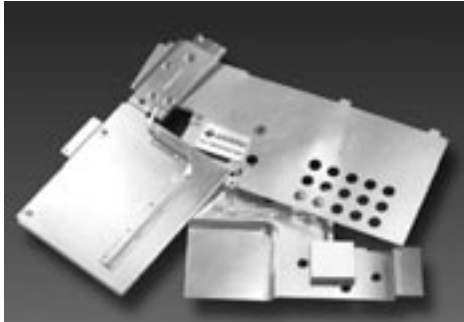


The Notebook PC Slim Coldplate

Designed for Notebook PC Thermal Management



INTRODUCTION

In 1993, Enertron engineers developed the first Slim Coldplate for use in the P5 level notebook PC. Since then, the original Slim Coldplate and its successors have been used as thermal solutions in millions of notebook PCs. As with all of Enertron's thermal solutions, the Slim Coldplate is custom-designed and manufactured to meet the customer's exact thermal requirements. The Slim Coldplate's thin profile provides the designer of mobile electronics a thermal solution that works well within a tight space.

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Because it is lightweight and requires no moving parts, the Slim Coldplate is a highly reliable, thin profile, passive thermal solution with a virtually unlimited operational life. The overall thickness of the Slim Coldplate is less than 3 mm. The average weight is 100 grams. The Slim Coldplate fits very well into mobile electronics, spreading heat within the limited, thin space available in today's designs.

The typical Slim Coldplate configuration consists of an aluminum spreader plate and a heat pipe. In order to dissipate higher levels of heat, a miniature fan can be added to reject hot air out to ambient. Routing the heat pipe through the best heat-transporting path allows the Slim Coldplate to efficiently move heat from the source to the aluminum spreader plate, resulting in an even distribution of heat in the mobile unit. In the typical notebook PC environment, a Slim Coldplate alone can dissipate up to 15 watts of heat, and up to 25 watts when a fan and a Mini-Modular Fan Cooler (see Enertron's Mini-Modular Fan Cooler for more details) is configured in. In other applications where the surface area is larger, the performance of the Slim Coldplate is even better.

Specifications:

Dimensions:

Comes in a variety of sizes, depending on customer requirements.

Watts of heat dissipated per spreader surface:

~0.5 W/cm² (typical of a NBPC application without micro-fan installed)

Heat sink weight per watt of heat dissipated:

~10 g/W.

Best Applications:

- Notebook PCs
- Ultra Slim Portables
- Mobile Electronics

Enertron... A Powerful Thermal Management Team and a Skilled Production Partner

Enertron is both a powerful thermal management engineering service and a highly-skilled, cost effective production partner. Enertron offers custom thermal solutions at "off-the-shelf" prices and delivery times. Enertron's customers are Fortune 500 companies in the computer, microelectronics, aerospace, and defense industries. Enertron competes on its industrial expertise, timely service, and unerring commitment to excellence for its customers.

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