# Memory Module Specifications



## HX421C14FBK8/64

64GB (8GB 1G x 64-Bit x 8 pcs.) DDR4-2133 CL14 288-Pin DIMM



#### **DESCRIPTION**

HyperX HX421C14FBK8/64 is a kit of eight 1G x 64-bit (8GB) DDR4-2133 CL14 SDRAM (Synchronous DRAM) 2Rx8, memory module, based on sixteen 512M x 8-bit FBGA components per module. Each module kit supports Intel® Extreme Memory Profiles (Intel® XMP) 2.0. Total kit capacity is 64GB. Each module has been tested to run at DDR4-2133 at a low latency timing of 14-14-14 at 1.2V. Additional timing parameters are shown in the Plug-N-Play (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.

#### JEDEC/XMP TIMING PARAMETERS

JEDEC/PnP: DDR4-2133 CL14-14-14 @1.2V
XMP Profile #1: DDR4-2133 CL14-14-14 @1.2V

## **SPECIFICATIONS**

| CL(IDD)   | 14 cycles         |
|---|-------------------|
| Row Cycle Time (tRCmin)                             | 46.5ns(min.)      |
| Refresh to Active/Refresh<br>Command Time (tRFCmin) | 260ns(min.)       |
| Row Active Time (tRASmin)                           | 32.75ns(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**

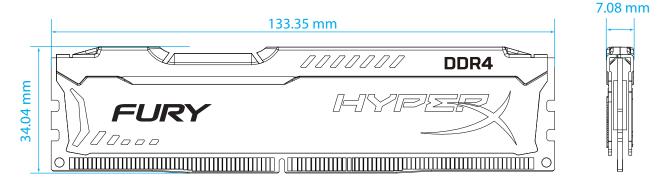
- Power Supply: VDD = 1.2V Typical
- VDDQ = 1.2V Typical
- VPP 2.5V Typical
- VDDSPD = 2.2V to 3.6V
- Nominal and dynamic on-die termination (ODT) for data, strobe, and mask signals
- Low-power auto self refresh (LPASR)
- Data bus inversion (DBI) for data bus
- On-die VREFDQ generation and calibration
- Dual-rank
- On-board I2 serial presence-detect (SPD) EEPROM
- · 16 internal banks; 4 groups of 4 banks each
- Fixed burst chop (BC) of 4 and burst length (BL) of 8 via the mode register set (MRS)
- Selectable BC4 or BL8 on-the-fly (OTF)
- Fly-by topology
- Terminated control command and address bus
- Height 1.340" (34.04mm), w/heatsink

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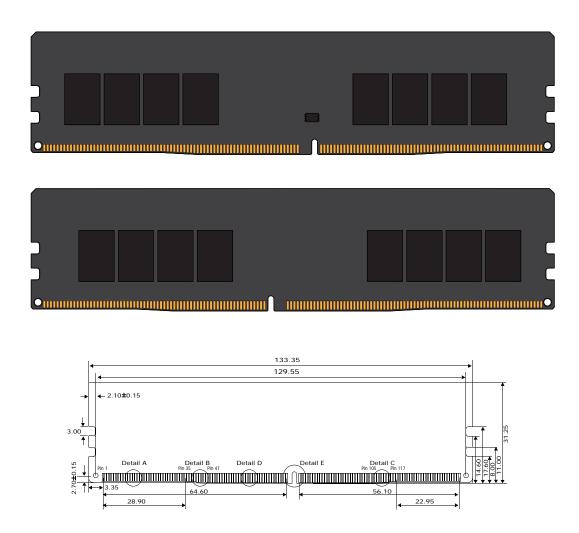
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## **MODULE WITH HEAT SPREADER**



## 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.