Veritrek’s statistical approach to thermal analysis enables users to quickly evaluate thermal design sensitivities, rapidly identify design risks, and find engineering solutions. Leveraging the power of reduced-order models, the Veritrek software provides access to thousands of simulation results in seconds. This enables a maximized understanding of a thermal design and enables previously infeasible analyses types such as sensitivity studies, design optimization studies, trade studies, model correlation efforts, and much more.

By sacrificing a greater upfront time investment of generating a reduced-order model from a high-fidelity model, Veritrek prioritizes providing a complete understanding of a thermal model’s design space and minimizing mission risk. The innovative software suite enables users to explore, verify and improve thermal analysis. Simply select a thermal model, convert it to a reduced-order model using Veritrek’s Creation Tool, and obtain thousands of results in seconds in Veritrek’s Exploration Tool.

Currently built for Thermal Desktop, Veritrek’s reduced-order models are created from training data of a high-fidelity thermal model. The result is an accurate statistical predictor of a thermal model’s behavior in near real-time. Veritrek’s easy-to-use interface provides a straightforward, powerful enhancement to standard thermal modeling and analysis approaches.
**APPLICATIONS**

+ Spacecraft design optimization  
+ Thermal design trade studies  
+ Thermal model correlation  
+ Thermal sensitivity studies  
+ Mission operations planning  
+ Thermal design envelope evaluation  
+ Thermal uncertainty quantification  
+ Thermal design verification  
+ Thermal environmental screening

**PARAMETERS**

- **WINDOWS 10 OS**  
  Operation System

- **AUTOCAD 2016, 2017, OR 2018**  
  THERMAL DESKTOP 6.0.14+ABILITY TO INSTALL ANACONDA, PYTHON, AND JAVA. INSTRUCTIONS AND FILES ARE INCLUDED WITH THE VERITREK SOFTWARE SOLUTION.  
  Software Required

**MISSION HERITAGE**

+ NASA Jet Propulsion Laboratory – Mars 2020 mission  
+ Sierra Nevada Corporation – Dream Chaser Cargo module  
+ NASA Marshall Spaceflight Center – Artemis Lunar Lander program  
+ ATA Engineering - SmallSat Bus

For more information about our space capabilities, contact Redwire Space Sales.

**HERITAGE**

Redwire is a new leader in mission critical space solutions and high reliability components for the next generation space economy. With decades of flight heritage combined with the agile and innovative culture of a commercial space platform, Redwire is uniquely positioned to assist its customers in solving the complex challenges of future space missions. For more information, please visit [www.redwirespace.com](http://www.redwirespace.com).

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