



KHX2333C9D3T1FK3/3GX

3GB (1GB 128M x 64-Bit x 3 pcs.) DDR3-2333MHz

CL9 240-Pin DIMM Kit w/ Fan

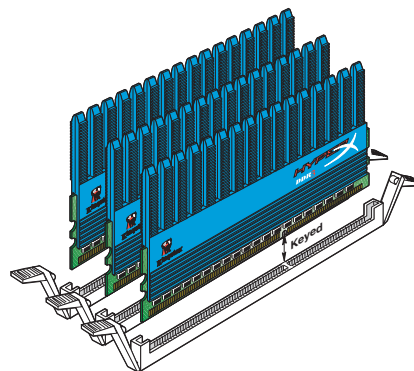
DESCRIPTION:

Kingston's KHX2333C9D3T1FK3/3GX is a kit of three 128M x 64-bit (1GB) DDR3-2333MHz CL9 SDRAM (Synchronous DRAM) memory modules, based on eight 128M x 8-bit DDR3 FBGA components per module. Each module kit supports **Intel® XMP** (Extreme Memory Profiles). Total kit capacity is 3GB. Each module kit has been tested to run at DDR3-2333MHz at a low latency timing of 9-11-9-27 at 1.65V. See more detailed XMP Profile information at the bottom of the page. The SPDs are programmed to JEDEC standard latency DDR3-1333MHz 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).

FEATURES:

- ✓ JEDEC standard 1.5V \pm 0.075V Power Supply
- ✓ VDDQ = 1.5V \pm 0.075V
- ✓ 667MHz fCK for 1333Mb/sec/pin
- ✓ 8 independent internal bank
- ✓ Programmable CAS Latency: 6,7,8,9
- ✓ 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 \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
- ✓ PCB : Height 2.401" (61.00mm) w/ heatsink, single sided component

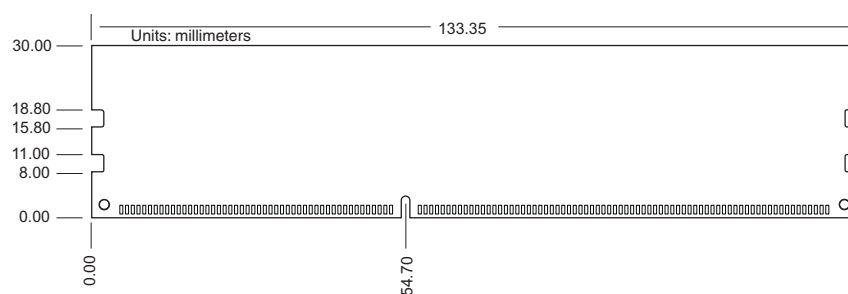
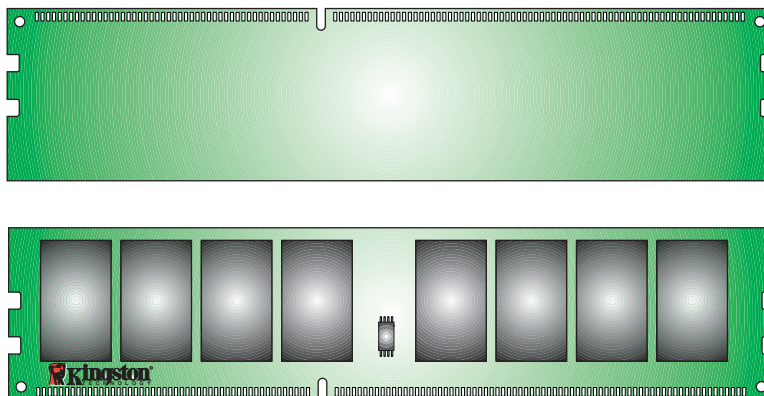


PERFORMANCE:

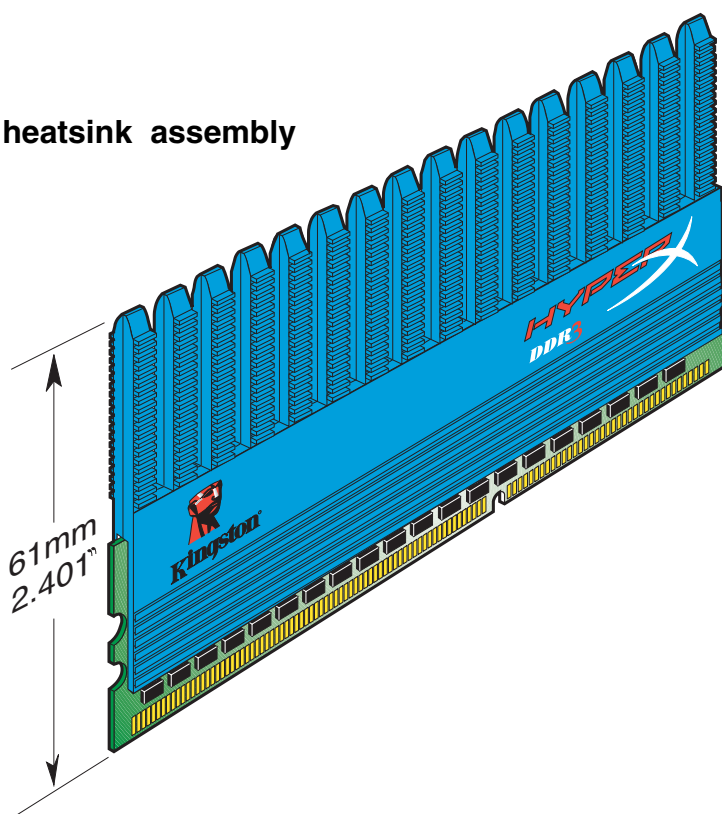
- | | |
|--|--------------------------------|
| ✓ CL(IDD) | 9 cycles |
| ✓ Row Cycle Time (tRCmin) | 49.5ns (min.) |
| ✓ Refresh to Active/Refresh Command Time (tRFCmin) | 110ns |
| ✓ Row Active Time (tRASmin) | 36ns (min.) |
| ✓ Power | 1.080 W (operating per module) |
| ✓ UL Rating | 94 V - 0 |
| ✓ Operating Temperature | 0° C to 85° C |
| ✓ Storage Temperature | -55° C to +100° C |

XMP Supported Profiles:

- ✓ Profile #1: DDR3-2333 CL9-11-9 @ 1.65V (**Intel 6-Core CPU**)
- ✓ Profile #2: DDR3-2000 CL9-10-9 @ 1.65V (**Intel 4-Core CPU**)

MODULE DIMENSIONS:

w/ heatsink assembly



KHX-FAN

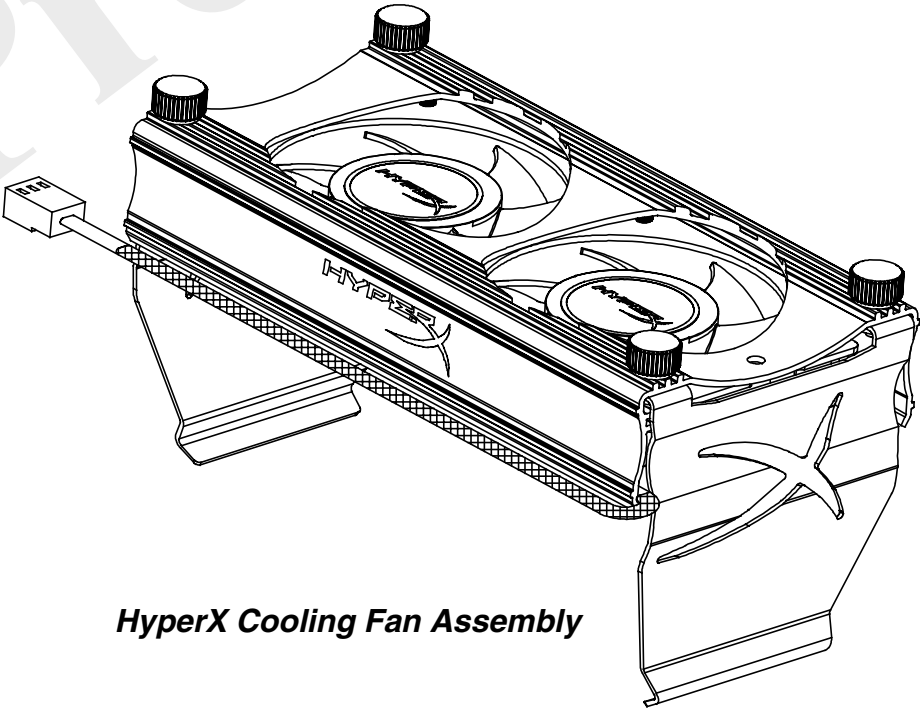
HyperX Cooling Fan Assembly

DESCRIPTION:

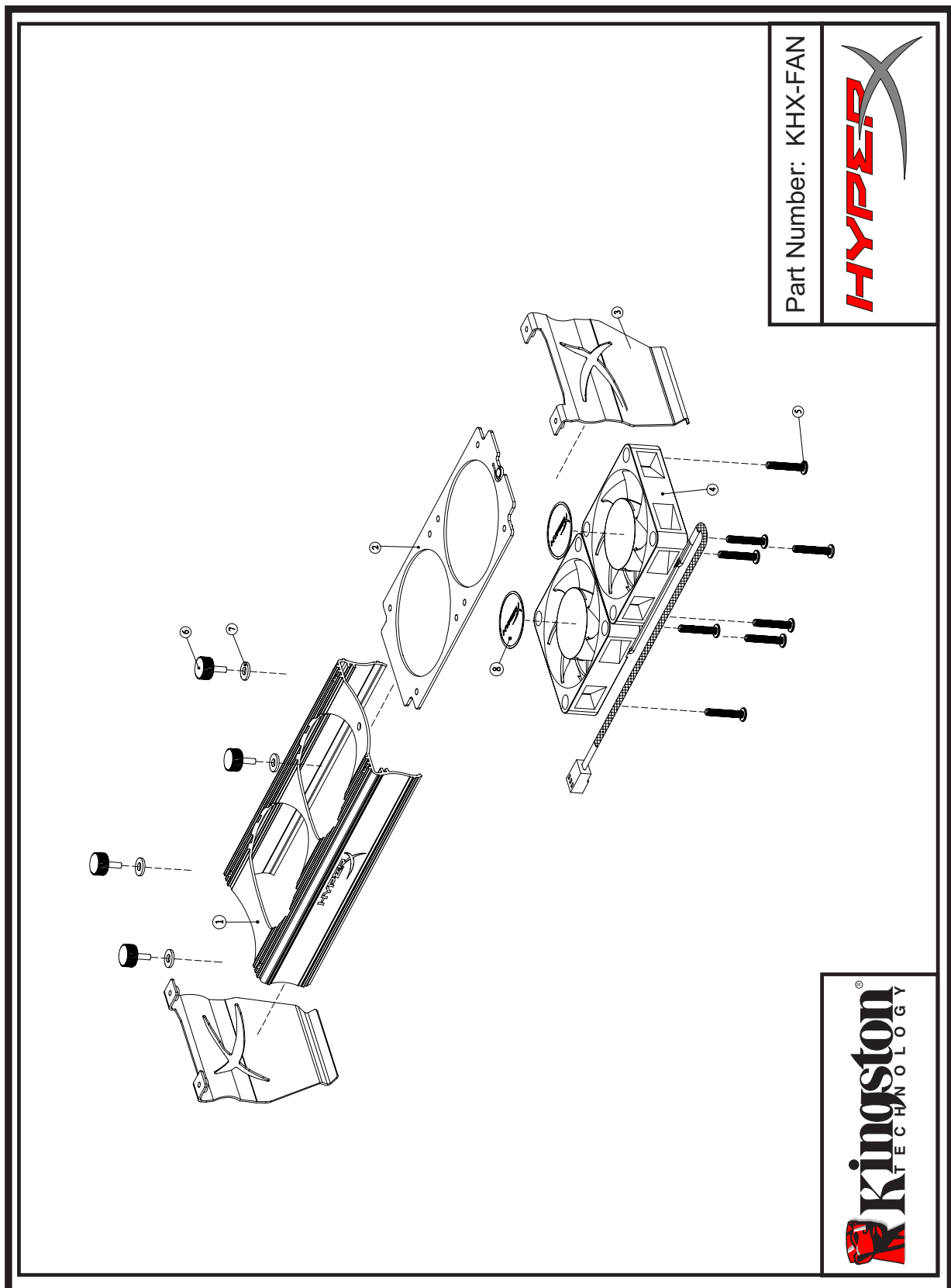
This document describes Kingston's HyperX memory module cooling fan assembly. If you are looking to maximize the performance potential of your HyperX memory... this is it. With twin fans focusing air directly onto your HyperX modules, your modules will run cooler, even in the most demanding environments.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

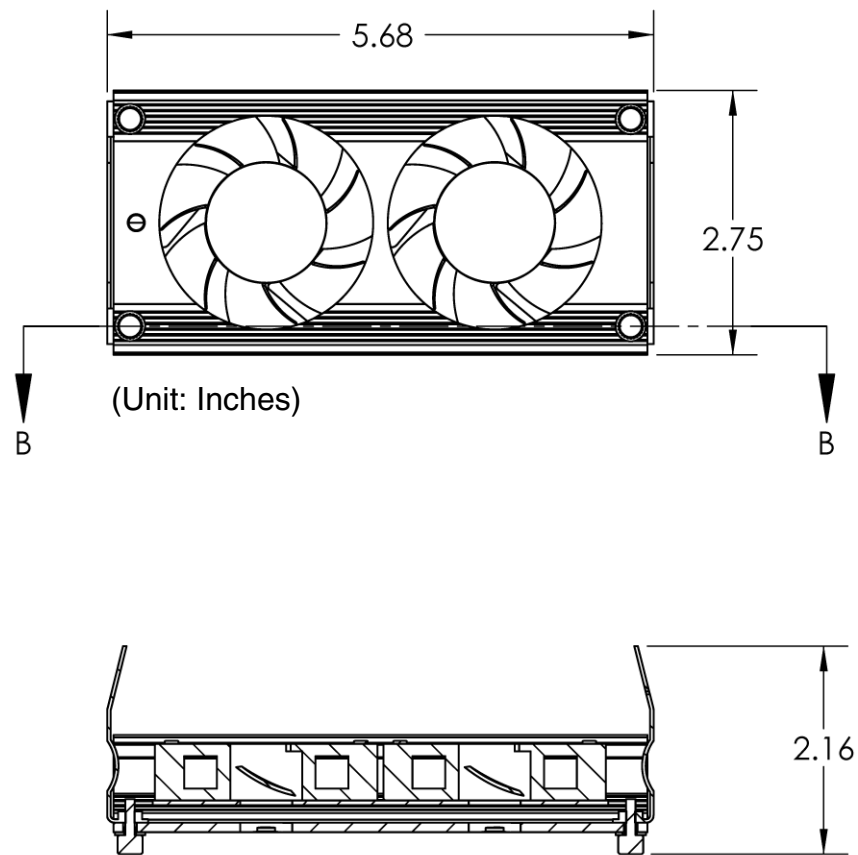
PERFORMANCE:

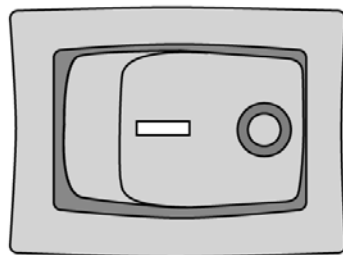
✓ Rated Voltage	12 VDC
✓ Operational Voltage	8 - 13.5 VDC
✓ Input Current	0.09 amp
✓ Input Power	1.08 watt
✓ RPM	3000 ± 10%
✓ Speed Control Type	
✓ Signal Output	Frequency Generator (FG)
✓ Max. Air Flow	0.43 m ³ /min
At Zero Static Pressure	15.02 CFM
✓ Max. Air Pressure	2.31 mm-H ₂ O
At Zero Flow	0.09 inch-H ₂ O
✓ Accoustical Noise	25 (28 max.) dB-A



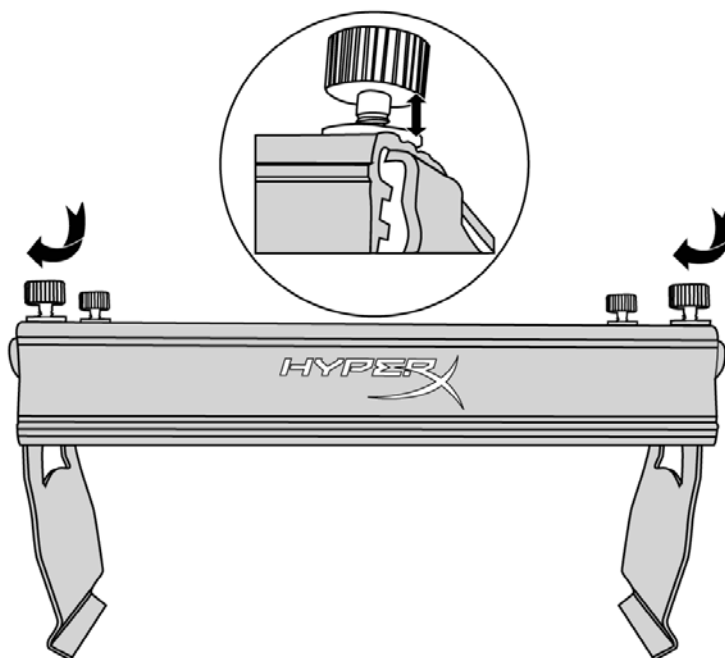
HyperX Cooling Fan Assembly

ASSEMBLY:

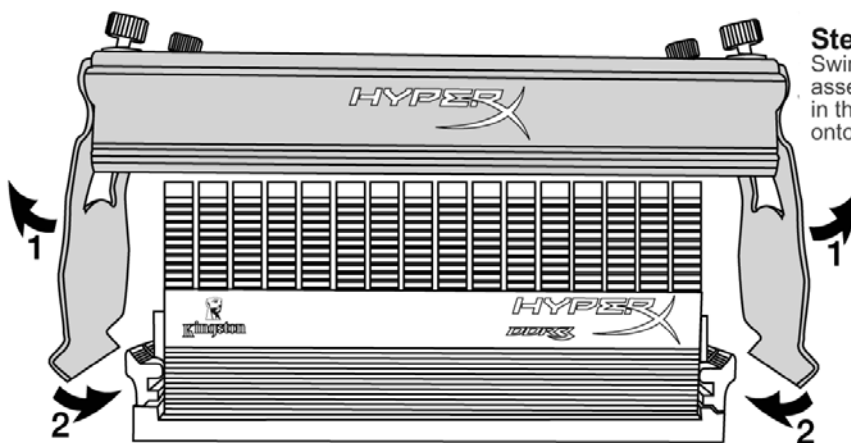
DIMENSIONS:

INSTALLATION:**Step #1:**

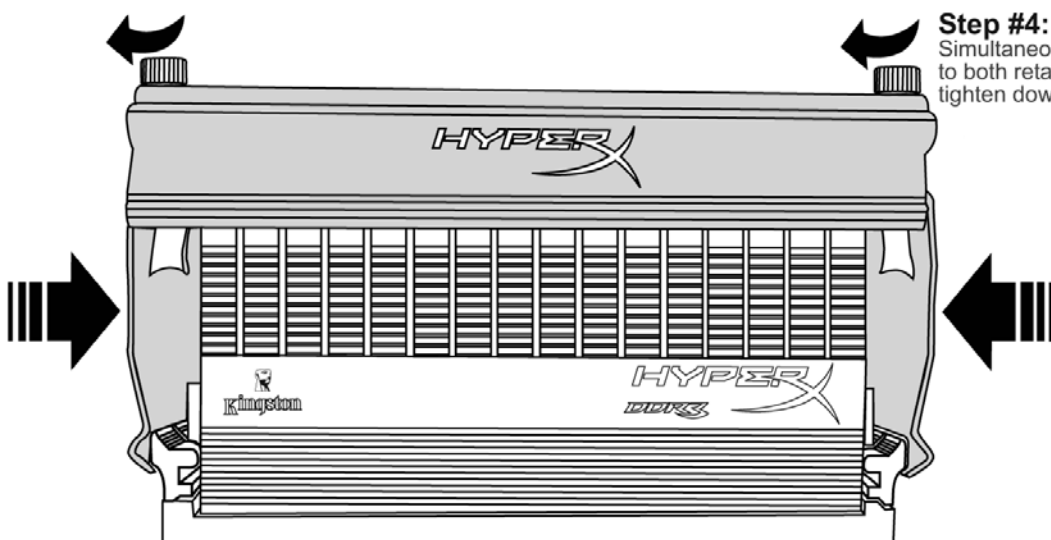
Power the computer system off, disconnect the AC power cord and remove the computer cover.

**Step #2:**

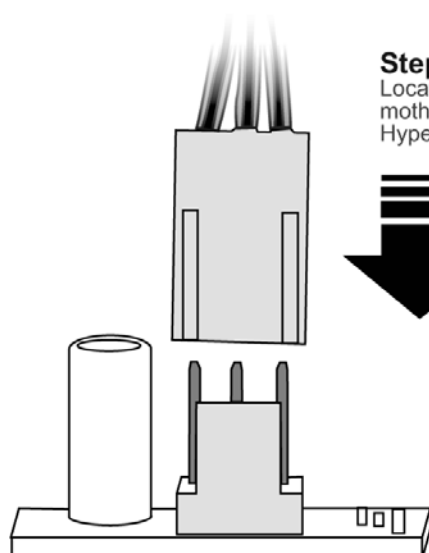
To assemble the HyperX fan, secure the two side brackets with the four thumb screws / washers. Do not tighten the screws completely!

**Step #3:**

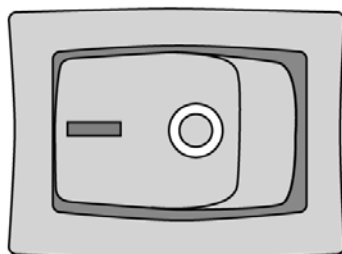
Swing the retaining brackets open and slide the assembly over the HyperX modules as shown in the illustration. Rest the base of the brackets onto the memory socket lock tabs.

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.