



FASTENING SOLUTIONS FOR AEROSPACE AND DEFENSE ELECTRONICS

Military Electronics | Radar | Satellites | Connectors | Drones | Wearables



SEE HOW PEM® INNOVATION CAN MOVE YOU FORWARD

From standard catalog parts to custom-engineered solutions, PEM® fasteners deliver rugged, reliable performance for a wide range of defense applications and related applications in military, aerospace electronics, and beyond.

The innovation behind our self-clinching, broaching, flaring, and surface-mount technologies gives you the power to miniaturize, improve costs, and reduce assembly time.

With one of the largest and most diverse portfolios available, see how you can move forward with the optimum performance of PEM® fastening solutions.

YOUR SOURCE FOR COMPLIANT PARTS

PEM® products are certified to meet a number of defense and military specifications.

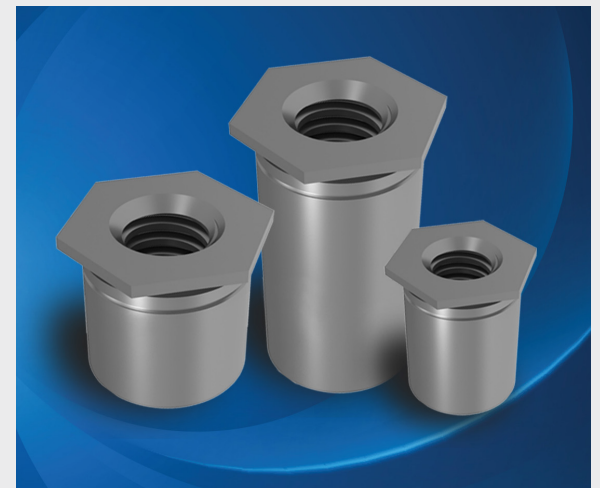
- ✓ **DFARS**
- ✓ **MIL-SPEC** – see our MIL Cross Reference Chart for PEM® Fasteners
- ✓ **NASM**
- ✓ **NSN** – over 2,000 PEM® parts available on NSN lookup
- ✓ **ITAR**
- ✓ **ISO 9001:2015 Certified** – global PEM® locations in U.S., Singapore, Germany
- ✓ **DOD Qualified Suppliers List for Manufacturers (QSLM)** – Class 2 and Class 3 Threaded Fasteners

View all PEM® regulatory certifications and compliance for government requirements [here](#).

YOUR SOURCE FOR CUSTOMIZED PARTS

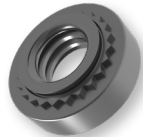
For any application challenge you have, custom-engineered PEM® solutions are available. Our team of engineers works with you to design and develop the right fastener for the results you need – whether a modified catalog part or a fully custom solution.

To learn more click [here](#).



PEM® FASTENERS

The innovation behind PEM® fasteners can add value and long-term cost savings to your defense and military requirements. Our portfolio is one of the largest and most diverse in the industry.



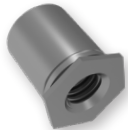
Nuts

Nuts with thread strengths greater than mild steel screws – commonly used wherever strong internal threads are needed for component attachment or fabrication assembly



Studs

Threaded and unthreaded fasteners used where attachment must be positioned before being fastened



Standoffs

Used where it is necessary to stack or space components away from the panel – thru-threaded and blind types are typically standard



Panel Fasteners

Generally used on enclosures where screw must remain with the door or panel



PC Board Fasteners

Fasteners that utilize surface-mount, broaching and flaring technology for use with PCB applications



Micro Fasteners

Thinner, lighter, stronger fasteners – ideal for micro applications in electronics systems



COTS (Commercial Off The Shelf)

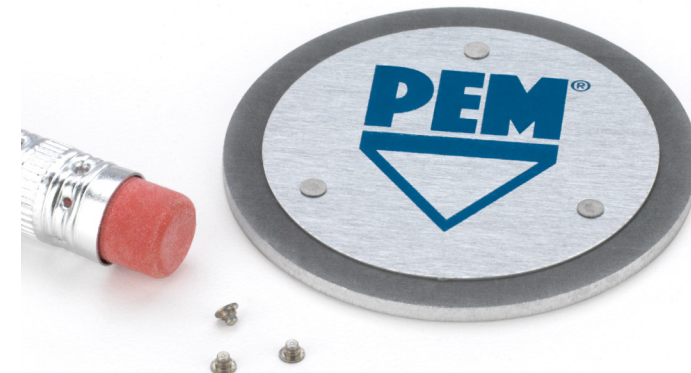
Numerous parts available

LIGHTER. SMALLER. STRONGER.

As the complexity of defense and aerospace applications grows, so does the need for lighter, smaller, and stronger fastening solutions – especially for electronics applications.

PEM® fasteners and our extensive portfolio of microPEM® products have become a critical piece of electronics architecture across many industries. It's a combination that delivers optimum performance where it's needed most – particularly in compact spaces where traditional micro screws tend to increase assembly time and total costs.

- Military Electronics
- Radar
- Satellites
- Connectors
- Drones
- Wearables
- And More...



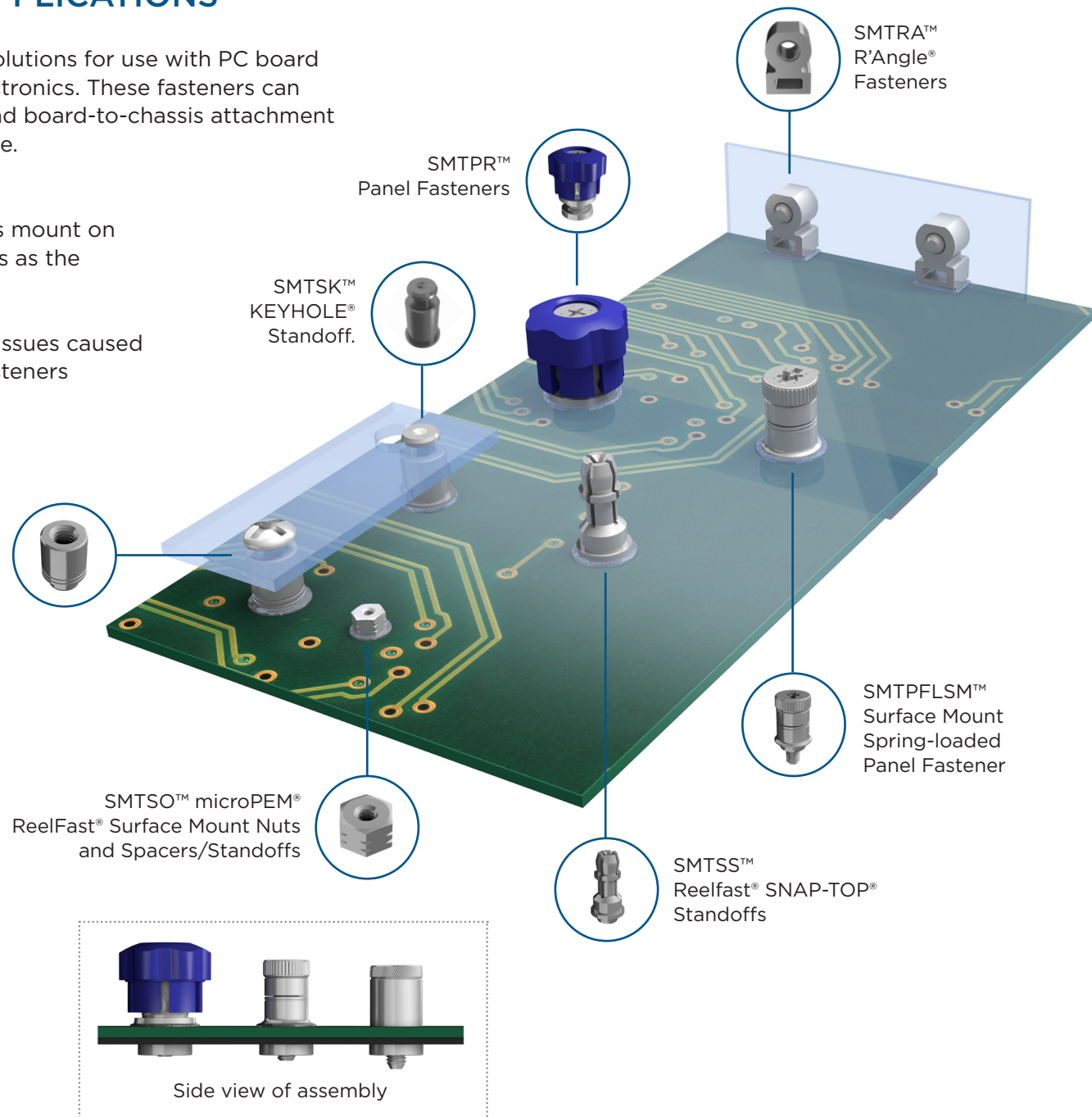
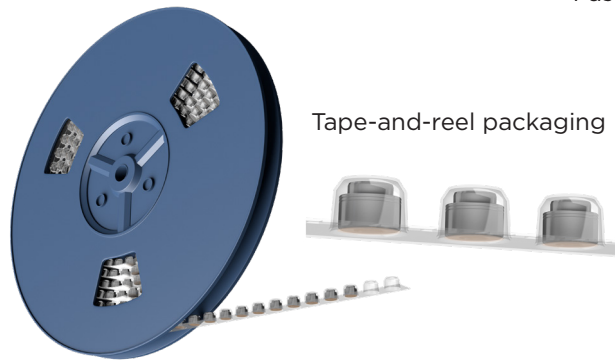
FASTENERS FOR PC BOARD APPLICATIONS


PEM® offers a comprehensive line of fastening solutions for use with PC board applications used in aerospace and defense electronics. These fasteners can satisfy component-to-board, board-to-board, and board-to-chassis attachment needs and deliver optimum product performance.

ReelFast® Surface Mount Fasteners

PEM® surface mount technology (SMT) fasteners mount on PC boards and use the same soldering processes as the board's other electronic components.

- Eliminates common productivity and damage issues caused by loose fastening hardware and broaching fasteners
- Supplied in tape-and-reel packaging for easy pick-and-place assembly
- Excellent pullout and torque-out forces



 [Click here](#) to watch installation video for SMT fasteners.

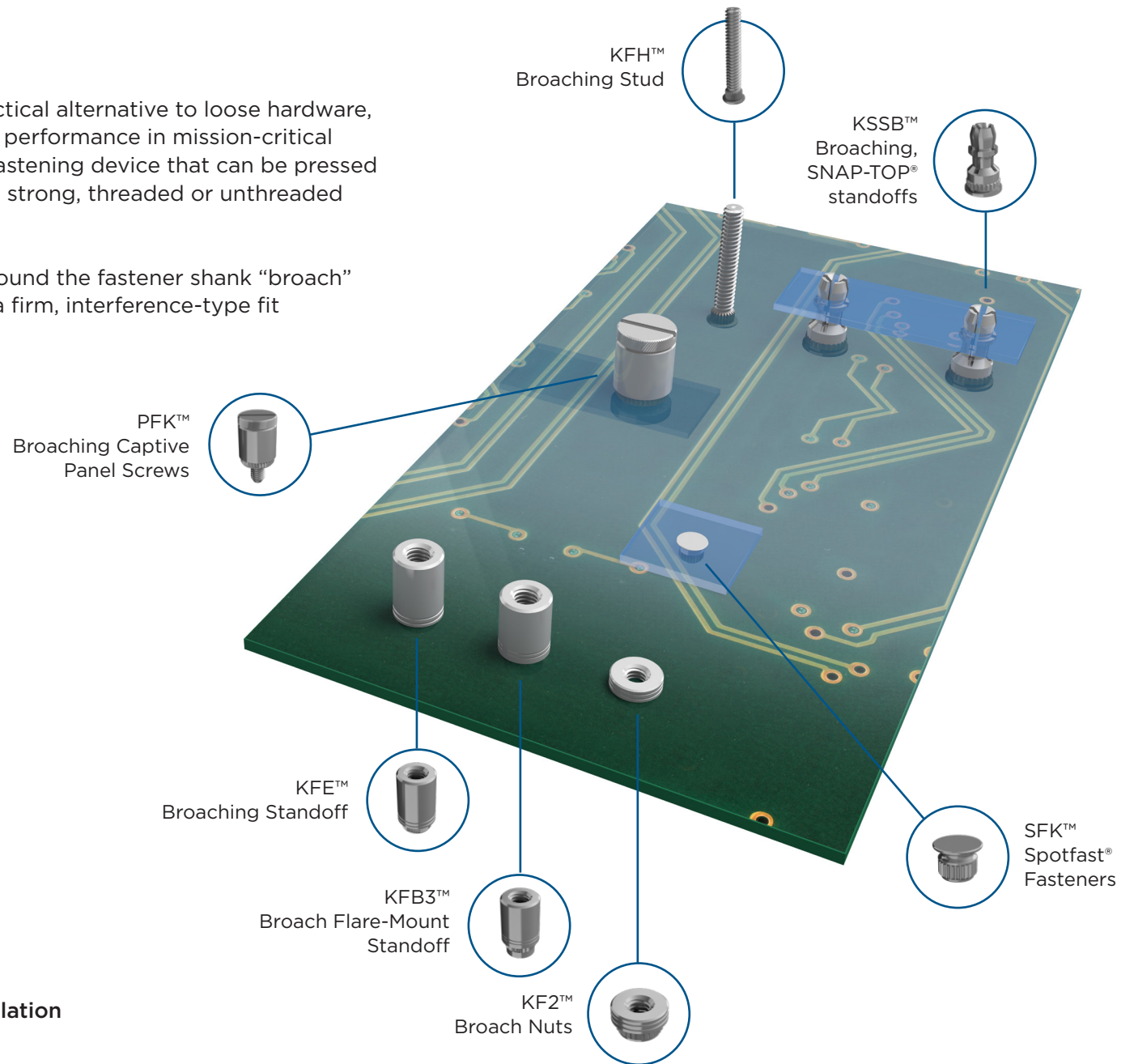
Broaching Fasteners

This fastening solution offers a practical alternative to loose hardware, which can increase the risk of poor performance in mission-critical applications. It is a knurled-shank fastening device that can be pressed into a hole to provide a permanent, strong, threaded or unthreaded attachment point in PC boards.

- Specially formed axial grooves around the fastener shank “broach” or cut into the material, creating a firm, interference-type fit resistance to rotation.



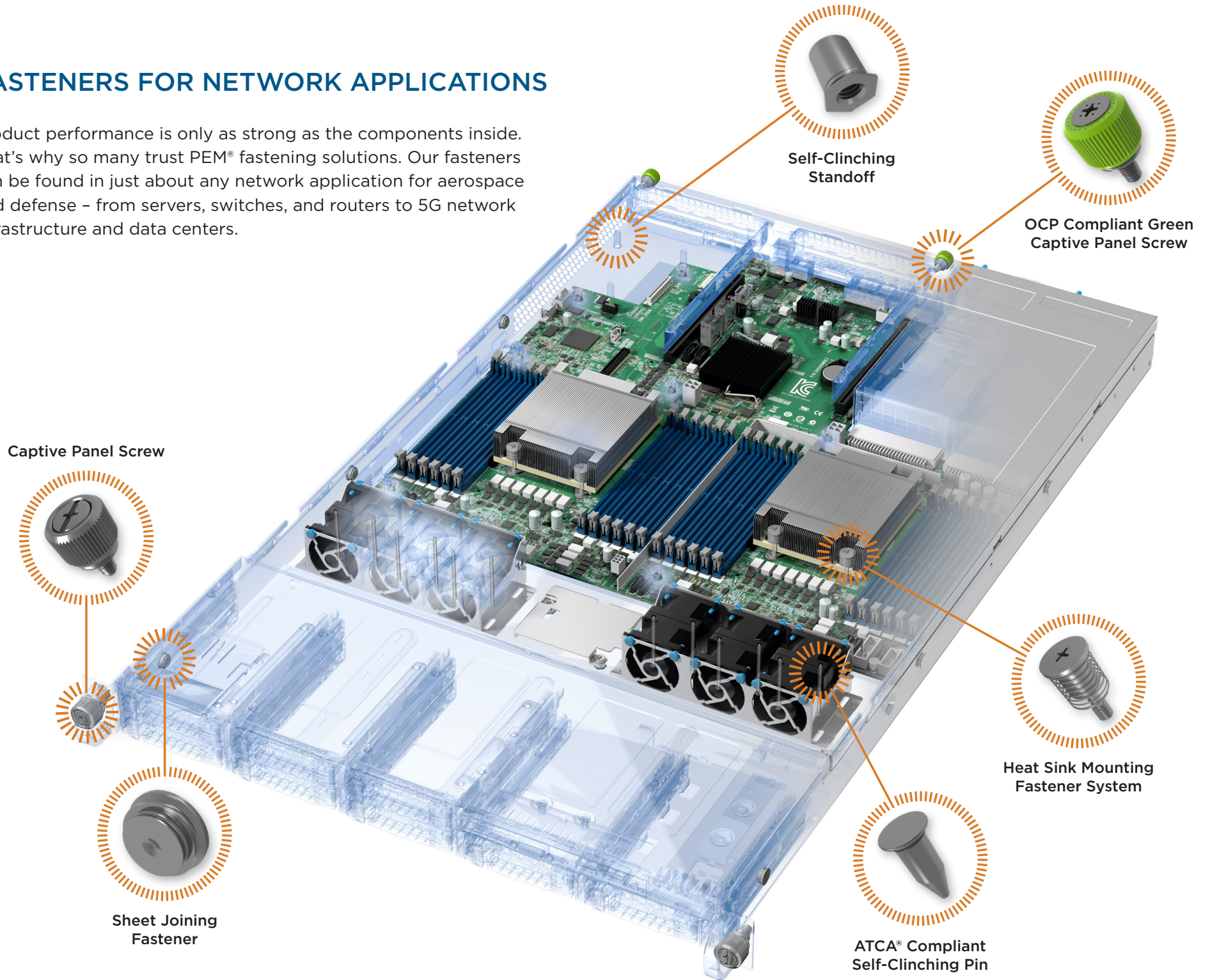
SFK™ Spotfast® Fasteners are designed for flush joining of metal to PCB/plastic panels



[Click here](#) to watch installation video for KFE fasteners.

FASTENERS FOR NETWORK APPLICATIONS

Product performance is only as strong as the components inside. That's why so many trust PEM® fastening solutions. Our fasteners can be found in just about any network application for aerospace and defense - from servers, switches, and routers to 5G network infrastructure and data centers.



Self-Clinching Standoff

OCP Compliant Green Captive Panel Screw

Captive Panel Screw

Sheet Joining Fastener

Heat Sink Mounting Fastener System

ATCA Compliant Self-Clinching Pin

EXPERTISE TO TAKE YOU FURTHER

PEM® Self clinching technology has revolutionized production fastening and put us on the map as a global industry leader. It's a clean, energy-smart alternative to conventional fastening methods like spot weld - with proven performance in the most challenging defense and aerospace applications.

How Self-Clinching Works

When pressed into ductile material, a self clinching fastener displaces the host material around the mounting hole, causing it to cold flow into a specially designed annular recess in the shank or pilot of the fastener.

A serrated clinching ring, knurl, ribs, or hex head prevents fastener rotation in the host material once inserted - becoming a permanent part of the piece into which it's installed.

Self clinching Strength - Stronger threads vs. a tapped panel

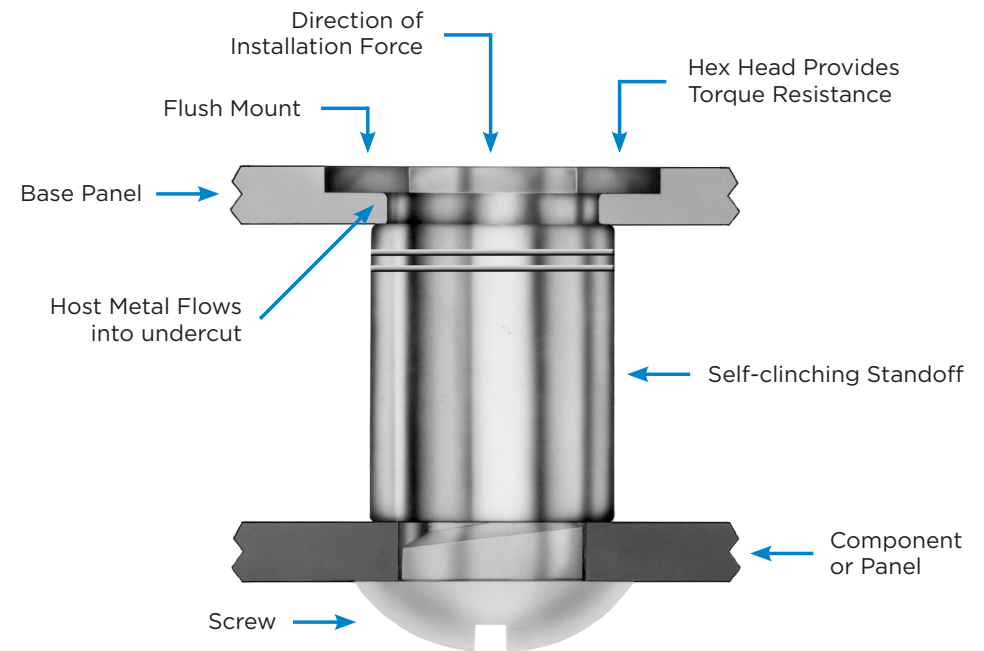
In-Process Installation - Parts are installed into a plain round hole with no secondary operations required

Cost Reduction - Decreased installation cycle times with high-speed installation options

Design Flexibility - Can be installed into dissimilar materials

Clean Process - Environmentally friendly, with no weld splatter and less energy requirements

Learn more about [self clinching technology](#) or compare [self clinching vs. weld.](#)



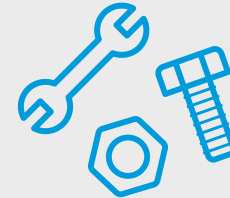
YOUR COMPETITIVE ADVANTAGE STARTS WITH PEMedge® SERVICES

When PEM® customers need to improve product cost or quality, test alternative fastening solutions, or optimize part performance, they turn to PEMedge® Services – a full suite of engineering expertise that helps customers gain a market edge.



Application Engineering Services

Optimize part performance with application review and analysis from PEM® engineers. Other services include catalog samples, 3D models, and custom design/product development, even for small lot jobs.



Teardown Service

Reduce weight, assembly time, and cost with our teardown service. We disassemble and analyze your product – exploring alternative fastening solutions to improve performance of your current products.



Testing Service

From failure analysis to materials testing, we can determine the safety, compliance, and application suitability of your parts. Includes FEA analysis, mechanical testing, micro hardness, and more.



FASTENERClass™ Master Classes

Through complimentary live and pre-recorded courses, you'll learn foundational theory, best practices, application exploration, and other topics to help you optimize current fastener usage.



SEE WHAT'S POSSIBLE WITH PEM® FASTENING SOLUTIONS.

The all-new [PEMnet.com](https://www.pemnet.com) is a completely reimagined website experience designed with you in mind. Dive into our online resources center and discover what PEM® fasteners can do for your toughest application challenges.

- [Product Finder](#)
- [Catalog / CAD Drawings](#)
- [Datasheets](#)
- [Download Center](#)
- [Engineering Guides](#)
- [Animation Library](#)
- [PEM® Virtual Consult](#)



GLOBAL CONTACT INFORMATION

NORTH AMERICA

Danboro, Pennsylvania USA
info@pemnet.com
+1-215-766-8853
800-237-4736 (USA)

EUROPE

Galway, Ireland
europe@pemnet.com
+353-91-751714

ASIA/PACIFIC

Japan
eurotec@eurotec21.com
+042-798-7177

Singapore
singapore@pemnet.com
+65-6-745-0660

SHANGHAI, CHINA

china@pemnet.com
+86-21-5868-3688

Your Local Authorized Distributor



800.323.1232
www.biscoind.com/PEM

CONNECT WITH PENNINGENGINEERING®

To learn more about our fastening solutions for datacom and telecom, please visit our resource center by following this link or scanning the QR code: <https://info.pemnet.com/datacom-telecom>. Or, follow us for the latest company and product news, bulletin updates, tech tips, videos, and more.

