# Memory Module Specifications



# HX321C11SRK4/32

32GB (8GB 1G x 64-Bit x 4 pcs.)
DDR3-2133 CL11 240-Pin DIMM Kit



#### **DESCRIPTION**

HyperX HX321C11SRK4/32 is a kit of four 1G x 64-bit (8GB) DDR3-2133 CL11 SDRAM (Synchronous DRAM) 2Rx8, memory module, based on sixteen 512M x 8-bit FBGA components per module. Each module kit supports Intel® XMP (Extreme Memory Profiles). Total kit capacity is 32GB. Each module has been tested to run at DDR3-2133 at a low latency timing of 11-12-12 at 1.6V. The SPDs are programmed to JEDEC standard latency DDR3-1600 timing of 11-11-11 at 1.5V. Each 240-pin DIMM uses gold contact fingers. The JEDEC standard electrical and mechanical specifications are as follows:

#### XMP TIMING PARAMETERS

JEDEC: DDR3-1600 CL11-11-11 @1.5V

XMP Profile #1: DDR3-2133 CL11-12-12 @1.6V

XMP Profile #2: DDR3-1600 CL9-9-9 @1.5V

## **SPECIFICATIONS**

CL(IDD)	11 cycles
Row Cycle Time (tRCmin)	48.125ns(min.)
Refresh to Active/Refresh Command Time (tRFCmin)	260ns(min.)
Row Active Time (tRASmin)	35ns(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.

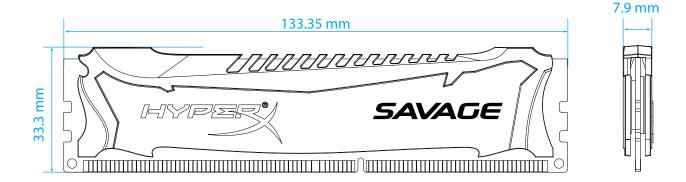
#### **FEATURES**

- JEDEC standard 1.5V (1.425V ~ 1.575V) Power Supply
- VDDQ = 1.5V (1.425V ~ 1.575V)
- 800MHz fCK for 1600Mb/sec/pin
- 8 independent internal banks
- Programmable CAS latency: 11, 10, 9, 8, 7, 6
- Programmable Additive Latency: 0, CL 2, or CL 1 clock
- 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 than TCASE 85°C, 3.9us at 85°C < TCASE < 95°C°</li>
- · Asynchronous Reset
- Height 1.311" (33.30mm), w/heatsink double sided component

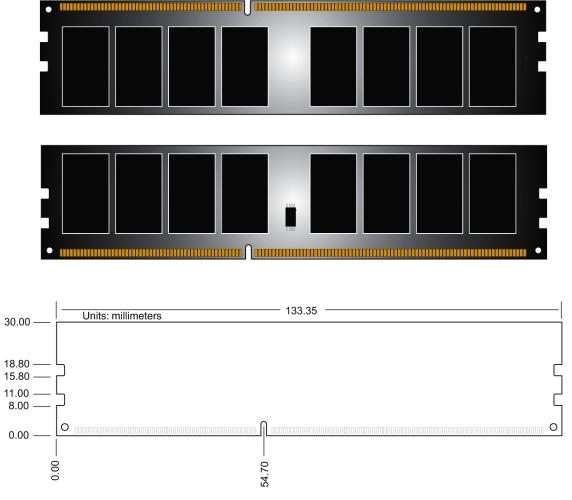
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### **MODULE WITH HEAT SPREADER**



### **MODULE DIMENSIONS**



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