



# Q1'2018 DATABOOK

Rev 0.1

# NAND Flash Memory

## SLC

PRODUCT	TECH.	DENSITY	BLOCK SIZE	STACK	VCC / ORG	PKG.	AVAIL.	REMARK
H27U1G8F2B	4xnm	1Gb	128KB	SDP	3.3V / x8	TSOP/FBGA	Now	-
H27S1G8F2B	4xnm	1Gb	128KB	SDP	1.8V / x8	TSOP/FBGA	Now	-
H27U1G8F2C	3xnm	1Gb	128KB	SDP	3.3V / x8	TSOP/FBGA	Now	-
H27S1G8F2C	3xnm	1Gb	128KB	SDP	1.8V / x8	TSOP/FBGA	Now	-
H27U2G8F2C	4ynm	2Gb	128KB	SDP	3.3V / x8	TSOP	Now	-
H27S2G8F2C	4ynm	2Gb	128KB	SDP	1.8V / x8	TSOP/FBGA	Now	-
H27U2G8F2D	3xnm	2Gb	128KB	SDP	3.3V / x8	TSOP	Now	-
H27S2G8F2D	3xnm	2Gb	128KB	SDP	1.8V / x8	TSOP	Now	-
H27U4G8F2D	4ynm	4Gb	128KB	SDP	3.3V / x8	TSOP	Now	-
H27U4G8F2E	3xnm	4Gb	128KB	SDP	3.3V / x8	TSOP	Now	-
H27S4G8F2E	3xnm	4Gb	128KB	SDP	1.8V / x8	TSOP	Now	-
H27U4G(O/8)F2G	1xnm	4Gb	256KB/128KB	SDP	3.3V / x8	TSOP	Q1'18	O:4KB/8:2KB
H27U8G(O/8)G5G	1xnm	4Gb	256KB/128KB	DDP	3.3V / x8	TSOP	Q1'18	O:4KB/8:2KB

# NAND Flash Memory

## MLC

PRODUCT	TECH.	DENSITY	BLOCK SIZE	STACK	VCC / ORG	PKG.	AVAIL.	REMARK
H27QCG8T2E	1xnm	64Gb	4MB	SDP	3.3V / x8	FBGA(132ball)	Now	HS(Toggle2.0)
H27QDG8UDE	1xnm	128Gb	4MB	DDP	3.3V / x8	FBGA(132ball)	Now	HS(Toggle2.0)
H27QEG8VEE	1xnm	256Gb	4MB	QDP	3.3V / x8	FBGA(132ball)	Now	HS(Toggle2.0)
H27QFG8YEE	1xnm	512Gb	4MB	ODP	3.3V / x8	FBGA(132ball)	Now	HS(Toggle2.0)
H27QCG8T2F	1xnm	64Gb	4MB	SDP	3.3V / x8	FBGA(132ball)	Now	HS(Toggle2.0)
H27QDG8UDF	1xnm	128Gb	4MB	DDP	3.3V / x8	FBGA(132ball)	Now	HS(Toggle2.0)
H27QEG8VEF	1xnm	256Gb	4MB	QDP	3.3V / x8	FBGA(132ball)	Now	HS(Toggle2.0)
H27QFG8YEF	1xnm	512Gb	4MB	ODP	3.3V / x8	FBGA(132ball)	Now	HS(Toggle2.0)
H27QDG8T2B	1xnm	128Gb	4MB	SDP	3.3V / x8	FBGA(132ball)	Now	HS(Toggle2.0)
H27QEG8UDB	1xnm	256Gb	4MB	DDP	3.3V / x8	FBGA(132ball)	Now	HS(Toggle2.0)
H27QFG8VEB	1xnm	512Gb	4MB	QDP	3.3V / x8	FBGA(132ball)	Now	HS(Toggle2.0)
H27Q1T8YEB	1xnm	1024Gb	4MB	ODP	3.3V / x8	FBGA(132ball)	Now	HS(Toggle2.0)
H27QFG8VQB	1xnm	512Gb	4MB	QDP	3.3V / x8	FBGA(132ball)	Now	HS(Toggle2.0)
H27Q1T8YQB	1xnm	1024Gb	4MB	ODP	3.3V / x8	FBGA(132ball)	Now	HS(Toggle2.0)
H27Q2T8CQB	1xnm	2048Gb	4MB	16DP	3.3V / x8	FBGA(132ball)	Now	HS(Toggle2.0)
H27QFG84EB	1xnm	512Gb	4MB	QDP	3.3V / x8	FBGA(132ball)	Now	HS(Toggle2.0)
H27Q1T85EB	1xnm	1024Gb	4MB	ODP	3.3V / x8	FBGA(132ball)	Now	HS(Toggle2.0)
H27Q2T87EB	1xnm	2048Gb	4MB	16DP	3.3V / x8	FBGA(132ball)	Now	HS(Toggle2.0)
H27QFG8PEM	1xnm	512Gb	4MB	QDP	3.3V / x8	FBGA(132ball)	Now	HS(Toggle2.0)
H27Q1T8QEM	1xnm	1024Gb	4MB	ODP	3.3V / x8	FBGA(132ball)	Now	HS(Toggle2.0)
H27QCG882M	1xnm	64Gb	6MB	SDP	3.3V / x8	FBGA(132ball)	Now	HS(Toggle2.0)
H27QDG89DM	1xnm	128Gb	6MB	DDP	3.3V / x8	FBGA(132ball)	Now	HS(Toggle2.0)
H27TDG8T2D	1ynm	128Gb	6MB	SDP	3.3V / x8	FBGA(152ball)	Now	HS(Toggle2.0)
H27TEG8U5D	1ynm	256Gb	6MB	DDP	3.3V / x8	FBGA(152ball)	Now	HS(Toggle2.0)
H27TFG8VFD	1ynm	512Gb	6MB	QDP	3.3V / x8	FBGA(152ball)	Now	HS(Toggle2.0)
H27QDG8T2C	3D-V2	128Gb	9MB	SDP	3.3V / x8	FBGA(152ball)	Now	HS(Toggle2.0)
H27QEG8UDC	3D-V2	256Gb	9MB	DDP	3.3V / x8	FBGA(152ball)	Now	HS(Toggle2.0)
H27QFG8VEC	3D-V2	512Gb	9MB	QDP	3.3V / x8	FBGA(152ball)	Now	HS(Toggle2.0)
H27Q1T8YEC	3D-V2	1024Gb	9MB	ODP	3.3V / x8	FBGA(152ball)	Now	HS(Toggle2.0)
H27Q2T8CEC	3D-V2	2048Gb	9MB	16DP	3.3V / x8	FBGA(152ball)	Now	HS(Toggle2.0)
H25QEM8A1B	3D-V4	256Gb	19MB	SDP	3.3V / x8	FBGA(152ball)	Q4'18	HS(Toggle2.0)

# NAND Flash Memory

## TLC

PRODUCT	TECH.	DENSITY	BLOCK SIZE	STACK	VCC / ORG	PKG.	AVAIL.	REMARK
H27QDG8M2M	1xnm	128Gb	4MB	SDP	3.3V / x8	FBGA(132ball)	Now	HS(Toggle2.0)
H27QEG8NDM	1xnm	256Gb	4MB	DDP	3.3V / x8	FBGA(132ball)	Now	HS(Toggle2.0)
H27QFG8PEM	1xnm	512Gb	4MB	QDP	3.3V / x8	FBGA(132ball)	Now	HS(Toggle2.0)
H27Q1T8QEEM	1xnm	1Tb	4MB	ODP	3.3V / x8	FBGA(132ball)	Now	HS(Toggle2.0)
H27QCG882M	1xnm	64Gb	6MB	SDP	3.3V / x8	FBGA(132ball)	Now	HS(Toggle2.0)
H27QDG8M2B	1ynm	128Gb	6MB	SDP	3.3V / x8	FBGA(132ball)	Now	HS(Toggle2.0)
H27QEG8NDB	1ynm	128Gb	6MB	DDP	3.3V / x8	FBGA(132ball)	Now	HS(Toggle2.0)
H27QFG8PEB	1ynm	128Gb	6MB	QDP	3.3V / x8	FBGA(132ball)	Now	HS(Toggle2.0)
H27QEG8M2A	3D-V4	256Gb	13.5MB	SDP	3.3V / x8	FBGA(152ball)	Now	HS(Toggle2.0)
H27QFG8NDA	3D-V4	512Gb	13.5MB	DDP	3.3V / x8	FBGA(152ball)	Now	HS(Toggle2.0)
H27Q1T8PEA	3D-V4	1024Gb	13.5MB	QDP	3.3V / x8	FBGA(152ball)	Now	HS(Toggle2.0)
H27Q2T8QEA	3D-V4	2048Gb	13.5MB	ODP	3.3V / x8	FBGA(152ball)	Now	HS(Toggle2.0)
H27Q2T8QAA	3D-V4	2048Gb	13.5MB	ODP	3.3V / x8	FBGA(152ball)	Now	HS(Toggle2.0)
H27Q4T8LEA	3D-V4	4096Gb	13.5MB	16DP	3.3V / x8	FBGA(152ball)	Now	HS(Toggle2.0)
H27Q4T8LAA	3D-V4	4096Gb	13.5MB	16DP	3.3V / x8	FBGA(152ball)	Now	HS(Toggle2.0)
H27Q1T8PQA	3D-V4	1024Gb	13.5MB	QDP	3.3V / x8	FBGA(316ball)	Now	HS(Toggle2.0)
H27Q2T8QQA	3D-V4	2048Gb	13.5MB	ODP	3.3V / x8	FBGA(316ball)	Now	HS(Toggle2.0)
H27Q4T8LQA	3D-V4	4096Gb	13.5MB	16DP	3.3V / x8	FBGA(316ball)	Now	HS(Toggle2.0)
H25QFT8A1A	3D-V4	512Gb	13.5MB	SDP	3.3V / x8	FBGA(152ball)	Now	HS(Toggle2.0)
H25QFT8B3A	3D-V4	1024Gb	13.5MB	DDP	3.3V / x8	FBGA(152ball)	Now	HS(Toggle2.0)
H25QFT8D4A	3D-V4	2048Gb	13.5MB	QDP	3.3V / x8	FBGA(152ball)	Now	HS(Toggle2.0)
H25QFT8F4A	3D-V4	4096Gb	13.5MB	ODP	3.3V / x8	FBGA(152ball)	Now	HS(Toggle2.0)
H25QFT8F6A	3D-V4	4096Gb	13.5MB	ODP	3.3V / x8	FBGA(152ball)	Now	HS(Toggle2.0)
H25QFT8G4A	3D-V4	8192Gb	13.5MB	16DP	3.3V / x8	FBGA(152ball)	Now	HS(Toggle2.0)
H25QFTMA1A	3D-V4	512Gb	13.5MB	SDP	3.3V / x8	FBGA(152ball)	Now	HS(Toggle2.0)
H25QFTMB3A	3D-V4	1024Gb	13.5MB	DDP	3.3V / x8	FBGA(152ball)	Now	HS(Toggle2.0)
H25QFTMD4A	3D-V4	2048Gb	13.5MB	QDP	3.3V / x8	FBGA(152ball)	Now	HS(Toggle2.0)
H25QFTMF4A	3D-V4	4096Gb	13.5MB	ODP	3.3V / x8	FBGA(152ball)	Now	HS(Toggle2.0)
H25QFTMF6A	3D-V4	4096Gb	13.5MB	ODP	3.3V / x8	FBGA(152ball)	Now	HS(Toggle2.0)
H25QFTMG4A	3D-V4	8192Gb	13.5MB	16DP	3.3V / x8	FBGA(152ball)	Now	HS(Toggle2.0)
H25BFT8A1M	3D-V5	512Gb	18MB	SDP	3.3V / x8	FBGA(152ball)	Q1'19	HS(Toggle3.0)

# NAND Flash Memory

## UFS2.1

PRODUCT	DENSITY	BASE COMPONENT			VCC / ORG	VERSION	AVAIL.	SIZE
		TECH.	DENSITY	STACK				
H28U62301AMR	32GB	3D-V2	128Gb	2	3.3V / 1 & 2Lane	UFS2.1	Now	11.5x13x1.0mm
H28U74301AMR	64GB	3D-V2	128Gb	4	3.3V / 1 & 2Lane	UFS2.1	Now	11.5x13x1.0mm
H28U88301AMR	128GB	3D-V2	128Gb	8	3.3V / 1 & 2Lane	UFS2.1	Now	11.5x13x1.0mm
H26S6D302BMR	32GB	3D-V3	128Gb	2	3.3V / 1 & 2Lane	UFS2.1	Now	11.5x13x1.0mm
H28S7Q302BMR	64GB	3D-V3	128Gb	4	3.3V / 1 & 2Lane	UFS2.1	Now	11.5x13x1.0mm
H28S8Q302CMR	128GB	3D-V4	256Gb	4	3.3V / 1 & 2Lane	UFS2.1	Now	11.5x13x1.0mm
H28S9O302BMR	256GB	3D-V4	256Gb	8	3.3V / 1 & 2Lane	UFS2.1	Now	11.5x13x1.0mm

## UFS2.0

PRODUCT	DENSITY	BASE COMPONENT			VCC / ORG	VERSION	AVAIL.	SIZE
		TECH.	DENSITY	STACK				
H28U64222MMR	32GB	1ynm	64Gb	4	3.3V / 1 & 2Lane	UFS2.0	Now	11.5x13x1.0mm
H28U78222MMR	64GB	1ynm	64Gb	8	3.3V / 1 & 2Lane	UFS2.0	Now	11.5x13x1.0mm



# NAND Flash Memory

## eMMC

PRODUCT	DENSITY	BASE COMPONENT			VCC / ORG	VERSION	AVAIL.	SIZE
		TECH.	DENSITY	STACK				
H26M31001HPR	4GB	1ynm	32Gb	1	3.3V / x4, x8	MMC4.5	Now	11.5x13x0.8mm
H26M41204HPR	8GB	1ynm	64Gb	1	3.3V / x4, x8	MMC5.1	Now	11.5x13x0.8mm
H26M41208HPR	8GB	1ynm	64Gb	1	3.3V / x4, x8	MMC5.1	Now	11.5x13x0.8mm
H26M52208FPR	16GB	1ynm	64Gb	2	3.3V / x4, x8	MMC5.1	Now	11.5x13x0.8mm
H26M64208EMR	32GB	1ynm	64Gb	4	3.3V / x4, x8	MMC5.1	Now	11.5x13x1.0mm
H26M78208CMR	64GB	1ynm	64Gb	8	3.3V / x4, x8	MMC5.1	Now	11.5x13x1.0mm
H26M88002AMR	128GB	3D-V2	128Gb	8	3.3V / x4, x8	MMC5.1	Now	11.5x13x1.0mm
H26T87001CMR	128GB	3D-V4	256Gb	4	3.3V / x4, x8	MMC5.1	Now	11.5x13x1.0mm
H26M51002KPR	16GB	1znm	128Gb	1	3.3V / x4, x8	MMC5.1	Now	11.5x13x0.8mm
H26M62002JPR	32GB	1znm	128Gb	2	3.3V / x4, x8	MMC5.1	Now	11.5x13x0.8mm
H26M74002HMR	64GB	1znm	128Gb	4	3.3V / x4, x8	MMC5.1	Now	11.5x13x1.0mm

# NAND Flash Memory

## E2NAND3.0

PRODUCT	TECH.	DENSITY	BLOCK SIZE	STACK	VCC / ORG	PKG.	AVAIL.	REMARK
H2JTCG8T21BMR	1xnm	64Gb	4MB	1	3.3V / x8	WLGA	Now	Non Shielded
H2JTDG8UD1BMR	1xnm	128Gb	4MB	2	3.3V / x8	WLGA	Now	Non Shielded
H2JTEG8VD1BMR	1xnm	256Gb	4MB	4	3.3V / x8	WLGA	Now	Non Shielded
H2JTFG8YD1BMR	1xnm	512Gb	4MB	8	3.3V / x8	WLGA	Now	Non Shielded
H2JTDG8UD1BMS	1xnm	128Gb	4MB	2	3.3V / x8	WLGA	Now	EMI Shielded
H2JTEG8VD1BMS	1xnm	256Gb	4MB	4	3.3V / x8	WLGA	Now	EMI Shielded
H2JTFG8YD1BMS	1xnm	512Gb	4MB	8	3.3V / x8	WLGA	Now	EMI Shielded
H2JTCG8T21CMR	1xnm	64Gb	4MB	1	3.3V / x8	WLGA	Now	Non Shielded
H2JTFG8YD1CMR	1xnm	512Gb	4MB	8	3.3V / x8	WLGA	Now	Non Shielded
H2JTFG8YD1CMS	1xnm	512Gb	4MB	8	3.3V / x8	WLGA	Now	EMI Shielded
H2JT1T8QD1MMS	1xnm	1024Gb	4MB	8	3.3V / x8	WLGA	Now	EMI Shielded
H2JTDG8UD1CMR	1ynm	128Gb	4MB	2	3.3V / x8	WLGA	Now	Non Shielded
H2JTEG8VD1CMR	1ynm	256Gb	4MB	4	3.3V / x8	WLGA	Now	Non Shielded
H2JTDG8UD1CMS	1ynm	128Gb	4MB	2	3.3V / x8	WLGA	Now	EMI Shielded
H2JTEG8VD1CMS	1ynm	256Gb	4MB	4	3.3V / x8	WLGA	Now	EMI Shielded
H2JTFG8PD1MMR	1ynm	512Gb	4MB	4	3.3V / x8	WLGA	Now	Non Shielded
H2JT1T8QD1MMR	1ynm	1024Gb	4MB	8	3.3V / x8	WLGA	Now	Non Shielded
H2JTFG8PD1MMS	1ynm	512Gb	4MB	4	3.3V / x8	WLGA	Now	EMI Shielded

# NAND Flash Memory

## E3NAND

PRODUCT	TECH.	DENSITY	BLOCK SIZE	STACK	VCC / ORG	PKG.	AVAIL.	REMARK
H23QDG8UD1ACS	1ynm	128Gb	4MB	2	3.3V / x8	WLGA	Now	EMI Shielded
H23QFG8YK1ACS	1ynm	512Gb	4MB	8	3.3V / x8	WLGA	Now	EMI Shielded
H23QFG8PG1MCS	1ynm	512Gb	4MB	4	3.3V / x8	WLGA	Now	EMI Shielded
H23Q1T8QK1MYS	1ynm	1024Gb	4MB	8	3.3V / x8	WLGA	Now	EMI Shielded
H23QEG8VG1ACR	1ynm	256Gb	4MB	4	3.3V / x8	WLGA	Now	Non Shielded
H23QDG8UD1ACR	1ynm	128Gb	4MB	2	3.3V / x8	WLGA	Now	Non Shielded
H23QFG8PG1MCR	1ynm	512Gb	4MB	4	3.3V / x8	WLGA	Now	Non Shielded
H23Q1T8QK1MYR	1ynm	1024Gb	4MB	8	3.3V / x8	WLGA	Now	Non Shielded
H23QEG8VG2ACS	1ynm	256Gb	4MB	4	3.3V / x8	WLGA	Now	EMI Shielded
H23Q1T8QK2MYS	1ynm	1024Gb	4MB	8	3.3V / x8	WLGA	Now	EMI Shielded
H23Q1T8QK2BYS	1znm	1024Gb	6MB	8	3.3V / x8	WLGA	Now	EMI Shielded
H23Q2T8QK3MYS	3D-V3	2048Gb	9MB	8	3.3V / x8	WLGA	Now	EMI Shielded
H23QEG8VG2ACR	1ynm	256Gb	4MB	4	3.3V / x8	WLGA	Now	Non Shielded
H23QFG8ND6MDS	3D-V3	512Gb	9MB	2	3.3V / x8	Prebump(110ball)	Now	EMI Shielded
H23Q2T8QK6MES	3D-V3	2048Gb	9MB	8	3.3V / x8	Prebump(110ball)	Now	EMI Shielded
H23QEG8ND2CCS	3D-V3	256Gb	9MB	2	3.3V / x8	WLGA	Q1'18	EMI Shielded
H23QFG8ND6ADS	3D-V4	512Gb	13.5MB	2	3.3V / x8	WLGA	Q4'18	EMI Shielded
H23QFG8ND6ADR	3D-V4	512Gb	13.5MB	2	3.3V / x8	WLGA	Q4'18	Non Shielded
H23Q2T8QK6AES	3D-V4	2048Gb	13.5MB	8	3.3V / x8	WLGA	Q4'18	EMI Shielded
H23Q2T8QK6AER	3D-V4	2048Gb	13.5MB	8	3.3V / x8	WLGA	Q4'18	Non Shielded
H23Q2T8PG6MDS	3D-V4	2048Gb	13.5MB	4	3.3V / x8	WLGA	Q4'18	EMI Shielded
H23Q2T8PG6MDR	3D-V4	2048Gb	13.5MB	4	3.3V / x8	WLGA	Q4'18	Non Shielded
H23Q4T8QK6MES	3D-V4	4096Gb	13.5MB	8	3.3V / x8	WLGA	Q4'18	EMI Shielded
H23Q4T8QK6MER	3D-V4	4096Gb	13.5MB	8	3.3V / x8	WLGA	Q4'18	Non Shielded



