

## KHX12800D3K2/4G

### 4GB (2GB 256M x 64-Bit x 2 pcs.)

### PC3-12800 CL9 240-Pin DIMM Kit

#### DESCRIPTION:

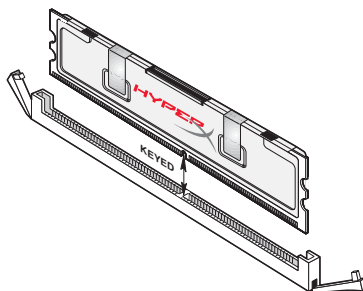
Kingston's KHX12800D3K2/4G is a kit of two 256M x 64-bit 2GB (2048MB) DDR3-1600 CL9 SDRAM (Synchronous DRAM) memory modules, with each module using sixteen 128M x 8-bit DDR3 FBGA components. Total kit capacity is 4GB (4096MB). Each module has been tested to run at DDR3-1600MHz at a low latency timing of 9-9-9-27 at 1.7V to 1.9V. The SPDs are programmed to JEDEC standard latency DDR3-1066Mhz timing of 7-7-7-20 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:

- ✓ JEDEC standard 1.5V  $\pm$  0.075V Power Supply
- ✓ VDDQ = 1.5V  $\pm$  0.075V
- ✓ 533MHz fCK for 1066Mb/sec/pin
- ✓ 8 independent internal bank
- ✓ Programmable CAS Latency: 6,7,8,9,10
- ✓ Posted CAS
- ✓ Programmable Additive Latency: 0, CL - 2, or CL - 1 clock
- ✓ Programmable CAS Write Latency(CWL) = 7(DDR3-1066)
- ✓ 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  $\pm$  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
- ✓ 1066Mbps CL7 doesn't have backward compatibility with 800Mbps CL5
- ✓ PCB : Height 1.180" (30.00mm), double sided component

#### PERFORMANCE:

- |                                                    |                              |
|----------------------------------------------------|------------------------------|
| ✓ CL(IDD)                                          | 7 cycles                     |
| ✓ Row Cycle Time (tRCmin)                          | 50.625ns (min.)              |
| ✓ Refresh to Active/Refresh Command Time (tRFCmin) | 110ns                        |
| ✓ Row Active Time (tRASmin)                        | 37.5ns (min.)                |
| ✓ Power                                            | TBD W (operating per module) |
| ✓ UL Rating                                        | 94 V - 0                     |
| ✓ Operating Temperature                            | 0° C to 85° C                |
| ✓ Storage Temperature                              | -55° C to +100° C            |



**MODULE DIMENSIONS:**