

# DDR4 SDRAM PART NUMBERING

H 5 A N XX X X X X X - XX X

1 2 3 4 5 6 7 8 9 10 11 12 13 14

**SK Hynix MEMORY**

**PRODUCT FAMILY**

5 : DRAM

**PRODUCT MODE**

A : DDR4 SDRAM

**POWER SUPPLY**

N : VDD & VDDQ=1.2V

**DENSITY & REFRESH**

1G : 1Gb  
 2G : 2Gb  
 4G : 4Gb  
 8G : 8Gb  
 AG : 16Gb  
 BG : 32Gb

**ORGANIZATION**

4 : x4  
 8 : x8  
 6 : x16

**DIE TYPE**

N : Non-TSV  
 T : TSV

**DIE GENERATION**

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

**OPERATING TEMPERATURE & POWER CONSUMPTION**

C : Commercial Temp(0°C ~ 85°C) & Normal Power  
 R : Commercial Temp(0°C ~ 85°C) & Reduced IDD6  
 I : Industrial Temp(-40°C ~ 95°C) & Normal Power  
 K : Extended Temp(-40°C ~ 105°C) & Normal Power  
 F : Automotive Grade Industrial Temp (AIT / -40°C ~ 95°C)  
 N : Automotive Grade Automotive Temp (AAT / -40°C ~ 105°C)

**SPEED(tCL-tRCD-tRP)**

PB : DDR4-1600 11-11-11  
 RD : DDR4-1866 13-13-13  
 TF : DDR4-2133 15-15-15  
 UH : DDR4-2400 17-17-17  
 VK : DDR4-2666 19-19-19  
 XN : DDR4-3200 22-22-22

**PACKAGE MATERIAL**

L : Leaded  
 P : Lead Free (ROHS compliant)  
 R : Lead Free & Halogen Free (ROHS compliant)

**PACKAGE TYPE**

F : FBGA  
 M : FBGA DDP  
 J : Flipchip SDP  
 2 : TSV 2 high stack  
 4 : TSV 4 high stack