

# Part Number Decoder—SigmaQuad/SigmaDDR

**GSI /QQ**  
**GS P DDD O FF WWW R KK - BBB T C S**

**P = Product Line Code**  
**(1 digit)**

8 = Sync SRAM

**DDD = Density/Product Family**  
**(Up to 3 digits)**

18 = 16 or 18Mb  
 34 = 32 or 36Mb  
 66, 67, 69 = 64 or 72Mb  
 130, 131, 133 = 128 or 144Mb  
 258, 261 = 256 or 288Mb

**O = Option**  
**(Up to 1 digit)**

2 = II/II+  
 3 = IIIe  
 4 = IVe

**FF = Function Code**  
**(Up to 2 alpha)**

D = SigmaQuad B4  
 DT = SigmaQuad B4 (Weak/Strong ODT)  
 E = LV and HV HSTL  
 H = HV (1.5 V) HSTL  
 L = LV (1.2 V) HSTL  
 Q = SigmaQuad B2  
 QT = SigmaQuad B2 (Weak/Strong ODT)  
 R = SigmaDDR B4  
 S = SigmaSIO DDR  
 T = SigmaDDR B2  
 TT = SigmaDDR B2 (Weak/Strong ODT)

**WWW = I/O Width/Variation**  
**(Up to 3 digits)**

6, 7, 8 = x8  
 9, 10, 11 = x9  
 18, 19, 20, 21 = x18  
 36, 37, 38, 39 = x36

**R = Revision Level**  
**(Up to 1 alpha)**

Blank = Original Mask Set  
 A = 2nd Generation  
 B = 3rd Generation  
 C = 4th Generation

**KK = Package**  
**(Up to 2 alpha)**

CE = 21 mm x 25 mm, 165 CCGA  
 D = 13 mm x 15 mm, 165 FPBGA  
 E = 15 mm x 17 mm, 165 FPBGA  
 HK = 5/6 RoHS 14 mm x 22 mm, 260 BGA  
 (leaded package balls, lead-free die bumps)  
 K = 14 mm x 22 mm, 260 BGA  
 LE = 21 mm x 25 mm, 165 CLGA  
 GD = 6/6 RoHS 13 mm x 15 mm, 165 FPBGA  
 GE = 6/6 RoHS 15 mm x 17 mm, 165 FPBGA  
 GK = 6/6 RoHS 14 mm x 22 mm, 260 BGA

**BBB = Speed Bin**  
**(Up to 3 digits)**

XX = ns or MHz

**T = Temp Grade**  
**(Up to 1 alpha)**

Blank = Commercial (0° to 70°C)  
 I = Industrial (–40° to 85°C)  
 E = Extended (–40° to 125°C)  
 M = Military (–55° to 125°C)

**C = Customization**

V = Voltage Variation  
 X = Non-catalog Post-assembly Option

Note: If "X" is shown in the Customization field, the Speed Bin field may become a general purpose alphanumeric custom part number field.

**S = Shipping Option**  
**(Up to 1 alpha)**

Blank = Bulk  
 T = Tape and Reel

**QQ = Qualification Status**  
**(Up to 1 symbol and 2 alpha)**

Blank = Pre-Qual or Qualified  
 /ES = Eng Sample\*

\*Note: The /ES mark may appear anywhere on the top surface of the package. The /ES mark supersedes any other qualification status mark that may appear on the device.