



GORE® Aerospace Cables and Materials

Engineered to Perform



Reliable Performance

Mission Assurance

Reduced Life-Cycle Costs

MILITARY AEROSPACE



GORE® Aerospace Cables and Materials



“Gore’s expertise and cable technology has produced a high performance cable solution. GORE® 1394b Military FireWire® Cables have enabled Lockheed Martin to meet the stringent demands of the F-35 data transfer system while reducing weight on the platform.”

LORRAINE MARTIN, LOCKHEED MARTIN F-35 GENERAL MANAGER



Lead the Military Aerospace Industry with Gore as Your Partner

It is essential for electronic systems to communicate reliably and accurately; and cables are the lifeline of these systems.

Improvements in aerospace technology and the need for more power performance are driving the demand to update military aircraft. Also, tighter budgets mean that aircraft need to be more reliable, remain in service longer, and require less maintenance and are not damaged to reduce life-cycle costs. Understanding these challenges and how they are changing is the only way to ensure mission-critical success. We are here to collaborate with you to improve your components, systems, and aircraft performance.

Ensure Reliable Performance

Mechanical, electrical, and environmental stress factors can easily affect cables and materials performance throughout the aircraft. For example, the aircraft environment exposes cable materials to harsh contaminants such as fuels, oils, and chemicals. Extreme temperature changes in which cables must operate can have a direct impact on the materials used in their construction

as well. Cables can be easily compromised by abrasion from continuous movement through tight areas. Damaged insulation can lead to failures over time when exposed to challenging conditions. Therefore, cables and materials need to be more durable and flexible for easier routing to ensure they do not break during installation and can withstand the harsh environments of aerospace.

Deliver Mission Assurance

Design engineers are integrating sophisticated electronics into almost every system in military aircraft. It is essential for electronic systems to communicate reliably and accurately; and cables are the lifeline of these systems. Electromagnetic interference can compromise signal integrity over long distances and reduce the quality of signal transmission. In addition, higher data rate systems require greater attention to all electrical parameters, such as impedance control, attenuation, crosstalk, and EMI. Therefore, aerospace

cables need to be more reliable to ensure mission-critical system performance.

Reduce Life-Cycle Costs

In today's competitive environment, maintenance, repair and overhaul criteria are essential to reduce life-cycle costs. Cables and materials need to be smaller and lighter weight without compromising electrical and mechanical integrity. Industry experts estimate that each additional kilogram of additional weight on the aircraft can increase operating costs by thousands of dollars. As a result, cables and materials need to be smaller and lighter weight while still performing reliably in extreme conditions to reduce maintenance and downtime for rework and re-testing to replace cables.






GORE® Aerospace Cables and Materials

Gore Products Meet the Challenges of Aerospace

Our commitment to innovation is based on a thorough understanding of materials and how they interact with their environment.



GORE® Aerospace Cables and Materials meet today's industry challenges by delivering reliable, long-lasting performance. Our products are engineered to withstand broad temperature ranges, exposure to abrasion and wear, repeated mechanical stress, high voltages, and harsh contaminants such as fuels, oils and chemicals. Whether you need high-performance cables, reliable signal transmission or aerospace materials to reduce maintenance and downtime, you can be confident that our products deliver long-lasting reliable performance.

Ensure Reliable Performance

From the cockpit to the tail, Gore's products are engineered specifically to withstand electrical, mechanical, and environmental challenges most common in the aerospace industry. Our cables are engineered with a robust insulation that withstand the mechanical stress of flight operations, providing improved cut-through resistance for greater mechanical strength and abrasion resistance for durable protection during installation. They also provide superior electrical and mechanical performance in extreme temperatures, and have been fully tested and flight-proven to guarantee long-lasting performance.

Deliver Mission Assurance

Gore's products are optimized for high performance in challenging military applications to ensure reliable signal integrity and consistent power delivery. Our cables and assemblies are specifically engineered to maintain electrical performance even with the mechanical stress of vibration, acceleration loads, installation and maintenance. They also provide excellent signal transmission with optimized shielding for the highest bandwidth and lowest skew to ensure mission-critical success. Our cables have delivered reliable performance for military aircraft equipped with towed decoy systems for more than 20 years. Our airframe assemblies deliver the lowest insertion loss before and after installation, ensuring reliable performance.

Reduce Life-Cycle Costs

Gore's innovative fluoropolymer technologies deliver solutions that are significantly smaller with thinner insulation that provide the same amount of power performance and protection — all of which translates to reduced life-cycle costs and increased affordability. We have products that are up to 60% lighter when compared to the industry standards.



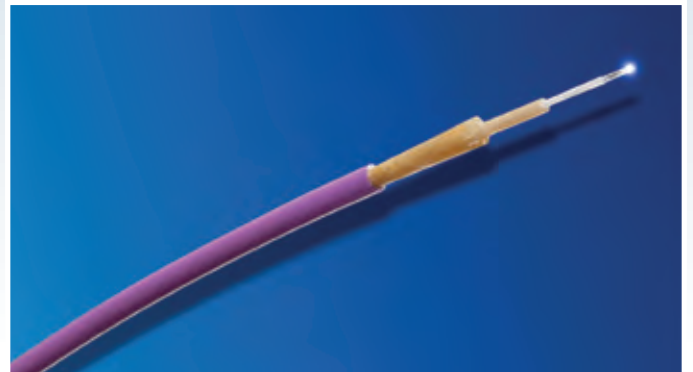
As a fit-and-forget solution, **GORE-FLIGHT™ Microwave Assemblies** provide the lowest insertion loss before and after installation to ensure reliable performance.



GORE® 1394b Military FireWire® Cables have a unique design that offer lightweight construction and are easier to install due to small size and flexibility.



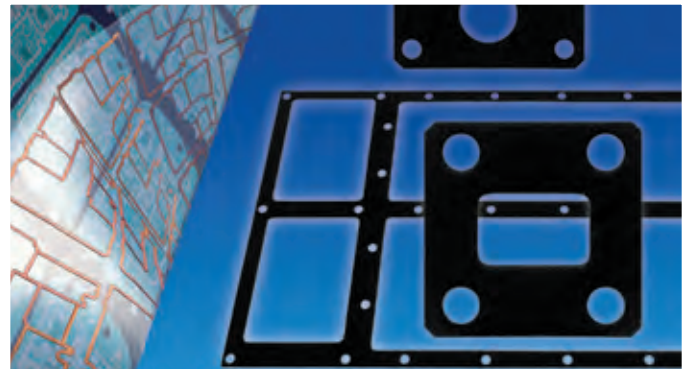
With a durable construction that is up to 35% lighter and more flexible than comparable cables, **GORE® Shielded Twisted Pair Cables** deliver reliable high-speed data transmission in extreme environments.



With a high-strength construction that is small and lightweight, **GORE® Aerospace Fiber Optic Cables** have delivered reliable performance for military aircraft equipped with towed decoy systems for more than 20 years.



GORE® Ethernet Cables have a high-density construction that significantly reduces weight and diameter while maintaining reliable signal integrity for high-speed data transmission in demanding environments.



GORE® EMI Shielding Materials deliver excellent shielding effectiveness and low DC resistance, ensuring reliable electrical performance from conformable materials that achieve consistent contact over time.



GORE® Aerospace Cables and Materials



GORE™ SKYFLEX™ Aerospace Materials reduce production and maintenance time by maintaining seals over multiple open/close cycles and eliminating time required for curing.



GORE® MIL-STD-1760 Assemblies reduce life-cycle costs because they do not have to be replaced after each use. They are fully qualified, tested and flight-proven for lasting performance.



GORE® Cableband Systems enable increased power for higher output and better resolution. They are also lightweight and flexible, reducing the stress on radar systems.



GORE® Fibre Channel Assemblies enhance noise immunity and EMI suppression. They are proven on many platforms, such as F-16, F-18 and V-22.



By preventing the ingress of water vapor, jet fuel, and other harsh contaminants, **GORE® Microwave Sealed Airframe Assemblies** maintain reliable electrical performance.



GORE® Optimized Coaxial Cables are up to 60% lighter and up to 30% smaller diameter compared to standard RG cables, which means significant weight savings in a smaller package.

Engineered to Perform



The Gore Advantage



Enabling increased aircraft efficiency through implementation of new or improved electrical systems.

Gore is a technology-driven company focused on discovery and product innovation. Well known for waterproof, breathable GORE-TEX® fabric, the company's portfolio includes everything from high-performance fabrics and implantable medical devices to industrial manufacturing components and aerospace electronics.

Products Engineered for the Aerospace Industry

One of our core values is a concept called fitness-for-use, which means that our products not only do what we say they do, but they also work in environments where other products may fail. To meet this commitment, we offer a global engineering and support team

to the aerospace industry. We work closely with your design team, helping select the right products to streamline the design process, reduce product size and weight, and increase durability and reliability for long life. In our global testing facilities, we evaluate the performance of our products to increase our understanding of their reliability in the field. These world-class labs are comprised of three areas of expertise: digital and microwave signal analysis, environmental and stress testing, and electromagnetic compatibility – working together to quantitatively ensure optimal electrical signal integrity for all of our electronic products.

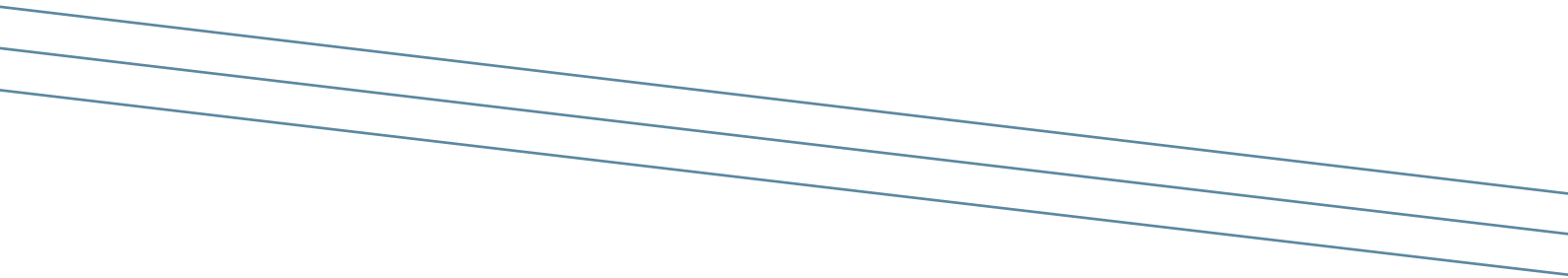
Proven Performance Backed by Gore's Engineering Team

Gore has a proven track record for delivering reliable, long-lasting products for use in the most challenging environments in the aerospace industry, including those experienced by the Apollo space missions and the more recent Mars Landers. In every major military aircraft from the F-15 to the F-35, GORE® Aerospace Cables and Materials, EMI shielding materials and aircraft sealants ensure superior electrical performance and reliability in the most severe environments encountered in the aerospace industry today.





GORE® Aerospace Cables and Materials



NOTICE – USE RESTRICTIONS APPLY
Not for use in food, drug, cosmetic or medical device
manufacturing, processing, or packaging operations.

FireWire is a trademark of Apple Inc., registered in the U.S. and other countries

W. L. Gore & Associates

No part of this publication may be reproduced in any form or by any means without the written consent of W. L. GORE & ASSOCIATES, INC. GORE, GORE-TEX, GORE FLIGHT, SKYFLEX, and designs are trademarks of W.L. Gore & Associates. ©2014 W. L. Gore & Associates, Inc. DIV-0070-BRC-US-JUL14

gore.com

