

DDR3 Synchronous Dynamic Ram

3D3D16G32WB2650

16Gbit DDR3 SDRam organized as 512Mx32



Main applications:

- Embedded Systems
- Workstations
- Servers
- Super Computers
- Test Systems

Features and Benefits

- Industry standard ball-out
- Combines two 8Gb x16 devices in one package
- Vdd=VddQ = +1.5V
- Differential bidirectional data strobe
- 8n-bit prefetch architecture
- 8 internal banks per memory
- Nominal and dynamic on-die termination
- Programmable CAS latency
- Posted CAS additive latency
- Fixed burst lengths of 8 and burst chop (BC) of 4
- Selectable BC4 or BL8 on-the-fly
- Self refresh mode
- Write leveling
- Multipurpose register
- Output driver calibration
- Clock rate available : 1066 and 1333 Mbps
- Industrial and Military temperature range.

General description

3D Plus offers a new 16Gbit DDR3 SDRAM cube compatible with the industry standard footprint.

This product embeds 2 chips with a capacity of 8Gb (512Mx16) each.

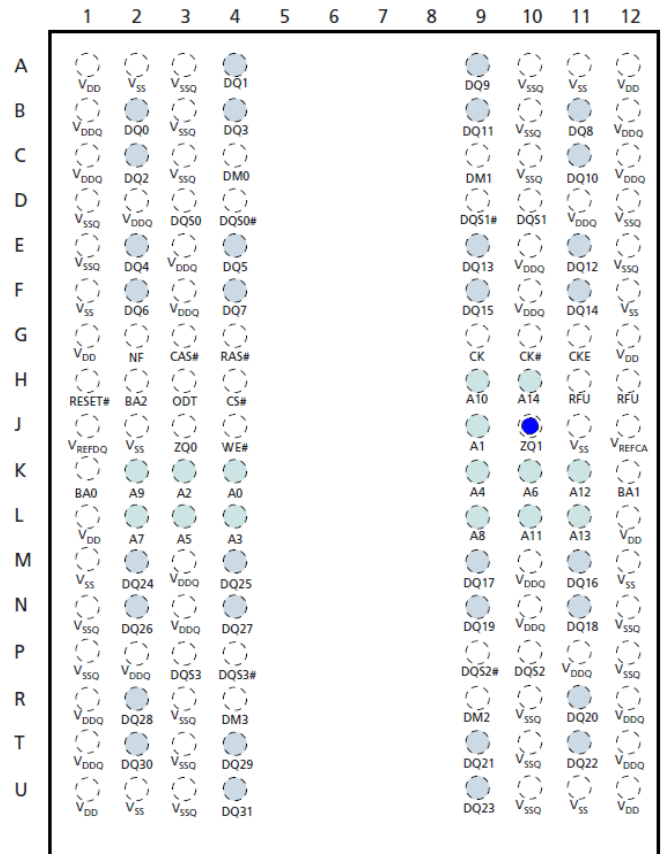
Our products are available at 1066 and 1333 Mbps in Industrial and Military temperature range.

Thanks to the high density patented technology the memories are embedded in a small form factor device without compromising electrical or thermal performance.

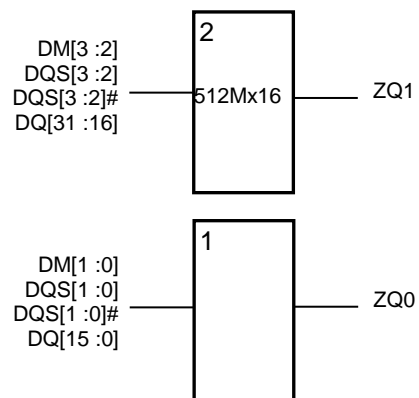
This device is ideal for high density memory applications that require high speed transfer and compatibility with standard servers and networking equipment.

Pin Assignment (Top View)

FBGA 136 (Pitch : 0.80 mm)



FUNCTIONAL Block Diagram

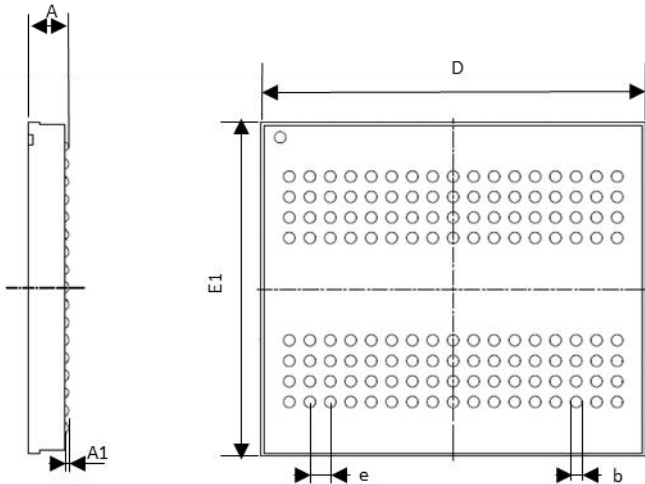


(All other signals are common to the devices)

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	Min	Max
A	3.95	4.15
A1	0.20	0.3
D	14.9	15.1
E1	12.9	13.1
b	0.35	
e	0.8	
Dimensions (mm)		

DC OPERATING CONDITIONS

Parameter	Symbol	Min	Max	Unit
Supply Voltage	V _{DD}	1.425	1.575	V
I/O Supply Voltage	V _{DDQ}	1.425	1.575	V

ABSOLUTE MAXIMUM DC RATINGS

Parameter	Symbol	Min	Max	Unit
Voltage on any ball relative to V _{SS}	V _{IN} , V _{OUT}	-0.4	+1.87	V
Input Leakage Current	I _i	-4	+4	μA
Vref Supply Leakage Current	I _{Vref}	-2	+2	μA
Storage temperature	T _{STG}	-65	+150	°C

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

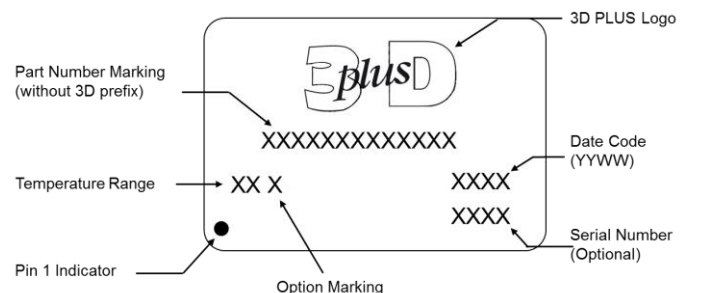
Electrical Characteristics

Parameter	Symbol	Value	Unit
Operating Current (one bank active)	I _{DD1}	258	mA
Precharge Power Down Current	I _{DD2P0}	70	mA
Room Temp Self Refresh	I _{DD6}	116	mA

3D3D16G32WB2650 **XX**

Temperature Range
IB = -40°C ~ +85°C
MB = -55°C + 125°C

Module Marking



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