# Memory Module Specifications



## HX421S13IBK2/8

8GB (4GB 512M x 64-Bit x 2 pcs.) DDR4-2133 CL13 260-Pin SODIMM Kit



## **DESCRIPTION**

HyperX HX421S13IBK2/8 is a kit of two 512M x 64-bit (4GB) DDR4-2133 CL13 SDRAM (Synchronous DRAM) 1Rx8, memory modules, based on eight 512M x 8-bit DDR4 FBGA components. Total kit capacity is 8GB. Each module kit supports Intel® Extreme Memory Profiles (Intel® XMP) 2.0. This module has been tested to run at DDR4-2133 at a low latency timing of 13-13-13 at 1.2V. Additional timing parameters are shown in the PnP Timing Parameters section below. The JEDEC standard electrical and mechanical specifications are as follows:

**Note:** The PnP feature offers a range of speed and timing options to support the widest variety of processors and chipsets. Your maximum speed will be determined by your BIOS.

#### PnP JEDEC TIMING PARAMETERS:

• JEDEC/PnP: DDR4-2133 CL13-13-13 @1.2V

• XMP Profile #1: DDR4-2133 CL13-13-13 @1.2V

# **SPECIFICATIONS**

| CL(IDD)   | 13 cycles       |
|---|-----------------|
| Row Cycle Time (tRCmin)                             | 46.5ns (min.)   |
| Refresh to Active/Refresh<br>Command Time (tRFCmin) | 260ns (min.)    |
| Row Active Time (tRASmin)                           | 33ns (min.)     |
| Maximum Operating Power                             | TBD W*          |
| UL Rating   | 94 V - 0        |
| Operating Temperature                               | 0°C to 85°C     |
| Storage Temperature                                 | -55°C to +100°C |
|   |                 |

<sup>\*</sup>Power will vary depending on the SDRAM used.

## **FEATURES**

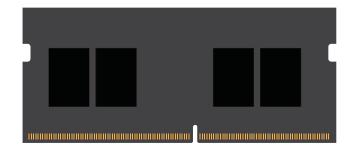
- Power Supply: VDD = 1.2V Typical
- VDDQ = 1.2V Typical
- VPP 2.5V Typical
- VDDSPD = 2.25V to 3.6V
- On-Die termination (ODT)
- 16 internal banks; 4 groups of 4 banks each
- Bi-Directional Differential Data Strobe
- 8 bit pre-fetch
- Burst Length (BL) switch on-the-fly BL8 or BC4(Burst Chop)
- Height 1.18" (30.00mm)

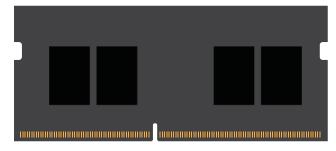
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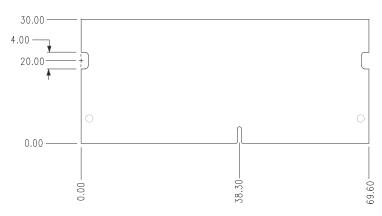
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# MODULE DIMENSIONS









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All Kingston products are tested to meet our published specifications. Some motherboards or system configurations may not operate at the published HyperX memory speeds and timing settings. Kingston does not recommend that any user attempt to run their computers faster than the published speed. Overclocking or modifying your system timing may result in damage to computer components.