DDR3 SDRAM MODULE PART NUMBERING

H M T X XX X X X X X X X - XX
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

HYNIX MEMORY

PRODUCT FAMILY

M : DRAM MODULE

PRODUCT MODE

T : DDR3 SDRAM

COMPONENT DENSITY

5 : 512Mb
1 : 1Gb
3 : 2Gb
4 : 4Gb
8 : 8Gb

MEMORY DEPTH

16	: 16Mb	51	: 512Mb
32	: 32Mb	1G	: 1Gb
64	: 64Mb	2G	: 2Gb
12	: 128Mb	4G	: 4Gb
25	: 256Mb	8G	: 8Gb

MODULE TYPE

U : 240 pin Unbuffered DIMM
R : 240 pin Registered DIMM
V : 240 pin VLP Registered DIMM
S : 204 pin Unbuffered SO-DIMM

DATA WIDTH

6 : x64
7 : x72

DIE GENERATION

M	: 1st	D	: 5th
A	: 2nd	E	: 6th
B	: 3rd	F	: 7th
C	: 4th	G	: 8th

SPEED(tCL-tRCD-tRP)

P9 : DDR3-1600 9-9-9
PA : DDR3-1600 10-10-10
PB : DDR3-1600 11-11-11
H8 : DDR3-1333 8-8-8
H9 : DDR3-1333 9-9-9
HA : DDR3-1333 10-10-10
G6 : DDR3-1066 6-6-6
G7 : DDR3-1066 7-7-7
G8 : DDR3-1066 8-8-8
S5 : DDR3-800 5-5-5
S6 : DDR3-800 6-6-6

OPERATING TEMPERATURE & POWER CONSUMPTION

C : Commercial Temp[2] & Normal Power
L : Commercial Temp[2] & Low Power
E : Extended Temp[3] & Normal Power
I : Industrial Temp[4] & Normal Power
A : Commercial Temp[1] & 1.35 VDD Power

ORGANIZATION

4 : x4 Based
8 : x8 Based
6 : x16 Based

PACKAGE MATERIAL

L : Leaded
P : Lead Free (RoHS[5] Compliant)
R : Lead Free & Halogen Free (RoHS[5] Compliant)

PACKAGE TYPE

F : FBGA SDP (Single Die Package)
M : FBGA DDP (Dual Die Package)
H : FBGA QDP (Quad Die Package)

Note:
1) Refer to respective datasheet for more module options
2) Commercial Temperature: 0°C ~ 85°C
3) Extended Temperature: -25°C ~ 85°C
4) Industrial Temperature: -40°C ~ 85°C
5) ROHS : Restriction Of Hazardous Substances

DDR3 SDRAM MODULE PART NUMBERING

HYM XX X XX X XX X X X X X - XX

HYNIX MODULE

COMPONENT GROUP

T5 : 512Mb DDR3 SDRAM
     8K/64ms Refresh, 8Banks

T1 : 1G DDR3 SDRAM
     8K/64ms Refresh, 8 Banks

T2 : 2Gb DDR3 SDRAM
     8K/64ms Refresh, 16Banks [1]

INTERFACE & POWER SUPPLY

BLANK   SSTL_15, : VDD 1.5V & VDDQ 1.5V

MEMORY DEPTH

32	: 32M	51	: 512M
64	: 64M	1G	: 1G
12	: 128M	2G	: 2G
25	: 256M		

MODULE TYPE

P : Registered DIMM
B : Fully Buffered DIMM
U : Unbuffered DIMM
S : So-DIMM

DATA WIDTH

64 : x64
72 : x72

SPEED(tCL-tRCD-tRP)

H7 : DDR3-1333 7-7-7
H8 : DDR3-1333 8-8-8
H9 : DDR3-1333 9-9-9
G6 : DDR3-1066 6-6-6
G7 : DDR3-1066 7-7-7
G8 : DDR3-1066 8-8-8
S5 : DDR3-800 5-5-5
S6 : DDR3-800 6-6-6

SPECIAL MODULE

Reserved for future usage

ORGANIZATION

4 : x4 Based
8 : x8 Based
6 : x16 Based

PACKAGE TYPE & MATERIAL[2]

F : FBGA Single Die
M : FBGA DDP [3]
S : FBGA Stack

POWER CONSUMPTION

N : Nomal
L : Low Self Refresh Power
K : Reduced Power

DIE GENERATION

Z	: 1st Gen.	D	: 5th Gen.
A	: 2nd Gen.	E	: 6th Gen.
B	: 3rd Gen.	F	: 7th Gen.
C	: 4th Gen.	G	: 8th Gen.

* Die generation follows alphabetical order from 2nd Generation.

Notes)

1. Exception: 8K/64ms Refresh, 8 Banks for DDP

2. All Lead-free and RoHS compliant ~ RoHS: Restriction of Hazardous Substance

3. DDP(Dual Die Package)

4. All DDR3 partnumber may also be changed by the result of nomenclature revision in progress