

# Thermal Management

## Fans, Heat Sinks, Peltier Devices & Accessories

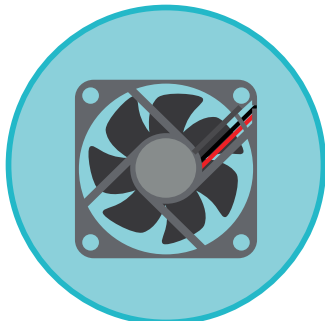
As the heat in applications continues to rise due to increasing power densities, addressing your growing thermal management needs has become more crucial than ever. To help keep your design running at its peak condition, we have developed a thermal management portfolio that encompasses a range of ac fans, dc fans, heat sinks, Peltier devices, and accessories.

## Innovative Tech ○○○○○



### arcTEC™ Structure

CUI Devices' innovative arcTEC™ Structure combats the effects of thermal fatigue found in thermoelectric modules by incorporating a thermally conductive resin between the electrical interconnect and ceramic on the cold side of the module, high temperature solder, and larger P/N elements made from premium silicon ingot. The combination of these three enhancements greatly improves the reliability, performance, and cycle life of Peltier modules built with the arcTEC structure, allowing them to outperform conventional thermoelectric coolers in the most demanding applications.



### omniCOOL™ System

CUI Devices' omniCOOL™ system bridges the gap between traditional sleeve and ball bearing fan and blower technologies by incorporating either a magnetic structure or enhanced sleeve bearing design. Both omniCOOL system features work to dramatically reduce friction, wobble, and noise found in traditional bearing types, while extending dc fan life and improving operation. By addressing many of the drawbacks presented by sleeve and ball bearings, CUI Devices' fans built with the omniCOOL system ultimately lessen the tradeoff between fan cost and performance.

## Engineering Tools



### Resource Library

Gain access to a wide range of videos, blogs, ebooks, webinars, and more to assist in your next design.



### CAD Model Library

Save time and resources by utilizing our library of free, ready-made 3D models and PCB footprints to help you to streamline the design process.



### Thermal Calculators

Use our airflow and thermal conversion calculators to quickly convert between common units for volume airflow, air velocity, thermal resistance, and more.

## Global Stock Availability

Our network of global distribution partners provides you with quick and easy access to hundreds of our thermal management products, ready to ship same day across the globe.



# Thermal Management Product Line



## Fans

### Ac & Dc Power Options

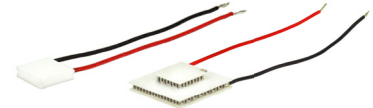
- 20 to 172 mm frame sizes
- Airflows up to 382 CFM
- 5, 12, 24, 48 Vdc rated voltages
- Ball bearing, sleeve bearing & omniCOOL™ system construction
- Auto restart protection
- Tachometer signal, rotation detector & PWM control signal options
- 1,500 to 25,000 RPM rated speeds
- 6.6 to 68.1 dBA noise levels
- IP68 rated models available



## Heat Sinks

### Board Level & BGA Versions

- Aluminum & copper heat sinks
- TO-218, TO-220, TO-252, TO-263, BGA package types
- Thermal resistances down to 4.49°C/W at 75°C, nat conv
- Power dissipation ratings up to 16.7 W at 75°C, nat conv
- Black anodized & tin plated material finishes
- Available with or without solder pins
- Vertical or horizontal solder pin orientations



## Peltier Devices

### 3.4 to 70 mm Package Sizes

- Profiles as low as 1.95 mm
- 0.7 to 20 A current ratings
- 70 up to 105°C Tmax (Th=50°C)
- Precise temperature control
- Solid state construction
- High performance modules with arcTEC™ structure
- Two-stage modules with high Tmax
- Peltier cooling units available with better seal structure

## CUSTOM CAPABILITIES

### Multiple External Modifications

#### Custom Wires

- Tachometer signal
- Rotation detector
- PWM control signal
- Modified wire lengths & gauges
- Custom connectors

### Multiple Production Methods

- Extrusion
- Stamping
- Forging
- Die casting

### Range of Materials

#### Variety of Finishes

- Black, clear & color anodization
- Chromate powder coating
- Nickel & zinc plating

### Hole Punching Options

### Variety of Shapes & Sizes

- Square profiles up to 62 mm
- Rectangular profile lengths up to 89 mm
- Round profiles up to 50 mm in diameter
- Available with or without center hole

### Custom Wires

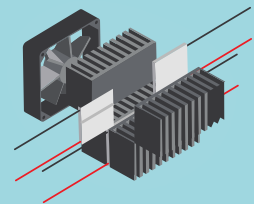
- Modified wire lengths
- Custom connectors

### Heat Sink Integrations

- Add heat sinks to our Peltier modules using thermal interface materials (TIM) for improved thermal performance

## Thermal Design Services

CUI Devices' industry-leading thermal design services employ advanced simulation tools and decades of expertise to identify potential hotspots, optimize airflow, and design effective cooling systems tailored to your specific needs. Our services and capabilities include thermal simulation, product customizations and integrations, thermal management consulting, and thermal testing and validation.



6405 SW Rosewood St, Ste C  
Lake Oswego, Oregon 97035  
1-877-323-3576  
[www.cuidevices.com](http://www.cuidevices.com)

© 2024 CUI Devices. All Rights Reserved. CUI Devices reserves the right to make changes to the product at any time without notice. Information provided by CUI Devices is believed to be accurate and reliable. However, no responsibility is assumed by CUI Devices for its use, nor for any infringements of patents or other rights of third parties which may result from its use.