

# Memory Roadmap – DDR3/3L SDRAM 2017-2020


Density	I/O Width	2017		2018				2019				2020			
		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1Gb	x16	1.5V/1.35V, 1600MTPS (FBGA), 3Xnm													
	x8	1.5V/1.35V, 1600MTPS (FBGA), 3Xnm													
2Gb	x16	1.5V/1.35V, 1866/1600MTPS (FBGA), 3Xnm													
	x8	1.5V/1.35V, 1866/1600MTPS (FBGA), 3Xnm													

- MP, Standard Extended Test Operating Temperature: 0°C to 95°C  
 Standard Industrial Operating Temperature: -40°C to 95°C  
 Ultra High Industrial Operating Temperature\*: -40°C to 105°C

\* Contact factory for ultra high temperature

# Memory Roadmap – DDR2 SDRAM 2017-2020


Density		I/O Width	2017		2018				2019				2020			
			Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
512Mb	x16	1.8V, 1066/800MTPS (FBGA), 4Xnm														
	x8	1.8V, 1066/800MTPS (FBGA), 4Xnm														
1Gb	x16	1.8V, 1066/800MTPS (FBGA), 3Xnm														
	x8	1.8V, 1066/800MTPS (FBGA), 3Xnm														
2Gb		x16	1.8V, 1066/800MTPS (FBGA), 4Xnm													
Low Power	1Gb	x32	1.2-1.8V, 400MTPS (FBGA), 3Xnm													
	2Gb	x32	1.2-1.8V, 400MTPS (FBGA), 3Xnm													

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 MP, Standard Extended Test Operating Temperature: 0°C to 85°C  
 Standard Industrial Operating Temperature: -40°C to 95°C  
 Ultra High Industrial Operating Temperature\*: -40°C to 105°C

\* Contact factory for ultra high temperature

# Memory Roadmap – DDR SDRAM 2017-2020


Density		I/O Width	2017		2018				2019				2020					
			Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
256Mb		x16	2.5V, 400MTPS (TSOP-II, FBGA), 6Xnm															
512Mb		x16	2.5V, 500/400MTPS (TSOP-II, FBGA), 4Xnm															
		x8	2.5V, 500/400MTPS (TSOP-II, FBGA), 4Xnm															
Low Power	512Mb	x32	1.7-1.95V, 200/166MTPS (FBGA), 6Xnm															
	1Gb	x32	1.7-1.95V, 200MTPS (FBGA), 4Xnm															

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 MP, Standard Extended Test Operating Temperature: 0°C to 70°C  
 Standard Industrial Operating Temperature: -40°C to 85°C  
 Ultra High Industrial Operating Temperature\*: -40°C to 105°C

\* Contact factory for ultra high temperature

# Memory Roadmap – SDR SDRAM 2017-2020

Density	I/O Width	2017		2018				2019				2020			
		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
16Mb	x16	3.3V, 166MHz (TSOP-II), 6Xnm													
64Mb	x16	3.3V, 200/166MHz (TSOP-II, BGA), 6Xnm													
	x32	3.3V, 200/166MHz (TSOP-II, BGA), 6Xnm													
128Mb	x16	3.3V, 200/166MHz (TSOP-II, BGA), 6Xnm													
	x32	3.3V, 200/166MHz (TSOP-II, BGA), 6Xnm													
256Mb	x8	3.3V, 200/166MHz (TSOP-II, BGA), 6Xnm													
	x16	3.3V, 200/166MHz (TSOP-II, BGA), 6Xnm													
512Mb	x16	3.3V, 200/166MHz (TSOP-II), 6Xnm													

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 MP, Standard Extended Test Operating Temperature: 0°C to 70°C  
 Standard Industrial Operating Temperature: -40°C to 85°C  
 Ultra High Industrial Operating Temperature\*: -40°C to 105°C

\* Contact factory for ultra high temperature