

# Memory Module Specification



## KHX2000C8D3T1K2/4GX

### 4GB (2GB 256M x 64-Bit x 2 pcs.) DDR3-2000MHz CL8 240-Pin DIMM Kit

#### **DESCRIPTION:**

Kingston's KHX2000C8D3T1K2/4GX is a kit of two 256M x 64-bit 2GB (2048MB) DDR3-2000MHz CL8 SDRAM (Synchronous DRAM) memory modules, based on sixteen 128M x 8-bit DDR3 FBGA components per module. Each module kit supports Intel® XMP (Extreme Memory Profiles). Total kit capacity is 4GB. Each module kit has been tested to run at DDR3-2000MHz at a low latency timing of 8-8-8 at 1.65V. The SPDs are programmed to JEDEC standard latency DDR3-1333MHz timing of 9-9-9 at 1.5V. Each 240-pin DIMM uses gold contact fingers and requires +1.5V. The JEDEC standard electrical and mechanical specifications are as follows:

#### **FEATURES:**

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✓ JEDEC standard  $1.5V \pm 0.075V$  Power Supply

 $\checkmark$  VDDQ = 1.5V ± 0.075V

☑ 667MHz fCK for 1333Mb/sec/pin

8 independent internal bank

Programmable CAS Latency: 5,6,7,8,9,10

Posted CAS

Programmable Additive Latency: 0, CL - 2, or CL - 1 clock

Programmable CAS Write Latency(CWL) = 7(DDR3-1333)

8-bit pre-fetch

Burst Length: 8 (Interleave without any limit, sequential with starting address "000" only), 4 with tCCD = 4

which does not allow seamless read or write [either on the fly using A12 or MRS]

Bi-directional Differential Data Strobe

Internal(self) calibration: Internal self calibration through ZQ pin (RZQ: 240 ohm ± 1%)

On Die Termination using ODT pin

Average Refresh Period 7.8us at lower then TCASE 85°C, 3.9us at 85°C < TCASE . 95°C

Asynchronous Reset

PCB: Height 2.401" (61.00mm) w/ heatsink, double sided component

#### **PERFORMANCE:**

CL(IDD)

Row Cycle Time (tRCmin)

Refresh to Active/Refresh Command Time (tRFCmin)

✓ Row Active Time (tRASmin)

Power

UL Rating

Operating Temperature

**☑** Storage Temperature

9 cycles

49.5ns (min.)

110ns

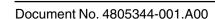
36ns (min.)

1.800 W (operating per module)

94 V - 0

0° C to 85° C

-55° C to +100° C



### **MODULE DIMENSIONS:**

