SPRAYCOOL®

Transit Case Solutions
Liquid Cooling Kits
Industrial Application

SprayCool Kit Configuration Features

Product Overview
- Enables mobile HPC in harsh environments
- Enables environmental isolation of commercial grade electronics in transit case solutions
- Enables fully integrated enclosure solutions with power and cooling

Features
- Up to 2500W of Cooling Capacity
- 450W power for cooling
- Wide range of OEM solutions
- Compatible with composite and aluminum cases
- Designed to meet military grade requirements for industrial applications

Benefits
- Lighter weight, lower power, and cooler processors than comparable A/C systems
- Simple service model with field serviceability of key items that are light, small, and easy to store on-vehicle

Overview

Traditional transit cases used for electronics equipment deployed in harsh environments require that the front and rear covers be removed before the equipment can be powered up and used. Such operation exposes electronics to damage and failure from dust and moisture. Further, heat generated by the internal equipment is customarily controlled by regulating ambient air temperature around the transit case, necessitating the use of a large and power-hungry environmental control system (ECS) to maintain an optimal temperature for electronics. The SprayCool transit case kits consist of an innovative two-phase liquid cooling system and air-to-air heat exchangers that completely isolate the electronics from sand, dust and rain while at the same time keeping the critical components operating below their spec limit even in 50˚C ambient conditions. The result is power efficient, reliable operation of low cost commercial electronics anywhere. SprayCool-enabled transit cases are smaller, lighter and more energy efficient, which equates to a mobile computing cabinet that is convenient to install, easier to transport, and requires less cooling and power infrastructure to operate.

Enabling Electronics Survivability
in Rugged Rackmount Enclosures

Available in 1000 – 2500 Watt kits. The total power draw of the cooling system is only 450W, and can handle a total payload of 2500W in the case. SprayCool-enabled transit cases are smaller, lighter and more energy efficient, which equates to a mobile computing cabinet that is convenient to install, easier to transport, and requires less cooling and power infrastructure to operate. The end result is the enhanced ability to position advanced computing power in harsh field environments.

Capabilities
- Light weight - meets payload requirements
- OEM servers and communications gear deployed in harsh environments
- Remote high performance computing in unmanned environments
- Unsheltered applications utilizing commercial electronics
- Halt and on-the-move operation using vehicle power
- Field Tent and shelter environment applications without HVAC

Rugged Industrial Applications
- Oil and Gas Exploration
- Telecommunications

Fast Cluster Configuration

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OEM SprayModule Kits

Cisco
- 3825 Router
- 3750 12 Port Switch
- 3750 24 Port Switch
- 7825 Call Manager

Dell
- 1850
- 1950
- 1425
- 2850
- 2950

HP
- DL 140
- DL 145
- DL 360

SUN Microsystems
- Sunfire x4100

IBM
- x326
- x336

1U/2U Servers

Blade Servers

Switch and Routers

General Specifications

Dimensions:	Compatible with 9U cases and greater
Cooling Capacity:	2500 W (8500 Btu/hr) at 50˚C
Cooling System	
Operational Range:	-40 to 50˚C (storage: -40 to 72˚C)
Reliability:	45,000 hrs MTBF (predicted)
Power Consumption:	464 Watts Maximum
Input Power:	28 VDC or 110/220 VAC
Weight:	Less than 100 lbs empty Includes Transit Case and Cooling System
Weatherproofing	
Transit Case	According to IP 65 per EN 60529
External Fans	According to IP 55 per EN 60529

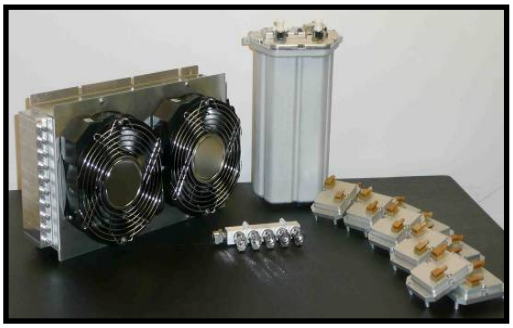
Optional Services

- OEM Hardware Integration
- System Configuration & Testing
- SprayCool Education and Training Services
- Technical Assistance Center (TAC)

Optional Accessories

- Custom I/O Panel
- Fluid Fill Kit
  - Service Depot Level
  - Field Level

SprayCool® Technology



SprayCool's patented 2-phase "direct spray" liquid cooling technology deploys a fine mist of non-corrosive, non-conductive liquid, sprayed in a thin layer, which evaporates and cools electronics. The process continuously cycles within a sealed, closed loop system. In doing so, SprayCool products isolate the electronics from dirty, corrosive environments found in military and industrial applications resulting in temperature optimized, higher performance, and more durable electronic devices, often without the need of dedicated environmental control systems. SprayCool technology enables customers to deploy both commercial grade and custom electronics in harsh environments more quickly, and at significantly lower costs.

SPRAYCOOL®
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