

PANDUIT®



Wire Management Solutions for Aerospace

Maximum productivity and safety
for commercial airline manufacturing

Let Panduit help drive operational productivity to meet your demand

The commercial and military aerospace sectors are experiencing a revitalization. Growing consumer travel, increasing defense budgets, programs for more energy efficient planes, and the simple replacement of aging equipment are all driving demand for aircraft production and putting pressure on suppliers to help airframe manufacturers increase productivity and deliver innovative products.

As a commercial aerospace manufacturer, the success of meeting this demand relies on your ability to:

- Decrease assembly time and increase operator efficiency
- Consider and evaluate new materials and innovative designs that provide higher efficiency, lighter weight, and ease of installation
- Maximize operational cost-efficiencies to gain more out of your production investments
- Meet and exceed strict industry quality, reliability and performance standards

For more than 50 years, Panduit has helped the world's largest commercial airline manufacturers improve their wire harness assembly, productivity, and lead times with solutions that deliver industry-leading product performance, ergonomics, industry certifications, and product compliance.

With an end-to-end portfolio of industry-compliant wire harnessing solutions, and fiber optic cabling to reduce weight and fuel consumption, Panduit can help keep your aircraft production on time and provide optimum performance.

Products: Securely bundle, connect, organize your electrical systems, and deploy high bandwidth lightweight fiber optical cabling, all available through an unrivaled distribution network

Tools: Increase productivity, provide industry leading ergonomic features, improve product and installer safety, and minimize installation costs

Support: Our value-added expertise helps you specify the right components, and uncover new opportunities for greater production efficiency, product performance and worker safety.

Enhance Reliability and Reduce Operating Costs



Maximize Productivity

Gain the greatest return on your production investments by utilizing tools that offer industry-leading performance speeds combined with ergonomic designs that keep your installers safe from harm and incidents that can slow down or interrupt production times.



Build with Confidence

Ensure that the products you install have been designed, tested and validated by industry experts with the highest quality and durability to meet or exceed stringent compliance requirements.



Simplify Access to Product

Gain access to one of the most comprehensive portfolios of end-to-end Aerospace Wire Harnessing solutions available from a single source, backed by a world-class distributor network.

If You Bundle It, Route It, and Protect It... Panduit Can Help You Manage It

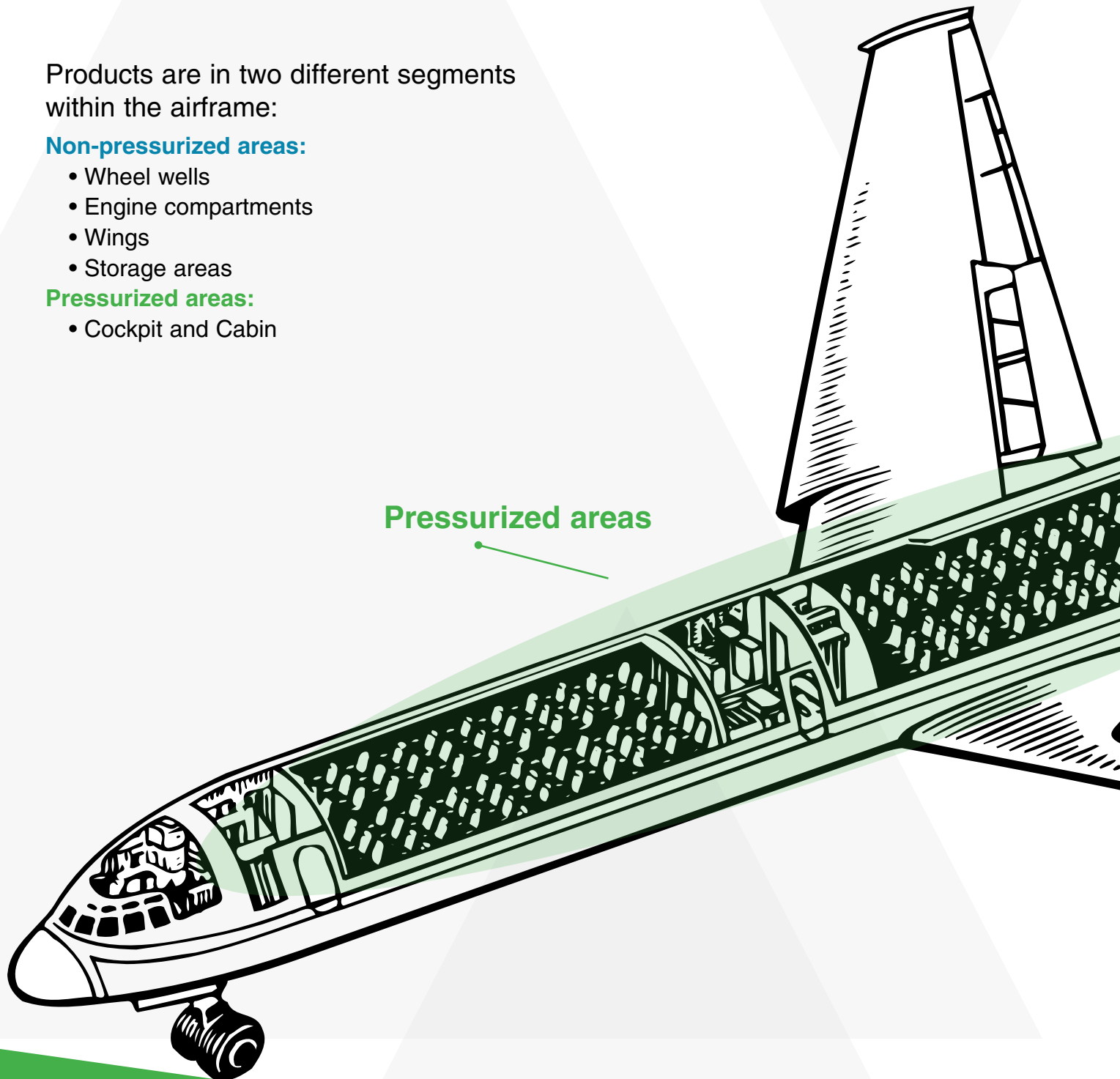
Products are in two different segments within the airframe:

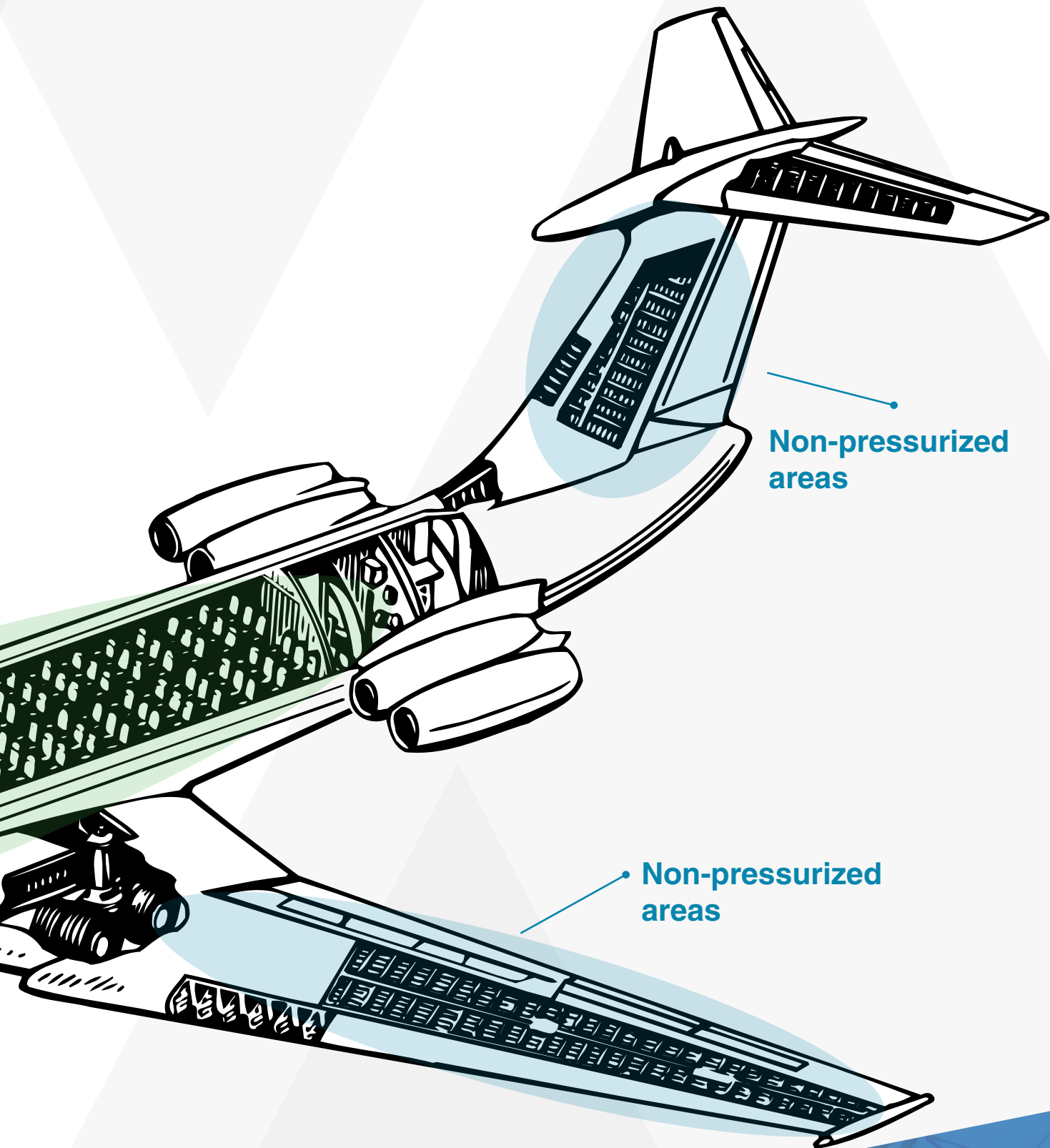
Non-pressurized areas:

- Wheel wells
- Engine compartments
- Wings
- Storage areas

Pressurized areas:

- Cockpit and Cabin





Cable Ties



Panduit offers the most complete selection of cable ties.

- Various styles, sizes, materials and colors to meet our customer's needs
- Cable ties bundle, manage, route in indoor and outdoor harsh environment applications
- MIL spec approved

Aerospace Cable Ties

Products molded in special materials and designs for resistance to higher temperatures and vibration.

High Temperature Materials

PEEK Materials 260°C



PLT1M-C71

Tefzel Materials 170°C



PLT2I-C76

Heat Stabilized Nylon 6.6. 115°C



PLT2M-M39

Vibration Resistant Designs

The Contour-Ty cable tie is designed for the Aerospace Industry to provide maximum protection for wire insulation.

- Nylon 6.6 material
- External tooth design for improved abrasion protection for thin wire insulation used in the aerospace industry
- Cable ties bundle, manage, route in indoor and outdoor harsh environment applications
- MIL spec approved

Belt design:

- Abrasion protection for thin wire insulation used in aerospace industry
- Provides a lower profile head and rounded corners/edges for maximum protection when ties are embedded in multiple bundles



Contour-Ty, designed for the Aerospace Industry*

***Vibration testing performed to Section 8 of RTCA (Radio Technical Commission for Aeronautics) DO-160, a vibration procedure widely recognized in the aerospace industry.**

Cable Accessories and Mounts



Panduit provides a wide variety of mounts and wire management accessories.

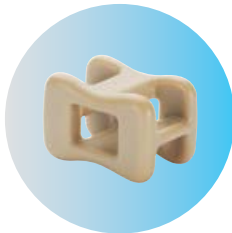
- Routes and secures cable bundles to ensure the most efficient and cost-effective assembly
- Halogen-free and low smoke
- Multiple adhesive options for mounting to surfaces
- Push mount and fir tree and fastener secured designs
- MIL spec approved

Aerospace Cable Tie Mounts and Accessories

Products molded in special materials for resistance to higher temperatures and vibration.

High Temperature Materials

PEEK Materials 260°C



CSMS-D71

- Innovative design PEEK spacer mounts applied in non-pressurized areas with Tefzel Ties
- PEEK material for high temperature applications (260°C)

Tefzel Materials 170°C



TM2S8-C76*

- Stackable, light weight, mount for aerospace application
- Available in various materials

Heat Stabilized Nylon 6.6 Materials 115°C



TM1S4-M30*

- Low profile design keeps bundle close to mounting surface
- Manufactured from Heat Stabilized Nylon 6.6 Material
- Designed for aerospace industry with rounded edges to minimize chance for abrasion

***Vibration testing performed to Section 8 of RTCA (Radio Technical Commission for Aeronautics) DO-160, a vibration procedure widely recognized in the aerospace industry.**



Stainless Steel Cable Ties

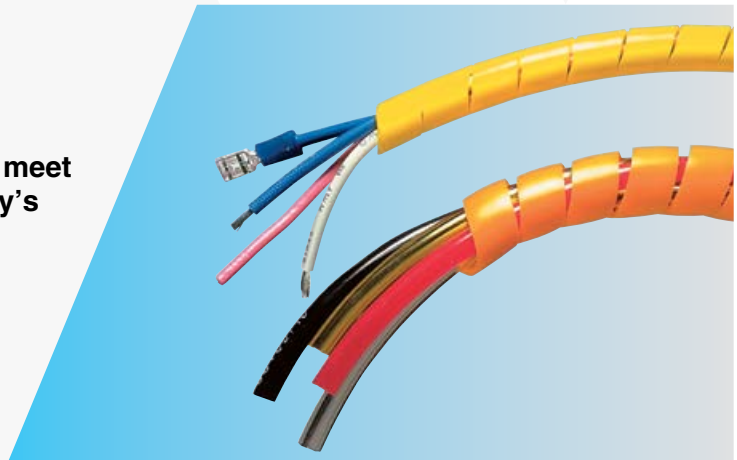
Stainless steel cable ties bundle, fasten, and secure items that are exposed to corrosive or harsh conditions. Highly durable ties are built to last and can help reduce periodic rework.

- Self-locking cable ties enable faster installation
- Fully coated ties help prevent corrosion between dissimilar metals
- MIL spec approved

Abrasion Protection and Heat Shrink

A broad range of abrasion protection products meet your unique application requirements and today's most demanding safety standards.

- Halogen-free spiral wrap and braided expandable sleeving protect your cables, wires, and tubing from abrasion and heat shrink
- Heat shrink tubing insulates and protects larger cables
- MIL spec approved



Create Greater Efficiencies with Tools

Promote worker safety, reduce installation time, and increase productivity to lower your costs, with Panduit tools.

- Cable tie tools with ergonomic and lightweight designs and easily adjustable tension settings for simple operation
- Stainless steel installation tools, available in hand and battery-operated options, for low, medium or high volume applications
- Crimping tools available in manual, powered, dieless, and pneumatic options for consistent and reliable terminations for power connections

Alternative Products to Lacing Tape

Lacing tape has been used to secure wires in Aerospace applications for many years. While lacing tape provides a secure and safe method of bundling wire harnesses, there are significant drawbacks:

- High labor content to install.
- Increases production cycle time of wire harnesses
- Extensive installer training required.
- Potential negative ergonomic impact on installers
- Many installers with these skills nearing retirement. Difficulty finding replacements

Panduit offers alternatives to lacing tape that provide:

- Ease of installation. Does not require special training.
- Quick install significantly decreasing wire harness production cycle time.
- High temperature resistance
- High resistance to abrasion of wire insulation due to vibration
- High tensile strength for securing wire bundles
- GTS-E installation tools available to significantly improve installer ergonomics and offer consistent installation

Questions about alternative products to lacing tape?

Visit: www.panduit.com/aerospace to reach a dedicated Panduit specialist.

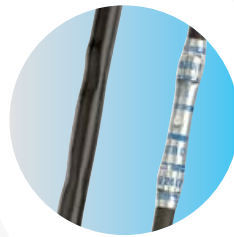
Aerospace Industry Standards Certifications

Panduit has successfully submitted and passed multiple industry specific vibration, temperature cycling, and product endurance tests.



MIL Spec (QPL) Products and Solutions

Panduit is continuously growing our product line and has a complete portfolio of over 500 MIL spec approved products. Please visit: www.panduit.com/aerospace to obtain the full listing of our MIL spec approved products.



Panduit Part Cross Reference

Panduit part numbers are cross referenced to specific Boeing BACS and Airbus NSA part numbers. For a listing of cross reference parts and Aerospace Industry standards, contact Panduit Customer Service: cs@panduit.com

US and Canada: 800.777.3300

Europe, Middle East, and Africa:

44.20.8601.7200

Latin America: 52.33.3777.6000

Asia Pacific: 65.6305.7575

Global Expertise, Support and Aerospace Distribution

Continuous improvement is essential to staying competitive and growing your business. Whether you're specifying a new design, improving an existing one, or seeking to make production more efficient, Panduit can help.

Developing new airframes or upgrading existing designs, or upgrading existing designs, involves numerous considerations, from the quality and reliability of your systems to compliance with the latest standards. Turn to Panduit experts during the design process to specify, develop, and test products to handle stringent aerospace applications.

Our support specialists can help review your cable and wire management systems and installation processes, and identify potential product or process improvements for greater productivity, safety, and cost efficiencies.

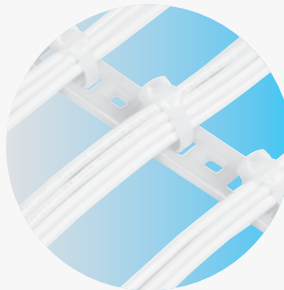
Aerospace products are available to you through our global distribution partners that can service your needs and carry inventory to service your production requirements.

Military Aerospace

Panduit offers products for military applications.



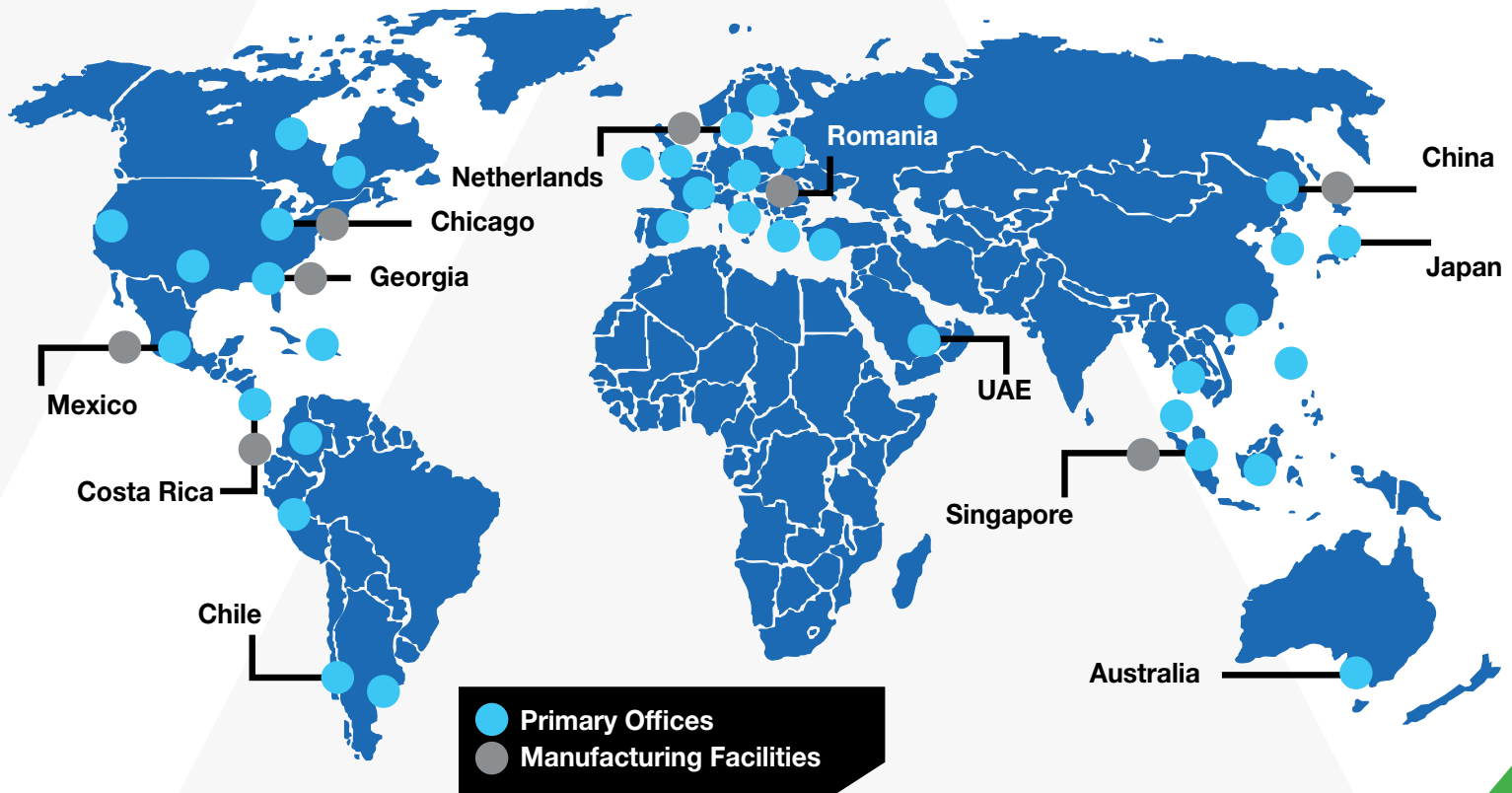
Stainless Steel Cable Ties



Aerospace Mounts



**Wire Management
Accessories and Fixing
Devices**



Global Capabilities

Global Expertise and Support

Global distribution, manufacturing, sales and technical support teams make Panduit solutions readily accessible, allowing the right products to be delivered when and where they are needed.

Worldwide Certifications

Panduit solutions hold a variety of the most common heavy industry certifications and approvals worldwide.

PANDUIT®

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