

INFORM

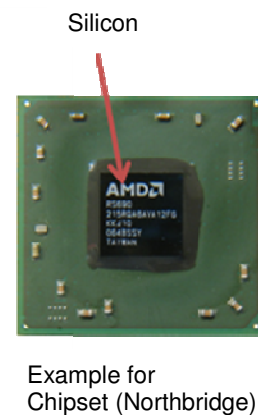
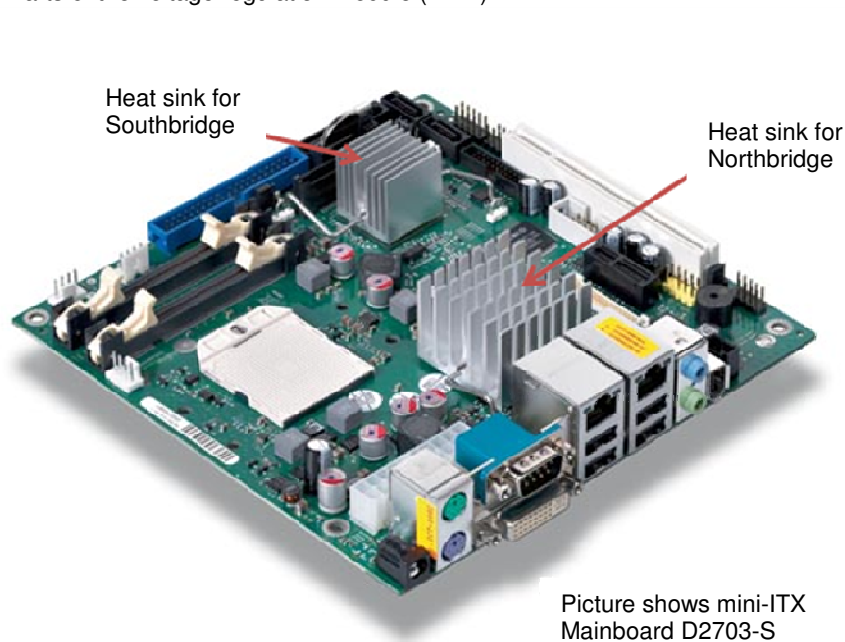
Handling of Mainboards Removal of Heatsinks

Issue	July 15, 2009
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Explanation

In order to provide proper working heat dissipation several components on a mainboard are equipped with passive heat sinks:

- Chipset (Northbridge and optional Southbridge)
- CPU only where CPU is already soldered onboard (BGA – ball grid array CPUs)
- Parts of the voltage regulation module (VRM)

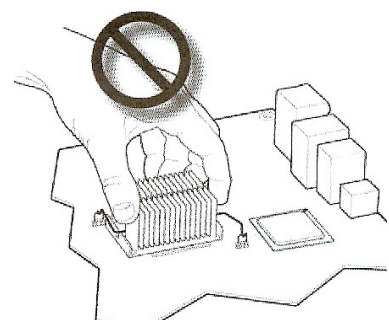


In general those heat sinks must be handled with care:

ATTENTION: ! Do not lift or handle the mainboard by those heat sinks !

Handling may damage the thermal interface material that resides between the heat sink and the silicon of e.g. chipset.

If there is a demand to remove a heat sink for assembly of proprietary cooling solutions such as heat pipes several points need to be put into account:



What needs to be considered in case of removal of a heat sink?

Each controller is very sensitive against mechanical defects. Therefore the removal of a heat sink has to be performed very carefully.

! Do not scratch the surface of the mainboard by opening and removing the clips !

! Do not scratch the surface of the silicon by removing the heat sink and mounting substitutable cooling parts !

! Do not forget to add thermal paste !

! For a proper handling please refer to the instruction guide of the respective heat sink vendor !

What needs to be considered in case of RMA of mainboards where heat sink has been removed?

- Before returning the mainboard the originally equipped heat sink has to be remounted carefully.
! Do not forget to add thermal paste onto the contact area of the heat sink and ensure a proper fit !
- In case the heat sink is missing the returned mainboard will not be accepted and returned to the sender without any repair
- In case the component (chipset, CPU, ...) indicates mechanical damages (scratches, depopulated components, soiling with e.g. thermal paste, ...) a warranty repair is excluded.

Important Information

Especially for passive cooled solutions we kindly ask you to ensure that critical temperatures for components according our reference lists must not be exceeded. Otherwise this might impact the lifetime expectation and MTTF/MTBF significantly. Information on the temperature reference limits are provided in our tech notes:

D2703-S (refer to page 69 and 70):

ftp://ftp.ts.fujitsu.com/pub/Mainboard-OEM-Sales/Products/Mainboards/Industrial&ExtendedLifetime/D2703-S/Documentation_D2703-S/D2703-S_Technotes_V3.5.pdf

D2836-S/D2831-S (refer to page 34 and 35):

ftp://ftp.ts.fujitsu.com/pub/Mainboard-OEM-Sales/Products/Mainboards/Industrial&ExtendedLifetime/D2831-S_D2836-S/Documentation/D283x-S_IndustrialMainboards_TechNotes_V1.2.pdf

Additional information and downloads

- General Information:
www.ts.fujitsu.com/mainboards
- Documentation and downloads:
<ftp://ftp.ts.fujitsu.com/pub/Mainboard-OEM-Sales/>

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