KHX21C11T3FK8/64X

64GB (8GB 1G x 64-Bit x 8 pcs.)
DDR3-2133 CL11 240-Pin DIMM Kit w/Fan

SPECIFICATIONS

CL(IDD)	9 cycles
Row Cycle Time (tRCmin)	49.5ns (min.)
Refresh to Active/Refresh Command Time (tRFCmin)	260ns (min.)
Row Active Time (tRASmin)	36ns (min.)
Maximum Operating Power	2.460 W* (per module)
UL Rating	94 V - 0
Operating Temperature	0° C to 85° C
Storage Temperature	-55° C to +100° C

*Power will vary depending on the SDRAM used.

DESCRIPTION

Kingston's KHX21C11T3FK8/64X is a kit of eight 1G x 64-bit (8GB) DDR3-2133 CL11 SDRAM (Synchronous DRAM) 2Rx8 memory modules, based on sixteen 512M x 8-bit DDR3 FBGA components per module. Each module kit supports **Intel® XMP** (Extreme Memory Profiles). Total kit capacity is 64GB. Each module kit has been tested to run at DDR3-2133 at a low latency timing of 11-12-11 at 1.65V. The SPDs are programmed to JEDEC standard latency DDR3-1333 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:

This special kit part number includes Kingston's HyperX high-performance cooling fan assembly (KHX-FAN).

XMP TIMING PARAMETERS

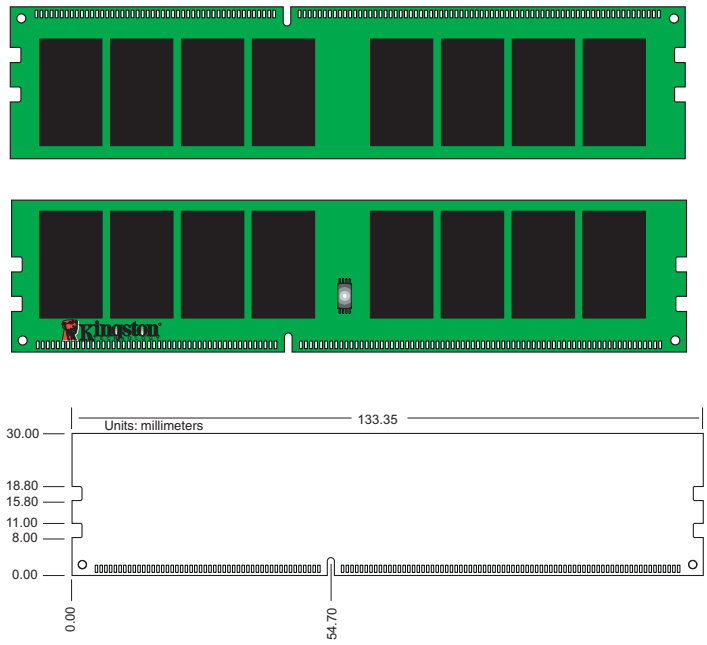
- JEDEC: DDR3-1333 CL9-9-9 @1.5V
- XMP Profile #1: D3-2133 CL11-12-11 @1.65V
- XMP Profile #2: D3-1600 CL9-9-9 @1.6V

FEATURES

- JEDEC standard 1.5V (1.425V ~ 1.575V) Power Supply
- VDDQ = 1.5V (1.425V ~ 1.575V)
- 667MHz fCK for 1333Mb/sec/pin
- 8 independent internal bank
- Programmable CAS Latency: 9, 8, 7, 6
- 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 than TCASE 85°C, 3.9us at 85°C < TCASE ≤ 95°C
- Asynchronous Reset
- PCB : Height 1.827” (46.41mm) w/ heatsink, double sided component

Continued >>

MODULE DIMENSIONS



MODULE WITH HEAT SPREADER

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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.

KHX-FAN

HyperX Cooling Fan Assembly

DESCRIPTION:

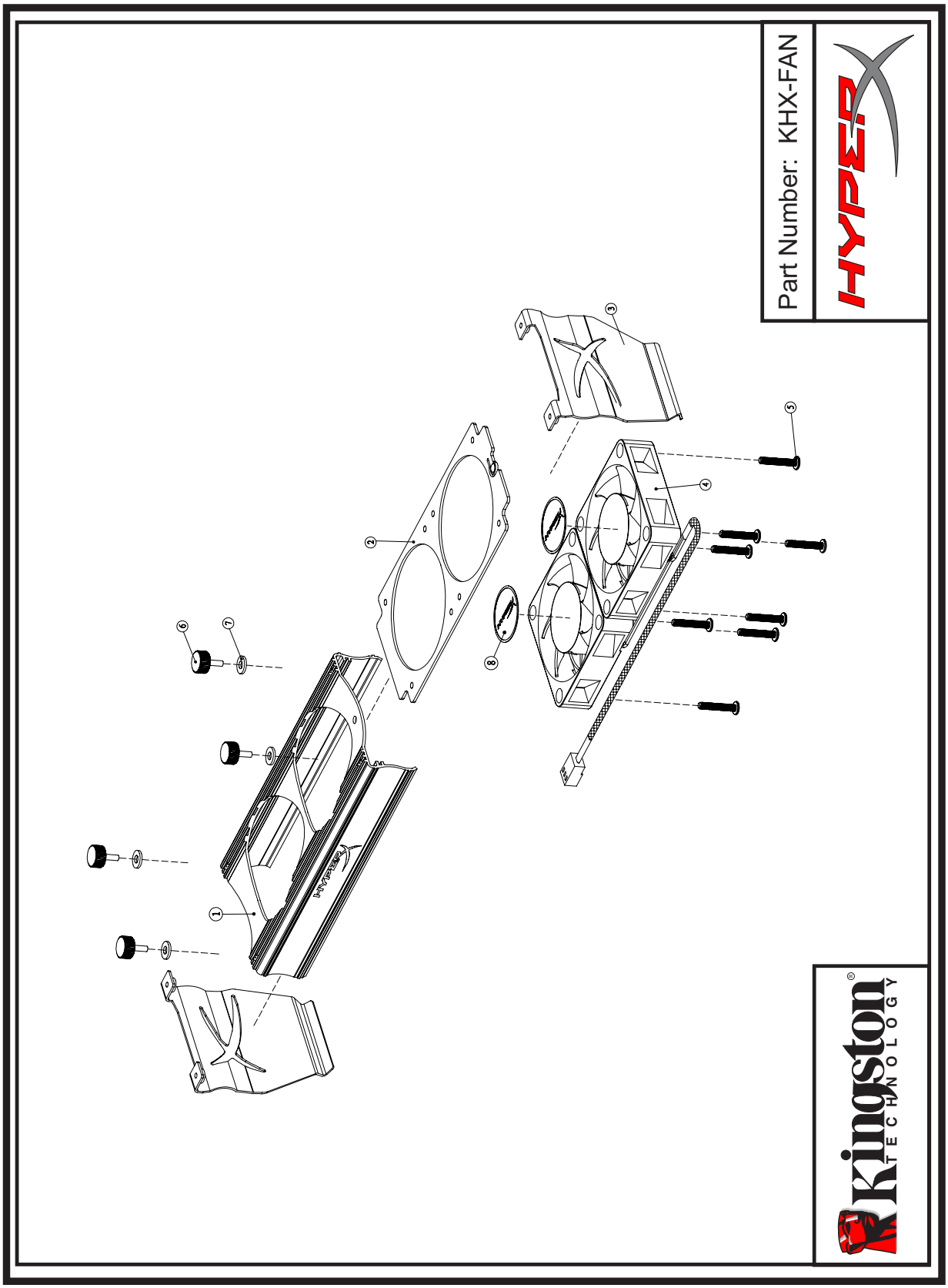
This document describes Kingston's HyperX memory module cooling fan assembly. If you are looking to maximize the performance potential of your HyperX memory... this is it. With twin fans focusing air directly onto your HyperX modules, your modules will run cooler, even in the most demanding environments. The mechanical and electrical specifications are as follows:

PERFORMANCE:

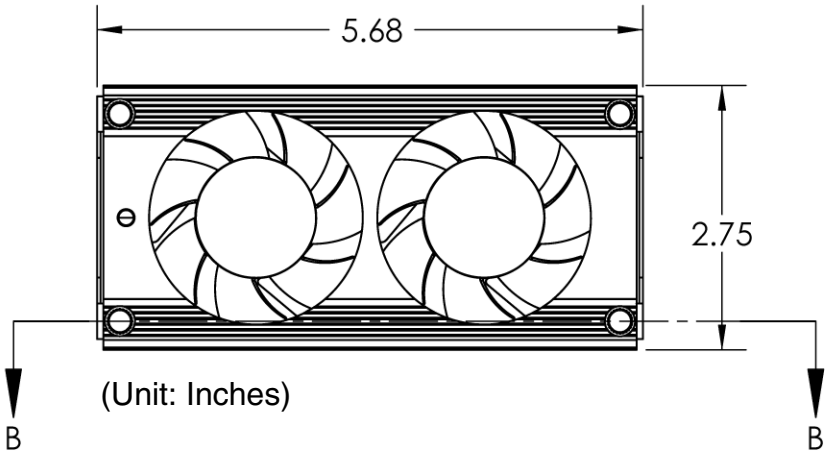
☑ Rated Voltage	12 VDC
☑ Operational Voltage	8 - 13.5 VDC
☑ Input Current	0.09 amp
☑ Input Power	1.08 watt
☑ RPM	3000 ± 10%
☑ Speed Control Type	
☑ Signal Output	Frequency Generator (FG)
☑ Max. Air Flow	0.43 m^3/min
At Zero Static Pressure	15.02 CFM
☑ Max. Air Pressure	2.31 mm-H_2O
At Zero Flow	0.09 inch-H_2O
☑ Accoustical Noise	25 (28 max.) dB-A

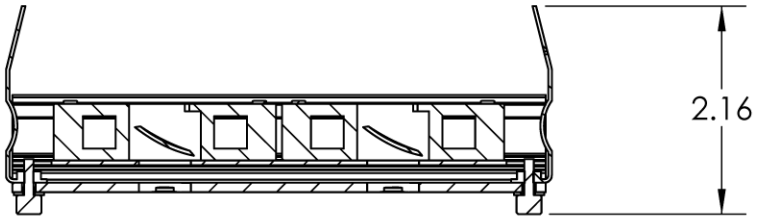
HyperX Cooling Fan Assembly

ASSEMBLY:

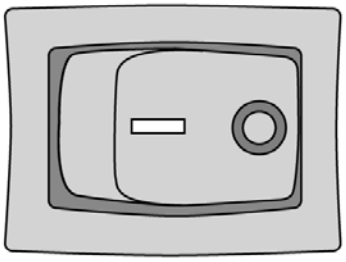


DIMENSIONS:

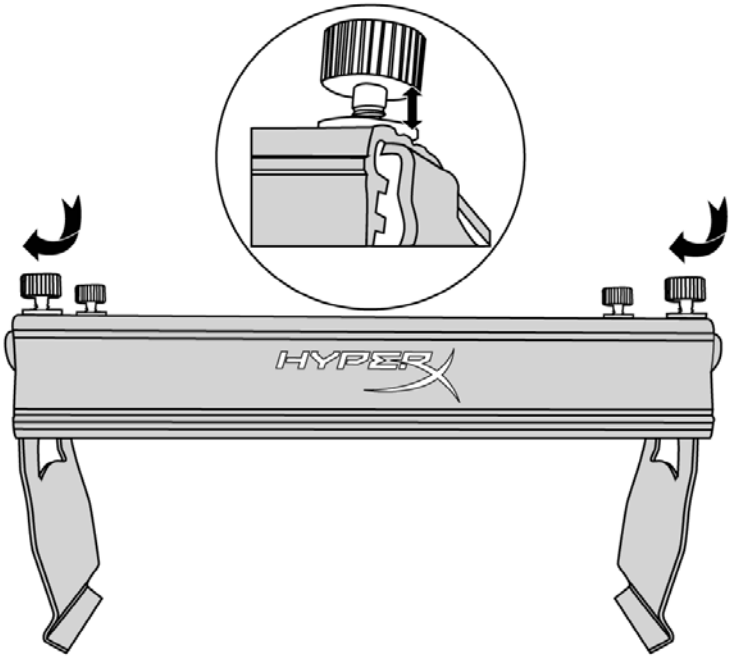




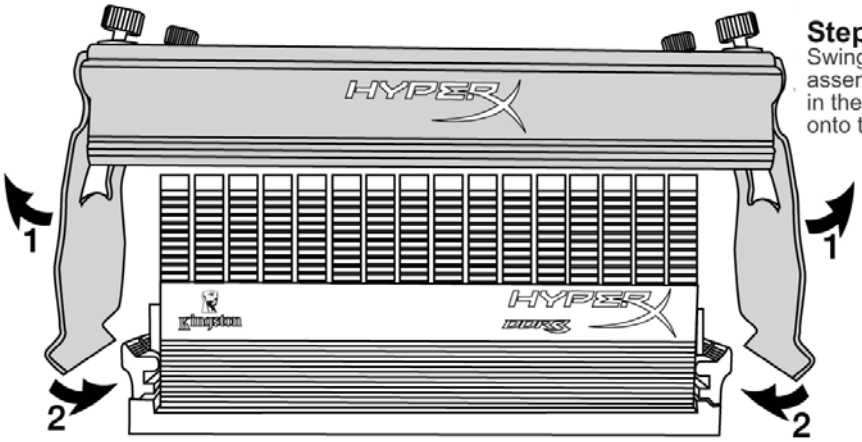
INSTALLATION:



Step #1:
Power the computer system off, disconnect the AC power cord and remove the computer cover.

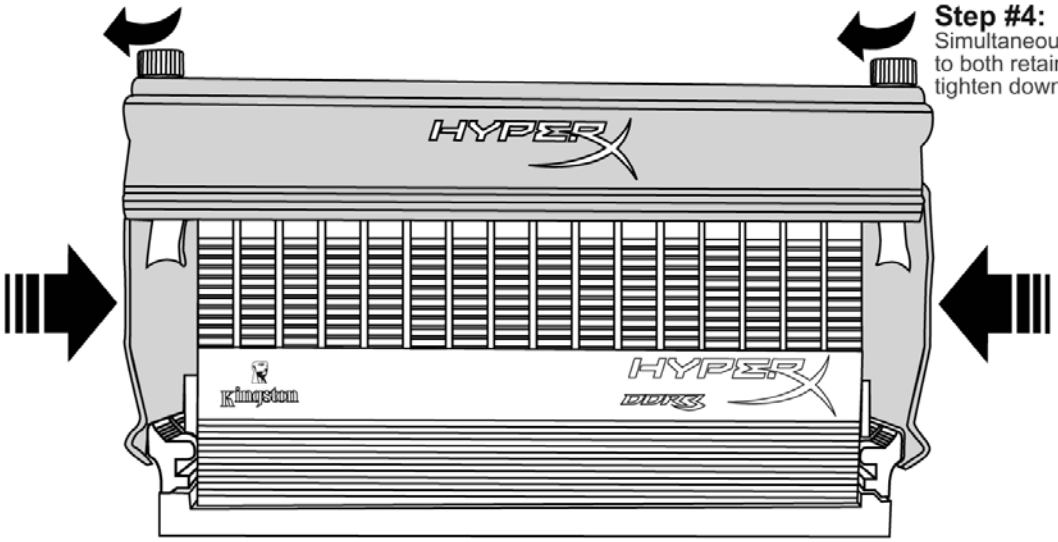


Step #2:
To assemble the HyperX fan, secure the two side brackets with the four thumb screws / washers. Do not tighten the screws completely!

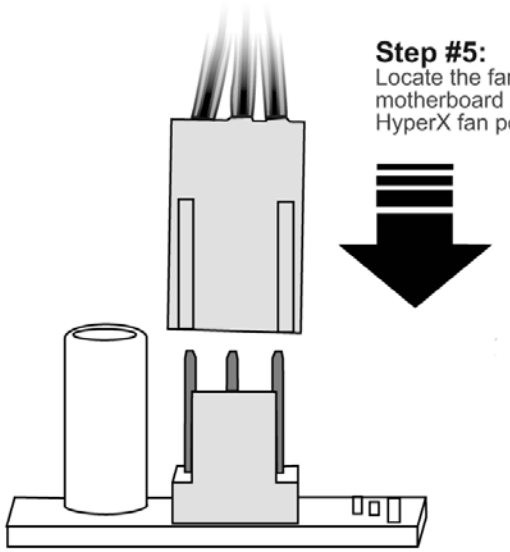


Step #3:
Swing the retaining brackets open and slide the assembly over the HyperX modules as shown in the illustration. Rest the base of the brackets onto the memory socket lock tabs.

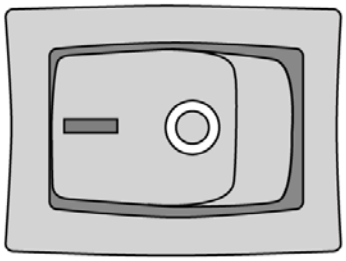
INSTALLATION (cont.):



Step #4:
Simultaneously apply pressure to both retaining brackets and tighten down all four thumb screws.



Step #5:
Locate the fan power source on the motherboard and connect the HyperX fan power cable.



Step #6:
Reconnect the AC power cord and power up the computer to verify fan operation. Replace the computer cover.

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