

Product: **Cool RoadRunner PM**

Title: **Heat sink solutions for Cool RoadRunner PM (CRR-PM)**




Concerned Versions:

All versions of the Cool RoadRunner PM.

Description:

This application note describes the available heat sink solutions for the Cool RoadRunner PM in standard and extended temperature range.

Solutions:

Heat Sink Type	Part Number	Suitable for CPU / Temperature Range	Suitable for CRR-PM version	Remarks	Measurements (l x w x h) / weight	Picture
Heat spreader	865-0017-10	All CPU frequencies / Standard temperature range -20°C to 60°C	On customer request only; please add the part number on your order	Additional cooling is necessary by mounting the heat spreader to a metal enclosure or by mounting an extra heat sink or heat pipe on the heat spreader.	measurements approx. 84 x 50 x 12 mm / weight CPU and heat sink approx. 240 gr.	
Passive cooler	865-0018-10	Pentium M / Celeron M up to 1.4 GHz / Standard temperature range -20°C to 60°C	803-0014-10 803-0013-10 803-0017-10	CRR-PM must be on top of the PC/104+ stack. The size of the heat sink is designed to fulfill requirements of the standard temperature range without additional cooling.	measurements approx. 84 x 50 x 25 mm / weight CPU and heat sink approx. 260 gr.	
Passive cooler	865-0018-10	Celeron M up to 1.0 GHz / Extended temperature range -40°C to 85°C	903-0013-10 903-0017-10	CRR-PM must be on top of the PC/104+ stack. The size of the heat sink is designed to fulfill requirements of the extended temperature range without additional cooling.	measurements approx. 84 x 50 x 25 mm / weight CPU and heat sink approx. 260 gr.	




APPLICATION NOTE

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Active cooler with integrated fan	865-0019-10	Up to 1.8 GHz / Standard temperature range -20°C to 60°C	803-0015-10	CRR-PM must be on top of the PC/104+ stack. The size of the heat sink is designed to fulfill requirements of the standard temperature range without additional cooling.	measurements approx. 84 x 50 x 40 mm / weight CPU and heat sink approx. 370 gr.	
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Remarks:

- All heat sinks are mounted with 2.5 mm spacers. Add 2.5 mm to the measurements for the total height above the CPU board.
- All heat sinks are mounted without occupying the normal PC/104 mounting holes
- The CPU temperature may never exceed 100°C. The CPU temperature can be monitored with the hardware monitor circuit (see technical manual).