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Alpenföhn® Black Ridge

Low-profile cooler in co-operation with DAN Cases

Product description

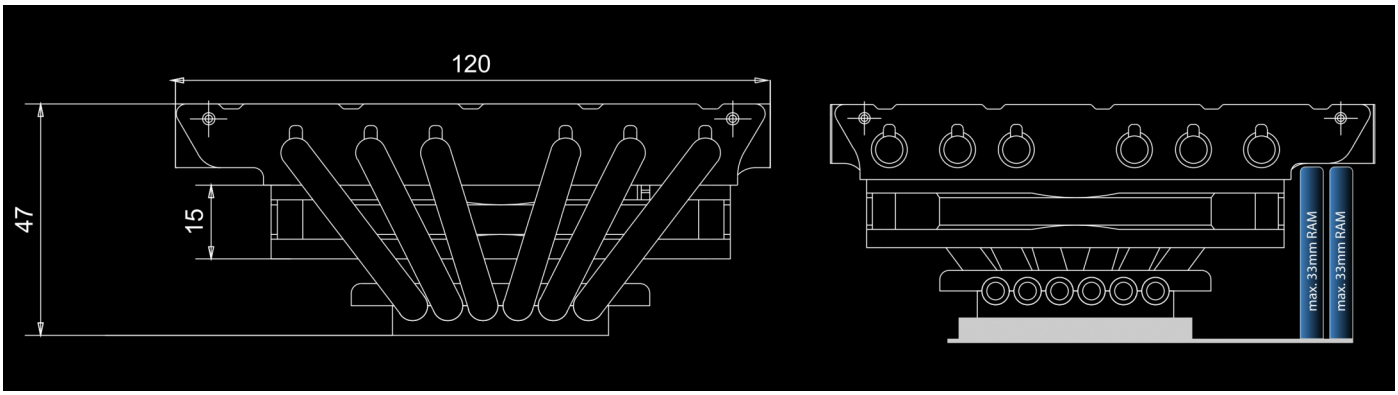
Black nickel-plated, 6x6mm heatpipes, a large heat sink and a fin design that supports RAM with a maximum height of 33mm - Black Ridge offers pure performance in a minimal installation space. The 92mm PWM fan included in the scope of delivery is mounted on the underside of the heat sink to provide the necessary airflow. This not only reduces the volume in tightly dimensioned systems, but also realises a maximum height of just 47mm. The screw mounting system included in the scope of delivery has been designed to ensure the best possible compatibility with mini-ITX mainboards.GPU compatibility: 100% compatibility on some mainboards with riser cable only.Note for AMD based systems: With mini ITX mainboards from the manufacturers ASrock, Gigabyte and MSI, mounting problems may occur due to the arrangement of the components.

Main features

- Maximum height 47mmVGA compatibility on mini-ITX mainboardsBlack nickel-platedRAM compatibility for modules with a maximum height of 33mm6x6mm heatpipes92x92x15mm PWM fanSecure mounting system for Intel/AMD

Alpenföhn® Black Ridge Technical data

Dimensions in mm



Cooler properties

Article number	84000000156
Dimension	140 mm x 120 mm x 47 mm
Operating voltage	12 VDC
Weight	438 g (incl. fan) g
Power loss	95 W TDP
Heatpipes	6 x 6 mm heatpipes
Fins	Aluminium
Base plate	Copper

Specification of the fan

Dimension	92 mm x 92 mm x 15 mm
Operating voltage	12 VDC
Warehouse	Fluid Dynamic bearing
Fan connection	4-pin
Speed	800 U/min - 2800 U/min
Air flow rate	80.03 m³/h
Noise level	37.6 dB(A)

* Thermal and mechanical compatibility may vary depending on the system used
** According to manufacturer specifications

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Alpenföhn® Black Ridge Further data

German engineering

The intelligent use of materials and a complex fin design creates the perfect balance between performance and compatibility. With its maximum height of 47mm, the cooler is also ideal for use in DAN Cases cases.

VGA compatibility on mini-ITX mainboards

The asymmetrical design of the heat sink enables full VGA compatibility on most mini-ITX mainboards.

Heatpipes

6 heatpipes transport the waste heat from the processor quickly and efficiently to the soldered aluminium fins of the heat sink.Expandable fan configuration "Performance and Overclocking Mode"For even more flexibility in the realisation of your project, 2 different mounting brackets are included in the scope of delivery. One pair of brackets is suitable for mounting a 120x120x12/15mm fan on the underside of the heat sink. In conjunction with VLP RAM, the performance of the heat sink can be increased even further. The scope of delivery also includes a pair of brackets for mounting a 120x120x25mm fan on the top of the finned package. In this configuration, the Alpenföhn Black Ridge offers the highest performance.

Compatibility mode (92x92x15mm fan)

Performance mode (120x120x15mm fan)

Overclocking mode (120x120x25mm fan)

PWM fan

The built-in 92x92x15mm PWM fan has a 4-pin connection and can therefore be controlled via the mainboard. This enables speed adjustment between 800 and 2,800 rpm, allowing a minimum of 14 dB(A) and a maximum of 80.03 m³/h.

Secure mounting system for AMD/Intel

The screw mounting system included in the scope of delivery has been designed to ensure maximum compatibility with mini-ITX mainboards.

Important note for the use of the Alpenföhn Black Ridge

Please note that the Alpenföhn Black Ridge is a powerful cooler up to max. 95W TDP for use in compact cases. The cooler is supplied with a 92x92x15mm fan for the best possible compatibility and no overclocking of your CPU is recommended. Performance increases can be achieved using the "Performance" or "Overclocking" mode with alternative fan configuration. How much the cooling performance can be increased in these two modes depends on the fan used and cannot be specified exactly by Alpenföhn®.Nevertheless, it can happen that the performance of the heat sink is not sufficient despite the supported TDP of your CPU. This problem can occur with processor series with the suffix K, X and C if a TDP limitation is deactivated or the board automatically overclocks the CPU due to incorrect settings, which can lead to higher power consumption, for example. Installation video Black Ridge IntelInstallation video Black Ridge AMD