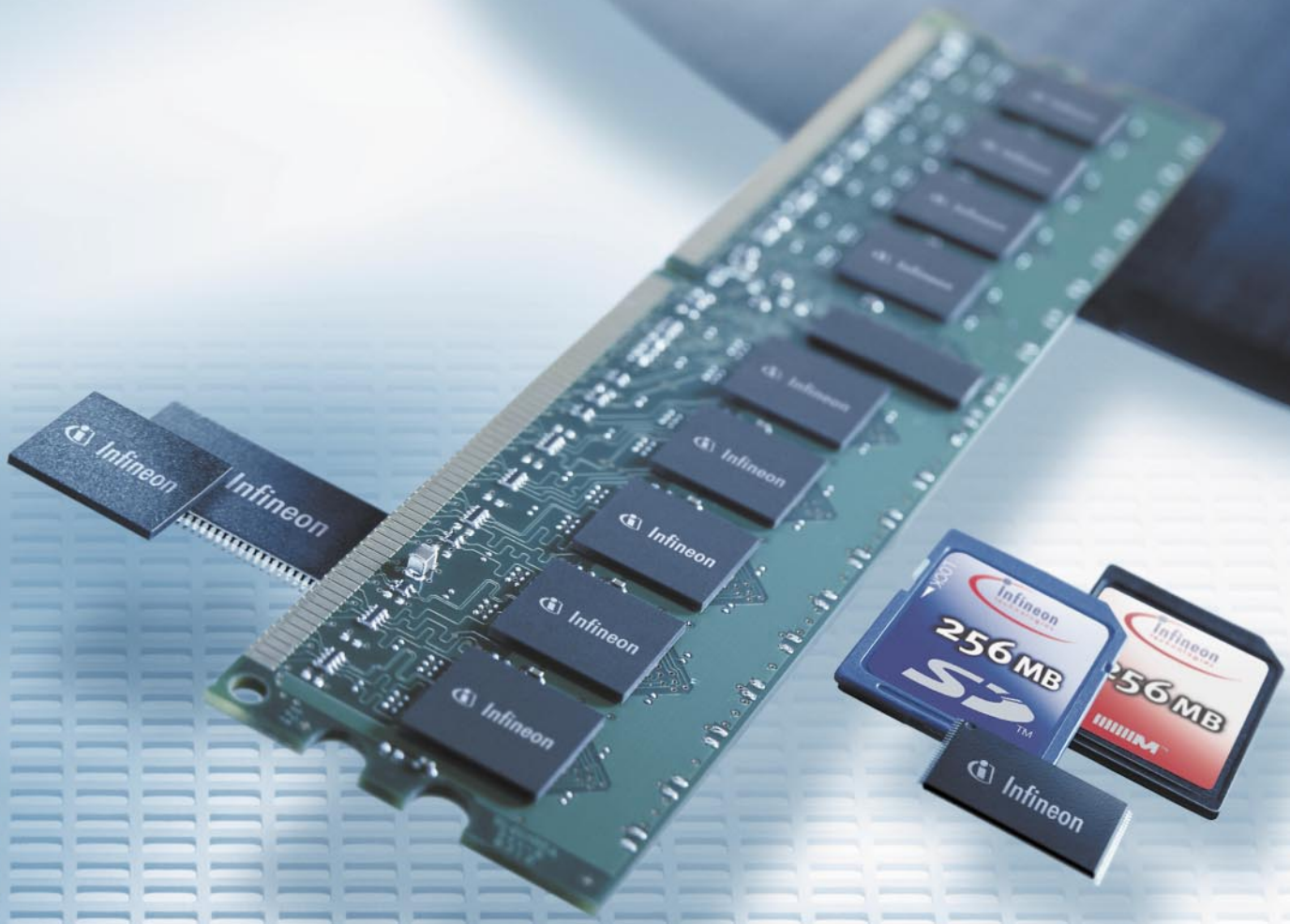
MEMORY SPECTRUM



www.infineon.com/memory
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Infineon technologies

Never stop thinking.

Introduction

APRIL 2004. This edition of Memory Spectrum has been developed to enable you to easily view the entire range of Infineon's memory products. For more related product information and the latest datasheets, please visit our websites: www.infineon.com/memory and www.infineon.com/memory/flash.

Technology and Trends

As a leading memory products supplier, Infineon continues to expand its portfolio with the recent introduction of:

- DDR400 Components and DIMMs (PC3200)
- 2 GB DDR2 Unbuffered DIMM
- 4 GB DDR2 Registered DIMM
- 16 Mb and 32 Mb CellularRAM
- 512 Mb Mobile-RAM
- "Green**", DRAM Components and Modules
- 512 Mb and 1 Gb TwinNAND Components
- SD Cards / MultiMediaCards

** Lead & Halogen-Free

DRAM Components

Double Data Rate (DDR / DDR2) and Single Data Rate (SDR). Synchronous Dynamic Random Access Memory.

	16 Mb	32 Mb	128 Mb	256 Mb	512 Mb	1 Gb
DDR DRAMs			+	+	+	
DDR2 DRAMs				+	+	+
SDR DRAMs			+	+	+	
Reduced Latency (RLDRAM™)				+		
Graphics RAM			+	+		
Mobile-RAM			+	+	+	
CellularRAM™	+	+				

DRAM Modules

Double Data Rate (DDR / DDR2), Dual Inline Memory Modules (DIMMs).

	64 MB	128 MB	256 MB	512 MB	1 GB	2 GB	4 GB
Unbuffered DDR		+	+	+	+		
Registered DDR		+	+	+	+		
Registered DDR Reduced Height		+	+	+	+	+	
SO-DIMM DDR		+	+	+	+		
Unbuffered DDR2			+	+	+	+	
Registered DDR2			+	+	+	+	+
SO-DIMM DDR2			+	+	+	+	

Single Data Rate (SDR), Dual Inline Memory Modules (DIMMs).

	64 MB	128 MB	256 MB	512 MB	1 GB	2 GB	4 GB
Unbuffered SDR		+	+	+			
Registered SDR		+	+	+	+		
SO-DIMM SDR		+	+	+			

Flash Components

Thin Small Outline Package (TSOP).

	64 Mb	128 Mb	256 Mb	512 Mb	1 Gb	2 Gb	4 Gb
TwinFlash™				+	+		

Flash Cards

MultiMediaCards and SD Cards.

	64 MB	128 MB	256 MB	512 MB	1 GB	2 GB	4 GB
MultiMediaCards	+	+	+				
SD Cards	+	+	+				

RLDRAM™ and CellularRAM™ are registered trademarks of Infineon Technologies AG. TwinFlash™ is a trademark of Infineon Technologies AG, based on Saifun NROM technology.

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DRAM Components

Nomenclature DRAM Components

HYB 25 D 128 80 o C T - 6 (Example)

Speed/Performance	3	=	DDR2-667 4-4-4	(DDR2)
	3.7	=	DDR2-533 4-4-4	(DDR2)
	5	=	DDR2-400 3-3-3/DDR400B 3-3-3	(DDR2/DDR)
	6	=	DDR333 2.5-3-3/PC166 3-3-3	(DDR/SDR)
	7	=	DDR266A 2-3-3/PC133 2-2-2	(DDR/SDR)
	7F	=	DDR266 2-2-2	(DDR)
	7.5	=	DDR266B 2.5-3-3/PC133 3-3-3	(DDR/SDR)
	8	=	DDR200 2-2-2/PC100 2-2-2	(DDR/SDR)
Power	none	=	Standard Power	
	L	=	Low-Power Product	
Package	C	=	FBGA	Contains Lead
	T	=	TSOP 400 mil	Contains Lead
	E	=	TSOP 400 mil	Lead and Halogen-Free (ROHS*-compliant)
	F	=	FBGA	Lead and Halogen-Free (ROHS*-compliant)
	G	=	TSOP stack	Lead and Halogen-Free (ROHS*-compliant)
Product Revision	Die Revision			
Product Variation	o	=	Standard Product	
Organization	40	=	x 4	
	80	=	x 8	
	16	=	x 16	
Memory Density	128	=	128 Mb	
	256	=	256 Mb	
	512	=	512 Mb	
	1G	=	1024 Mb	
Memory Type	S	=	SDR	Single Data Rate SDRAM
	D	=	DDR	Double Data Rate SDRAM
	T	=	DDR2	Double Data Rate 2 SDRAM
Supply Voltage	39	=	3.3 V	
	25	=	2.5 V	
	18	=	1.8 V	
Prefix	HYB	=	Memory Components	

* ROHS = Restriction Of Hazardous Substances



DDR Components

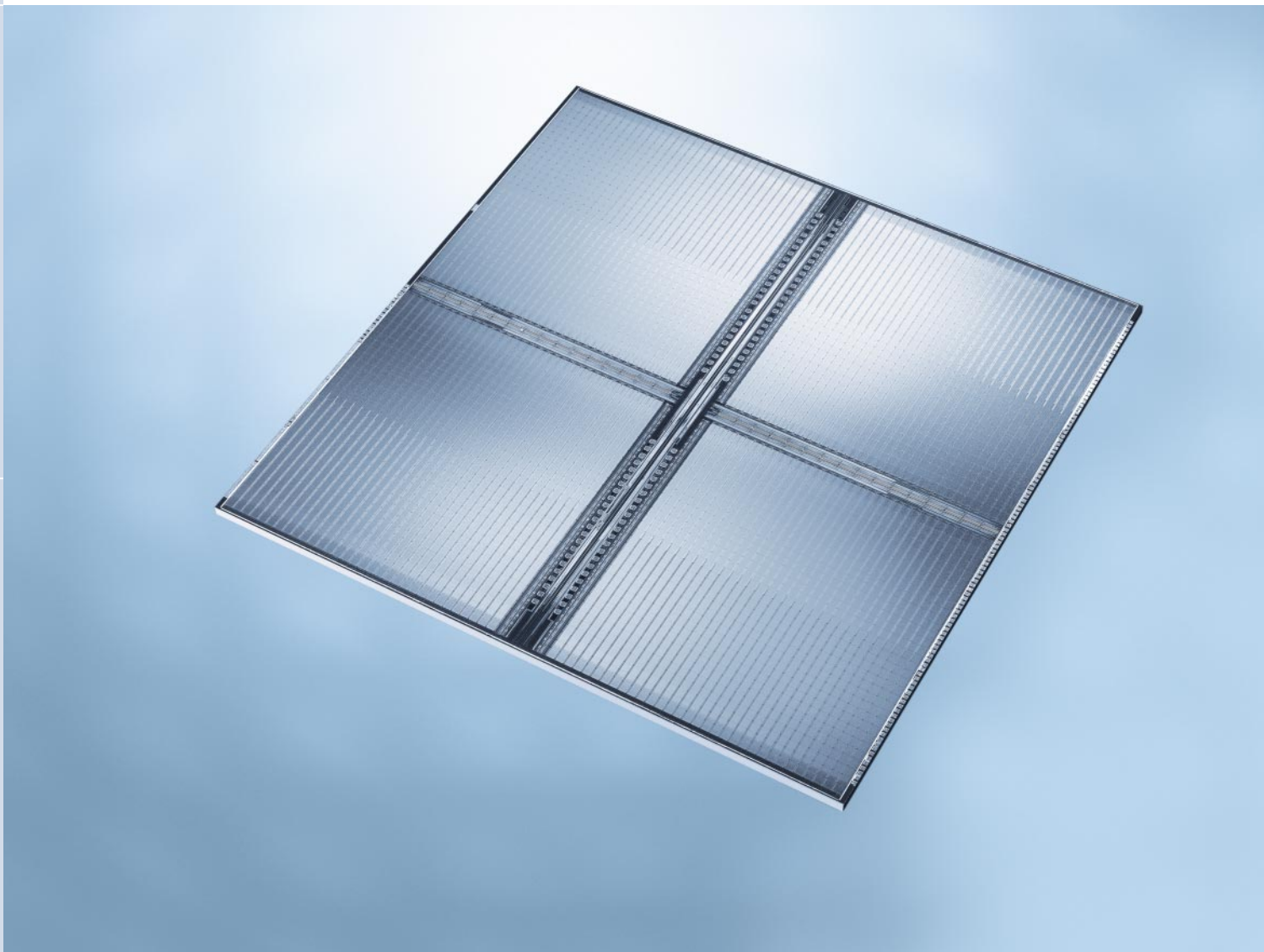
Generation	Organization	Package	Speed	Latency	Sales Description	Speed No.	Ordering Code		Prod.	Green
128 Mb	32 M x 4	TSOP-66 (400 mil)	DDR266A	2-3-3	HYB25D128400AT-	7	Q67100	Q4309	Now	
			DDR333	2.5-3-3	HYB25D128400CE-	6	Q67100	Q1455	2Q04	XX
	16 M x 8	TSOP-66 (400 mil)	DDR266A	2-3-3	HYB25D128800AT-	7	Q67100	Q4311	Now	
			DDR333	2.5-3-3	HYB25D128800CE-	6	Q67100	Q1459	2Q04	XX
	8 M x 16	TSOP-66 (400 mil)	DDR266A	2-3-3	HYB25D128160AT-	7	Q67100	Q4313	Now	
			DDR333	2.5-3-3		6	Q67100	Q5044		
			DDR333	2.5-3-3	HYB25D128160CE-	6	Q67100	Q1458	2Q04	XX
256 Mb	64 M x 4	TSOP-66 (400 mil)	DDR266A	2-3-3	HYB25D256400BT-	7	Q67100	Q4587	Now	
			DDR266	2-2-2		7F	Q67100	Q4880		
			DDR266A	2-3-3	HYB25D256400CE-	7	Q67100	Q5049	Now	XX
	32 M x 8	TSOP-66 (400 mil)	DDR333	2.5-3-3	HYB25D256800BT-	6	Q67100	Q4589	Now	
			DDR400	3-3-3		5	Q67100	Q4275		
			DDR333	2.5-3-3	HYB25D256800CE-	6	Q67100	Q5051	Now	XX
			DDR333	2.5-3-3	HYB25D256800CEL-	6	Q67100	Q1753	Now	XX
			DDR400	3-3-3	HYB25D256800CE-	5	Q67100	Q5180	Now	XX
	16 M x 16	TSOP-66 (400 mil)	DDR266A	2-3-3	HYB25D256160BT-	7	Q67100	Q4593	Now	
			DDR333	2.5-3-3		6	Q67100	Q4592		
			DDR400	3-3-3		5	Q67100	Q4277		
			DDR333	2.5-3-3	HYB25D256160CE-	6	Q67100	Q5045	Now	XX
			DDR400	3-3-3		5	Q67100	Q5182	Now	XX
256 Mb FBGA	64 M x 4	FBGA 60 (8 x 12 mm)	DDR266A	2-3-3	HYB25D256400BC-	7	Q67100	Q4615	Now	
			DDR333	2.5-3-3		6	Q67100	Q4614		
			DDR400	3-3-3		5	Q67100	Q1071		
			DDR333	2.5-3-3	HYB25D256400CC-	6	Q67100	Q4764	2Q04	
			DDR400	3-3-3		5	Q67100	Q1418		
	32 M x 8	FBGA 60 (8 x 12 mm)	DDR266A	2-3-3	HYB25D256800BC-	7	Q67100	Q4596	Now	
			DDR333	2.5-3-3		6	Q67100	Q4595		
			DDR333	2.5-3-3	HYB25D256800CF-	6	Q67100	Q4443	2Q04	XX
			DDR333	2.5-3-3	HYB25D256800CC-	6	Q67100	Q4767	2Q04	
			DDR400	3-3-3		5	Q67100	Q1419		
	16 M x 16	FBGA 60 (8 x 12 mm)	DDR266A	2-3-3	HYB25D256160BC-	7	Q67100	Q4599	Now	
			DDR333	2.5-3-3		6	Q67100	Q4598		
			DDR333	2.5-3-3	HYB25D256160CC-	6	Q67100	Q4770	2Q04	

XX = Lead and Halogen-Free

DDR Components

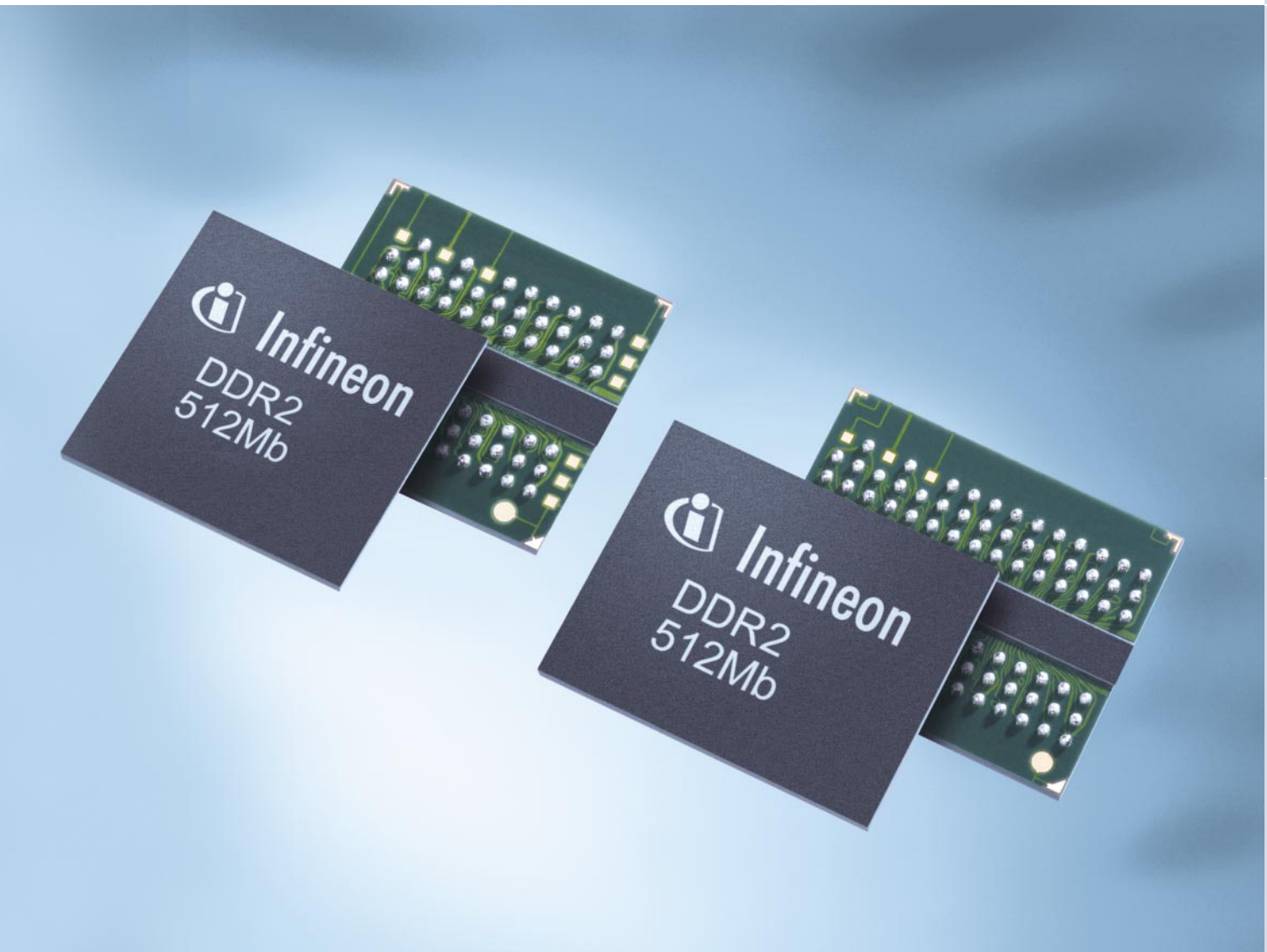
Generation	Organization	Package	Speed	Latency	Sales Description	Speed No.	Ordering Code		Prod.	Green
512 Mb	128 M x 4	TSOP-66 (400 mil)	DDR266A	2-3-3	HYB25D512400AT-	7	Q67100	Q4413	Now	
					HYB25D512400BE-	7	Q67100	Q5202	Now	XX
	256 M x 4	TSOP stack (400 mil)	DDR266A	2-3-3	HYB25D1G400BG-	7	On request			
	64 M x 8	TSOP-66 (400 mil)	DDR266A	2-3-3	HYB25D512800AT-	7	Q67100	Q4412	Now	
			DDR333	2.5-3-3		6	Q67100	Q4415		
			DDR333	2.5-3-3	HYB25D512800BE-	6	Q67100	Q5205	Now	XX
			DDR400	3-3-3		5	Q67100	Q5204		
	32 M x 16	TSOP-66 (400 mil)	DDR266A	2-3-3	HYB25D512160AT-	7	Q67100	Q4411	Now	
			DDR333	2.5-3-3	HYB25D512160AT-	6	Q67100	Q4416	Now	
			DDR333	2.5-3-3	HYB25D512160BE-	6	Q67100	Q5209	Now	XX
			DDR400	3-3-3		5	Q67100	Q5208		
512 Mb FBGA	128 M x 4	FBGA 60 (10 x 12 mm)	DDR333	2.5-3-3	HYB25D512400BC-	6	Q67100	Q1661	Now	
			DDR400	3-3-3		5	Q67100	Q1693		
	64 M x 8	FBGA 60 (10 x 12 mm)	DDR333	2.5-3-3	HYB25D512800BC-	6	Q67100	Q1663	Now	
			DDR333	2.5-3-3	HYB25D512800BF-	6	Q67100	Q5215	Now	XX
			DDR400	3-3-3	HYB25D512800BC-	5	Q67100	Q1451	Now	
			DDR400	3-3-3	HYB25D512800BF-	5	Q67100	Q1452	Now	XX
	32 M x 16	FBGA 60 (10 x 12 mm)	DDR333	2.5-3-3	HYB25D512160BC-	6	Q67100	Q1453	Now	
			DDR400	3-3-3		5	Q67100	Q1454		

XX = Lead and Halogen-Free



DDR2 Components

Generation	Organization	Package	Speed	Latency	Sales Description	Speed No.	Ordering Code		Production	Green
256 Mb	64 M x 4	PTFBGA-60	DDR2 400	3-3-3	HYB18T256400AC-	5	Q67100	Q1314	3Q04	
			DDR2 533	4-4-4		3.7	Q67100	Q1311		
	32 M x 8	PTFBGA-60	DDR2 400	3-3-3	HYB18T256800AC-	5	Q67100	Q1322		
			DDR2 533	4-4-4		3.7	Q67100	Q1320		
	16 M x 16	PTFBGA-84	DDR2 400	3-3-3	HYB18T25616OAC-	5	Q67100	Q1301		
			DDR2 533	4-4-4		3.7	Q67100	Q1293		
512 Mb	128 M x 4	PTFBGA-60	DDR2 400	3-3-3	HYB18T512400AC-	5	Q67100	Q1350	2Q04	
			DDR2 533	4-4-4		3.7	Q67100	Q1349		
	64 M x 8	PTFBGA-60	DDR2 400	3-3-3	HYB18T512800AC-	5	Q67100	Q1354		
			DDR2 533	4-4-4		3.7	Q67100	Q1352		
	32 M x 16	PTFBGA-84	DDR2 400	3-3-3	HYB18T51216OAC-	5	Q67100	Q1347		
			DDR2 533	4-4-4		3.7	Q67100	Q1346		
1 Gb	256 M x 4	PTFBGA-68	DDR2 400	3-3-3	HYB18T1G400AC-	5	Q67100	Q1619	3Q04	
			DDR2 533	4-4-4		3.7	Q67100	Q1618		
	128 M x 8	PTFBGA-68	DDR2 400	3-3-3	HYB18T1G800AC-	5	Q67100	Q1622		
			DDR2 533	4-4-4		3.7	Q67100	Q1621		
	64 M x 16	PTFBGA-92	DDR2 400	3-3-3	HYB18T1G160AC-	5	Q67100	Q1625		
			DDR2 533	4-4-4		3.7	Q67100	Q1624		





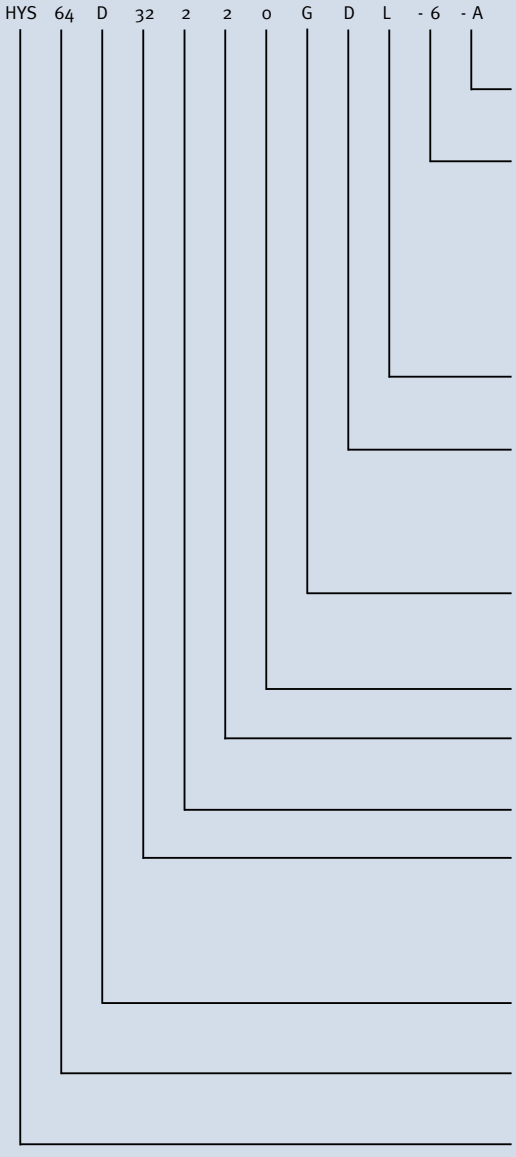
SDR Components

Generation	Organization	Package	Speed	Latency	Sales Description	Speed No.	Ordering Code		Production	Green
128 Mb	32 M x 4	TSOP-54 (400 mil)	PC133	2-2-2	HYB39S128400CT-	7	Q67100	Q4101		
	16 M x 8	TSOP-54 (400 mil)	PC133	2-2-2	HYB39S128800CT-	7	Q67100	Q4107	Now	
	8 M x 16	TSOP-54 (400 mil)	PC133	2-2-2	HYB39S128160CT-	7	Q67100	Q4113		
256 Mb	64 M x 4	TSOP-54 (400 mil)	PC133	2-2-2	HYB39S256400DT-	7	Q67100	Q4330		
	32 M x 8	TSOP-54 (400 mil)	PC133	2-2-2	HYB39S256800DT-	7	Q67100	Q4332	Now	
	16 M x 16	TSOP-54 (400 mil)	PC133	2-2-2	HYB39S256160DT-	7	Q67100	Q4334		
256 Mb FBGA	64 M x 4	FBGA-54 (8 x 12 mm)	PC133	2-2-2	HYB39S256400DC-	7	Q67100	Q4772		
	32 M x 8	FBGA-54 (8 x 12 mm)	PC133	2-2-2	HYB39S256800DC-	7	Q67100	Q4774	Now	
	16 M x 16	FBGA-54 (8 x 12 mm)	PC133	2-2-2	HYB39S256160DC-	7	Q67100	Q4808		
512 Mb	128 M x 4	TSOP-54 (400 mil)	PC133	3-3-3	HYB39S512400AT-	7.5	Q67100	Q4404		
	64 M x 8	TSOP-54 (400 mil)	PC133	3-3-3	HYB39S512800AT-	7.5	Q67100	Q4403	Now	
	32 M x 16	TSOP-54 (400 mil)	PC133	3-3-3	HYB39S512160AT-	7.5	Q67100	Q4402		

DRAM Modules

Nomenclature DDR/DDR2 Modules

Unbuffered DIMM, Registered DIMM (184-pin) and SO-DIMM (200-pin)



Part Number Extension	Component Die Revision Indicator			
Speed	8	=	PC1600 2-2-2	DDR200
	7.5	=	PC2100 2.5-3-3	DDR266B
	7	=	PC2100 2-3-3	DDR266A
	7F	=	PC2100 2-2-2	DDR266
	6	=	PC2700 2.5-3-3	DDR333
	5	=	PC3200 3-3-3 / PC2-3200 3-3-3	DDR400 / DDR2-400
	3.7	=	PC2-4300 4-4-4	DDR2-533
	3	=	PC2-5300 4-4-4	DDR2-667
Power	L	=	Low Power	
	none	=	Standard Power	
Module Family	U	=	Unbuffered DIMM	TSOP-based for DDR / FBGA-based for DDR2
	R	=	Registered DIMM	TSOP-based for DDR / FBGA-based for DDR2
	D	=	SO-DIMM	TSOP-based for DDR / FBGA-based for DDR2
	BD	=	SO-DIMM	FBGA-based
	BR	=	Registered DIMM	FBGA-based
Package Type	G	=	Contains Lead	
	H	=	Lead-Free (ROHS*-compliant)	
	E	=	Lead and Halogen-Free available on request (ROHS*-compliant)	
Designator	Product Variations			
Number of Memory Ranks	0	=	One Memory Module Rank	
	2	=	Two Memory Module Ranks	
Designator	Data Sheet Defined			
Memory Density per DQ	16	=	16 Mb	
	32	=	32 Mb	
	64	=	64 Mb	
	128	=	128 Mb	
	256	=	256 Mb	
Power Supply	D	=	2.5 V (DDR Modules)	
	T	=	1.8 V (DDR2 Modules)	
Data Width	64	=	x 64 (Non-ECC)	
	72	=	x 72 (ECC)	
Prefix	HYS	=	Standard Prefix for SDRAM-based Memory Modules	

*ROHS = Restriction Of Hazardous Substances

DDR Modules

Unbuffered DDR DIMM – 184-pin

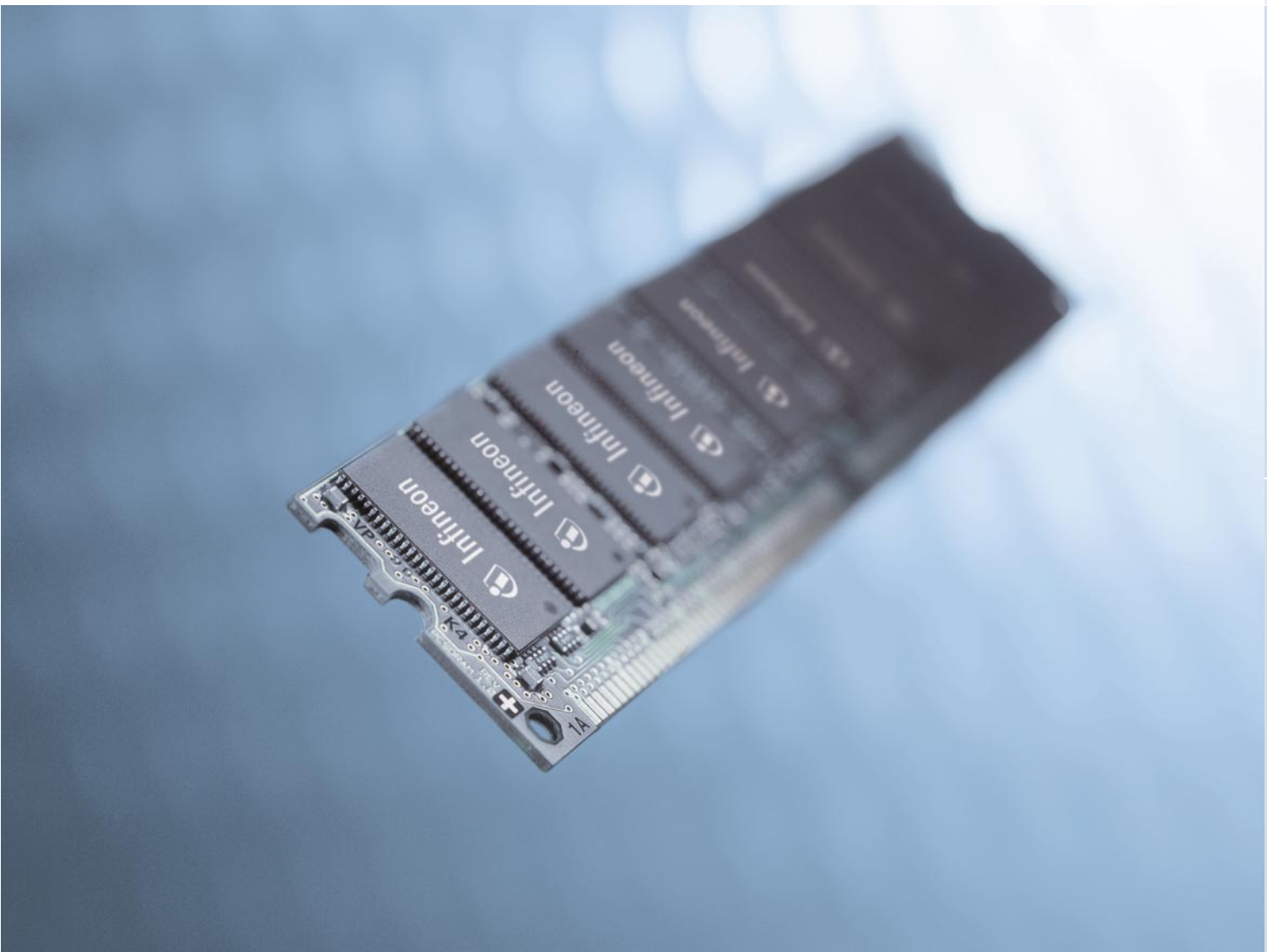
Module Density	Organi-zation	Genera-tion	Compo. Organization	Compo. Package	# of Ranks on Module	Module Height	Module Speed	Sales Description	Speed No.	Ordering Code		Prod.	Green
128 MB	16 M x 64	256 M	16 M x 16	TSOP	1	1.25"	PC2700	HYS64D16301GU-	6-B	Q67100	Q4940	Now	
							PC3200		5-B	Q67100	Q5136		
							PC2700		6-C	Q67100	Q1448		
							PC3200		5-C	Q67100	Q1754		
							PC2700	HYS64D16301HU-	6-C	Q67100	Q4995	Now	X
							PC3200		5-C	Q67100	Q5188		
128 MB ECC	16 M x 72	128 M	16 M x 8	TSOP	1	1.25"	PC2100	HYS72D16000GU-	7-A	Q67100	Q4367	Now	
256 MB	32 M x 64	256 M	32 M x 8	TSOP	1	1.25"	PC2100	HYS64D32000GU-	7-B	Q67100	Q4517	Now	
							PC2700	HYS64D32300GU-	6-B	Q67100	Q4944	Now	
							PC3200		5-B	Q67100	Q5081		
							PC2700		6-C	Q67100	Q5184		
							PC3200		5-C	Q67100	Q1755		
							PC2700	HYS64D32300HU-	6-C	Q67100	Q4996	Now	X
							PC3200		5-C	Q67100	Q5189		
256 MB ECC	32 M x 72	256 M	32 M x 8	TSOP	1	1.25"	PC2100	HYS72D32000GU-	7-B	Q67100	Q4519	Now	
							PC2100-222		7F-B	Q67100	Q5029		
							PC2700	HYS72D32300GU-	6-B	Q67100	Q4946	Now	
							PC3200		5-B	Q67100	Q4957		
							PC2700		6-C	Q67100	Q1768		
							PC3200		5-C	Q67100	Q1756		
							PC2700	HYS72D32300HU-	6-C	Q67100	Q4998	Now	X
							PC3200		5-C	Q67100	Q5191		
512 MB	64 M x 64	256 M	32 M x 8	TSOP	2	1.25"	PC2100	HYS64D64020GU-	7-B	Q67100	Q4521	Now	
							PC2700	HYS64D64320GU-	6-B	Q67100	Q4948	Now	
							PC3200		5-B	Q67100	Q5084		
							PC2700		6-C	Q67100	Q1449		
							PC3200		5-C	Q67100	Q1761		
							PC2700	HYS64D64320HU-	6-C	Q67100	Q5001	Now	X
							PC3200		5-C	Q67100	Q5190		
512 MB ECC	64 M x 72	256 M	32 M x 8	TSOP	2	1.25"	PC2100	HYS72D64020GU-	7-B	Q67100	Q4525	Now	
							PC2100-222		7F-B	Q67100	Q5030		
							PC2700	HYS72D64320GU-	6-B	Q67100	Q4950	Now	
							PC3200		5-B	Q67100	Q4958		
							PC2700		6-C	Q67100	Q1757		
							PC3200		5-C	Q67100	Q1762		
							PC2700	HYS72D64320HU-	6-C	Q67100	Q4997	Now	X
							PC3200		5-C	Q67100	Q5192		

X = Lead-Free

Unbuffered DDR DIMM – 184-pin

Module Density	Organi-zation	Genera-tion	Compo. Organization	Compo. Package	# of Ranks on Module	Module Height	Module Speed	Sales Description	Speed No.	Ordering Code		Prod.	Green
1 GB	128 M x 64	512 M	64 M x 8	TSOP	2	1.25"	PC2100	HYS64D128020GU-	7-A	Q67100	Q4656	Now	
							PC2700		6-A	Q67100	Q4823		
							PC2700	HYS64D128320GU-	6-B	Q67100	Q1779	Now	
							PC3200		5-B	Q67100	Q1780		
							PC2700	HYS64D128320HU-	6-B	Q67100	Q1426	Now	X
							PC3200		5-B	Q67100	Q1427		
1 GB ECC	128 M x 72	512 M	64 M x 8	TSOP	2	1.25"	PC2100	HYS72D128020GU-	7-A	Q67100	Q4658	Now	
							PC2700		6-A	Q67100	Q4935		
							PC2700	HYS72D128320GU-	6-B	Q67100	Q1781	Now	
							PC3200		5-B	Q67100	Q1782		
							PC2700	HYS72D128320HU-	6-B	Q67100	Q1065	Now	X
							PC3200		5-B	Q67100	Q1064		

X = Lead-Free



Registered DDR DIMM (Reduced Height) – 184-pin

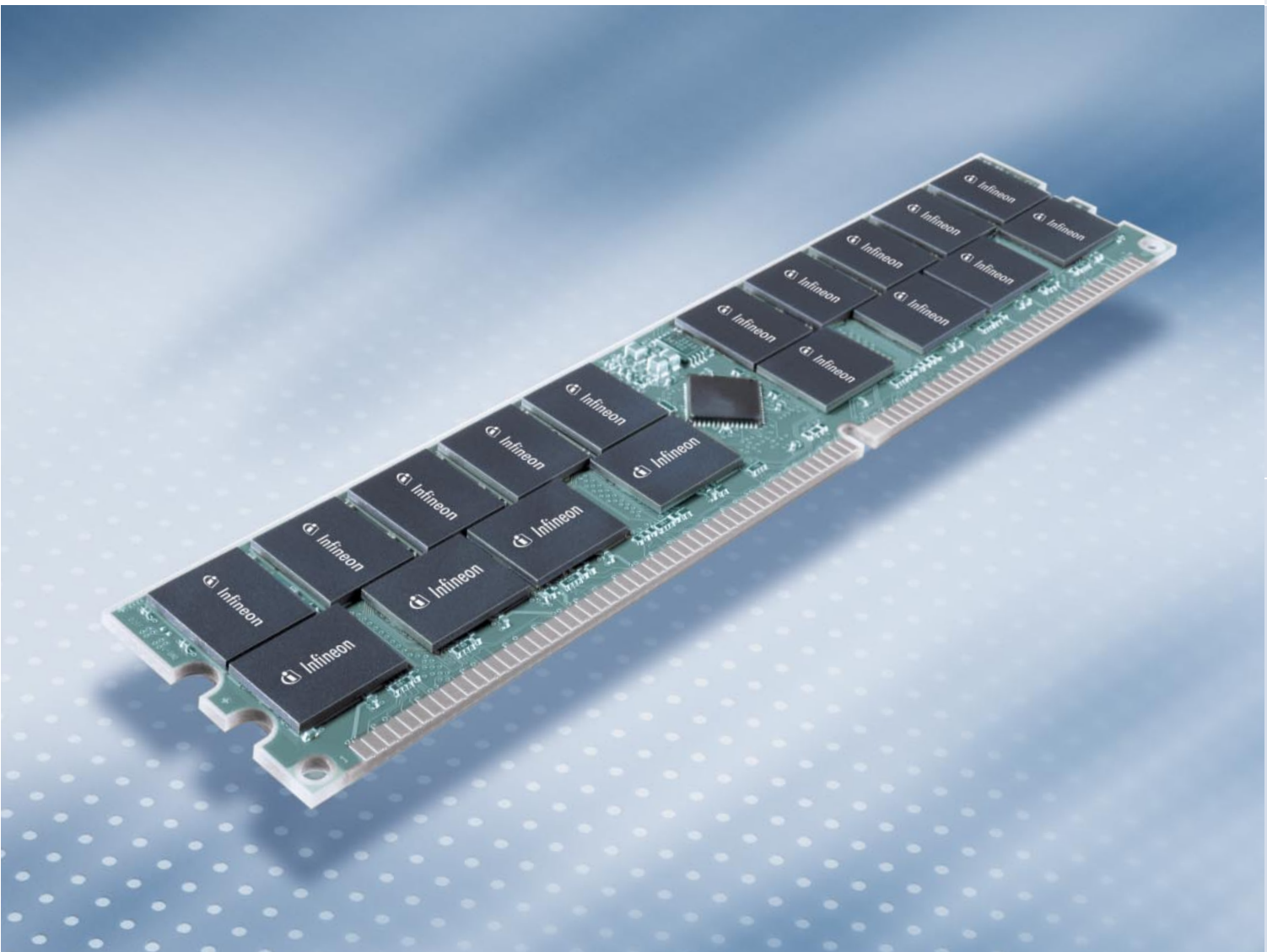
Module Density	Organi-zation	Genera-tion	Compo. Organization	Compo. Package	# of Ranks on Module	Module Height	Module Speed	Sales Description	Speed No.	Ordering Code		Prod.	Green
128 MB	16 M x 72	128 M	16 M x 8	TSOP	1	1.2"	PC2100	HYS72D16500GR-	7-A	Q67100	Q4446	Now	
256 MB	32 M x 72	128M	32 M x 4	TSOP	1	1.2"	PC2100	HYS72D32501GR-	7-A	Q67100	Q4377		
								HYS72D32501HR-	7-C	Q67100	Q1471	3Q04	X
		256 M	32 M x 8	TSOP	1	1.2"	PC2100	HYS72D32500GR-	7-B	Q67100	Q4457		
		256 M	32 M x 8	FBGA	1	1.125"	PC2100	HYS72D32300GBR-	7-B	Q67100	Q4533	Now	
							PC2700		6-B	Q67100	Q4671		
							PC3200		5-B	Q67100	Q1461		
							PC2700		6-C	Q67100	Q1413	2Q04	
							PC3200		5-C	Q67100	Q1673	3Q04	
512 MB	64 M x 72	256 M	64 M x 4	TSOP	1	1.2"	PC2100	HYS72D64500GR-	7-B	Q67100	Q4463		
							PC2100-222		7F-B	Q67100	Q5007		
				FBGA	1	1.125"	PC2100	HYS72D64300GBR-	7-B	Q67100	Q4673	Now	
							PC2700		6-B	Q67100	Q4686		
							PC3200		5-B	Q67100	Q1462		
							PC2700		6-C	Q67100	Q1415	2Q04	
							PC3200		5-C	Q67100	Q1685	3Q04	
			32 M x 8	FBGA	2	1.125"	PC2100	HYS72D64320GBR-	7-B	Q67100	Q4687		
							PC2700		6-B	Q67100	Q4693	Now	
							PC3200		5-B	Q67100	Q1463		
							PC2700		6-C	Q67100	Q1414	2Q04	
							PC3200		5-C	Q67100	Q1684	3Q04	
1 GB	128 M x 72	256 M	128 M x 4	TSOP stack	2	1.2"	PC2100	HYS72D128521GR-	7-B	Q67100	Q4752		
							PC2100-222		7F-B	Q67100	Q5008	Now	
			64 M x 4	FBGA	2	1.2"	PC2100	HYS72D128320GBR-	7-B	Q67100	Q4674		
							PC2700		6-B	Q67100	Q4668		
							PC2700		6-C	Q67100	Q1412	2Q04	
		512 M	128 M x 4	TSOP	1	1.2"	PC2100	HYS72D128500GR-	7-A	Q67100	Q4990	Now	
				FBGA	1	1.125"	PC2100	HYS72D128300GBR-	7-B	Q67100	Q1429		
							PC2700		6-B	Q67100	Q1032	Now	
							PC3200		5-B	Q67100	Q1687		
			64 M x 8	FBGA	2	1.125"	PC2100	HYS72D128321GBR-	7-B	Q67100	Q1422		
							PC2700		6-B	Q67100	Q1043	Now	
							PC3200		5-B	Q67100	Q1686		
2 GB	256 M x 72	512 M	256 M x 4	TSOP stack	2	1.2"	PC2100	HYS72D256520GR-	7-A	Q67100	Q4661	Now	
			128 M x 4	FBGA	2	1.2"	PC2100	HYS72D256320GBR-	7-B	Q67100	Q1031		
							PC2700		6-B	Q67100	Q1030	Now	
							PC3200		5-B	Q67100	Q1689		

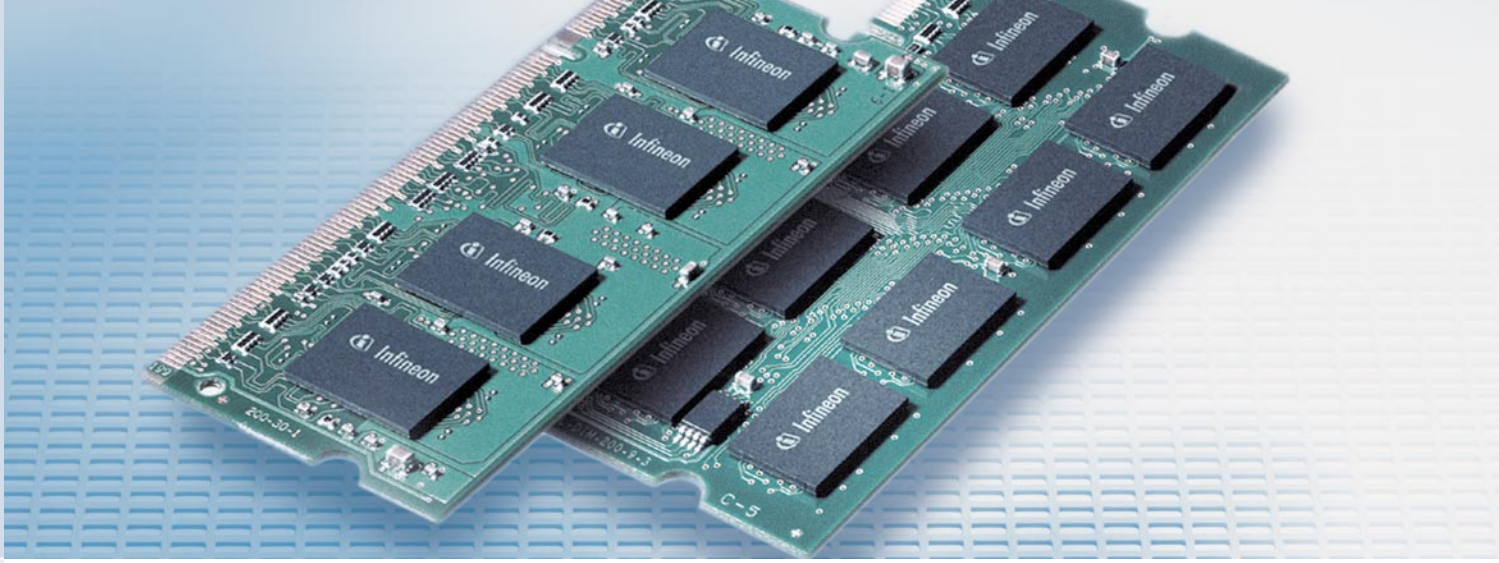
X = Lead-Free

Registered DDR DIMM – 184-pin

Module Density	Organi-zation	Genera-tion	Compo. Organization	Compo. Package	# of Ranks on Module	Module Height	Module Speed	Sales Description	Speed No.	Ordering Code		Prod.	Green
128 MB	16 M x 72	128 M	16 M x 8	TSOP	1	1.7"	PC1600	HYS72D16000GR-	8-A	Q67100	Q4372	EOL	
							PC2100		7-A	Q67100	Q4373		
256 MB	32 M x 72	128 M	32 M x 4	TSOP	1	1.7"	PC1600	HYS72D32001GR-	8-A	Q67100	Q4375	EOL	
							PC2100		7-A	Q67100	Q4378		
		256 M	32 M x 8	TSOP	1	1.7"	PC1600	HYS72D32000GR-	8-B	Q67100	Q4508		
							PC2100		7-B	Q67100	Q4509		
512 MB	64 M x 72	256 M	64 M x 4	TSOP	1	1.7"	PC1600	HYS72D64000GR-	8-B	Q67100	Q4510	EOL	
							PC2100		7-B	Q67100	Q4511		
1 GB	128 M x 72	256 M	128 M x 4	TSOP stack	2	1.7"	PC1600	HYS72D128021GR-	8-B	Q67100	Q4743	EOL	
							PC2100		7-B	Q67100	Q4694		

EOL = End of Life





SO-DIMM DDR – 200-pin

Module Density	Organi-zation	Genera-tion	Compo. Organization	Compo. Package	# of Ranks on Module	Module Height	Module Speed	Sales Description	Speed No.	Ordering Code		Prod.	Green
128 MB	16 M x 64	256 M	16 M x 16	TSOP	1	1,25"	PC2100	HYS64D16001GDL-	7-B	Q67100	Q5179	Now	
							PC2700		6-B	Q67100	Q5187		
							PC2100	HYS64D16000GDL-	7-B	Q67100	Q4531		
							PC2700		6-B	Q67100	Q4670		
							PC2700		6-C	Q67100	Q1763	2Q04	
							PC2700	HYS64D16000HDL-	6-C	Q67100	Q5078	2Q04	X
256 MB	32 M x 64	256 M	16 M x 16	TSOP	2	1,25"	PC2100	HYS64D32020GDL-	7-B	Q67100	Q4454	Now	
							PC2700		6-B	Q67100	Q4667		
							PC3200		5-B	Q67100	Q5227		
							PC2700		6-C	Q67100	Q1767	2Q04	
							PC3200		5-C	Q67100	Q1769		
							PC2700	HYS64D32020HDL-	6-C	Q67100	Q4831	2Q04	X
							PC3200		5-C	Q67100	Q1699		
512 MB	64 M x 64	256M	32 M x 8	FBGA	2	1,25"	PC2100	HYS64D64020GBDL-	7-B	Q67100	Q4680	Now	
							PC2700		6-B	Q67100	Q4681		
							PC3200		5-B	Q67100	Q1193		
							PC2700		6-C	Q67100	Q1450	2Q04	
							PC3200		5-C	Q67100	Q1702		
							PC2700	HYS64D64020HBDL-	6-C	Q67100	Q4835	3Q04	X
		512 M	32 M x 16	TSOP	2	1,25"	PC2100	HYS64D64020GDL-	7-A	Q67100	Q4663	Now	
							PC2700		6-A	Q67100	Q4744		
							PC2700		6-B	Q67100	Q1774		
							PC3200		5-B	Q67100	Q1783		
							PC2700	HYS64D64020HDL-	6-B	Q67100	Q1423	Now	X
							PC3200		5-B	Q67100	Q1698		
1 GB	128 M x 64	512 M	64 M x 8	FBGA	2	1,25"	PC2700	HYS64D128021GBDL-	6-B	Q67100	Q1416	Now	
							PC3200		5-B	Q67100	Q1694		
							PC2700	HYS64D128021HBDL-	6-B	Q67100	Q1028	Now	X
							PC3200		5-B	Q67100	Q1695		

X = Lead-Free

DDR2 Modules

Nomenclature DDR/DDR2 Modules

Unbuffered DIMM, Registered DIMM (240-pin) and SO-DIMM (200-pin)

HYS 64 D 32 2 2 0 G D L - 6 - A (Example)

Part Number Extension	Component Die Revision Indicator			
Speed	8	=	PC1600 2-2-2	DDR200
	7.5	=	PC2100 2.5-3-3	DDR266B
	7	=	PC2100 2-3-3	DDR266A
	7F	=	PC2100 2-2-2	DDR266
	6	=	PC2700 2.5-3-3	DDR333
	5	=	PC3200 3-3-3 / PC2-3200 3-3-3	DDR400 / DDR2-400
	3.7	=	PC2-4300 4-4-4	DDR2-533
	3	=	PC2-5300 4-4-4	DDR2-667
Power	L	=	Low Power	
	none	=	Standard Power	
Module Family	U	=	Unbuffered DIMM	TSOP-based for DDR / FBGA-based for DDR2
	R	=	Registered DIMM	TSOP-based for DDR / FBGA-based for DDR2
	D	=	SO-DIMM	TSOP-based for DDR / FBGA-based for DDR2
	BD	=	SO-DIMM	FBGA-based
	BR	=	Registered DIMM	FBGA-based
Package Type	G	=	Contains Lead	
	H	=	Lead-Free (ROHS*-compliant)	
	E	=	Lead and Halogen-Free available on request (ROHS*-compliant)	
Designator	Product Variations			
Number of Memory Ranks	0	=	One Memory Module Rank	
	2	=	Two Memory Module Ranks	
Designator	Data Sheet Defined			
Memory Density per DQ	16	=	16 Mb	
	32	=	32 Mb	
	64	=	64 Mb	
	128	=	128 Mb	
	256	=	256 Mb	
Power Supply	D	=	2.5 V (DDR Modules)	
	T	=	1.8 V (DDR2 Modules)	
Data Width	64	=	x 64 (Non-ECC)	
	72	=	x 72 (ECC)	
Prefix	HYS	=	Standard Prefix for SDRAM-based Memory Modules	

*ROHS = Restriction Of Hazardous Substances

Unbuffered DDR2 DIMM – 240-pin

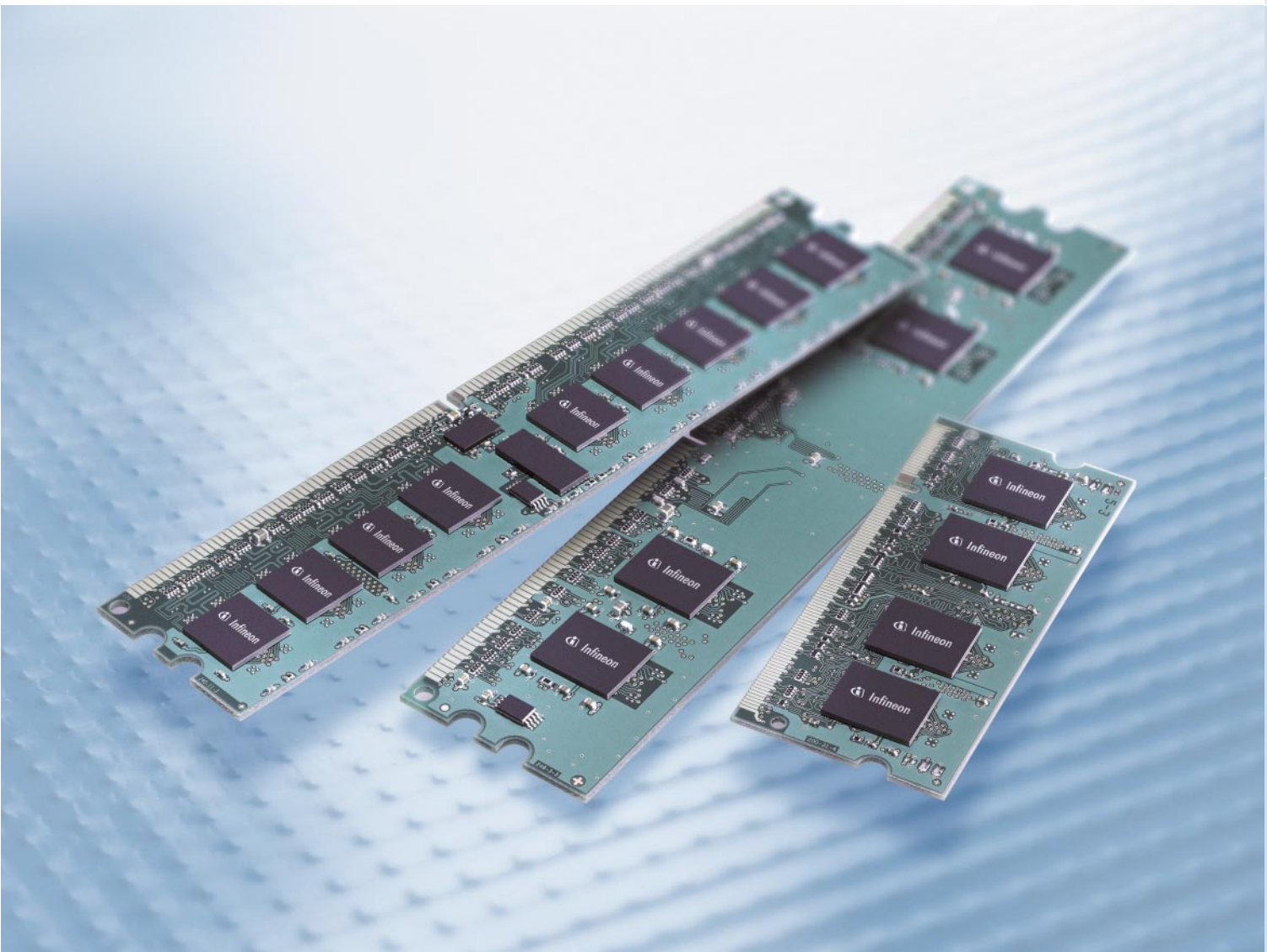
Module Density	Organi-zation	Genera-tion	Compo. Organization	Compo. Package	# of Ranks on Module	Module Height	Module Speed	Sales Description	Speed No.	Ordering Code		Prod.	Green
256 MB	32Mx64	512M	32Mx16	PTFBGA84	1	30 mm	PC2-3200 3-3-3	HYS64T32000GU	5-A	Q67100	Q1386	2Q04	
							PC2-4300 4-4-4		3.7-A	Q67100	Q1387		
256 MB ECC	32 M x 72	256 M	32 M x 8	PTFBGA60	1	30 mm	PC2-3200 3-3-3	HYS72T32000GU-	5-A	Q67100	Q1371	3Q04	
							PC2-4300 4-4-4		3.7-A	Q67100	Q1370		
512 MB	64 M x 64	512 M	64 M x 8	PTFBGA60	1	30 mm	PC2-3200 3-3-3	HYS64T64000GU-	5-A	Q67100	Q1389	2Q04	
							PC2-4300 4-4-4		3.7-A	Q67100	Q1390		
512 MB ECC	64 M x 72	512 M	64 M x 8	PTFBGA60	1	30 mm	PC2-3200 3-3-3	HYS72T64000GU-	5-A	Q67100	Q1392	2Q04	
							PC2-4300 4-4-4		3.7-A	Q67100	Q1393		
1 GB	128 M x 64	512 M	64 M x 8	PTFBGA60	2	30 mm	PC2-3200 3-3-3	HYS64T128020GU-	5-A	Q67100	Q1395	2Q04	
							PC2-4300 4-4-4		3.7-A	Q67100	Q1396		
1 GB ECC	128 M x 72	512 M	64 M x 8	PTFBGA60	2	30 mm	PC2-3200 3-3-3	HYS72T128020GU-	5-A	Q67100	Q1398	2Q04	
							PC2-4300 4-4-4		3.7-A	Q67100	Q1399		
2 GB	256 M x 64	1 G	128 M x 8	PTFBGA68	2	30 mm	PC2-3200 3-3-3	HYS64T256020GU-	5-A	Q67100	Q1739	3Q04	
							PC2-4300 4-4-4		3.7-A	Q67100	Q1740		
2 GB ECC	256 M x 72	1 G	128 M x 8	PTFBGA68	2	30 mm	PC2-3200 3-3-3	HYS72T256020GU-	5-A	Q67100	Q1741	3Q04	
							PC2-4300 4-4-4		3.7-A	Q67100	Q1742		

Registered DDR2 DIMM – 240-pin

Module Density	Organi-zation	Genera-tion	Compo. Organization	Compo. Package	# of Ranks on Module	Module Height	Module Speed	Sales Description	Speed No.	Ordering Code		Prod.	Green
256 MB	32 M x 72	256 M	32 M x 8	PTFBGA60	1	30 mm	PC2-3200 3-3-3	HYS72T32000GR-	5-A	Q67100	Q1326	3Q04	
							PC2-4300 4-4-4		3.7-A	Q67100	Q1330		
512 MB	64 M x 72	256 M	64 M x 4	PTFBGA60	1	30 mm	PC2-3200 3-3-3	HYS72T64001GR-	5-A	Q67100	Q1715	3Q04	
							PC2-4300 4-4-4		3.7-A	Q67100	Q1716		
			32 M x 8	PTFBGA60	2	30 mm	PC2-3200 3-3-3	HYS72T64020GR-	5-A	Q67100	Q1367		
							PC2-4300 4-4-4		3.7-A	Q67100	Q1366		
		512 M	64 M x 8	PTFBGA60	1	30 mm	PC2-3200 3-3-3	HYS72T64000GR-	5-A	Q67100	Q1378	2Q04	
							PC2-4300 4-4-4		3.7-A	Q67100	Q1379		
1 GB	128 M x 72	512 M	128 M x 4	PTFBGA60	1	30 mm	PC2-3200 3-3-3	HYS72T128000GR-	5-A	Q67100	Q1380	2Q04	
							PC2-4300 4-4-4		3.7-A	Q67100	Q1381		
			64 M x 8	PTFBGA60	2	30 mm	PC2-3200 3-3-3	HYS72T128020GR-	5-A	Q67100	Q1382		
							PC2-4300 4-4-4		3.7-A	Q67100	Q1383		
2 GB	256 M x 72	512 M	128 M x 4	PTFBGA60	2	30 mm	PC2-3200 3-3-3	HYS72T256220GR-	5-A	Q67100	Q1891	3Q04	
							PC2-4300 4-4-4	HYS72T256020GR-	3.7-A	Q67100	Q1918		
		1 G	256 M x 4	PTFBGA68	1	30 mm	PC2-3200 3-3-3	HYS72T256000GR-	5-A	Q67100	Q1735		
							PC2-4300 4-4-4		3.7-A	Q67100	Q1736		
4 GB	512 M x 72	1 G	512 M x 4	SDFBGA	2	30 mm	PC2-3200 3-3-3	HYS72T512022GR-	5-A	Q67100	Q1737	1Q05	
							PC2-4300 4-4-4		3.7-A	Q67100	Q1738		

SO-DIMM DDR2 – 200-pin

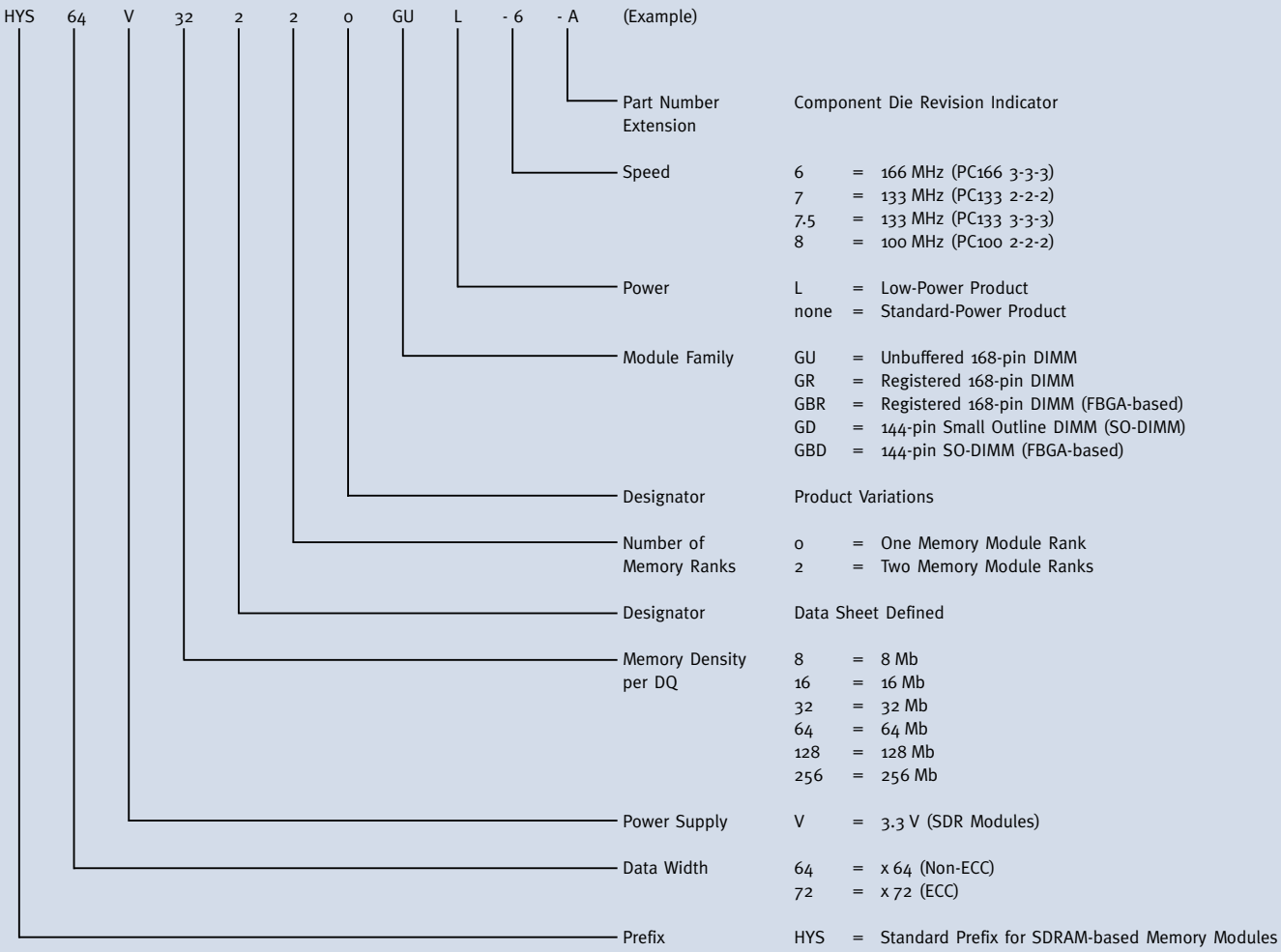
Module Density	Organi-zation	Genera-tion	Compo. Organization	Compo. Package	# of Ranks on Module	Module Height	Module Speed	Sales Description	Speed No.	Ordering Code		Prod.	Green
256 MB	32 M x 64	512 M	32 M x 16	PTFBGA84	1	30 mm	PC2-3200 3-3-3	HYS64T32000GDL-	5-A	Q67100	Q1401	3Q04	
							PC2-4300 4-4-4		3.7-A	Q67100	Q1402		
512 MB	64 M x 64	512 M	32 M x 16	PTFBGA84	2	30 mm	PC2-3200 3-3-3	HYS64T64020GDL-	5-A	Q67100	Q1404	3Q04	
							PC2-4300 4-4-4		3.7-A	Q67100	Q1405		
1 GB	128 M x 64	512 M	128 M x 8	SDFBGA	2	30 mm	PC2-3200 3-3-3	HYS64T128022GDL-	5-A	Q67100	Q1692	3Q04	
							PC2-4300 4-4-4		3.7-A	Q67100	Q1691		
		1 G	64 M x 16	PTFBGA92	2	30 mm	PC2-3200 3-3-3	HYS64T128020GDL-	5-A	Q67100	Q1743		
							PC2-4300 4-4-4		3.7-A	Q67100	Q1744		
2 GB	256 M x 64	1 G	256 M x 8	SDFBGA	2	30 mm	PC2-3200 3-3-3	HYS64T256022GDL-	5-A	Q67100	Q1745	4Q04	
							PC2-4300 4-4-4		3.7-A	Q67100	Q1746		

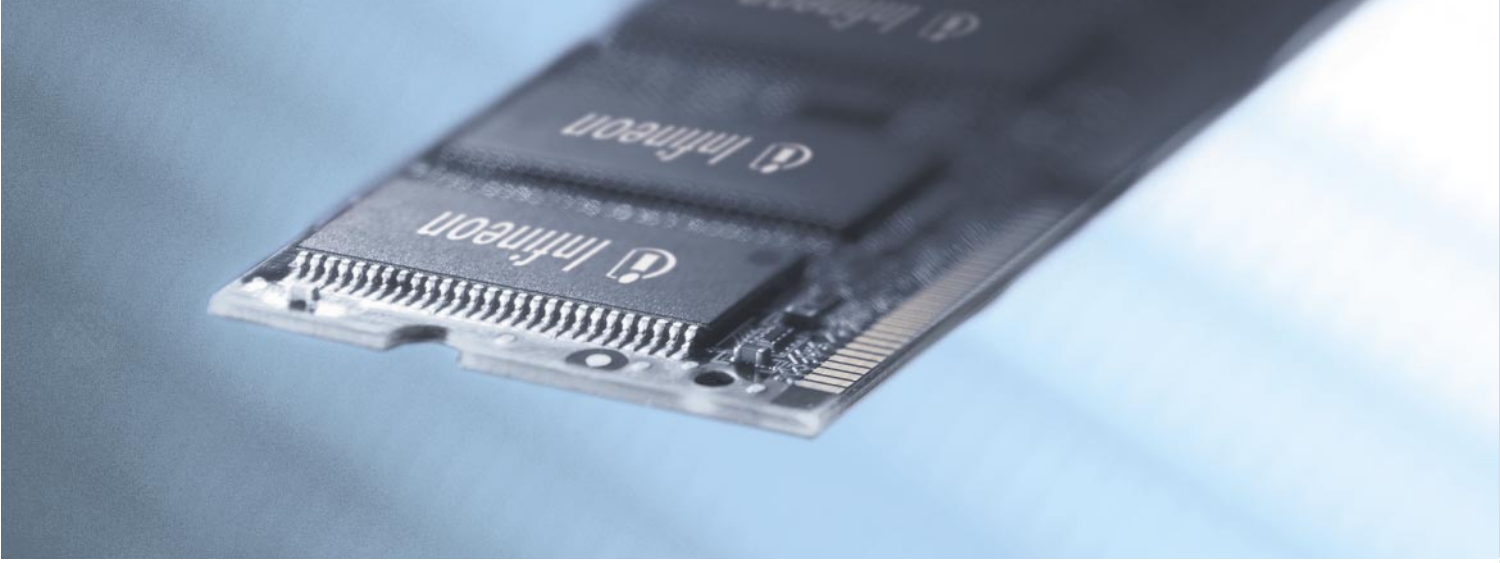


SDR Modules

Nomenclature SDR Modules

Unbuffered DIMM, Registered DIMM (168-pin) and SO-DIMM (144-pin)

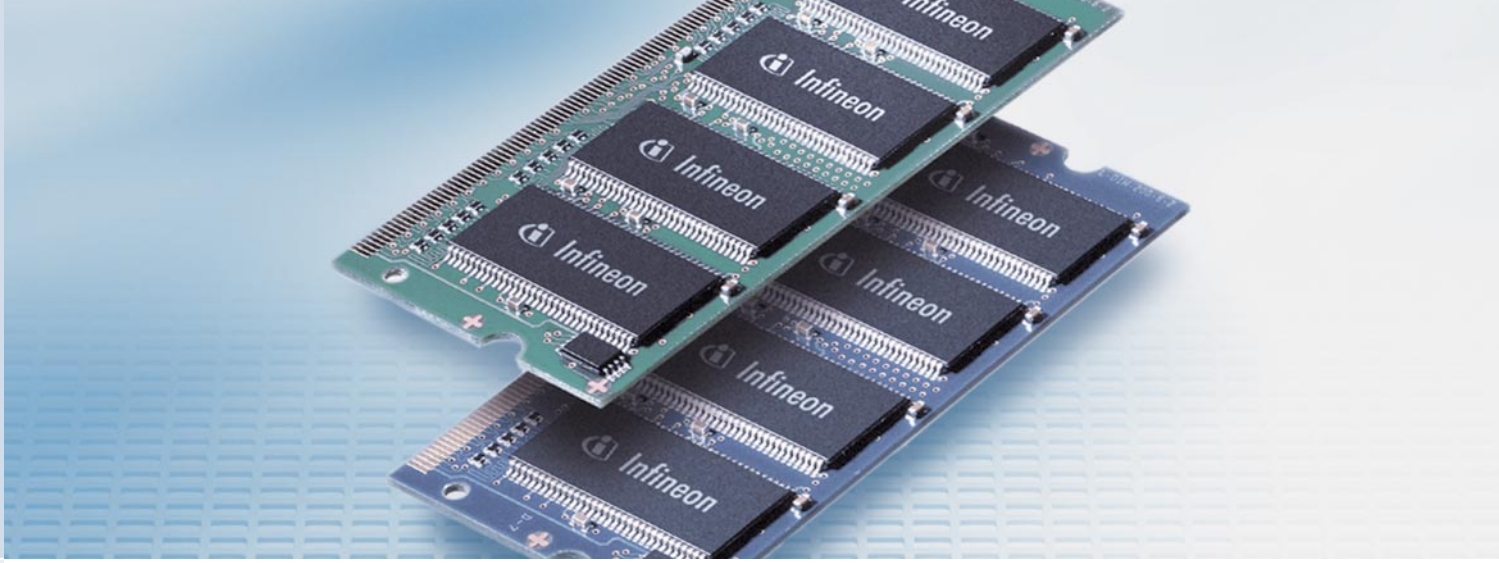




Unbuffered SDR DIMM – 168-pin

Module Density	Organi-zation	Genera-tion	Compo. Organization	Compo. Package	# of Ranks on Module	Module Height	Module Speed	Sales Description	Speed No.	Ordering Code		Prod.	Green
128 MB	16 M x 64	128 M	16 M x 8	TSOP	1	1.25"	PC133 3-3-3	HYS64V16300GU-	7.5-C2	Q67100	Q4079	EOL	
							PC133 2-2-2		7-C2	Q67100	Q4080		
		256 M	16 M x 16	TSOP	1	1.15"	PC133 3-3-3	HYS64V16302GU-	7.5-D	Q67100	Q4466		
							PC133 2-2-2		7-D	Q67100	Q4442		
128 MB ECC	16 M x 72	128 M	16 M x 8	TSOP	1	1.25"	PC133 3-3-3	HYS72V16300GU-	7.5-C2	Q67100	Q4085	EOL	
							PC133 2-2-2		7-C2	Q67100	Q4086		
256 MB	32 M x 64	128 M	16 M x 8	TSOP	2	1.25"	PC133 3-3-3	HYS64V32220GU-	7.5-C2	Q67100	Q4082	EOL	
							PC133 2-2-2		7-C2	Q67100	Q4083		
		256 M	32 M x 8	TSOP	1	1.25"	PC133 3-3-3	HYS64V32300GU-	7.5-D	Q67100	Q4359		
							PC133 2-2-2		7-D	Q67100	Q4361		
256 MB ECC	32 M x 72	128 M	16 M x 8	TSOP	2	1.25"	PC133 3-3-3	HYS72V32220GU-	7.5-C2	Q67100	Q4088	EOL	
							PC133 2-2-2		7-C2	Q67100	Q4089		
		256 M	32 M x 8	TSOP	1	1.25"	PC133 3-3-3	HYS72V32300GU-	7.5-D	Q67100	Q4362		
							PC133 2-2-2		7-D	Q67100	Q4360		
512 MB	64 M x 64	256 M	32 M x 8	TSOP	2	1.25"	PC133 3-3-3	HYS64V64220GU-	7.5-D	Q67100	Q4390	EOL	
							PC133 2-2-2		7-D	Q67100	Q4389		
512 MB ECC	64 M x 72	256 M	32 M x 8	TSOP	2	1.25"	PC133 3-3-3	HYS72V64220GU-	7.5-D	Q67100	Q4387	EOL	
							PC133 2-2-2		7-D	Q67100	Q4388		

EOL = End of Life



Registered SDR DIMM – 168-pin

Module Density	Organi-zation	Genera-tion	Compo. Organization	Compo. Package	# of Ranks on Module	Module Height	Module Speed	Sales Description	Speed No.	Ordering Code		Prod.	Green
128 MB	16 M x 72	128 M	16 M x 8	TSOP	1	1.5"	PC133 3-3-3	HYS72V16301GR-	7.5-C2	Q67100	Q4091	EOL	
							PC133 2-2-2		7-C2	Q67100	Q4092		
256 MB	32 M x 72	128 M	32 M x 4	TSOP	1	1.5"	PC133 3-3-3	HYS72V32301GR-	7.5-C2	Q67100	Q4094	EOL	
		256 M	32 M x 8	TSOP	1	1.5"	PC133 3-3-3	HYS72V32300GR-	7.5-D	Q67100	Q4479		
							PC133 2-2-2		7-D	Q67100	Q4440		
512 MB	64 M x 72	256 M	64 M x 4	TSOP	1	1.5"	PC133 3-3-3	HYS72V64300GR-	7.5-D	Q67100	Q4474	EOL	
							PC133 2-2-2		7-D	Q67100	Q4441		
1 GB	128 M x 72	256 M	128 M x 4	TSOP stack	2	1.5"	PC133 3-3-3	HYS72V128321GR-	7.5-D	Q67100	Q4725	EOL	
							PC133 2-2-2		7-D	Q67100	Q4726		
							PC133 3-3-3	HYS72V128320GR-	7.5-D	Q67100	Q4475		
							PC133 2-2-2		7-D	Q67100	Q4439		

EOL = End of Life

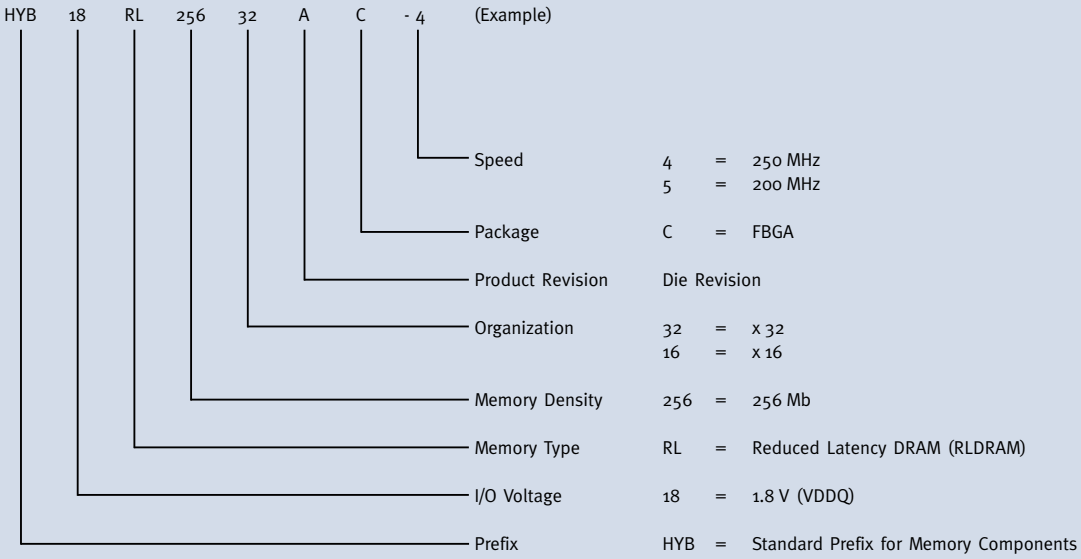
SO-DIMM SDR – 144-pin

Module Density	Organi-zation	Genera-tion	Compo. Organization	Compo. Package	# of Ranks on Module	Module Height	Module Speed	Sales Description	Speed No.	Ordering Code		Prod.	Green
128 MB	16 M x 64	128 M	8 M x 16	TSOP	2	1.00"	PC133 3-3-3	HYS64V16220GDL-	7.5-C2	Q67100	Q4342	EOL	
		256 M	16 M x 16	TSOP	1	1.00"	PC133 3-3-3	HYS64V16200GDL-	7.5-D	Q67100	Q4478		
							PC133 2-2-2		7-D	Q67100	Q4363		
256 MB	32 M x 64	256 M	16 M x 16	TSOP	2	1.00"	PC133 3-3-3	HYS64V32220GDL-	7.5-D	Q67100	Q4472	EOL	
							PC133 2-2-2		7-D	Q67100	Q4444		
512 MB	64 M x 64	256 M	32 M x 8	FBGA	2	1.15"	PC133 3-3-3	HYS64V64220GBDL-	7.5-D	Q67100	Q4499	EOL	
							PC133 2-2-2		7-D	Q67100	Q4501		

EOL = End of Life

Specialty DRAMs

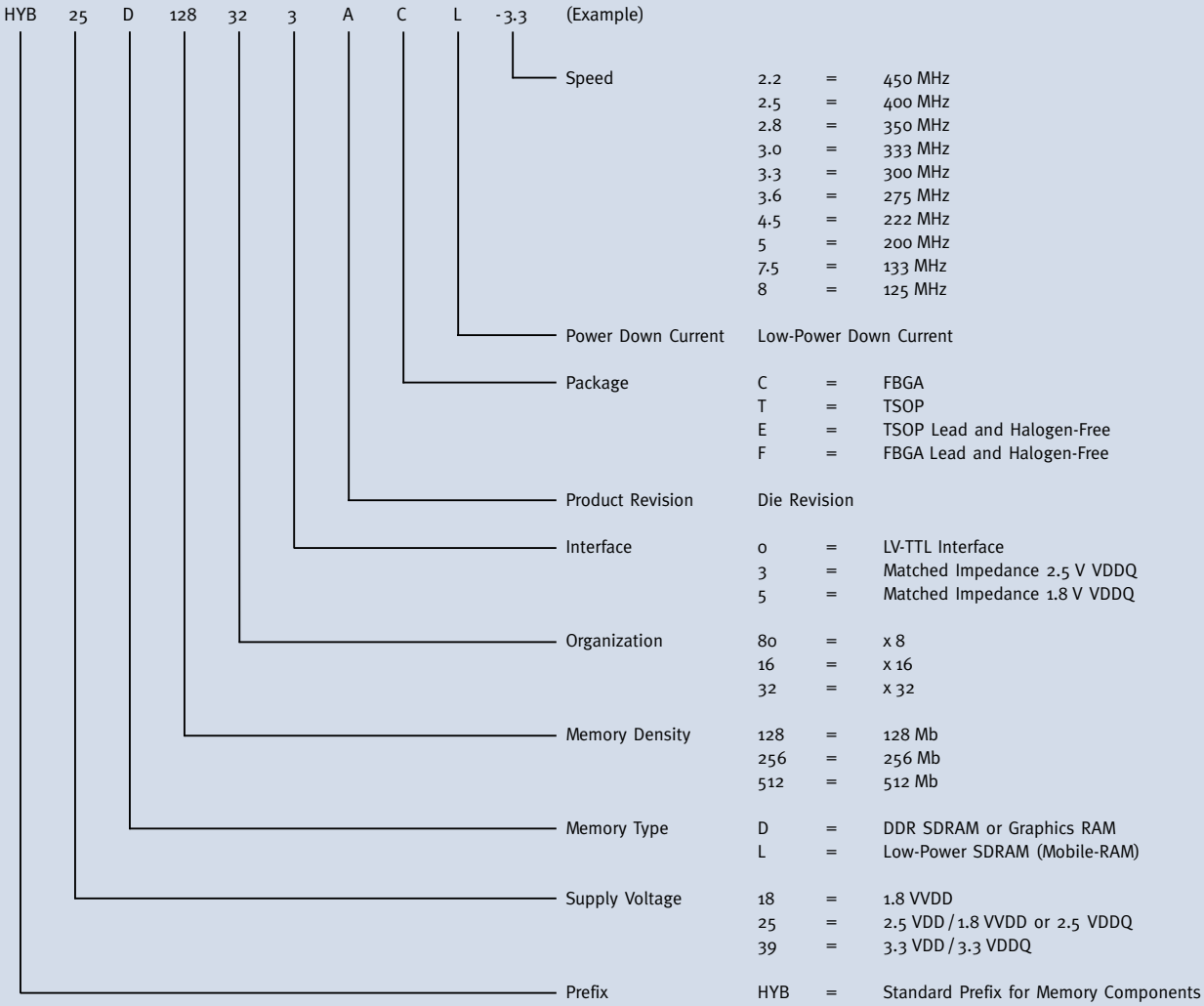
Nomenclature Reduced Latency DRAM (RLDRAM™)



Reduced Latency DRAM (RLDRAM™)

Density	Organization	Power Supply	Speed	Sales Description	Speed No.	Ordering Code		Package	Prod.	Green
256 Mb	8 M x 32	2.5 V / 1.8 V VDDQ	250 MHz	HYB18RL25632AC-	4	Q67100	Q4355	T-FBGA-144	Now	
			200 MHz		5	Q67100	Q4357			
	16 M x 16		250 MHz	HYB18RL25616AC-	4	Q67100	Q4356			
			200 MHz		5	Q67100	Q4358			

Nomenclature Graphics RAM and Mobile-RAM





Graphics RAM

Density	Organization	Power Supply	Speed	Sales Description	Speed No.	Ordering Code		Package	Prod.	Green
128 Mb	4 M x 32	2.5 V	333 MHz	HYB25D128323C-	3.0	Q67100	Q4866	FBGA-144	EOL	
			300 MHz		3.3	Q67100	Q4121			
			275 MHz		3.6	Q67100	Q4348			
				HYB25D128323CL-	3.6	Q67100	Q4930			
			222 MHz	HYB25D128323C-	4.5	Q67100	Q4123			
				HYB25D128323CL-	4.5	Q67100	Q4786			
256 Mb	16 M x 16	2.5 V	166 MHz	HYB25D256160BT-	6.0	Q67100	Q4592	TSOP-66	Now	
			200 MHz		5.0	Q67100	Q4277			
			200 MHz	HYB25D256161CE-	5.0	Q67100	Q1408		Now	XX
			250 MHz		4.0	Q67100	Q1409			
	8 M x 32	1.8 V	500 MHz	HYB18T256321F-	20	Q67100	Q4868	FBGA-144	3Q04	X
			450 MHz		22	Q67100	Q4869			
			400 MHz		25	Q67100	Q4870			

XX = Lead and Halogen-Free X = Lead-Free EOL = End of Life

Mobile-RAM

Density	Organization	Power Supply Core	Power Supply I/O	Speed	Latency	Sales Description	Speed No.	Ordering Code		Package	Prod.	Green
128 Mb	8 M x 16	2.5 V	2.5 V / 1.8 V	133 MHz	3-3-3	HYB25L128160AC-	7.5	Q67100	Q4542	FBGA-54	Now	
						HYE25L128160AC-	7.5 ETR	Q67100	Q4544	FBGA-54		
		3.3 V	3.3 V			HYB39L128160AT-	7.5	Q67100	Q4624	TSOP-54		
						HYB39L128160AC-	7.5	Q67100	Q4546	FBGA-54		
		1.8 V	1.8 V			HYB18L128160BF-	7.5	Q67100	Q1581	FBGA-54	2Q04	XX
						HYB18L128160BC-	7.5	Q67100	Q1588	FBGA-54	2Q04	○
256 Mb	16 M x 16	2.5 V	2.5 V / 1.8 V	133 MHz	3-3-3	HYB25L256160AC-	7.5	Q67100	Q5145	FBGA-54	Now	
						HYE25L256160AC-	7.5 ETR	Q67100	Q5148	FBGA-54		
		3.3 V	3.3 V			HYB39L256160AC-	7.5	Q67100	Q5144	FBGA-54		
						HYB39L256160AT-	7.5	Q67100	Q4627	TSOP-54		
		1.8 V	1.8 V			HYB18L256160BF-	7.5	Q67100	Q1295	FBGA-54	2Q04	XX
						HYB18L256160BC-	7.5	Q67100	Q1577	FBGA-54	2Q04	○
512 Mb	Dual 16 M x 16	3.3 V or 2.5 V	3.3 V or 2.5 V / 1.8 V	133 MHz	3-3-3	HYB25L512160AC-	7.5	Q67100	Q4921	FBGA-54	Now	
						HYE25L512160AC-	7.5 ETR	Q67100	Q4923	FBGA-54		

○ = Halogen-Free XX = Lead and Halogen-Free ETR = Extended Temperature

Nomenclature CellularRAM™



Package	C =	Chip-size Package
	W =	Wafer / Known Good Die
Product Revision	Die Revision	
Interface	o =	Sync / Async / Page
	1 =	Async / Page only
Organization	16 =	x 16
Memory Density	16 =	16 Mb
	32 =	32 Mb
Memory Type	P =	CellularRAM (PSRAM)
Supply Voltage	18 =	1.8 V VDD / 1.8 – 3.0 V VDDQ
Prefix	HYE =	Extended Temperature

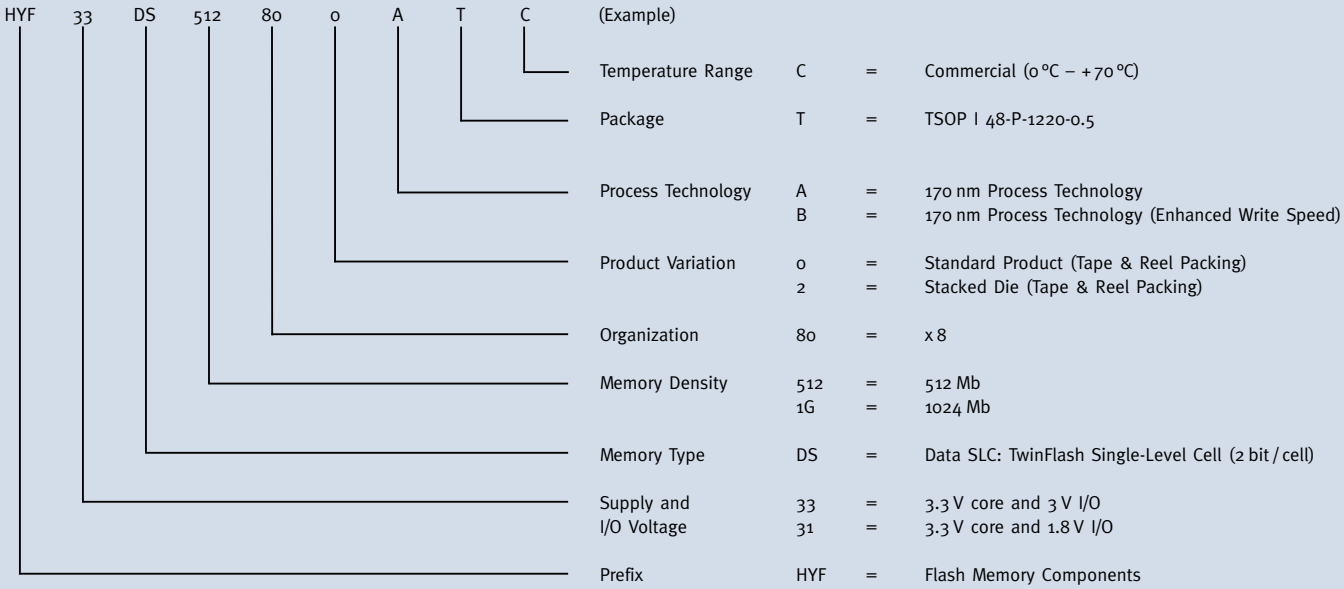
CellularRAM™

Density	Organization	Interface	Speed	Sales Description	Speed No.	Ordering Code		Package	Prod.	Green
16 Mb Async	1 M x 16	SRAM	85 ns	HYE18P16161AC-	85	Q67100	Q5098	VFBGA-48	2Q04	X
			70 ns		70	Q67100	Q5099	VFBGA-48		
			70 ns	HYE18P16161AW-	70	Q67100	Q5101	Wafer / KGD		
32 Mb Async	2 M x 16	SRAM	85 ns	HYE18P32161AC-	85	Q67100	Q5103	VFBGA-48	2Q04	X
			70 ns		70	Q67100	Q5104	VFBGA-48		
			70 ns	HYE18P32161AW-	70	Q67100	Q5106	Wafer / KGD		
32 Mb Sync	2 M x 16	SRAM / Flash	80 MHz / 70 ns	HYE18P32160AC-	12.5	Q67100	Q1802	VFBGA-54	2Q04	X
			66 MHz / 85 ns		15	Q67100	Q5108	VFBGA-54		
			66 MHz / 85 ns	HYE18P32160AW-	15	Q67100	Q5110	Wafer / KGD		

X = Lead-Free

Flash

Nomenclature TwinFlash™ Components



TwinFlash™ Components

Density	Organization	Page Size	Block Size	Core Voltage	I/O Voltage	Write Speed	Sales Description	Ordering Code	Package
512 Mb	64 M x 8	512 + 16 Bytes	16 K + 512 Bytes	3 V	3 V	Normal	HYF33DS512800ATC	On request	P-TSOPI-48
					3 V	Enhanced	HYF33DS512800BTC		
					1.8 V	Enhanced	HYF31DS512800BTC		
1 Gb	128 M x 8	512 + 16 Bytes	16 K + 512 Bytes	3 V	3 V	Normal	HYF33DS1G802ATC	On request	P-TSOPI-48
					3 V	Enhanced	HYF33DS1G802BTC		
					1.8 V	Enhanced	HYF31DS1G802BTC		



Nomenclature TwinFlash™ Cards

HYC 3 N 256 0 NO 5 0 AA 1 A A (Example)

Package	A	=	SD (commercial)
	B	=	MMC (commercial)
	C	=	miniSD (commercial)
	D	=	mini MMC (commercial)
Memory Revision	A	=	170 nm Process Technology
	B	=	110 nm Process Technology
Controller Generation	1	=	1st generation
	2	=	2nd generation
Firmware	AA	=	1st firmware
	AB	=	2nd firmware
Content	0	=	No content
	1	=	Content 1 rev. label
Label Size	0	=	No label
	1	=	16 MB
	2	=	32 MB
	3	=	64 MB
	4	=	128 MB
	5	=	256 MB
	6	=	512 MB
	7	=	1 GB
Label Shortcut	NO	=	No label
	IF	=	IFX label
Speed	0	=	Standard
	1	=	Future use
Memory Capacity	64	=	64 MB
	128	=	128 MB
	256	=	256 MB
	512	=	512 MB
	01G	=	1024 MB
Technology	N	=	TWIN-NAND
Supply Voltage	3	=	3.3 V Core
	1	=	1.8 V Core (Dual-Voltage)
Type	C	=	Flash Card

TwinFlash™ Cards

Card	Density	Operating Voltage	Sales Description	Ordering Code
Multi Media Cards	64 MB	2.7 V – 3.6 V	HYC3N0640NO00AA1AB	On request
	128 MB		HYC3N1280NO00AA1AB	
	256 MB		HYC3N2560NO00AA1AB	
SD Cards	64 MB	2.7 V – 3.6 V	HYC3N0640NO00AA1AA	On request
	128 MB		HYC3N1280NO00AA1AA	
	256 MB		HYC3N2560NO00AA1AA	

More detailed Information on Memory Products is available:

On our Internet websites:
www.infineon.com/memory and www.infineon.com/memory/flash

- Datasheets
- Simulation models
- Memory Spectrum (PDF version)
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