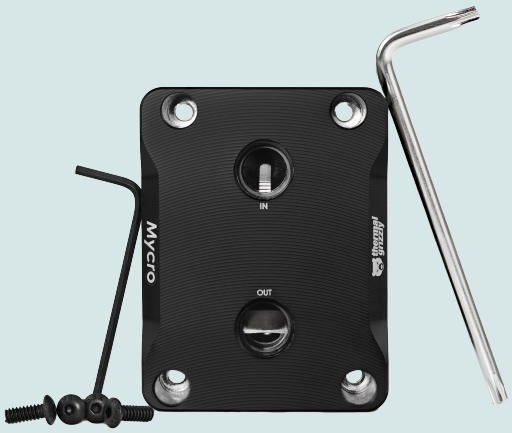
INTEL Mycro Direct-Die V1



High Performance Cooling Solutions – Made in Germany

With the Intel Mycro Direct-Die V1, Thermal Grizzly offers its first water cooler for the Intel LGA1700 platform. With a direct-die water cooler, the waste heat from the CPU can be optimally dissipated into the water cooling circuit. Microfins are located on the top of the nickel-plated copper cooler to ensure the best possible heat transfer. In addition, the Integrated Heatspreader (IHS), including a layer of heat transfer medium, is eliminated from the circuit. An up-to-date list of all verified compatible processors is available online.

Short information

- Water cooler for direct-die mounting
- Microfin cooler made of nickel-plated copper
- Replaces ILM and heatspreader
- Cover made of CNC-milled POM
- G1/4-inch connections
- CPU compatibility list available online
- Only for delidded CPUs!
- Attention: Loss of warranty!

Maximum cooling capacity for best performance

The combination of an Intel Mycro Direct-Die V1 and Conductonaut Extreme liquid metal clearly outperformed a normal water cooler in internal tests**. The comparison cooler used achieved an average temperature of 92.1 degrees Celsius at a pump speed of the Xylem Lowara D5 of approx. 3,400 revolutions per minute with a flow rate of 2.2 liters per minute.

The Intel Mycro Direct-Die V1 was able to achieve an average temperature of 74.9 degrees Celsius at the same pump speed, which is 17.2 °C lower than the comparison cooler. The flow rate, on the other hand, has increased to 2.6 liters per minute, as the microfin structure of the Intel Mycro Direct-Die V1 is optimized to offer less resistance.

Internal testing was carried out with an Intel Core i9-13900KS in a custom loop with a Watercool MO-RA3, including four 200 mm fans from Noctua. A Keyence FD-X was used as the flow sensor, which has the advantage of not creating any resistance in the water circuit itself.

Tech-Youtuber Roman "der8auer" Hartung used the Intel Mycro Direct-Die V1 with an Intel Core i9-14900KS and was also able to measure temperature differences of up to 14 degrees Celsius. More information on this can be found in the video links below.

Please note that delidding the processor is at your own risk and will invalidate the warranty!

**It should be noted that the temperature improvements achieved depend on several factors. Besides the quality of the individual processors ("Silicon Lottery"), test results are influenced by the room temperature and the cooling used, among other things. For an AiO, for example, the cooling performance depends on factors like the pump speed as well as the fans used. The values given are guidelines that can be higher or lower in individual cases.

Technical data

Unit:	Value/Description:
Material:	copper (nickel plated), POM
Color:	silver, black
Typical application:	Direct Die water cooler
Connectors:	2x G1/4 inch
Length:	70 mm
Width:	53 mm
Total height:	23,7 mm
Package size:	10,5x9,5x4 cm
*Gross weight:	229g
*Net weight:	188g
EAN-Code:	4260711991004
Item number:	TG-MY-DD-i-V1
PU:	7 Pcs.

*Net weight is the total weight of an article excluding the weight of packaging and accessories. The gross weight refers to the total weight of the product including accessories and packaging. Slight weight deviations are possible due to production factors.

Nickel-plated copper radiator with microfin structure

Integrated Heatspreader (IHS) and Integrated Loading Mechanism (ILM) of the mainboard are removed when using the Intel Mycro Direct-Die V1. The processor must be delidded accordingly. The surface of the nickel-plated copper heatspreader is significantly larger than that of the stock heat spreader and features optimized microfins that dissipate the waste heat very effectively into the water circuit of the custom cooling system. This also ensures optimum contact pressure of the CPU in the socket. The cover is made of CNC-milled polyoxymethylene (POM) and is equipped with one inlet and one outlet in the form of G1/4-inch threads.

Note on the use of KryoSheet

The Intel Mycro Direct Die V1 has been extensively tested internally in various application scenarios. During development, great importance was given to stable operation of the processor and RAM. For example, the Intel Mycro Direct Die V1 is mounted in such a way that the outer edges of the cooler do not rest on the mainboard. In our test series, KryoSheet in combination with the Intel Mycro Direct Die V1 was unable to achieve any significant improvements in terms of temperature and was problematic in terms of contact pressure. For this reason, we cannot recommend thermal pads because their additional thickness has a strong influence on the contact pressure and can therefore impair the function.

Scope of Delivery

- 1x Intel Mycro Direct-Die V1
- 1x pressure test protocol to 600 mbar
- 4x pan head screws UNC thread
- 1x hexagon socket wrench
- 1x Torx angle wrench

Quality without compromise: Made in Germany

The Intel Mycro Direct Die V1 is manufactured to the highest quality standards at our production site in Germany. The entire production chain is continuously monitored by our expertly trained staff. Particular attention is paid to the microfins, which are specially protected from contamination during the production chain.

All Intel Mycro Direct Die V1 are also subjected to a compressed air test (600 mbar) as part of quality control after assembly. Each water cooler is provided with a serial number and a corresponding pressure test report.
Attention: Removing the heatspreader ("delidding") of a processor is at your own risk! The manufacturer's warranty expires when the CPU is delidded! Damage caused by delidding the CPU is not covered by the manufacturer's warranty!

Removing the Integrated Loading Mechanism (ILM) of the mainboard may invalidate the manufacturer's warranty of the mainboard manufacturer!

Video links

der8auer YT-Channel:
https://www.youtube.com/watch?v=S_d74JB2ECY

der8auer EN YT-Channel:
https://www.youtube.com/watch?v=5AA2AsK2ewE

Trademark Information

Thermal Grizzly is a registered trademark.

Please note

The data in this technical data sheet are based on our current knowledge and experience. Due to the large amount of possible factors, this should not be construed as to release the users from doing their own tests and screening. No legally binding assurance of specific properties or applicability for a concrete purpose should be derived from these data. Please consider contacting us for further detail. It is the responsibility of the recipient of our products to ensure that any proprietary rights and existing laws and legislation are observed.

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