

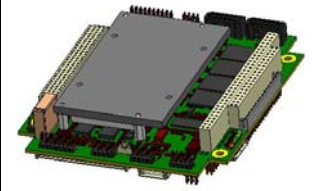
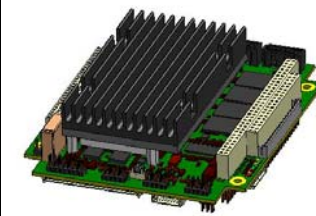
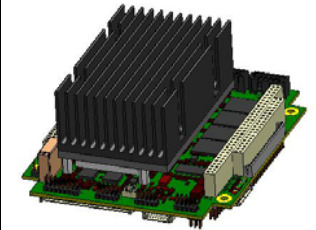
Concerned Versions:

All versions of the Cool RoadRunner 945GSE

Description:

This application note describes the available heat sink solutions for the Cool RoadRunner 945GSE in commercial, industrial and extended temperature range. For detailed drawings or 3D files please contact our support helpdesk@lippertembedded.com

Solutions:

Heat Sink Type	Part Number	Suitable for CPU / Temperature Range	Suitable for CRR-945GSE	Remarks	Heat sink Measurements (l x w x h) / weight	Picture	
Heat spreader	765-0022-11	ATOM N270 1.6 GHz / Commercial temperature range 0°C to 60°C Industrial 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. 80 x 50 x 3 mm / weight CPU and heat sink approx. 220 gr.	
Passive cooler	765-0025-10	ATOM N270 1.6 GHz / Commercial temperature range 0°C to 60°C Industrial temperature range -20°C to 60°C	703-0021-10 703-0022-10 803-0021-10 803-0022-10	CRR-945GSE must be on top of the PC/104+ stack. The size of the heat sink is designed to fulfill requirements of the commercial and industrial temperature range without additional cooling.	measurements approx. 80 x 50 x 15 mm / weight CPU and heat sink approx. 280 gr.		
Passive cooler	765-0025-11	ATOM N270 1.6 GHz / Extended temperature range -40°C to 85°C	903-0021-10 903-0022-10	CRR-945 GSE 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. 80 x 50 x 33 mm / weight CPU and heat sink approx. 330 gr.		

Remarks:

- All heat sinks are mounted with 8 mm spacers. Add 8 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