50	12.20
A2	10.40	10.80
D	27.20	27.60
E	13.40	13.80
E1	10.85	11.05
b	0.30	
e	0.65	
Dimension (mm)		

Max. weight : 8.10 gr.

DC OPERATING CONDITIONS

Parameter	Symbol	Min	Max	Unit
Supply Voltage	V _{DD}	2.3	2.7	V
I/O Supply Voltage	V _{DDQ}	2.3	2.7	V
I/O Reference Voltage	V _{REF}	0.49xV _{DDQ}	0.51xV _{DDQ}	V
I/O Termination Voltage (syst.)	V _{TT}	V _{REF} -0.04	V _{REF} +0.04	V
Input High Voltage	V _{IH} (DC)	V _{REF} +0.15	V _{REF} +0.3	V
Input Low Voltage	V _{IL} (DC)	-0.3	V _{REF} -0.15	V

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Voltage on any pin relative to V _{SS}	V _{IN} , V _{OUT}	-0.5 ~ +3.6	V
Storage temperature	T _{STG}	-55 ~ +150	°C
Power dissipation	P _D	2	W
Short circuit current	I _{OS}	50	mA

Note :
Permanent device damage may occur if "ABSOLUTE MAXIMUM RATINGS" are exceeded.
Functional operation should be restricted to recommended operating condition.
Exposure to higher than recommended voltage for extended periods of time could affect device reliability

DC Characteristics @ 133MHz

Parameter	Symbol	Value	Unit
Operating recharge Current	I _{DD1}	273	mA
Precharge Power Down Standby Current	I _{DD2P}	80	mA
Precharge Floating Standby Current	I _{DD2F}	520	mA

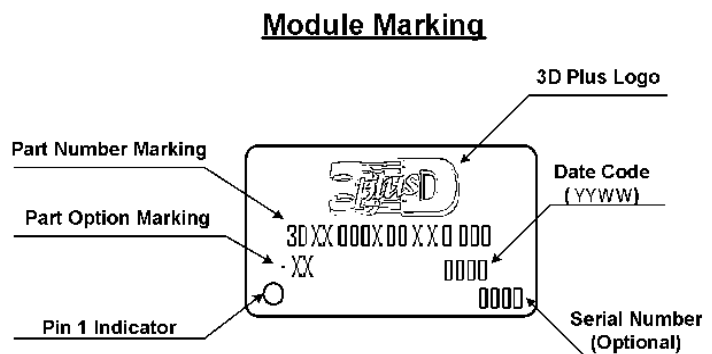
3D1D8G16TS8466 **X** **X**

Temperature Range _____

C = 0°C ~ +70°C
I = -40°C ~ +85°C
S = Specific (-40°C ~ +105°C)

Quality Level _____

N = Commercial Grade
B = Industrial Grade
S = Space Grade
C = Custom



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