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# OPTIMUS SIGNATURE V3 CPU BLOCK - INTEL- BLACK CERAMIC/ COPPER COLD PLATE

$249.00

## Product Images

## Short Description

The Optimus Signature V3 block is the finest CPU block ever created for Intel CPUs, custom designed for LGA 1700 platform models, including the 14900k, 13900k, 12900k CPUs.

With the goal of creating the best ever, we went back to the drawing board and redesigned a CPU block from the ground up.

New Intel-specific cold plate, revolutionary jet structure and a monolithic metal body worthy of the Signature name.

## Description

# SIGNATURE$^{V3}$INTEL

THE ULTIMATE INTEL 1700 CPU BLOCK

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GROUND UP DESIGN

INTEL 1700 SPECIFIC OPTIMIZATION

The Signature Block was entirely designed for Intel's latest CPUs. The V3 went through numerous iterations and tests to dial in the correct offset, cold plate size, bow shape and flow path, resulting in a block that squeezes out every last bit of performance from the CPU.

WHY SO GOOD?

The biggest reason Optimus blocks are so much better than the competition is because the high heat output in increasingly smaller areas. For example, a GPU die used to output 250w maximum. Now, GPUs have smaller dies but vastly higher heat output at 600w.

With the latest CPUs, especially bare die, the actual surface area needing to be cooled is extremely compact. This means the fins directly above the die itself do the majority of the work to cool the CPU.

Performance is relatively simple to explain: surface area + flow rate + contact = performance. By having the highest possible surface area directly above the dies, and then increasing the flow rate through the new Signature jet system, plus a highly-specific contact mounting system for Intel, the Optimus Signature V3 is able to remove heat at a faster rate than competing designs.

WORLD'S SMOOTHEST COLDPLATE

Optimus sets another record for flattest cold plate on the market. Optimus machines blocks less than 1 micro-inch (µin) in flatness. This is 0.000025mm of roughness (measuring the peaks and valleys of the surface).Other companies are over 400% rougher than Optimus coldplates.

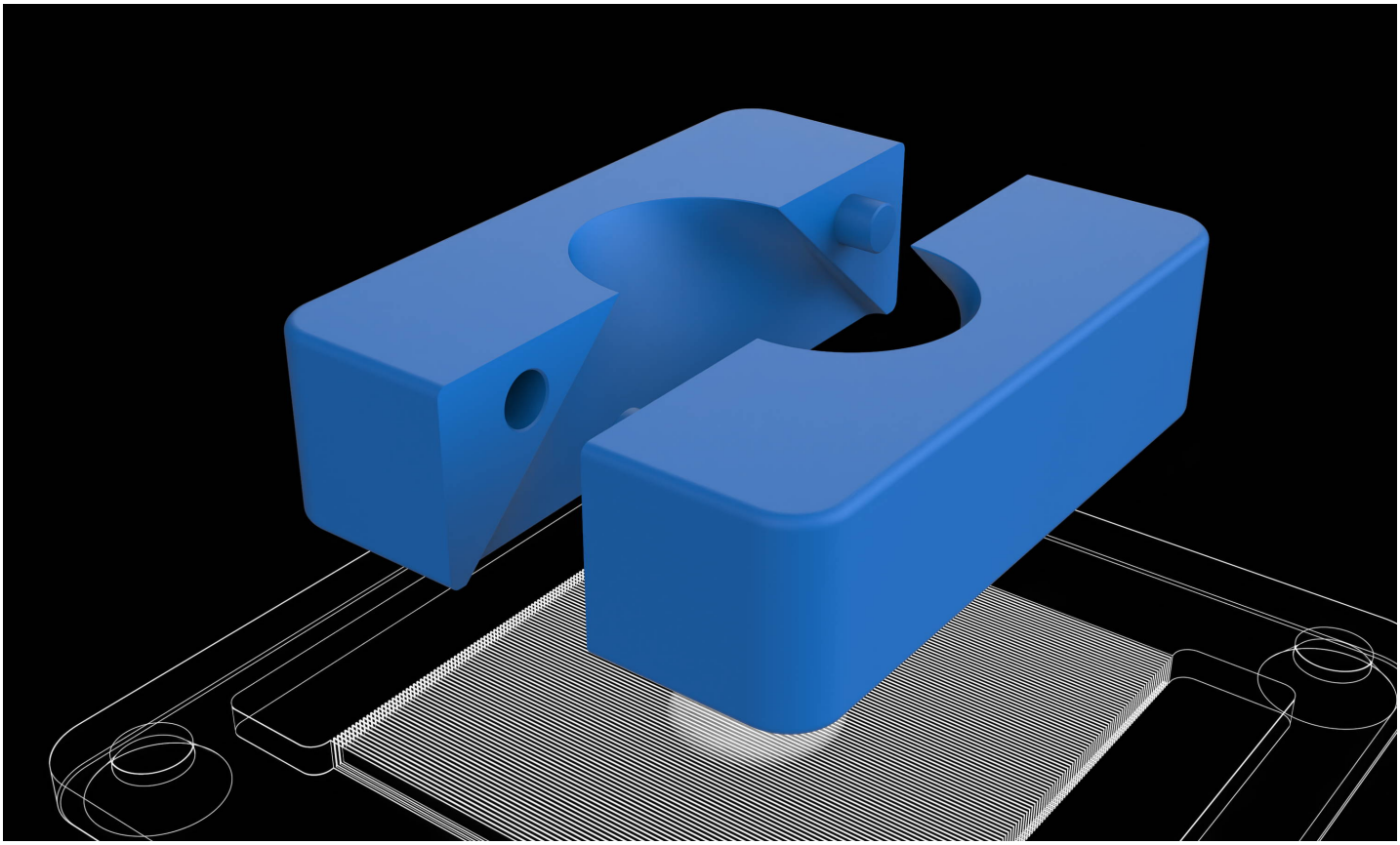
The only way to truly guarantee 0.000025mm level of accuracy is to CNC the cold plate perfectly with diamond bits. Optimus created proprietary diamond tooling that allows the cold plates to come off the CNC with a perfect mirror finish.

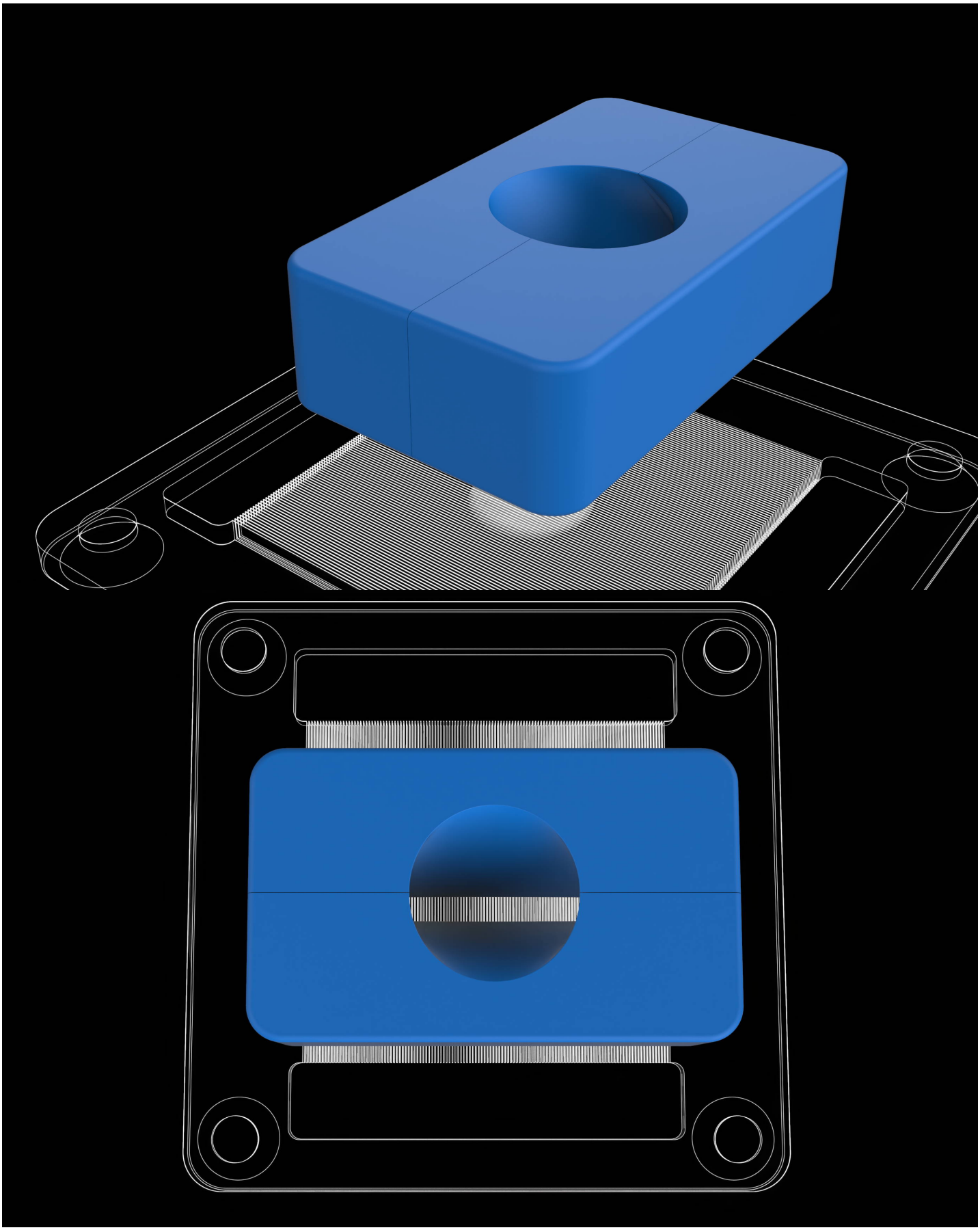
Additionally, because we control the fins and cold plate to such a precise level, we can make the distance between CPU IHS and the fins extremely small. Thin cold plates are able to transfer heat from the CPU faster than thicker cold plates.

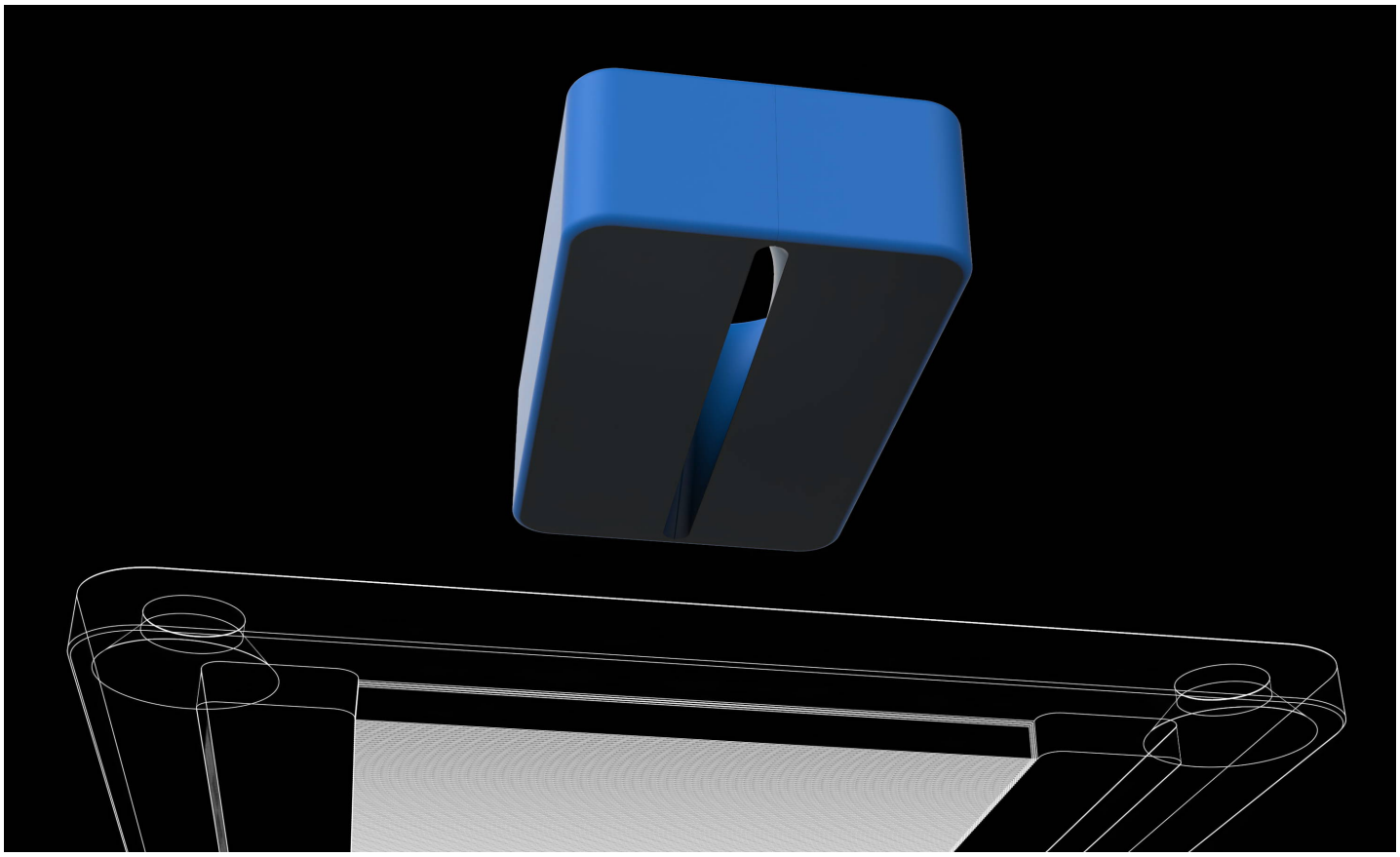
Revolutionary Jet Structure

Near perfect flow and performance

The new two piece jet structure (blue) replaces typical jet plates and inserts, allowing for maximum flow with highest possible velocity onto the fins. The unique flow path transitions from a circle to a slot with zero bends or edges that create liquid vortexes that slow the velocity of the coolant. Because of its unique, non-traditional shape, the insert is impossible to be machined out of a single piece of material, requiring a two piece design machined with extreme precision so the two pieces mate together perfectly. When machined out of Delrin polymer, the insert strength, surface finish, and precision surpasses anything that could be done with injection molding or 3D printing.







## Features

- Custom designed for LGA 1700+ waterblocks.
- Includes backplate, massive machined backplate for max rigidity.
- All new machined 2-piece ultra-optimized jet block insert.
- Massive brass monoblock structure.
- Custom micro-screwdriver for near-perfect torque installation.
- Incredibly strong ceramic Cerakote finish in silver ceramic or black ceramic.
- Raw copper or Pro-XE Nickel cold plate available.
- Includes Kingpin KPX thermal paste.
- 10 year warranty, 100% made in Chicago, USA.

## Specifications

Materials

- TOP PLATE: US-sourced brass monoblock
- COLD PLATE: US-sourced premium C110-grade copper
- COLD PLATE FINISH: Raw copper or electroless Pro-XE nickel
- THUMB NUTS: US-sourced machined 6061 aluminum, satin hard anodized
- O-RINGS: US-made plasticizer-free EPDM o-rings
- MOUNTING POSTS: US-made 18-8 stainless steel stainless steel cold plate screws

Assembly Details

- Variable Torque Driver: 0.5 Nm-0.6 Nm
- Mounting bit size: M3 Hex

Compatibility

- MOUNTING: Intel LGA 1700
- CPUs: Compatible with 12th, 13th and 14th Gen CPUs

In The Box

- 1 x Signature V3 Intel CPU Block
- 1 x Signature V3 Intel Backplate
- 4 x Optimus CNC Mounting Posts
- 4 x Optimus CNC Thumb Screws
- 1 x Optimus M3 Hex Mini Screwdriver
- 1 x Kingpin KPX thermal paste syringe

FAQ

- LIQUID METAL? BARE DIE?Go for it! Remember, liquid metal will etch copper immediately, though some builders like the performance of pure copper. Liquid metal will discolor nickel, but etching will take far longer. In both cases, performance of the cold plate won't be effected.
- THERMAL PASTE? We include Kingpin KPX thermal paste. However, numerous thermal pastes are also excellent. Thermal Grizzly Kryonaut and Arctic MX4 are two of the highest performance we have tested.
- FLOW DIRECTION? Fluid needs to flow in a specific direction -- center of fins and then out. On the V3 Signature block, the "in" is closer to the center of the block and the "out" is towards the top edge of the block.
- FLUSHING?All Optimus products have already been cleaned before shipping. You'll only need to flush your radiators and non-Optimus products. In fact, heavy system prep chemicals can be detrimental if they remain in small quantities in your loop. This can easily happen with fluid pressurized into o-ring grooves through heating.
- CLEANING? Microfiber is your friend. Dish soap and water is ideal for our products. Always use microfiber glass cloths to prevent any scratches, especially on cold plates. Do not scrub, simply hand rinse. Isopropyl alcohol is not needed and can cause discoloration.
- COPPER OXIDATION? Copper will immediately begin to oxidize (turn brown) when exposed to air. This is normal and expected and won't affect performance unless the oxidization is extreme, like the statue of liberty. But you're not leaving your blocks out by the ocean, are you?

## Additional Information

| | |
|---|---|
| Brand | Optimus |
| SKU | OP-CPU-SIG3-INT-BLK-CU |
| Weight | 4.0000 |
| Color | Black |
| CPU Series | Intel 1700 |
| Block CPU Type | Intel |
| Block Style | Nickel |