MCP Part Number System

H	9	X	X	X	X	X	X	X	X	X	X	X	X	x	-	X	X	X
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	

(1) Hynix Product : H

(2) Product Family
9 : MCP

(3) ~(4)Product Mode

MCP
LA : MCP NAND SDR
LB : MCP DDR2-N SDR
LC : MCP SDR Only
CI MCP
LP : CI-MCP NAND SDR

MCP
DA : MCP NAND DDR
DB : MCP DDR2-N DDR

DC : MCP DDR Only
CI MCP
DP : CI-MCP NAND DDR

MCP
TA : MCP NAND DDR2
TB : MCP DDR2-N DDR2
TC : MCP DDR2 Only
CI MCP
TP : CI-MCP NAND DDR2
TQ : CI-MCP NAND DDR3
MCP
CC : MCP DDR3 Only

CI MCP
HP : CI-MCP NAND DDR4
MCP
HC : MCP DDR4 Only

PC DDR2 MCP
YA : MCP NAND PC DDR2

PoP
LH : PoP NAND SDR
LJ : PoP DDR2-N SDR
LK : PoP SDR Only
CI PoP
LU :CI-PoP NAND SDR

PoP
DH : PoP NAND DDR
DJ : PoP DDR2-N DDR

DK : PoP DDR Only
CI PoP
DU :CI-PoP NAND DDR

PoP
TH : PoP NAND DDR2
TJ : PoP DDR2-N DDR2
TK : PoP DDR2 Only
CI PoP
TU :CI-PoP NAND DDR2

PoP
CK : PoP DDR3 Only

PoP
CW : PoP WIO Only

CI PoP
CU :CI-PoP NAND DDR3
PoP
HK : PoP DDR4 Only

(5) ~ (6) NVM(Non-volatile memory) Density + Stack +(Block size, Page Buffer)
NN :None
25 : 256Mb, SDP, SB, 512B

51:512Mb, SDP, SB, 512B
1A:1Gb, SDP, SB, 512B
1B:1Gb, DDP, SB, 512B
1G: 1Gb, SDP, LB, 2KB
1H: 1Gb, DDP, LB, 2KB
2G: 2Gb, SDP, LB, 2KB
2H: 2Gb, DDP, LB, 2KB
2V: 2Gb, SDP, LB, 4KB
AG : 16Gb, SDP, LB, MLC
32 : 32Gb, SDP, LB, MLC
33 : 32Gb, DDP, LB, MLC
17 : 128Gb, DDP, LB, MLC
18 : 128Gb, QDP, LB, MLC

4G: 4Gb, SDP, LB, 2KB
4H: 4Gb, DDP, LB, 2KB
4V: 4Gb, SDP, LB, 4KB
4W: 4Gb, DDP, LB, 4KB
8G: 8Gb, SDP, LB, 2KB
8H: 8Gb, DDP, LB, 2KB
8J: 8Gb, QDP, LB, 2KB
8V: 8Gb, SDP, LB, 4KB
8W: 8Gb, DDP, LB, 4KB
8Y: 8Gb, QDP, LB, 4KB
64 : 64Gb, SDP, LB, MLC
65 : 64Gb, DDP, LB, MLC
67 : 64Gb, QDP, LB, MLC
26 : 256Gb, QDP, LB, MLC

(7)NVM Voltage, I/O
N :NONE

NAND
A:3.3V, x8
B:3.3V, x16
C:3.0V, x8
D:3.0V, x16
E:2.7V, x8
F:2.7V, x16
G:1.8V, x8
H:1.8V, x16

LPDDR2-NVM
A: 1.8V / - / 1.2V, x8
B : 1.8V / - / 1.2V, x16
C :1.8V / - / 1.2V, x32
D : 1.8V/1.2V/1.2V, x8
E : 1.8V/1.2V/1.2V, x16
F : 1.8V/1.2V/1.2V, x32

eMMC
A:3.3V, x8 with Flash x8
B:3.3V, x8 with Flash x16
F:1.8V, x8 with Flash x8
G:1.8V, x8 with Flash x16
J:3.3V, x8 with Flash x16
K:1.8V, x8 with Flash x16

(8) ~(9) DRAM Density, Stack, Ch, CS

1G :1Gb, SDP
2G :2Gb, SDP
2H :2Gb, DDP, 1Ch, 1CS
2J :2Gb, DDP, 1Ch, 2CS
2K :2Gb, DDP, 2Ch, 1CS
4G :4Gb, SDP
4H :4Gb, DDP, 1Ch, 1CS
4J :4Gb, DDP, 1Ch, 2CS
4K :4Gb, DDP, 2Ch, 1CS

6A :6Gb, TDP, 1Ch, 2CS

6C :6Gb, TDP, 2Ch, 2CS
6D :6Gb, DDP, 1Ch, 2CS
8G :8Gb, SDP
8H :8Gb, DDP, 1Ch, 1CS
8J :8Gb, DDP, 1Ch, 2CS
8K :8Gb, DDP. 2Ch, 1CS

8L :8Gb, QDP, 1Ch, 2CS
8M :8Gb, QDP, 2Ch, 1CS
8P :8Gb, QDP. 2Ch, 2CS
8R :8Gb, SDP. 2Ch, 1CS
8V : 8Gb SDP, 8ch 1CS

12 :128Mb, SDP
25 :256Mb, SDP
51 :512Mb, SDP
3J :3Gb, DDP, 1Ch, 2CS
AA :12Gb, TDP, 1Ch, 2CS
AC :12Gb, TDP, 2Ch, 2CS
AD :12Gb, SDP, 2Ch, 1CS
AE :12Gb, DDP,1Ch, 2CS
BJ :16Gb, DDP, 1Ch, 2CS
BK :16Gb, DDP. 2Ch, 1CS
BL :16Gb, QDP, 1Ch, 2CS
BM :16Gb, QDP, 2Ch, 1CS
BP :16Gb, QDP. 2Ch, 2CS
BR :16Gb, QDP. 4Ch, 1CS
BT :16Gb, DDP. 4Ch, 1CS
BU :16Gb, DDP. 2Ch, 2CS
CL :32Gb, QDP, 1Ch, 2CS
CM :32Gb, QDP. 2Ch, 1CS
CP :32Gb, QDP. 2Ch, 2CS
CR :32Gb, QDP. 4Ch, 1CS
CT :32Gb, QDP. 4Ch, 2CS
DA :24Gb, QDP. 2Ch, 2CS
DB :24Gb, QDP. 4Ch, 1CS
DC :24Gb, HDP. 2Ch, 2CS
DE :24Gb, DDP. 4Ch, 1CS
DF :24Gb, TDP. 1Ch, 2CS
DG :24Gb, QDP. 4Ch, 2CS
DH :24Gb, TDP. 2Ch, 3CS
EA :48Gb, QDP. 4Ch, 2CS

(10) DRAM Voltage, I/O, option
A : 1.2V/1.2, x16, LPDDR2-S2
B : 1.2V/1.2, x16, LPDDR2-S4
C : 1.2V/1.2, x32, LPDDR2-S2
D : 1.2V/1.2, x32, LPDDR2-S4
G : 1.2V/1.2, x16 LPDDR3
T : 1.2V/1.2, x32 LPDDR3
U : 1.1V/1.1, x16 LPDDR4
H :1.8V/1.8,x16
J :1.8V/1.8, x32
K :1.8V/1.2, x64
L: 1.8V/1.8V, x32R
Y :1.8V, x16, PC DDR2
1: 1.8V/1.8V, X32R & X32
E : 1.1V/1.1, x64 WIO2

(11) Generation
M : 1st
A : 2nd
C : 4th
E : 6th
H : 8th
K :10th
B : 3rd
D : 5th
G : 7th
J : 9th

(12)~(13) Package Type(Ball count, size, Option)

MCP :M
MCP
CP : FBGA 162 Ball 11.5x13
MA : FBGA 149 Ball
MB : FBGA 107 Ball
MC : FBGA 137 Ball
MD : FBGA 127 Ball

ME : FBGA 107 Ball SS
MJ : FBGA 199 Ball
MK : FBGA 130 Ball 7x9
ML : FBGA 137 Ball 8x13
MM : FBGA 130 Ball 8x9
MN : FBGA 130 Ball 10x12
MP : FBGA134, 11x11.5
MR : FBGA 79 Ball 8X8
MS : FBGA 121 Ball 10x11
MT : FBGA 104 Ball 9x9
MU : FBGA 225 Ball 11x11 Apple
MV : FBGA 121 Ball 8x8
MW: FBGA 153 Ball 9x10
MX: FBGA 153 Ball 8x9
MY : FBGA 121 Ball 6x8
LA : FBGA 178 Ball 11x11.5
LB : FBGA 253 Ball 11x11.5
LC : FBGA134, 11.5x11.5 Apple
LD : FBGA361, 12.5x12.5 Apple
LE : FBGA361, 13x13 Apple
LF : FBGA261, 10x10 Apple
LG : LGA 60 Ball, 8x10
LH : FBGA 200 Ball, 10x15
LJ : FBGA134, 11.5x11.5
LK : FBGA 178b, 12.5 x 11.5
LL : FBGA 253b 12 x 12

Ci-h : FBGA 224 Ball
CE : FBGA 169 Ball
CF : FBGA 153 Ball
CG : FBGA 185 Ball
CH : FBGA 199 Ball
CJ : FBGA 121 Ball
CT : FBGA 168 Ball 12x12 N 4.2
CK : FBGA 168 Ball 12x12 N 4.5
CL
CM : FBGA 162 Ball 12x13.5
CP : FBGA 162 Ball 11.5x13
CN : FBGA 186 Ball 12x16
CQ : FBGA 186 Ball 14x18
CR : FBGA 346 Ball 12x16
CU : FBGA 221 Ball 11.5x13
CV : FBGA 529 Ball 15x15
CW : FBGA 275 Ball 12x15

PC DDR2 MCP
YA : FBGA 130 Ball 8x9 PC DDR2

PoP:P
PoP
PA : FBGA 160 Ball 15X15 JEDEC
PB : FBGA 152 Ball 14X14 JEDEC
PC : FBGA 152 Ball 14X14 TI
PD : FBGA 128 Ball 12X12 JEDEC
PE : FBGA 168 Ball 12X12 TI

PZ : FBGA 160 Ball 15X15 NECEL
PF : FBGA 104 Ball 9.5X10 APPLE
PG : FBGA 102 Ball 11X12 APPLE
PH : FBGA 72 Ball 13X13 APPLE
PK : FBGA 168 Ball 12x12 N 4.2
PL : FBGA 168 Ball 12x12 N 4.5
PM : FBGA 138 Ball 13x12 Apple
PN : FBGA 114 Ball 11x10 Apple
PP : FBGA 160 Ball 15x15 Renesas
PQ : FBGA 216 Ball 12x12
PR : FBGA 240 Ball 14x14
PS : FBGA 136 Ball 10x10
PT : FBGA 200 Ball 14x14 Apple
PU : FBGA 128 Ball 12x12
PV : FBGA 88 Ball 8.5x6 Apple
PW : FBGA 224 Ball 13x12 Apple

PY : FBGA 280 Ball 14x16.5 Apple
RA : FBGA 220 Ball 14x14 Qualcomm
RB : FBGA 272 Ball 14x15.5 Apple
RC : FBGA 244 Ball 13x14 Apple
RD : FBGA 136 Ball 10x10 Motorola
RE : FBGA 84 Ball 8.5x6.0 Apple
RF : FBGA 152 Ball 8.5x7.5 Apple
RG : FBGA 216 Ball 12x12 Ch-A
RH : FBGA 216 Ball 12x12 Ch-B
RJ : FBGA 84 Ball 8.5x5.5 Apple
RK : FBGA 456 Ball 14x15.5 Apple
RL : FBGA 216 Ball 15x15
RM : FBGA 144ball 10.5x10.5
RN : FBGA 220ball CuOSP
RP : FBGA 256ball 14x14
RR : FBGA 312ball 15x15 Apple
RT : FBGA 136ball 9.9x5.9 Apple
RS : FBGA 240ball 14x14 TI OMAP5
RU : FBGA 216 Ball 12x12 Ch-B CuOSP
RV : FBGA Qualcomm x128 PoP
RW : FBGA 426 Ball 13.5x14.5 Apple
RY : FBGA 216ball 15X15 CuOSP
TA : FBGA 504ball 15x15
TB : FBGA 524ball 18x15
TC : FBGA 504ball 18x15
TD : FBGA 216b 15x15 0.27ball (BDP)
TE : FBGA 216b 15x15 0.27ball(BDP) 0.72T
TF : FBGA 396ball 15x15
TG: FBGA 256ball 14x14 Ch-A
TH : FBGA 385ball 14x15.5 Samsung
TJ : FBGA 216b 15x15 0.27ball(BDP) 3layer Su
TK: FBGA 276ball 12.5x12.5 Apple
UA: FBGA 272ball 15x15 JEDEC
UB: FBGA 366ball 15x15 Qualcomm
UM:FBGA 450Ball 14.46x14.8 Apple

(14 L : Leaded
P : Lead Free
R : Lead & Halogen Free
(15) —

(16) NVM Speed
N :NONE

MCP		PoP	
2	: 25ns	2	: 25ns
3	: 30ns	3	: 30ns
4	: 45ns	4	: 45ns
5	: 50ns	5	: 50ns
6	: 60ns	6	: 60ns
8	: 80ns	8	: 80ns

Ci-MCP/Ci-PoP
3 : 25ns/30ns(Ci-NAND/NAND)
4 : 25ns/45ns(Ci-NAND/NAND)
5 : 25ns/50ns(Ci-NAND/NAND)
6 : 25ns/60ns(Ci-NAND/NAND)
8 : 25ns/80ns(Ci-NAND/NAND)
7 : 30ns(Ci-NAND) K : 52Mhz

LPDDR2-NVM
A : DDR2 200
B : DDR2 333
E : DDR2 400
C : DDR2 533
Y : DDR2 667
D : DDR2 800
PC DDR2 MCP
2: 25ns

(17) DRAM Speed
LPDDR
S : 105MHz CL3 (DDR 200 CL3)
P : 105MHz CL2 (DDR 200 CL2)
H : 133MHz CL3 (DDR 266 CL3)
B : 66MHz CL2
6 : 166MHz CL3 (DDR 333 CL3)

Q : 185MHz CL3 (DDR 370 CL3)
E : 200MHz CL3 (DDR 400 CL3)

LPDDR2, PCDDR2
6 : DDR2 333 (CL3)
E : DDR2 400 (CL3)

C : DDR2 533 (CL4)
Y : DDR2 667 (CL5)
D : DDR2 800 (CL6)
G : DDR2 1,066 (CL8)

H : DDR2 1,200
J : DDR2 1,250
LPDDR3
K : DDR3 1333 (CL10)
T : DDR3 1600 (CL12)
M : DDR3 1651.2 (CL14)
R : DDR3 1866 (CL12)
U : DDR3 1866 (CL14)
V : DDR3 2133 (CL16)

LPDDR4
L : DDR4 3200 (CL28)
WIO2
E : DDR2 400
C : DDR2 533

(18) Temperature
C : Commercial(0~70C)
E : Extended(-25~85C)
M : Mobile(-30~85C)
I : Industrial(-40~85C)
K : Mobile II (-30~95'C)
D : Commercial II (0~85C)
H : Mobile Extended (-30~105'C)