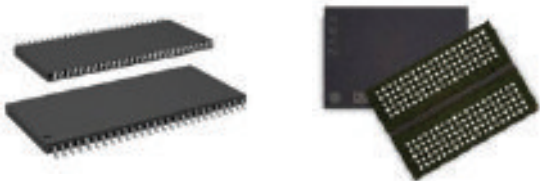


# DRAM Product Portfolio

- Global supplier of high performance memory products  
Bordison is headquartered in Salford, UK with worldwide offices located in USA, China, Europe, Hong Kong.
- We also support and maintain representations in many other countries
- Design and develop world class memory products for Automotive, Industrial, Healthcare and Communication Markets.



## Synchronous DRAMs

- Vin: 3.3V
  - Temp: 0 – 70 deg C / -40 – 85 deg C
  - Package: TSOP II or FBGA
- ▶ 16Mb (1Mb x 16), 143MHz, 50 pin
  - ▶ 16Mb (1Mb x 16), 200MHz, 50 pin
  - ▶ 64Mb (4Mb x 16), 166MHz, 54 pin
  - ▶ 128Mb (8Mb x 16), 166MHz, 54 pin
  - ▶ 128Mb (4Mb x 32), 166MHz, 86 pin
  - ▶ 128Mb (4Mb x 32), 166MHz, 90 pin
  - ▶ 256Mb (16Mb x 16), 166MHz, 54 pin
  - ▶ 512Mb (32Mb x 16), 143MHz, 54 pin

Density	Organization	PartNumber(Pb-Free)	Temperature	Speed	Package
16Mb	1Mb×16	BS1M16A-5/7TC	0°C~70°C	143/200 MHz	50Pin TSOPII
		BS1M16A-5/7TI	-40°C~85°C	143/200 MHz	50Pin TSOPII
64Mb	4Mb×16	BS4M16A-6TC	0°C~70°C	166 MHz	54Pin TSOPII
		BS4M16A-6TI	-40°C~85°C	166 MHz	54Pin TSOPII
		BS4M16A-6BC	0°C~70°C	166 MHz	54Ball FBGA
		BS4M16A-6BI	-40°C~85°C	166 MHz	54Ball FBGA
128Mb	8Mb×16	BS8M16A-6TC	0°C~70°C	166 MHz	54Pin TSOPII
		BS8M16A-6TI	-40°C~85°C	166 MHz	54Pin TSOPII
		BS8M16A-6BI	-40°C~85°C	166 MHz	54Ball FBGA
	4Mb×32	BS4M32A-6TC	0°C~70°C	166 MHz	86Pin TSOPII
		BS4M32A-6TI	-40°C~85°C	166 MHz	86Pin TSOPII
		BS4M32A-6BC	0°C~70°C	166 MHz	90Ball FBGA
256Mb	16Mb×16	BS16M16A-6TC	0°C~70°C	166 MHz	54Pin TSOPII
		BS16M16A-6TI	-40°C~85°C	166 MHz	54Pin TSOPII
		BS16M16A-6BC	0°C~70°C	166 MHz	54Ball FBGA
		BS16M16A-6BI	-40°C~85°C	166 MHz	54Ball FBGA
512Mb	32Mb×16	BS32M16A-7TC	0°C~70°C	143MHz	54Pin TSOPII
		BS32M16A-7TI	-40°C~85°C	143MHz	54Pin TSOPII
		BS32M16A-7BC	0°C~70°C	143MHz	54Ball FBGA
		BS32M16A-7BI	-40°C~85°C	143MHz	54Ball FBGA

## DDR SDRAMs

- Vin: 2.5V
  - Temp: 0 – 70 deg C / -40 – 85 deg C
  - Package: TSOP II or FBGA
- ▶ 256Mb (16Mb x 16), 166MHz, 66 pin
  - ▶ 256Mb (16Mb x 16), 200MHz, 60 pin
  - ▶ 512Mb (32Mb x 16), 200MHz, 66 pin

Density	Organization	PartNumber(Pb-Free)	Temperature	Speed	Package
256Mb	16Mb×16	BS1M16A-5/7TC	0°C~70°C	250MHz	66Pin TSOPII
		BS1M16A-5/7TI	-40°C~85°C	200MHz	66Pin TSOPII
		BS4M16A-6TC	0°C~70°C	166MHz	66Pin TSOPII
		BS4M16A-6TI	-40°C~85°C	250MHz	60Ball BGA
512Mb	32Mb×16	BS4M16A-6BC	0°C~70°C	200MHz	60Ball BGA
		BS4M16A-6BI	-40°C~85°C	166MHz	60Ball BGA
		BD32M16A-5TC	0°C~70°C	200MHz	66Pin TSOPII
		BD32M16A-5TI	-40°C~85°C	200MHz	66Pin TSOPII

## DDR II SDRAMs

- Vin: 1.8V
  - Temp: 0 – 70 deg C / -40 – 85 deg C
  - Package: FBGA
- ▶ 512Mb (32Mb x 16), 400MHz, 84 ball
  - ▶ 1Gb (64Mb x 16), 400MHz, 84 ball
  - ▶ 2Gb (128Mb x 16), 400MHz, 84 ball

Density	Organization	PartNumber(Pb-Free)	Temperature	Speed	Package
512Mb	32Mb×16	BDB32M16A-25BC	0°C~70°C	400MHz	84BallFBGA
		BDB32M16B-25BC	-40°C~85°C	400MHz	84BallFBGA
		BDB32M16B-25BI	-40°C~95°C	400MHz	84BallFBGA
1Gb	64Mb×16	BDB64M16A-25BC	0°C~70°C	400MHz	84BallFBGA
		BDB64M16A-25BI	-40°C~85°C	400MHz	84BallFBGA

## DDR III SDRAMs

- Vin: 1.35V & 1.5V
  - Temp: 0 – 70 deg C / -40 – 85 deg C
  - Package: FBGA
- ▶ 1Gb (64M x 16), 800MHz, 96 ball
  - ▶ 2Gb (128Mb x 16), 800MHz, 96 ball
  - ▶ 4Gb (256Mb x 16), 800MHz, 96 ball

Density	Organization	PartNumber(Pb-Free)	Temperature	Speed	Package
1Gb	64Mb×16	BDC64M16LA-12BC	-40°C~95°C	800MHz	96Ball FBGA
		BDC64M16LA-12BI	-40°C~95°C	800MHz	96Ball FBGA
2Gb	128Mb×16	BDC128M16LA-12BC	-40°C~95°C	800MHz	96Ball FBGA
		BDC128M16LA-12BI	-40°C~95°C	800MHz	96Ball FBGA
4Gb	256Mb×16	BDC256M16LA-12BC	-40°C~95°C	800MHz	96Ball FBGA
		BDC256M16LA-12BI	-40°C~95°C	800MHz	96Ball FBGA

SDRAM		Cross reference							BordisonsMemory
Density	Orig	Package	SAMSUNG	SK HYNIX	MICRON	ISi	AllianceMemory		
<b>SDRAM 3.3V</b>									
16Mb	1Mx16	50TSOP2	K4S161622D-TI/E60	HY57V161610DTC-6I	MT48LC1M16A1TGSIT	IS42S16100F-7TLL	AS4C1M16S-6TIN	BS1M16A-57TI	
64Mb	4Mx16	54TSOP2	K4S641632I-TC75	HY57V641620ELTP-5	MT48LC4M16A2P-6A AIT	IS42S16400J-7TLL	AS4C4M16SA-6TIN	BS4M16A-6TI	
64Mb	4Mx16	54BGA	N/A	N/A	MT48LC4M16A2B4-6A AIT	IS45S16400J-7BLA1	AS4C4M16SA-6BIN	BS4M16A-6BI	
128Mb	8Mx16	54TSOP2	K4S281632H-LC75	HY57V121620T-6	MT48LC8M16A2P-6A AIT	IS42S16800F-6TLL	AS4C8M16SA-6TIN	BS8M16A-6TI	
128Mb	8Mx16	54BGA	N/A	N/A	MT48LC8M16A2F4-6A AIT	IS42S16800F-6BLI	AS4C8M16SA-6BIN	BS8M16A-6BI	
128Mb	4Mx32	90BGA	K4S282333F-F75	HY57V283220L T-6	MT48LC4M32B2B5-6A AIT	IS45S32400F-6TLL	AS4C4M32SA-6TIN	BS4M32A-6TI	
256Mb	16Mx16	54TSOP2	K4S561632J-LC5	H57V2862GTR-75I	MT48LC16M16A2P-6A AIT	IS45S16160G-6TLA1	AS4C16M16SA-6TIN	BS16M16A-6TI	
256Mb	16Mx16	54BGA	N/A	N/A	MT48LC16M16A2B4-6A AIT	IS45S16160G-6BLA1	AS4C16M16SA-6BIN	BS16M16A-6BI	
512Mb	32Mx16	54TSOP2	K4S511632M-TL75	N/A	MT48LC32M16A2P-75 AIT	IS45S16320D-7CTLA1	AS4C32M16SA-7TIN	BS32M16A-7TI	
512Mb	32Mx16	54BGA	N/A	N/A	N/A	IS45S16320D-7BLA1	AS4C32M16SA-7BIN	BS32M16A-7BI	
<b>DDR2 1.5V</b>									
256Mb	16Mx16	66TSOP2	N/A	N/A	MT46V16M16P-5B AIT	S43R16160D-5TLL	AS4C16M16D1A-5TIN	BD16M16A-4TI	
256Mb	16Mx16	66TSOP2	N/A	N/A	MT46V16M16P-5B AIT	S43R16160D-5TLL	AS4C16M16D1A-5TIN	BD16M16A-5TI	
256Mb	16Mx16	66TSOP2	K4H281638B-TLA0	N/A	MT46V16M16P-5B AIT	IS43R16160D-6TLL	AS4C16M16D1A-5TIN	BD16M16A-6TI	
256Mb	16Mx16	60BGA	N/A	N/A	MT46V16M16CY-5B AIT	IS43R16160D-5BLI	AS4C16M16D1-5BIN	BD16M16A-4BI	
256Mb	16Mx16	60BGA	N/A	N/A	MT46V16M16CY-5B AIT	IS43R16160D-5BLI	AS4C16M16D1-5BIN	BD16M16A-5BI	
256Mb	16Mx16	60BGA	N/A	N/A	MT46V16M16CY-5B AIT	IS43R16160D-6BLI	AS4C16M16D1-5BIN	BD16M16A-6BI	
512Mb	32Mx16	66TSOP2	K4H511638J-LC80	HY5DU121622BT-5	MT46V32M16P-5B AIT	IS43R16320D-5TLL	AS4C32M16D1A-5TIN	BD32M16A-5TI	
512Mb	32Mx16	60BGA	N/A	N/A	MT46V32M16CY-5B IT	IS43R16320D-5BLI	AS4C32M16D1A-5BIN	BD32M16A-5BI	
<b>DDR2 1.8V</b>									
512Mb	32Mx16	84BGA	K4T51043QC-ZCE7	H6PS162FFR-L	MT47H32M16NF-25E	IS43DR16320C-25DBL	AS4C32M16D2B-25BCN	BDB32M16A-25BC	
512Mb	32Mx16	84BGA	N/A	H6PS162FFR-H	MT47H32M16NF-25E AIT	IS43DR16320C-25DBLI	AS4C32M16D2B-25BIN	BDB32M16A-25BI	
1Gb	64Mx16	84BGA	K4T1G044QF-BCE6	H5PS1G63EFR-E3C	MT47H64M16NF-25E	IS43DR16640B-25DBL	AS4C64M16D2B-25BCN	BDB64M16A-25BC	
1Gb	64Mx16	84BGA	N/A	H5PS1G63EFR-C4I	MT47H64M16NF-25E AIT	IS43DR16640B-25DBLI	AS4C64M16D2A-25BAN	BDB64M16A-25BI	
<b>DDR3 1.35V</b>									
1Gb	64Mx16	98BGA	K4B1G1646I-BYK0	H5TC1G63EFR-RG7A	MT41K64M16TW-107	IS43TR16640AL-15GBL	AS4C64M16D3LB-12BCN	BDC64M16LA-12BC	
1Gb	64Mx16	98BGA	K4B1G1646I-BFMA	H5TC1G63EFR-G7I	MT41K64M16TW-107 AIT	IS43TR16640AL-15GBLI	AS4C64M16D3LB-12BIN	BDC64M16LA-12BI	
2Gb	128Mx16	98BGA	K4B2G1646F-BYK0	H5TC2G63DFFR-G7A	MT41K128M16JT-107	IS43TR16128AL-187FBL	AS4C128M16D3LB-12BCN	BDC128M16LA-12BC	
2Gb	128Mx16	98BGA	K4B2G1646F-BFMA	H5TC2G63DFFR-G7I	MT41K128M16JT-107 IT	IS43TR16128AL-187FBLI	AS4C128M16D3LB-12BIN	BDC128M16LA-12BI	
4Gb	256Mx16	98BGA	K4B4G1646D-BYH9	H5TC4G63AFFR-H9A	MT41K256M16HA-125	IS43TR16256AL-187FBL	AS4C256M16D3LB-12BCN	BDC256M16LA-12BC	
4Gb	256Mx16	98BGA	K4B4G1646D-BFMA	N/A	MT41K256M16HA-125 AIT	IS43TR16256AL-187FBLI	AS4C256M16D3LB-12BAN	BDC256M16LA-12BI	
<b>DDR3 1.5V</b>									
1Gb	64Mx16	98BGA	K4B1G1646I-BCK0	H5TQ1G63DFFR-G7C	MT41J64M16TW-093	IS43TR16640A-15GBL	AS4C64M16D3B-12BCN	BDC64M16A-12BC	
1Gb	64Mx16	98BGA	N/A	H5TQ1G63DFFR-G7I	N/A	IS43TR16640A-15GBLI	AS4C64M16D3B-12BIN	BDC64M16A-12BI	
2Gb	128Mx16	98BGA	K4B2G1646F-BCK0	H5TQ2G63DFFR-G7C	MT41J128M16JT-125	IS43TR16128AL-187FBL	AS4C128M16D3B-12BCN	BDC128M16A-12BC	
2Gb	128Mx16	98BGA	N/A	H5TQ2G63DFFR-G7I	N/A	IS43TR16128AL-187FBLI	N/A	BDC128M16A-12BI	
4Gb	256Mx16	98BGA	K4B4G1646D-BCH9	H5TQ4G63AFFR-H9C	MT41J256M16LY-091G	IS43TR16256AL-187FBL	AS4C256M16D3B-12BCN	BDC256M16A-12BC	
4Gb	256Mx16	98BGA	N/A	N/A	N/A	IS43TR16256AL-187FBLI	AS4C256M16D3B-12BIN	BDC256M16A-12BI	



Industrial



Health Care



Transportation



Smart City



Communication



Digital Imaging