ASUS X-Mars CPU Cooler

Features

The ASUS X-Mars is a CPU cooler specifically designed for the AMD K8 platform (Socket 754/939/940).

Efficient Cooling thanks to Heat pipe technology:
Excellent contact between the copper base and the heat pipes allow for efficient heat dissipation.
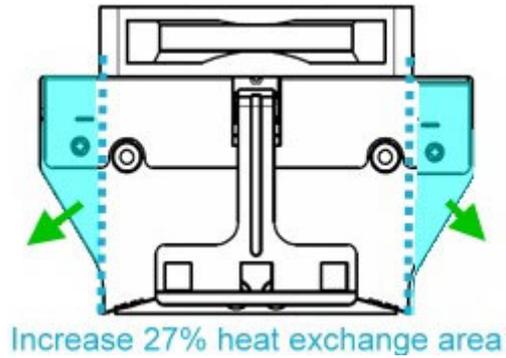*The X-Mars can easily absorb and dissipate heat from AMD's latest Dual-Core CPUs.*

Performance and Acoustics:
The Auto Detect Sensor Fan intelligently reads system temperature and automatically adjusts fan speeds to compensate. For this reason, the ASUS X-Mars CPU cooler is strongly recommended for both overclocking enthusiasts and users who demands quiet performance from their systems.

The special heat sink design increases the cooler's heat exchange area by 27% compared to traditional square designs for excellent heat dissipation.

Increase 27% heat exchange area

Aesthetics:

Aluminum stacked fins with Electro-Plating and ASUS logo on fan cover makes for a snazzy looking cooler that will look good on any motherboard – inside or outside of a case.
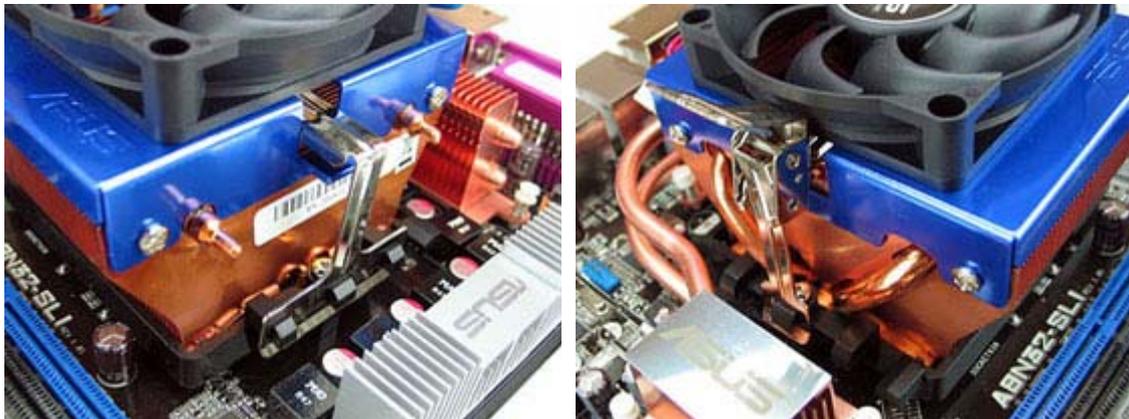

Greater Overall Reliability - Less weight on the Motherboard

The combination of Aluminum stacked fins and 7015 (70 x 15 mm) fan-driven airflow enables great cooling performance despite the X-Mars' mere 385g mass. This relieves the motherboard from potentially having to carry a heavier load and any negative effects that come with it, such as warping.

Installation

Installation of the X-Mars is very simple and totally tool-less. It is therefore no harder to install than a typical AMD stock CPU cooler.

The X-Mars is in no way a large CPU cooler, but the special design of the heatsink can potentially cause installation problems should your mobo's DIMM slots be placed in close proximity to the CPU socket.
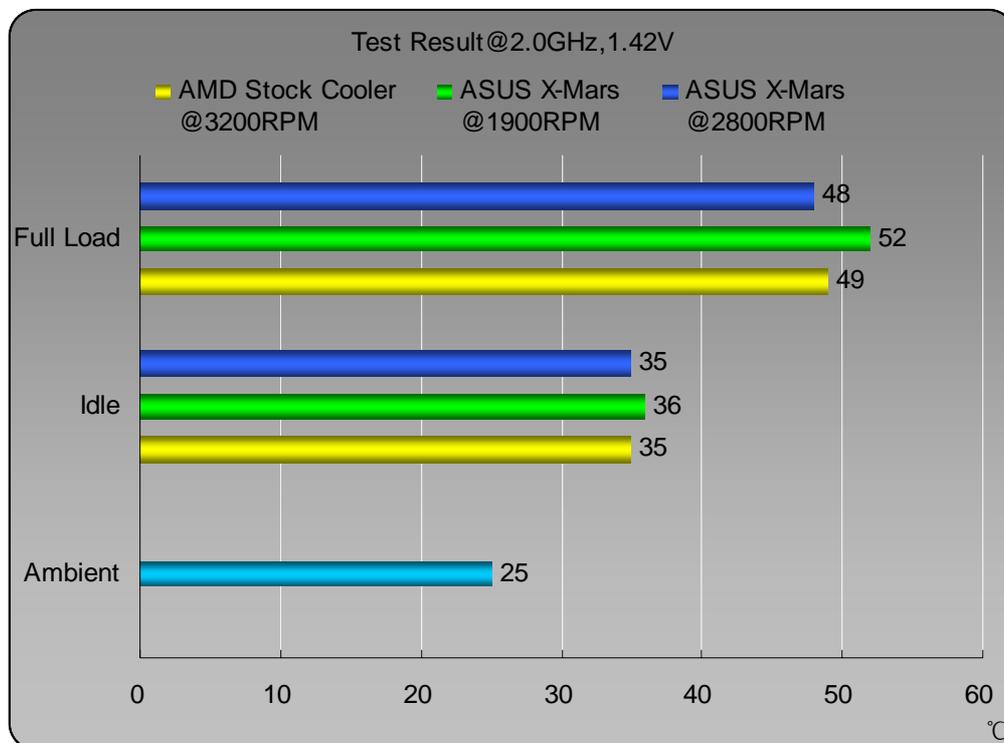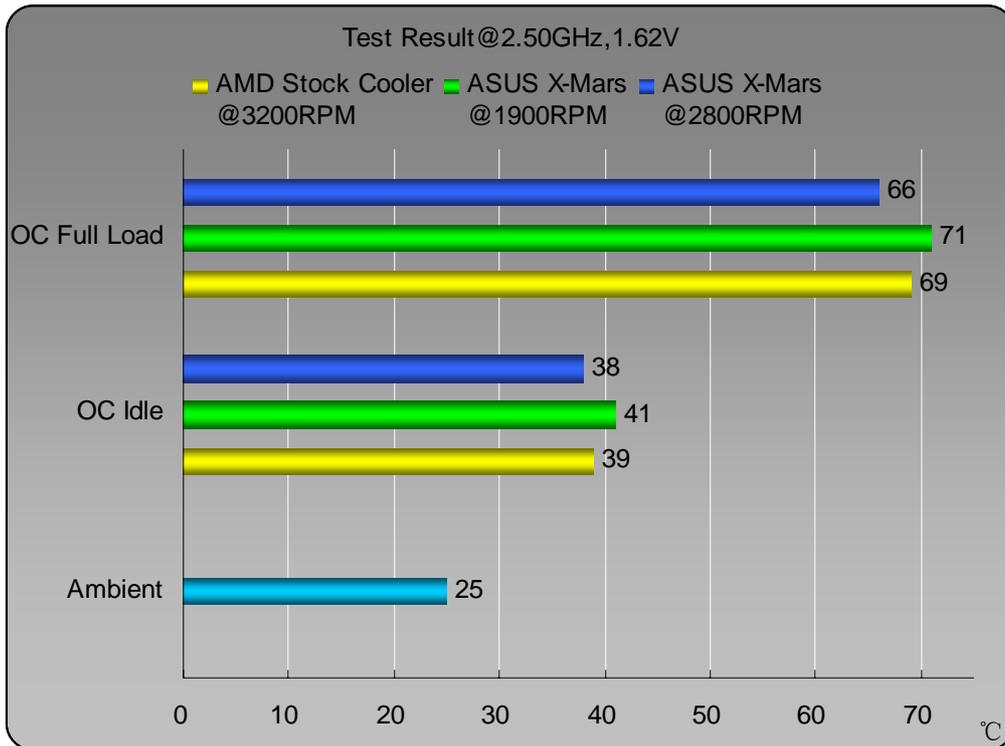
Test Result

Test Platform:

CPU	AMD Athlon 64 3200+（2.0GHz/512KB/Socket 939）
Motherboard	ASUS A8N32-SLI Deluxe（BIOS Ver:0502）
Graphics Card	Leadtek GeForce 6600GT 128MB

Hard Disk Drive	Maxtor DiamondMAX Plus 9 160G SATA（8MB Cache）
OS	Windows XP Professional SP2

Our test is conducted by putting the CPU under a full load utilizing the S&M v1.7.2 utility. The temperature data is provided courtesy of Ai Booster, which is an ASUS motherboard attached software.

Our test was done in an open system. That is to say that we didn't put the test platform within the confines of a PC case. As described above, the X-Mars sports an Auto Detect Sensor Fan which intelligently detects the system temperature and automatically adjusts fan speed which was 1900rpm throughout the test since as ambient temperatures were not very high. To increase fan speed, we used our power supply unit to blow "hot" air onto the X-Mars cooler. This evidently worked, as fan speeds increased to about 2800rpm, which is not at all high when taking into account its 5400rpm max capability.

Test Result@2.0GHz,1.42V

- AMD Stock Cooler @3200RPM
- ASUS X-Mars @1900RPM
- ASUS X-Mars @2800RPM

Full Load	48 / 52 / 49
Idle	35 / 36 / 35
Ambient	25

Test Result@2.50GHz,1.62V

Legend:
- AMD Stock Cooler @3200RPM (yellow)
- ASUS X-Mars @1900RPM (green)
- ASUS X-Mars @2800RPM (blue)

Category	AMD Stock Cooler @3200RPM	ASUS X-Mars @1900RPM	ASUS X-Mars @2800RPM
OC Full Load	69	71	66
OC Idle	39	41	38
Ambient	25		

(X-axis: 0 to 70 ℃)

According to the results shown above, when the X-Mars operates at 1900rpm it is in fact slightly behind the AMD stock cooler in terms of cooling performance, but we shouldn't forget that the latter operates at a much higher 3200rpm and therefore generates much more noise (although to be fair, the noise level is still low). As the fan speed increases to 2800rpm, X-Mars is able to surpass the AMD stock cooler. It's not hard to imagine that X-Mars' performance would continue to improve at higher fan speeds.

Final Words

The ASUS X-Mars is not the best performance CPU cooler on the market today, but its excellent acoustic properties and super light design makes it is a very decent and wise choice for most normal users. We can state with confidence that its performance is more than good enough for any AMD K8 processor on offer at this point in time.