

## Rockchip Solutions DDR SDRAM Support List

**Ver 2.39**

**2019/7/19**

## ◆ Revision History

Revision No.	History	Date
2.00	ORG.	2012.12.24
2.01	Add some supporting messages	2013.01.28
2.02	Add some supporting messages	2013.05.17
2.03	Add some supporting messages	2013.10.07
2.04	Add some supporting messages	2014.01.08
2.05	Add some supporting messages	2014.03.21
2.06	Add some supporting messages	2014.05.09
2.07	Add some supporting messages	2014.06.10
2.08	Add some supporting messages	2014.09.16
2.09	Add some supporting messages	2015.03.16
2.10	Add some supporting messages	2015.04.13
2.11	Add some supporting messages	2015.05.06
2.12	Add some supporting messages	2015.07.17
2.13	Add some supporting messages	2015.10.10
2.14	Add some supporting messages	2015.12.17
2.15	Add some supporting messages	2016.03.01
2.16	Add some supporting messages	2016.03.31
2.17	Add some supporting messages	2016.06.24
2.18	Add some supporting messages	2016.07.29
2.19	Add some supporting messages	2016.08.31
2.20	Add some supporting messages	2016.10.20
2.21	Add some supporting messages	2016.11.07
2.22	Add some supporting messages	2016.12.05
2.23	Add some supporting messages	2016.12.09
2.24	Add some supporting messages	2016.12.29
2.25	Add some supporting messages	2017.03.30
2.26	Add some supporting messages	2017.05.24
2.27	Add some supporting messages	2017.07.05
2.28	Add some supporting messages	2017.08.24
2.29	Add some supporting messages	2017.11.24
2.30	Add some supporting messages	2018.01.24
2.31	Add some supporting messages	2018.03.26
2.32	Add some supporting messages	2018.05.25
2.34	Add some supporting messages	2018.10.17
2.35	Add some supporting messages	2018.12.11
2.36	Add some supporting messages	2019.01.21
2.37	Add some supporting messages	2019.03.11
2.38	Add some supporting messages	2019.05.15
2.39	Add some supporting messages	2019.07.19

## ♦ Symbol

Symbol	Description
V	Fully Tested and Mass production
T/A	Fully Tested and Applicable
N/A	Not Applicable

## ♦The Latest Reference Circuits Version

Chip	DRAM Support Type	RK Reference Circuit Version
RK281x	DDR2	RK2818_REF_V1.3
RK2906	DDR2/DDR3/DDR3L	RK2906_PMIC_REF_V20_0418
RK2918	DDR2/DDR3/DDR3L	RK2918_REF_V13_20110517
RK2926/RK3026	DDR3/DDR3L	2926_86v_v1.2_20121109
RK2928/RK3028/RK3028A	DDR3/DDR3L	RK2928-DDR3P208SD4-V10-20120712LX.pcb
RK3066	DDR3/DDR3L/LPDDR2	RK3066_REF_TP5659I02_V12_20121024_1CELL
PX2	DDR3/DDR3L/LPDDR2	PX2_CAR_V11.pcb
RK3168/RK3188	DDR3/DDR3L/LPDDR2	RK3188-DDR3P416SD4-V10-20130607WF.pcb
RK3126	DDR3/DDR3L	2926_86v_v1.2_20121109
RK3128	DDR3/DDR3L/LPDDR2	RK3128-DDR3P216SD4-V10-20140912HJH.pcb
RK3288	DDR3/DDR3L/LPDDR2/LPDDR3	RK3288-DDR3P416SD6-V11-20140305HJH
RK3368	DDR3/DDR3L/LPDDR2/LPDDR3	R88(RK3368)_V01_20150313
RK3036	DDR3/DDR3L	RK3036_SDK_V1.0_20140528
RK3036G	DDR3/DDR3L	DONGLE_RK3036-G_20150408J.pcb
RK3228A/RK3228B/RK3229	DDR3/DDR3L/LPDDR2/LPDDR3	RK3228A_BOX_R88_DISCRETEPOWER_DDR3P216SD4_V1.0_20151129.pcb
PX3	DDR3/DDR3L/LPDDR2	RK_SDK_MAIN_PX3_CAR_V10_20160607
RK3399	DDR3/DDR3L/LPDDR3/LPDDR4	RK3399_VR&Tablet_V10_20160620
PX5	DDR3/DDR3L/LPDDR2/LPDDR3	RK_SDK_MAIN_PX5_CAR_V10_20160714_CGC
RK3228H	DDR3/DDR3L/DDR4/LPDDR3	RK_Demo_RK3228H_BOX_RK805-1_DDR3P216SD2_V02_20161128
RK3328	DDR3/DDR3L/DDR4/LPDDR3	RK_EVB_RK3328_BOX_RK805-1_DDR3P416DD6_V11_20161116
RV1108	DDR3/DDR3L/DDR2/LPDDR2	RK_EVB_MAINBOARD_RV1108_V12_20160930
PX3-SE	DDR3/DDR3L/LPDDR2	RK_SDK_MAIN_PX3SE_CAR_V11
RK3326	DDR3/DDR3L/DDR4/LPDDR2/LPDDR3	RK_EVB_RK3326_LP3S178P132SD4_V11_20180301FZB
PX30	DDR3/DDR3L/DDR4/LPDDR2/LPDDR3	RK_EVB_PX30_DDR4P416DD6_V10_20180301_FZB
RK3308	DDR3/DDR3L/DDR2/LPDDR2	RK_EVB_RK3308_DDR3P116SD4_V10_20180301
RK3399PRO	DDR3/DDR3L/LPDDR2/LPDDR3/LPDDR4	RK3399Pro_Layout_Template_LP3S178P232_LP3S178P132_SD8_V10_2018112
RK1808	DDR3/DDR3L/LPDDR3/DDR4	RK_EVB_RK1808_DDR3P216SD6_V10_2018-09-07_YWQ

Application Note:

- [1] Because lack of Address pin A15 in package, following SoCs do not support the 512M\*8 DDR3: RK2906-6,RK2906-8,RK3066.
- [2]The DRAM Part Number usually consists of two parts divided by '-'. which the first part contains memory type, density, organization, package, and the second part usually means data rate. We don't care about the second part.
- [3]RockChip platform can support all the chips that match the first part of Part Number which marks 'V' or 'T/A', and do not need to care the second part.
- If you want your system running more effective, you may need to find out the exact data rate in DRAM datasheet and config in kernel menuconfig.
- [4]Please copy the Rockchip reference design model of DRAM area PCB Layout directly without any modification and follow the PCB layout rules from Rockchip. Contact information: fae@rock-chips.com
- [5]Only support for RK3128.
- [6]The DRAM's VDD and VDDQ should powered by 1.5V when it used on these SoCs.
- [7]It can work stably on RK3399 with loader version rk3399\_ddr\_XXXMHz\_v1.22.bin and trust version rk3399\_bi31\_v1.28.elf. On RK3399pro, loader should be updated to rk3399pro\_ddr\_XXXMHz\_v1.22.bin, trust version should be updated to rk3399pro\_bi31\_v1.28.elf. Or the later version than all above.

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Manufacturer	Part Number	Density	Organization	Type	package	RK290x RK2918	RK2928/RK30 28A/RK3128/ PX3-SE	RK2926/RK3026/ RK3036/RK3036G /RK3126	RK3066/RK3066A/PX2 RK3168/RK3188/PX3	RK3288	RK3368/RK32 28A/RK3228B /RK3229/PX5	RV1108/ RK3308	RK3228H	RK3399	RK3328	RK3326/ PX30	RK1808	RK3399PRO CPU_RAM NPU_RA M	与双兼容情况
Nanya	NTSTU32M16CG-3C	512M bit	32M×16	DDR2	84ball	✓													
	NTSTU32M16FG	512M bit	32M×16	DDR2	84ball														
	NTSTU64M16HG	1G bit	64M×16	DDR2	84ball														
	NTSCB64M16GP	1G bit	64M×16	DDR3	96ball			T/A			T/A								
	NTSCB128M8DN	1G bit	128M×8	DDR3	96ball	✓													
	NTSCC128M8DN	1G bit	128M×8	DDR3L	78ball	✓			T/A	T/A									
	NTSCB128M8FN	1G bit	128M×8	DDR3	78ball						T/A								
	NTSCC128M8GN	1G bit	128M×8	DDR3L	78ball														
	NTSCB256M8GN	2G bit	256M×8	DDR3	78ball	✓	T/A	T/A	T/A	T/A									
	NTSCB256M8BN	2G bit	256M×8	DDR3	78ball	✓	T/A	T/A	T/A	T/A									
	NTSCB256M8FN	2G bit	256M×8	DDR3	78ball	✓	T/A	T/A	T/A	T/A									
	NTSCB256M8IN	2G bit	256M×8	DDR3	78ball						T/A								
	NTSCC256M8IN	2G bit	256M×8	DDR3L	78ball				T/A		T/A	T/A	T/A			T/A	T/A		
	NTSCB128M16BP	2G bit	128M×16	DDR3	96ball	✓	T/A	T/A	T/A										
	NTSCB128M16HP	2G bit	128M×16	DDR3	96ball	T/A			T/A										
	NTSCC128M16BP	2G bit	128M×16	DDR3L	96ball	✓													
	NTSCB128M16FP	2G bit	128M×16	DDR3	96ball	✓	T/A	T/A	T/A	T/A									
	NTSCC128M16IP	2G bit	128M×16	DDR3L	96ball		T/A	T/A	T/A		T/A	T/A							
	NTSCB128M16IP	2G bit	128M×16	DDR3	96ball		T/A	T/A	T/A		T/A	T/A							
	NTSCC128M16JR	2G bit	128M×16	DDR3L	96ball						T/A	T/A	T/A		T/A	T/A	T/A		T/A
	NTSCB512M8DN	4G bit	512M×8	DDR3	78ball						T/A								
	NTSCB512M8BN	4G bit	512M×8	DDR3	78ball		T/A	T/A	T/A <sup>(1)</sup>	T/A									
	NTSCC512M8BN	4G bit	512M×8	DDR3L	78ball		T/A	T/A	T/A <sup>(1)</sup>	T/A									
	NTSCC512M8DN	4G bit	512M×8	DDR3L	78ball						T/A	T/A	T/A		T/A	T/A			
	NTSCB256M16BP	4G bit	256M×16	DDR3	96ball	✓	T/A	T/A	T/A	T/A									
	NTSCB256M16CP	4G bit	256M×16	DDR3	96ball		T/A	T/A	T/A										
	NTSCB256M16DP	4G bit	256M×16	DDR3	96ball														
	NTSCB256M16EP	4G bit	256M×16	DDR3	96ball						T/A	T/A	T/A	T/A	T/A	T/A		T/A	
	NTSCC256M16CP	4G bit	256M×16	DDR3L	96ball	T/A	T/A	T/A	T/A	T/A									
	NTSCC256M16DP	4G bit	256M×16	DDR3L	96ball		T/A	T/A	T/A		T/A	T/A	T/A	T/A	T/A	T/A		T/A	
	NTSCC256M16EP	4G bit	256M×16	DDR3L	96ball		T/A		T/A		T/A	T/A	T/A	T/A	T/A	T/A		T/A	
	NTSCC256M16ER	4G bit	256M×16	DDR3L	96ball						T/A	T/A	T/A	T/A	T/A	T/A		T/A	
	NTSCC256M16ER-EK1	4G bit	256M×16	DDR3L	96ball									T/A					
	NT6TL128M32AQ	4G bit	128M×32	LPDDR2	168ball				T/A	T/A									
	NT6TL256F32AI	8G bit	256M×32	LPDDR2	134ball				T/A	T/A									
	NT6TL256T32AI	8G bit	256M×32	LPDDR2	134ball				T/A	T/A									
	NT6TL256T32AQ	8G bit	256M×32	LPDDR2	168ball				T/A	T/A									
	NT6CL128M32BM	4G bit	128M×32	LPDDR3	178ball														
	NT6CL128M32CM	4G bit	128M×32	LPDDR3	178ball														
	NT6CL256T32CM	8G bit	256M×32	LPDDR3	178ball								T/A	T/A	T/A	T/A	T/A	T/A	T/A
	NT6CL256T32BM	8G bit	256M×32	LPDDR3	178ball					T/A	T/A	N/A	T/A	T/A	T/A	T/A	T/A	T/A	T/A
	NT6CL256M32AM	8G bit	256M×32	LPDDR3	178ball						T/A		T/A	T/A	T/A	T/A	T/A	T/A	T/A
	NT6CL512T32AM	16G bit	512M×32	LPDDR3	178ball						T/A								
	NT6CL256T32AQ	8G bit	256M×32	LPDDR3	168ball					T/A	N/A								
	NT5AD256M16B2	4G bit	256M×16	DDR4	96ball								T/A		T/A				
	NT5AD256M16C4	4G bit	256M×16	DDR4	96ball								T/A		T/A				
	NT5AD512M16A4	8G bit	512M×16	DDR4	96ball											T/A	T/A		T/A

兼容性好

Manufacturer	Part Number	Density	Organization	Type	package	RK290x RK2918	RK2928/RK30 28A/RK3128/ PX3-SE	RK2926/RK3026/ RK3036/RK3036G /RK3126	RK3066/RK3066A/PX2 RK3168/RK3188/PX3	RK3288	RK3368/RK32 28A/RK3228B /RK3229/PX5	RV1108/ RK3308	RK3228H	RK3399	RK3328	RK3326/ PX30	RK1808	RK3399PRO CPU_RAM NPU_RA M	与双兼容情况
Samsung	K4T1G164QE	1G bit	64M×16	DDR2	84ball	✓													
	K4B1G0846G	1G bit	128M×8	DDR3	78ball	✓													
	K4B1G1646I-xCxx	1G bit	64M×16	DDR3	96ball				T/A	T/A									
	K4B1G1646I-xYxx	1G bit	64M×16	DDR3L	96ball							T/A	T/A						
	K4B2G0846C	2G bit	256M×8	DDR3	78ball	✓													
	K4B2G0846F-xYxx	2G bit	256M×8	DDR3L	78ball				T/A	T/A									
	K4B2G1646C	2G bit	128M×16	DDR3	96ball	✓													
	K4B2G1646E	2G bit	128M×16	DDR3	96ball	T/A	T/A	T/A	T/A	T/A	T/A	T/A	T/A	T/A	T/A	T/A	T/A		
	K4B2G1646Q	2G bit	128M×16	DDR3	96ball	T/A	T/A	T/A	T/A	T/A	T/A	T/A	T/A	T/A	T/A	T/A	T/A		
	K4B2G1646F-xYxx	2G bit	128M×16	DDR3L	96ball				T/A	T/A	T/A	T/A	T/A	T/A	T/A	T/A	T/A	T/A	T/A
	K4B4G0846E-xCxx	4G bit	512M×8	DDR3	78ball						T/A	T/A	T/A	T/A	T/A	T/A	T/A		T/A
	K4B4G1646B-xCxx	4G bit	256M×16	DDR3	96ball	✓	T/A	T/A	T/A	T/A	T/A								
	K4B4G1646Q-xYxx	4G bit	256M×16	DDR3L	96ball		T/A	T/A	T/A	T/A	T/A	T/A	T/A	T/A		T/A	T/A		
	K4B4G1646D-xYxx	4G bit	256M×16	DDR3L	96ball		T/A	T/A	T/A	T/A	T/A	T/A	T/A	T/A		T/A	T/A		
	K4B4G1646D-xCxx	4G bit	256M×16	DDR3	96ball		T/A	T/A	T/A	T/A	T/A	T/A	T/A	T/A		T/A	T/A		
	K4W4G1646Q-xCxx	4G bit	256M×16	DDR3	96ball				T/A	T/A									
	K4B4G1646E-xYxx	4G bit	256M×16	DDR3L	96ball			T/A	T/A	T/A	T/A	T/A	T/A	T/A		T/A	T/A	T/A	T/A
	K4B4G1646E-xCxx	4G bit	256M×16	DDR3	96ball			T/A	T/A	T/A	T/A	T/A	T/A	T/A		T/A	T/A	T/A	T/A
	K4B4G1646E-BMMA	4G bit	256M×16	DDR3L	96ball														
	K4B8G1646D-xYxx	8G bit	512M×16	DDR3L	96ball					T/A				T/A	✓	T/A	T/A		T/A
	K4A4G165WE-xCxx	4G bit	256M×16	DDR4	96ball														
	K4A8G165WB-xCxx	8G bit	512M×16	DDR4	96ball														
	K4A8G165WC-xCxx	8G bit	512M×16	DDR4	96ball														
	K3PE0E000A-XGC2	16Gb/2Channel	256Mx32x2Ch	LPDDR2	220ball					N/A	T/A							T/A	T/A
	K3PE0E000M-XGC2	16Gb/2Channel	256Mx32x2Ch	LPDDR2	216ball					N/A	T/A							T/A	T/A
	K4E8E304ED-EGCC	8Gb	256Mx32	LPDDR3	178ball						T/A	T/A	N/A						
	K4E8E304EE-EGCE	8Gb	256Mx32	LPDDR3	178ball						T/A				T/A				T/A
	K4E8E324EB-AGCF	8Gb	256Mx32	LPDDR3	168ball							T/A	N/A						
	K4E8E324EB-EGCF	8Gb	256Mx32	LPDDR3	178ball						T/A	T/A	N/A	T/A	T/A	T/A	T/A		T/A
	K3QF1F10DM-AGCE	8Gb/2Channel	128Mx32x2Ch	LPDDR3	216ball						T/A			T/A					
	K3QF1F10EM-BGCF	8Gb	128Mx32x2Ch	LPDDR3	216ball						T/A								
	K4E6E304EE-EGCE	16Gb	512M×32	LPDDR3	178ball						T/A	T/A	N/A	T/A		T/A	T/A		
	K4E6E304ED-EGCE	16Gb	512M×32	LPDDR3	178ball						T/A								
	K4E6E304EB-EGCF	16Gb	512M×32	LPDDR3	178ball						T/A	T/A	N/A	T/A	T/A	T/A	T/A	T/A	T/A
	K4E6E304EC-EGCF	16Gb	512M×32	LPDDR3	178ball						T/A			T/A	T/A	T/A	T/A		
	K4E8E304EC-EGCF	32Gb	1024M×32	LPDDR3	178ball														
	K3QF3F30BM-AGCF	16Gb	256M×32x2Ch	LPDDR3	216ball						T/A								
	K3QF3F30BM-BGCF	16Gb	256M×32x2Ch	LPDDR3	216ball						T/A								
	K4F8E304HB-MGxx	8G bit	256M×32	LPDDR4	200ball											T/A			T/A
	K4F6E354HM-MGxx	16Gb	512M×64	LPDDR4	200ball														T/A
	K3RG2G20CM-MGCJ	32Gb	512Mx64	LPDDR4	366ball										T/A <sup>[2]</sup>				T/A <sup>[2]</sup>
SPECTEK	PE918-15E (PRN256M8V79DG8GQF-15E)	2G bit	256M×8	DDR3	78ball	T/A	T/A	T/A	T/A	T/A									
	PE936-15E (PRN256M8V89CG8GQF-15E)	2G bit	256Mx8	DDR3	78ball	T/A	T/A	T/A	N/A	N/A									
	PEB08-15E (PRN512M8V80AG8RHF-15E)	4G bit	512M×8	DDR3	78ball		T/A	T/A	T/A <sup>(1)</sup>	T/A									
	PEB15-15E (PRN256M16V80AG8GPF-15E)	4G bit	256Mx16	DDR3	96ball	T/A	T/A	T/A	T/A	T/A									
	PEB16-15E (PRM256M16V80AG8GPF-15E)	4G bit	256Mx16	DDR3	96ball		T/A	T/A	T/A	T/A									
	PE017 (SUU256M16V90B8LY-125TP)	4G bit	256Mx16	DDR3	96ball			T/A											
	PE039 (SUU256M16V90B8LY-125TP)	4G bit	256Mx16	DDR3	96ball						T/A	T/A							
	Z9QH9 (SM128MX32U80MD1L9U-25FT)	4G bit	128Mx32	LPDDR2	134ball				T/A	T/A									
	PB047 (SS256M32V01MD1LPPF-107BT)	8G bit	256Mx32	LPDDR3	178ball								N/A	N/A	N/A	N/A			
	PB008 (SM512M322E0FD4LHL)	8G bit	256Mx32	LPDDR3	178ball										T/A				T/A
	PS006 (SU256M32201MD18NP)	8G bit	256Mx32	LPDDR4	200ball										N/A				N/A
	PS007 (SU512M32201MD2BNP)	16G bit	512M×32	LPDDR4	200ball											T/A			T/A
	(PS086) SU256M64Z00MD4DKN	16G bit	256Mx64	LPDDR4	366ball											T/A			T/A
	PS004 (SM512M64Z91MD48NK)	32Gbit	512M×64	LPDDR4	366ball											T/A			T/A
	PS035 (SU512M64Z01MD48NK)	32Gbit	512M×64	LPDDR4	366ball											T/A			T/A
	PS013 (SM512M64Z01MD48NK)	32Gbit	512M×64	LPDDR4	366ball											T/A			T/A
Elixir	N2TU1G16GG-AC	1G bit	64M×16	DDR2	84ball	✓													NANYA子品牌，兼容性良 好，特供指定渠道及客 户使用。南亚科技指定 经销商：彩虹奥特姆 (Aotom)、AVT、富鸿 (FHL)、芯智(SMC)、伟 世科技(WELSH)、世平 (WPI)，提供正品保固及 售后服务
	N2CB1G80GN-CG	1G bit	128M×8	DDR3	78ball	✓													
	N2CB2G80GN	2G bit	256M×8	DDR3	78ball	✓			✓	✓									
	N2CB2G16BP-CG	2G bit	128M×16	DDR3	96ball	✓													
	N2CB2G16FP-DI	2G bit	128M×16	DDR3	96ball														
	N2CB4G08DN-CG	4G bit	512M×8	DDR3	78ball		T/A	T/A	T/A	T/A	T/A								
	N2CB4G16BP-DI	4G bit	256M×16	DDR3	96ball		T/A	T/A	T/A <sup>(1)</sup>	T/A	T/A								
N2CC4G16DP	4G bit	256M×16	DDR3L	96ball				T/A	T/A	T/A									

Manufacturer	Part Number	Density	Organization	Type	package	RK290x RK2918	RK2928/RK30 28A/RK3128/ PX3-SE	RK2926/RK3026/ RK3036/RK3036G /RK3126	RK3066/RK3066A/PX2 RK3168/RK3188/PX3	RK3288	RK3368/RK32 28A/RK3228B /RK3229/PX5	RV1108/ RK3308	RK3228H	RK3399	RK3328	RK3326/ PX30	RK1808	RK3399PRO CPU_RAM NPU_RAM		与双兼容情况
Eorex	EM47DM1688SBA	2G bit	128M×16	DDR3	96ball	N/A														台湾颗粒厂商，兼容性较好
	EM47EM0888SBA-150	2G bit	256Mx8	DDR3	78ball	T/A	N/A	N/A	T/A	T/A										
	EM47EM1688SBA-150	4G bit	256Mx16	DDR3	96ball	T/A														
	EM47EM1688SBB-150A	4G bit	256Mx16	DDR3	96ball		T/A	T/A	T/A	T/A										
	EM47FM0888SBA-150	4G bit	512Mx8	DDR3	78ball		T/A	T/A												
	EM47FM0888SBA-150A	4G bit	512Mx8	DDR3	78ball		T/A	T/A												
	EM47EM3288MBA-125	8G bit	256Mx32	DDR3	136ball				T/A	T/A										
	EM45FM3288LBA-187F	16Gb/2Channel	256Mx32x2Ch	LPDDR2	220ball				N/A	T/A										
Etron Tech	EM68B16CWPA-25H	512M bit	32M×16	DDR2	84ball	✓														台湾颗粒厂商，兼容性较好
	EM6GC16EWKG-12H	1G bit	64Mx16	DDR3	96ball						T/A	T/A								
	EM6GD16EWKG-12H	2G bit	128Mx16	DDR3	96ball						T/A	T/A								
	EM6GD16EWXF-12H	2G bit	128Mx16	DDR3	96ball						T/A	T/A								
	EM6GD16EWBH-12H	2G bit	128Mx16	DDR3	96ball												T/A	T/A		
	EM6GE16W5B-15H	4G bit	256M×16	DDR3	96ball	T/A		T/A	T/A	T/A										
	EM6GE08EW8C-12H	4G bit	512Mx8	DDR3	78ball		T/A	T/A												
	EM6GE16WXC-12H	4G bit	256M×16	DDR3	96ball		T/A	T/A	T/A	T/A										
	EM6HE16WXD-12H	4G bit	256M×16	DDR3L	96ball						T/A	T/A	T/A		T/A	T/A	T/A	T/A		
	EM6GE16EWXD-10H	4G bit	256M×16	DDR3	96ball															
	EM6GE16EWXD-12H	4G bit	256M×16	DDR3	96ball		T/A	T/A		T/A	T/A	T/A	T/A	T/A	T/A	T/A	T/A	T/A		
	EM6GE16W5F-12H	4G bit	256M×16	DDR3	96ball															
	EM6HE16W5F-12H	4G bit	256M×16	DDR3L	96ball								T/A		T/A	T/A				
ESMT	M14D1G1664A-1.88G25D	1G bit	64Mx16	DDR2	84ball								T/A							
	M15T1G1664A-DEBG2C	1G bit	64Mx16	DDR3	96ball								T/A							
	M15T1G1664A-DEBG2CS	1G bit	64Mx16	DDR3	96ball			T/A												
	M15T2G16128A-DEBG2L	2G bit	128Mx16	DDR3	96ball						T/A	T/A					N/A			
	M15T2G16128A-DEBG2LS	2G bit	128Mx16	DDR3	96ball												N/A	T/A		
	M15T4G16256A-DEBG2L	4G bit	256M×16	DDR3	96ball										T/A	T/A				
	M15F4G16256A-DEBG2L	4G bit	256M×16	DDR3	96ball						T/A	T/A	T/A		T/A	T/A				
MIRA	P3R1GE4CF-8E	1G bit	64M×16	DDR2	84ball	✓														
	P3R1GE3FG-8E	1G bit	128M×8	DDR2	84ball	✓														
	P2P2GF4ALF-GGN	2G bit	128MX16	DDR3	96ball						T/A	T/A								
	P2P2GF4ALF-GJS	2G bit	128MX16	DDR3	96ball							T/A	T/A	T/A		T/A	T/A			
	P3P4GF3BLF-GGN	4G bit	512M×8	DDR3	78ball		T/A	N/A	N/A	N/A										
	P3P4GF4BLF-GGN	4G bit	256Mx16	DDR3	96ball		T/A		T/A	T/A	T/A	T/A	T/A		T/A	T/A	T/A			
	P3P4GF4BLF-GJS	4G bit	256Mx16	DDR3	96ball							T/A	T/A	T/A	T/A	T/A	T/A			
	P3P4GF4DMF-GJS	4G bit	256Mx16	DDR3	96ball							T/A	T/A	T/A	T/A	T/A				
Unic	SCB15H1G160CF-13K	1G bit	64M×16	DDR3	96ball								T/A							
	SCN13H2G160AF-13K	2G bit	128M×16	DDR3	96ball		T/A													
	SCB13H2G160AF-11M	2G bit	128M×16	DDR3L	96ball						T/A	T/A								
	SCB13H4G160AF-11M	4G bit	256Mx16	DDR3L	96ball						T/A	T/A	T/A		T/A	T/A				
	HXB15H4G800AF-13K	4G bit	512M×8	DDR3	78ball							T/A	T/A							
	HXB13H4G160AF-13KT	4G bit	256Mx16	DDR3	96ball		T/A	T/A		T/A	T/A	T/A								
	SCB13H8G162BF-11M	8G bit	512Mx16	DDR3L	96ball								T/A		T/A	T/A				
SCSemicon	HXB18T1G160AF-25D	1G bit	64M×16	DDR2	84ball	✓														
	HXB18T2G160AF-25D	2G bit	128M×16	DDR2	84ball	✓														
	HXB15H2G800BF-15H	2G bit	256M×8	DDR3	78ball	N/A	T/A	N/A	T/A	T/A										
	HXB15H2G160CF-13K	2G bit	128M×16	DDR3	96ball			T/A												
	HXB15H4G800BF-15H	4G bit	512M×8	DDR3	78ball	N/T <sup>(1)</sup>	T/A	N/A	T/A <sup>(1)</sup>	T/A										
	HXB15H4G160BF-15H	4G bit	256Mx16	DDR3	96ball	T/A														
ADATA	3CCD-1211A EL1250V	2G bit	256Mx8	DDR3	78ball	N/A	T/A	N/A	T/A	T/A										
	D2ND-1211A EL1345V	4G bit	256Mx16	DDR3	96ball			T/A	T/A	T/A										
	D2ND-1211A NA1518V	4G bit	256Mx16	DDR3L	96ball			T/A	T/A	T/A										
ANOR	AM43Q2G08AFP-150C	2G bit	256Mx8	DDR3	78ball	N/A	T/A	N/A	T/A	T/A										
	AM43Q4G08AFP-150C	4G bit	512Mx8	DDR3	78ball			T/A	N/A											
Zentel	A3R12E40DBF-AH	512M bit	32M×16	DDR2	84ball															
	A3T1GF40CBF-HP	1G bit	64M×16	DDR3	96ball								T/A							
	A3T1GF40CBF-GM	1G bit	64M×16	DDR3	96ball															
	A3T2GF408BF-GM	2G bit	128M×16	DDR3	96ball		T/A													
	A3T4GF40ABF-GM	4G bit	256Mx16	DDR3	96ball												T/A	T/A		
ProMOS	V59C1G01168QBASXJ25	1G bit	64M×16	DDR2	84ball	✓														
	V73CAG01808RA J19	1G bit	128M×8	DDR3	78ball	✓														
	V59C1G02168QB	2G bit	128M×16	DDR2	84ball	✓														



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SMART	S4B2G0846C-HYH9	2G bit	256Mx8	DDR3	78ball				T/A	T/A									巴西颗粒，国内用的不多
	S4B2G0846D-HYK0	2G bit	256Mx8	DDR3	78ball				T/A	T/A									
nPM	PME810816C8R-G8DN	1G bit	64Mx16	DDR2	84ball							T/A							
	PMF510816ABR-G8DN	1G bit	64Mx16	DDR3	96ball	✓													
	PMF511816ABR-G8DN	2G bit	128Mx16	DDR3	96ball	✓													
	PMF511816DBR-KADN	2G bit	128Mx16	DDR3	96ball				T/A	T/A									
	PMF5128168BR-KADN	4G bit	256Mx16	DDR3	96ball				T/A	T/A									
	PMF512816DBR-KADN	4G bit	256Mx16	DDR3	96ball		T/A	T/A	T/A	T/A									
	PMF412816FBR-KADN	4G bit	256Mx16	DDR3L	96ball				T/A	T/A									
MT.MOSET	ED3E25608CE-P9	2G bit	256Mx8	DDR3	78ball	T/A	T/A	N/A	T/A	T/A									
WINS	VPSTQ1G0835-F9	1G bit	128Mx8	DDR3	78ball	✓													
	VPSTQ2G1635FFP-F9	2G bit	128Mx16	DDR3	96ball	✓	N/A	N/A											
	VPSTQ2G0835L-F9	2G bit	256Mx8	DDR3	78ball	✓													
Kingston	D5128EETBPGGBU	4G bit	512Mx8	DDR3	78ball		T/A	T/A	T/A	T/A									256M16在RK3066，RK31xx平台上需要添加定频相关补丁。并且对参考层完整性要求较高，需要严格遵照我们的布板要求布板。
	D2516EC48XGGB	4G bit	256Mx16	DDR3L	96ball		T/A [6]	T/A [6]	T/A [6]	T/A [6]	T/A [6]	T/A [6]							
	D2516ECMDXGJD	4G bit	256Mx16	DDR3L	96ball								T/A		T/A	T/A	T/A	T/A	
	D2516JC48XGJD	4G bit	256Mx16	DDR3	96ball					T/A									
	B5116ECMDXGJD	8G bit	512Mx16	DDR3L	96ball					T/A									
	D2532LA6MLGJA	8G bit	256Mx32	LPDDR3	178ball								T/A		T/A	T/A	T/A	T/A	
	KB23AADL3E08G	8G bit	512Mx16	LPDDR3	178ball					T/A									
	D2516PC1CDGPLR	8G bit	256Mx32	LPDDR4	200ball									T/A				T/A	
	Q5116PH1MDGPAR	16G bit	512Mx32	LPDDR4	200ball									N/A				N/A	
ISSI	IS43TR16640B-125KBL	1G bit	64Mx16	DDR3	96ball							T/A							
	IS43TR1612BC-125KBL	2G bit	128Mx16	DDR3	96ball						T/A	T/A							
axeme	H2A301G1656BC6C	1G bit	64Mx16	DDR2	84ball							T/A							
	H2A401G1666BFBC	1G bit	64Mx16	DDR3	96ball							T/A							
	H2A402G1666BFBC	2G bit	128Mx16	DDR3	96ball		T/A	T/A											
	H2A404G1666CFMC	4G bit	256Mx16	DDR3	96ball								T/A		T/A	T/A			
	H2A404G0866CD8C	4G bit	512Mx8	DDR3	78ball				T/A	T/A									
ISDT	IL28R20E8H	16G bit/2Channel	256Mx32x2Ch	LPDDR2	220ball					T/A									
Winbond	W971GG65B-18	1G bit	64Mx16	DDR2	84ball							T/A							
	W631GG6K8-12	1G bit	64Mx16	DDR3	96ball						T/A	T/A							
	W631GG6MB-12	1G bit	64Mx16	DDR3	96ball							T/A							
	W632GG6K8-15	2G bit	128Mx16	DDR3	96ball		T/A	T/A	T/A	T/A									
	W632GG6N8-12	2G bit	128Mx16	DDR3	96ball								T/A		T/A	T/A			
Goldkey	GH4061600HRL-1833	4G bit	256Mx16	DDR3L	96ball								T/A		T/A	T/A			
BIWIN	BW52L512M32D2PF	16G bit	512Mx32	LPDDR3	178ball						T/A						T/A	T/A	
	BWMD4X32H2A-08Gb	8G bit	256Mx32	LPDDR4	200ball									N/A				N/A	
	BWMD4X32H2A-16Gb□	16G bit	512Mx32	LPDDR4	200ball									T/A				T/A	
FORESEE	NCLD382756M32	8G bit/ 2cs	256Mx32	LPDDR3	178ball					T/A					T/A			T/A	
	NCLDAC1MA256M32	8G bit	256Mx32	LPDDR4	200ball										T/A			T/A	
	NCLDAC2MA512M32	16G bit	512Mx32	LPDDR4	200ball										T/A			T/A	
	NCLDXC1MC512M32	16G bit	512Mx32	LPDDR4	200ball										T/A			T/A	
Essencore	ISTQ4G63EFR	4G bit	256Mx16	DDR3	96ball								T/A		T/A	T/A			
	EL48PMB8B1-S4ER	16G bit	512Mx32	LPDDR4	200ball									N/A				N/A	
Netsol	SSRG2G20CMS-MGCJ	32G bit	512Mx64	LPDDR4	366ball									N/A				N/A	
TMTc	TM8G32MD4LSA1-I4	8G bit	256Mx32	LPDDR4	200ball									T/A				T/A	
	TH16G32MD4LQM1-I4	16G bit	512Mx32	LPDDR4	200ball									N/A				N/A	