



## **Technical Brief**

***WayCool™ U400DT  
Hybrid (Air + Liquid)  
CPU Cooler***

## Overview

**The WayCool™ U400DT CPU Cooler Reference Design** is a universal, 400 Watt, desktop CPU cooler based on a hybrid (air + liquid) design. The Reference Design supports industry leading dual core and quad core CPUs. The WayCool™ U400DT Reference Design is a Hybrid Mesh (air + liquid) CPU cooler integrated in a self-contained design that meets both Intel and AMD requirements for an in-system, desktop processor cooler:

- Up to 400 Watts of thermal management capacity
- Replaces heat sinks, active air fans and coolers, and liquid CPU coolers
- Intel compatibility: All LGA775 processors
- AMD Compatibility: Athlon 64 / FX / X2 / Opteron Socket AM2 processors



## Key Components

- WayCool™ Carbon water block heat conductive interface to CPU
- A maintenance-free pump assembly with magnetic drive brushless DC motor
- WayCoolant™ de-mineralized liquid with appropriate anti-fungal additives
- WayCool™ Quiet Fan and Heatsink assembly

## Benefits for Cooler and Computer OEMs/ODMs

The WayCool™ U400DT Reference Design gives system designers and users the maximum performance, convenience, and flexibility in a cooling solution that fits today's desktop computer environments.

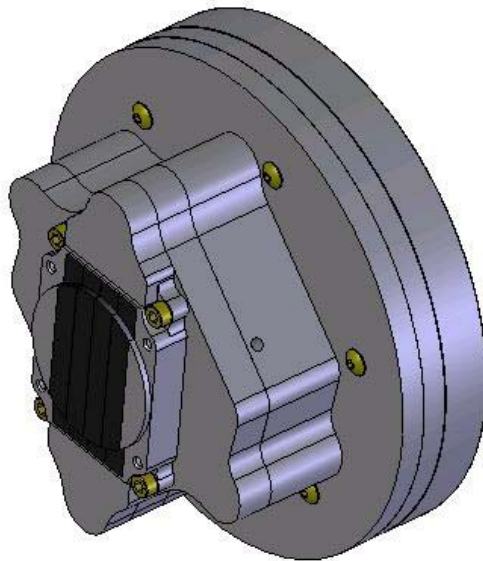
- Industry-leading 400 Watt cooling capacity with an in-system solution
- Improved processor performance
- Ability to operate at lower temperatures for improved reliability
- Maximized overclocking performance
- Faster time to market
- Customizable design

## ***Reference Design Elements Available to Licensees***

- Bill of Materials
- Sources of supply for each ingredient
- Written Specification for each ingredient
- Cooler Engineering drawing
- Application Notes
- Test Results
- Samples

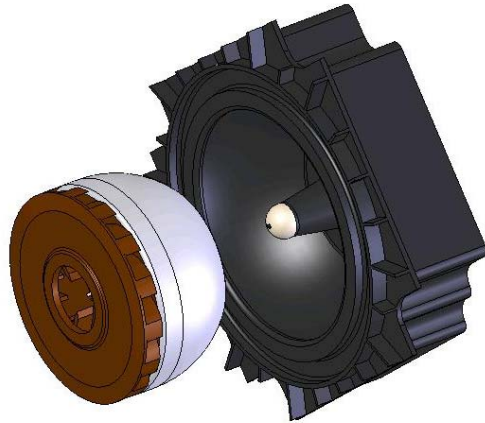
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The following guidelines are intended for general assembly and manufacturing processes and are subject to change without notice.



## **Pump**

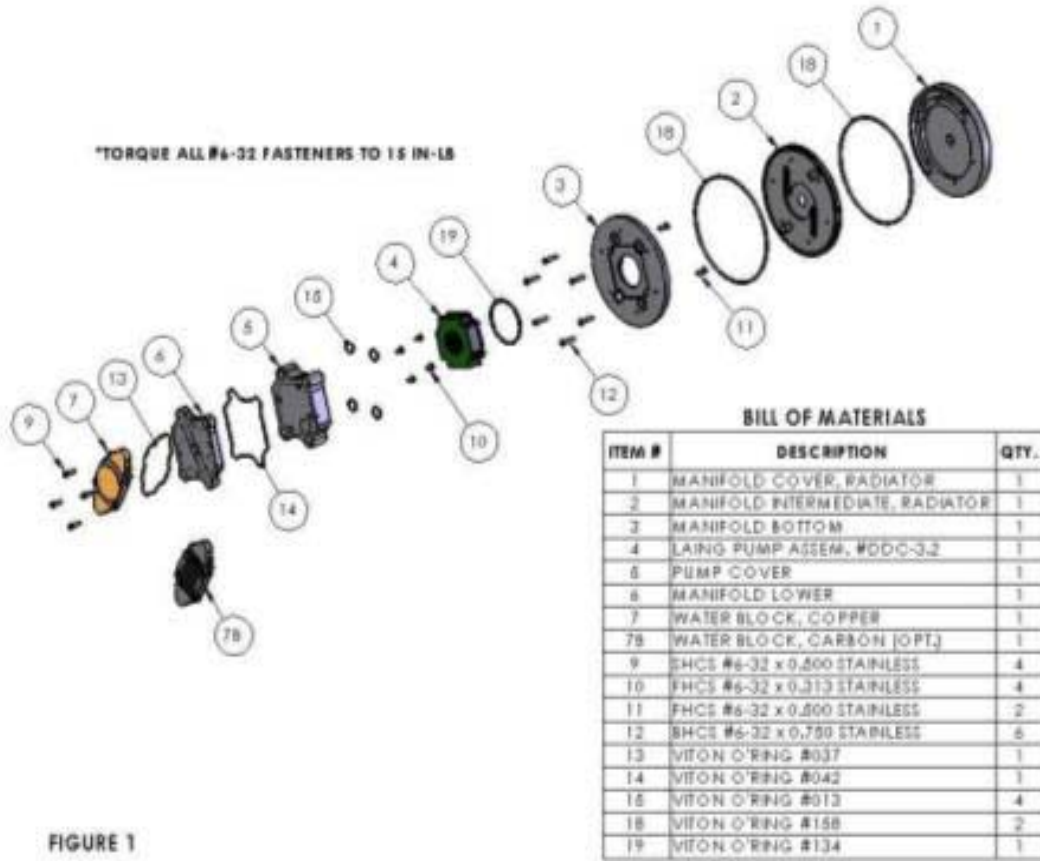
The Waytronx WayCool™ Cooler is designed around an almost silent and maintenance-free pump assembly. The pump design utilizes magnetic drive spherical motor technology. The pump employs a brushless DC motor with a lifetime expectancy in excess of 50,000 hours. It is recommended that the system use Waytronx™ WayCoolant™ de-mineralized liquid with the appropriate anti-fungal additives.



## **Key System Components** (see figure 1 below)

The entire WayCool™ system must be void of all air pockets for proper cooling and pump performance to be obtained. The pump is designed without a bleed point. It is recommended that a bleed point be installed at the highest point of the system after the pump.

- The Manifold Cover (1) Radiator is designed to accept (2) ¼"-19 BSPP male fittings.
- The center hole is the inlet to the pump from the cooler and the perimeter hole is the outlet from the pump to the cooler.
- Use ½" Perfect Seal G ¼ fittings attached with 1/2" I.D. tubing to a Black Ice GTX240 Radiator.



To find out more about WayCool technology and its integrated hybrid mesh architecture, contact our development team at (866) WAYTNX or send us an email at [techsupport@waytronx.com](mailto:techsupport@waytronx.com).

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