

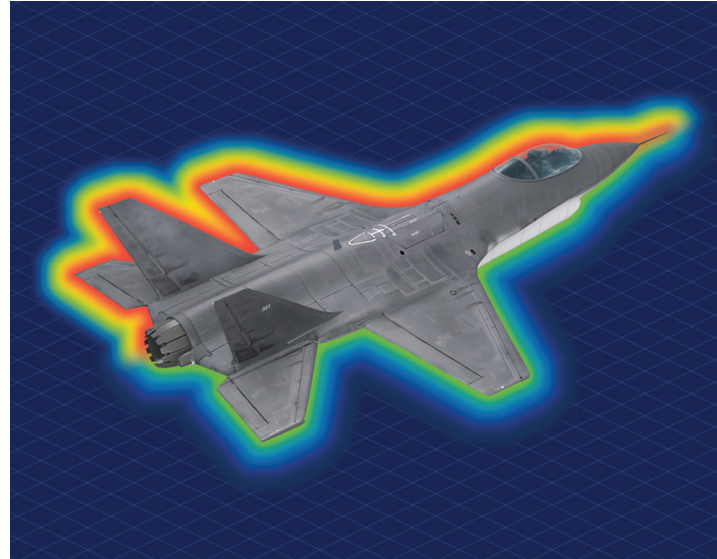
Thermal Management Systems

End-to-end liquid cooling systems

Complete solutions enabling today's EW, radar, signal intelligence, and embedded electronics

Aerospace and defense electronic systems are driving significant increases in power densities, resulting in thermal management challenges across a wide range of applications. Parker's thermal management systems (TMS) team delivers complete end-to-end liquid-cooling solutions with significant advantages in size, weight, and power (SWaP) for mission-critical applications.

From ships at sea to high-altitude unmanned aircraft, Parker TMS solutions enable electronics survivability in the harshest environments.



Single- and two-phase cooling solutions

Applications



Electronic warfare



Radar

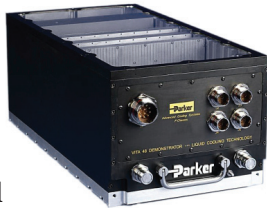


Signal intelligence

TMS offer solutions for a variety of military and aerospace customers. From ground combat vehicles to high-altitude unmanned aircraft, our solutions provide electronics survivability in the harshest environments. Thermal applications include signals intelligence and electronics surveillance for electronic warfare, radar processing, and command and control.

Complete thermal management systems solutions

From liquid-cooled conduction and SprayCool® enclosures using flow-through or direct-spray technology to heat exchangers, controllers, pumps, and cold plate assemblies, Parker TMS offers end-to-end, system-level solutions to meet the unique thermal management challenges required by today's military electronics.



Liquid-cooled conduction enclosure

Liquid-cooled conduction enclosures utilize proprietary manufacturing techniques to get the liquid close to the card edges, thus enabling lower flow rates and smaller cooling systems. Enclosures can support conduction cards in excess of 200 watts.



Cold plates

Cold plate and component cooling solutions deliver localized cooling of hot spots with low development costs, and are well-suited for radar and EW transmitters, directed energy weapons, and power electronics. Solutions range from single- to two-phase cold plates.



SprayCool® enclosures

Parker's SprayCool® enclosure series provides scalable designs using proven SprayCool technology which enables customers to select air-cooled 3U or 6U COTS cards for use in harsh operating environments.



Pumps, reservoirs, and controllers

Parker can support the infrastructure required to reject the heat contained in fluid with complete system and components such as pumps, motors, controllers, reservoirs, and filters.



Valves, hoses, and quick disconnects

Combining diverse fluid-handling experience and products enables Parker to provide highly engineered, integrated system solutions for the most challenging thermal management needs.



Heat exchangers and heat rejection units

Heat exchangers and heat rejection units (HRUs) are designed for cooling various fluids in a variety of platform environments. Our HRUs remove thousands of watts of heat HRUs manage coolant temperature based on measured system parameters to create a "set and forget" thermal management solution.

Platforms and programs

Thermal management systems offers solutions for a variety of military and aerospace customers. From ground combat vehicles to high-altitude unmanned aircraft, our solutions provide electronics survivability in the harshest environments. Platforms and programs include:



Signals intelligence (ASIP)



Electronics surveillance (MQ-4C Triton)



Airborne radar processing (TRACER)



Command and control (CPP-L)



Tactical radar processing (HALS)



Ground-based radar processing (MEADS)



Command and control (EFV)

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