

# Innovative Interconnect Solutions

For the Military and Aerospace Market

SEVERE ENVIRONMENT

RF

FILTER

FIBER

HERMETIC



*Engineered for life*

# History of Innovation and Leadership

At ITT, we have been serving the military/aerospace market for nearly a century – providing leading edge, innovative Cannon connector solutions for thousands of customers and applications. ITT's industry leading products include:

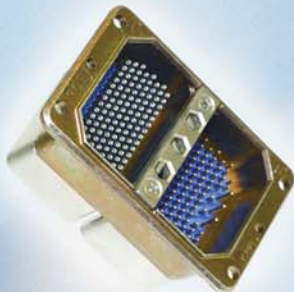


## Fiber Optics

ITT is a leader in the development of state-of-the-art fiber optic interconnects for high performance, high reliability military aerospace applications. From connector hardware to hybrid electrical/optical systems – from ship board and ground based networks to air and space platform systems – design, qualification and production – ITT offers the most comprehensive experience and capability in the industry.

## Spring Pin/Pad Interconnect

ITT offers a series of new products using a spring pin/pad contact system. This highly reliable connector withstands thousands of mating cycles, while maintaining low and consistent contact resistance. The pad face provides a flush and exposed surface for ease of cleaning in harsh field environments. This contact system can be packaged in a wide variety of I/O connector styles and can also be provided as a filtered connector.



## Chip-on-Flex Filter

ITT continues to be the leader in filter connectors with the release of Cannon Chip-on-Flex technology. Advanced flex circuitry replaces current ceramic planar array technology resulting in a lighter weight and more robust filter connector. This state of the art filter design provides enhanced mechanical performance sought after by today's designers for thermal shock and high vibration environments.



# Unmatched Design, Development Experience and Expertise

Whether its land, sea, air, or space – ITT experience and innovation continues to provide our customers with the high performance, high reliability, and high quality interconnect solutions you demand.

## Industry Leading Quality

For nearly a century, we have been providing our customers with high quality interconnect products for harsh environment applications. Our “Cannon Plugs” are known industry wide for performing under the most rugged conditions. Today we continue to supply our customers with industry leading quality products they require.

## Operational Excellence

To exceed the premier operational performance you demand from your supply chain partners, ITT has strategically implemented the tools and processes necessary to continuously improve our cost, lead time and service offering.

- Global Footprint
- Global Supply Chain Management
- Lean Manufacturing Techniques
- VMI/Consignment Inventory
- S&OP and Build-to-forecast
- Six Sigma
- Kanban
- eCommerce

1940s

CANNON  
INVENTS THE  
FIRST CIRCULAR  
CONNECTORS

1950s

CANNON  
INVENTS THE  
FIRST D-SUB  
CONNECTORS

1960s

CANNON  
INVENTS THE  
FIRST MICRO  
CONNECTORS  
& THE FIRST  
REAR RELEASE  
CONTACT  
SYSTEM

1970s & 1980s

THE FIRST  
CANNON 38999  
AND RACK  
& PANEL  
CONNECTORS

1990s

FIBER OPTICS,  
SPACE &  
INTEGRATED  
MODULAR  
AVIONICS  
CONNECTORS

2000s

HIGH SPEED  
ELECTRICAL;  
PHD 38999  
& ARINC  
CONNECTORS



# Delivering Solutions That Perform

---

At ITT, we feature an extensive array of connector assembly products and the ability to deliver standard or custom solutions to meet almost any application. From MIL-C-39029 standard contacts to the latest fiber optic, filtered, hermetic, spring pad/pin, quadrax, and composite technologies, ITT brings state of the art technology to deliver solutions that perform to the most stringent military requirements. Every technology solution is supported by a dedicated project team focused on the service, manufacturing, R&D, testing, and the project management required to meet all of your program needs.

---



## Cannon Rack & Panel Connectors

As the world leader in rack & panel connectors, ITT offers an unmatched variety of shell configurations and insert arrangements, materials, plating and contact options. We are a leading supplier on numerous programs with custom designs which meet the stringent specifications of ARINC 600, ARINC 404 (MIL-C-81659), and MIL-DTL-83733 standards.

---

## Cannon Circular Connectors

As a world leader in circular connectors, ITT can leverage our design and manufacturing expertise to fit your application. Our products offer fast positive mating for a wide range of military applications. Cannon's circular connectors are available in many sizes and contact configurations for various harsh environments, and meets specs including NATO Standard VG 95234, MIL-DTL-5015, MIL-C-26482, and MIL-DTL-83723.



## Cannon D-Sub Connectors



Invented by Cannon in 1952, our family of D-Subs has grown to include combinations of signal, power and RF, as well as severe service sealed connectors. Cannon D-Subs are available with an extensive line of backshells and accessories and are one of the most economical shielded connector solutions available today. Qualified to the MIL-DTL-24308 specification, Cannon D-Subminiature connectors are ideally suited to a variety of mil-aero applications.

---

## Cannon RF and Fiber Optic Connectors and Cable Assemblies

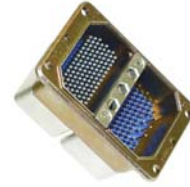
Cannon RF and fiber optic solutions provide an excellent performance/cost value. Performance can be tailored to the desired end system, and our use of superior materials and bonding agents provide highly effective solutions. Designed for shipboard, airborne and ground-based applications requiring performance in severe environments, our wide variety of products includes fiber optic hybrid contacts, multi-channel, rack and panel, and hi-rel assemblies. ITT's newest addition to the Cannon fiber optic product line is the PHD 38999 series providing high performance fiber optic contacts in high-density arrangements with the environmental robustness of MIL-DTL-38999 style connectors. ITT also offers Cannon PHD ARINC and Panel Mount configurations.



---

## Cannon Filter Connectors

Cannon filter connectors offer high quality and reliability, particularly in harsh environmental conditions. They are designed to meet applicable portions and intermateability of military specifications MIL-C-26482, MIL-DTL-24308, MIL-DTL-83723, MIL-DTL-38999, MIL-DTL-5015, MIL-DTL-83513, MIL-C-81659, and ARINC 600.



---

## Cannon Microminiature Connectors

Cannon microminiature connectors offer high performance and reliability with exceptional versatility. The Cannon Micro, Centi and Nano product lines utilize the high-reliability Twist Pin Contact system designed to allow continuity in very dense areas and under severe shock and vibration environments. Available in rectangular, circular and strip configurations, many of our connectors meet or exceed the applicable requirements of the MIL-DTL-83513 specification.



---

## Cannon Spring Pin/Pad Connectors

To meet the demand for high reliability and maintainability in harsh, field environments, ITT engineered interconnect solutions utilizing a high density, robust spring pin/pad contact system. This contact system can be packaged in a variety of I/O connector styles and is offered in either filtered or non-filtered designs. The spring pin/pad contact system allows a totally flush interface on the pad side of the connector, preventing ingress of dirt and grime, allowing for ease of cleaning and providing a highly reliable solution.



---

## Custom Engineered Interconnect Solutions

To meet the most demanding military specifications, ITT provides custom products designed and qualified to work in extreme environments such as, Space (Vacuum), Deep Sea (Corrosive), High Pressure, High/Low Temperatures, and High Vibration and Shock Environments. These products have capability and design features that that meet Sub-Marine, Nuclear and Space requirements.

---

To find out more about ITT's innovative interconnect solutions for Military and Aerospace applications, please visit [www.ittcannon.com](http://www.ittcannon.com)





# ITT

With manufacturing facilities, sales representatives and distributors located worldwide, please visit our website at [www.ittcannon.com](http://www.ittcannon.com) for a complete listing and to find the office nearest you.

## GERMANY

Cannonstrasse 1  
Weinstadt, 71384  
phone: 49.7151.699.0  
fax: 49.7151.699.217

## HONG KONG

Unit 901 & 912, West Tower  
Shun Tak Center  
168-200 Connaught Road  
Central  
phone: 852.2732.2720  
fax: 852.2732.2919

## ITALY

Via Pietro Panzeri 10  
Milano, 20123  
phone: 39.2.58180.1  
fax: 39.2.8372036

## UK

Jays Close, Viabes Estate  
Basingstoke, RG22 4BA  
phone: 44.1256.311200  
fax: 44.1256.323356

## USA

666 East Dyer Road  
Santa Ana, CA 92705  
toll free: 1.800.854.3028  
phone: 1.714.557.4700  
fax: 1.714.628.2142



[www.ittcannon.com](http://www.ittcannon.com)

©2005 ITT Industries, Inc.

"Engineered for life" and "Cannon" are registered trademarks of ITT Industries, Inc. Specifications and other data are based on information available at the time of printing, and are subject to change without notice.

MIL 05-Dec