AN INNOVATIVE COMPANY

INDUSTRIAL MEMORY PRODUCTS

3D PLUS is a leading supplier of advanced high density 3D microelectronic products including die and wafer-level products. Thanks to our advanced technology, our products are dedicated to high performance devices used in harsh environments. We offer standard products and custom System-in-Package (SiP) solutions based on our patented technology portfolio.

The company is ISO 9001:2008 certified. Scalable and cost efficient supply chain controls enable the quick introduction of new products to service fast ramp-up and high volume production markets.

A UNIQUE KNOW-HOW

3D PLUS technology enables the interconnection of electronic using the third dimension to provide an higher level of integration. By integrating heterogeneous semiconductor technologies, 3D PLUS modules are the solutions of choices when System On Chip or ASICs cannot be manufactured, while providing high reliability.

INDUSTRIAL APPLICATIONS EXPERTISE

Recognized for their electrical performance, miniaturization, quality and reliability assurance, 3D PLUS industrial products are optimally servicing the following applications :

- **Defense & Security**
- **Avionics**
- **Single Board Computers / Data Storage**
- **Heavy Industrial Applications**
- **Implantable Medical and Sciences**

Considerations for these highly demanding applications were incorporated from the design stage, up to the validation and testing.

KEY BENEFITS

- SMALL FORM FACTOR
  75 % space and weight savings in the design

- HIGH DENSITY

- WIDE DATA BUS

- HIGH PERFORMANCE

- HIGH RELIABILITY

- LONG TERM SUPPLY AND UPGRADES PATHS GUARANTY

- COMPLIANT TO MILITARY STANDARD

RELIABLE MINIATURIZATION TECHNOLOGIES FOR ELECTRONICS

www.3d-plus.com

a HEICO company

RELIABLE MINIATURIZATION TECHNOLOGIES FOR ELECTRONICS

DDR IV WIDE DATA BUS

DDR IV WIDE DATA BUS	DENSITY	CONFIGURATION	CLOCK RATE x(MHZ)	VOLTAGE (V)	PACKAGE (mm)	PITCH (mm)	TEMPERATURE	ROHS	SCD#
3D4D32G72LB2758	32GBit	512Mbit x 72	1200	1.2	BGA 30 x 19	1.0	I, S, M	5/6	3DDS-758
3D4D64G72LB2809	64Gbit	1024Mbit x 64 + 8b ECC	1200	1.2	BGA 30 x 19	1.0	I, S, M	5/6	3DDS-809
3D4D64G72LB2834 (2)	128Gbit	2048Mbit x 64 + 8b ECC	1200	1.2	BGA 30 x 20	1.0	I, S, M	5/6	3DFP-834

DDR IV

DDR IV	DENSITY	CONFIGURATION	CLOCK RATE (MHZ)	VOLTAGE (V)	PACKAGE (mm)	PITCH (mm)	TEMPERATURE	ROHS	SCD#
3D4D8G32LB1742	8Gbit	256Mbit x 32	1200	1.2	FBGA 144	0.8	I, S, M	Yes	3DDS-742

DDR III WIDE DATA BUS

DDR III WIDE DATA BUS	DENSITY	CONFIGURATION	CLOCK RATE (MHZ)	VOLTAGE (V)	PACKAGE (mm)	PITCH (mm)	TEMPERATURE	ROHS	SCD#
3D3D16G72WB24768	16Gbit	256Mbit x 72	533-667	1.5	BGA 223	1.00	I, S, M	5/6	3DDS-487

DDR III

DDR III	DENSITY	CONFIGURATION	CLOCK RATE (MHZ)	VOLTAGE (V)	PACKAGE (mm)	PITCH (mm)	TEMPERATURE	ROHS	SCD#
3D3D4G08WB1473	4Gbit	512Mbit x 8	533-800	1.5	BGA 78	0.80	I, M	Yes or 5/6	3DDS-473
3D3D4G16WB1627	4Gbit	256Mbit x 16	533-800	1.5	BGA 96	0.80	I, S, M	Yes or 5/6	3DDS-627
3D3D8G08WB2391	8Gbit	2 x (512Mbit x 8)	533-800	1.5	BGA 78	0.80	I, S, M	Yes or 5/6	3DDS-391
3D3D8G32WB1741	8Gbit	256Mbit x 32	533-800	1.35 or 1.5 (1)	BGA 136	0.80	I, S, M	Yes or 5/6	3DDS-741
3D3D16G16WB2659	16Gbit	2 x (512Mbit x 16)	533-800	1.5	BGA 96	0.80	I, S, M	5/6	3DDS-659
3D3D16G32WB2650	16Gbit	512Mbit x 32	533-800	1.5	BGA 136	0.80	I, S, M	5/6	3DDS-650

SRAM

SRAM	DENSITY	CONFIGURATION	ACCESS TIME (NS)	VOLTAGE (V)	PACKAGE (mm)	PITCH (mm)	TEMPERATURE	ROHS	SCD#
3DSR32M08VB2368	32Mbit	2 x (2Mbit x 8)	10	2.4 to 3.6	BGA 48	0.75	C, I, M	Yes or 5/6	3DDS-368
3DSR32M16VB2409	32Mbit	2 x (1Mbit x 16)	10	2.4 to 3.6	BGA 48	0.75	C, I, M	Yes or 5/6	3DDS-409

FLASH NAND

FLASH NAND	DENSITY	CONFIGURATION	BITS/CELL	VOLTAGE (V)	PACKAGE (mm)	PITCH (mm)	TEMPERATURE	ROHS	SCD#
3DFN64G08VB1388	64Gbit	8Gbit x 8	SLC	3.3	LGA 52	1.0	C, I, M	Yes	3DDS-388

FLASH NOR

FLASH NOR	DENSITY	CONFIGURATION	RAND. ACCESS (NS)	VOLTAGE (V)	PACKAGE	PITCH (MM)	TEMPERATURE	ROHS	SCD#
3DFO512M16VB2359	512Mbit	2 x (16Mbit x 16)	100-110	2.7 to 3.6	BGA 64	1.0	I, S, M	Yes or 5/6	3DDS-359
3DFO2G16VB2361	2Gbit	2 x (64Mbit x 16)	110-120-130	2.7 to 3.6	BGA 64	1.0	I, S, M	Yes or 5/6	3DDS-361

HIGH RELIABILITY

+ Perfect technology in environments susceptible to vibration and acceleration.

+ 3D PLUS modules are proven to sustain more than 2000 thermal cycles at -55°C +125°C.

SnPb LeadFree

+ 3D PLUS modules are available with leadfree and SnPb lead finishes.

COMPETITIVE EDGE

+ Upgrade your existing board with 3D PLUS memory modules and get densities not yet available in the market.

LIGHT WEIGHT SMALL FOOTPRINT

+ 3D PLUS modules are highly integrated, offering a small board footprint and extremely lightweight solution - a key parameter for airborne system.

WIDE TEMPERATURE RANGE

+ 3D PLUS modules are tested and validated to operate under industrial and military temperature ranges.

LONG TERM SUPPORT

+ By integrating all production and tests, 3D PLUS modules are available for applications where lifetime and obsolescence are critical.

HIGH DENSITY JEDEC FOOTPRINT

+ Our modules are compliant with JEDEC footprint, offering multiple board configurations without requiring a redesign.

WIDE BUS SOLUTIONS

+ 3D PLUS modules are available in wide bus configurations including decoupling capacitors and termination resistors. These modules offer a key benefit for applications requiring large amounts video processing and/ or real time signal processing.

Note 1: Replace W by Y in this part number for low voltage components (1.35V)
Note 2: Under request / development

For speed grade/access time, see 3D PLUS Part Number Decoder at http://www.3d-plus.com/quality-system.php

QUALITY LEVEL

N : Commercial Grade

B : Industrial Grade

TEMPERATURE RANGES

C : Commercial (0°C to 70°C)

I : Industrial (-40°C to +85°C)

S : Specific (-40°C to +95°C)

M : Military (-55°C to +125°C)

TERMINATIONS

- : RoHS

L : SnPb

ORDERING INFORMATION

Speed Grade (if required)

Part Number – X X – XXX

Temperature Range

Grade

Terminations