ESSENTRA COMPONENTS

Design Engineer's Guide

KEEPING **PCBS** OPERATIONAL FOR LONGER

PCB HARDWARE **COMPONENTS**

Which PCB hardware components give you the performance your application demands? This handy guide makes it easy for you to make your choices.

Whatever the requirements for your printed circuit board design, our extensive range can help. We've put together this guide to help you choose your PCB standoffs and spacers, PCB support pillars, PCB card guides, LED mounts and holders, and more.

Whether it's high conductivity or resistance to corrosion, our high-quality solutions are available in a range of materials and mounting types. We can also help with **free samples** and **free CADs** to make your selection process even easier.

CHOOSING THE RIGHT SPACERS, STANDOFFS AND SUPPORTS

Your printed circuit board layout design will dictate the **spacers**, **standoffs** and **supports** you need. Here's an overview of what you need to consider.

1 - KNOW YOUR APPLICATION

PCB substrate – Fibreglass PCBs deliver strength and flexibility, so it's best to use a snap in or snap fit component, such as a spacer. Paperboard PCBs are more rigid and can fracture. Use a push spacer to give support without penetrating the PCB, even when there is no mounting point. You can learn more about PCB substrate materials **here**.

Space limitations – If stacking multiple PCBs, then use a support with a wing or arrowhead connector, particularly when using boards with lower weight tolerances

2 - CONSIDER THE MATERIAL

Plastics: Some examples include Nylon, PVC, PEEK, PPS and Acetal.

Key benefits:

- Resistance to corrosive substances
- Cost effective for high-volume manufacturing
- Lightweight
- Non-conductive

Metal: Some examples include: Brass, and Steel with Brass

Key benefits: High tensile strength and impact resistance

3 - WHICH MOUNTING TYPE?

Threaded – held in position with the use of a nut to give a very secure fixing

Snap Lock – snaps and locks into a panel or chassis hole, giving a secure but easily releasable fix

Push Fit – quickly pushes into a panel or chassis hole

Press Fit – fins hold securely to a range of binding holes with a pointed style

Adhesive Base – An adhesive PCB spacer provides a secure hold – use when you can't puncture the PCB or have a hole

CONSUMER ELECTRONICS

Televisions | Computers | Mobile Phones

Whether insulation or conductivity is required, you can enhance functionality and protect your design with our solutions.

ENSURE DESIGN QUALITY WITH:

HEX SPACER

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- Made of stainless steel to protect against corrosion
- Robust and secure, they are ideal for electronics regularly moved around

LED MOUNT

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- Panel mount LED – holds a T-1 3/4 LED to a panel
- Easily snaps into standard panel holes by hand
- Locks into place when inserted from the rear of the panel
- Provides a secure and attractive display
- Nylon 6/6
- Rated UL94 V-2
- Operating temperature range: -40°C to 85°C (-40°F to 185°F)

PCB SUPPORT PILLARS – REVERSE LOCKING/ SNAP-FIT

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- Reverse mount provides support from underside of chassis
- Thin button head for minimal protrusion under the chassis
- Snap-fit design for fast, easy removal
- Nylon 6/6 PCB support pillars
- Rated UL94 V-2
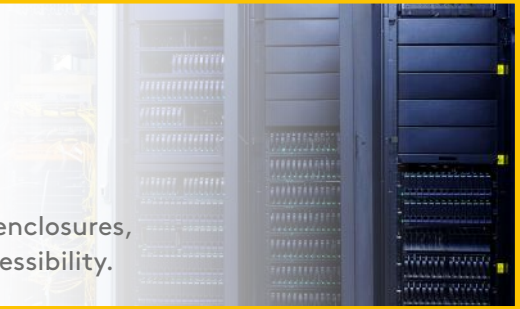- Operating temperature range: -40°C to 85°C (-40°F to 185°F)

ELECTRICAL CABINETS

Data Cabinet | Telecom Equipment Cabinet | Rack Enclosure Cabinets

For applications that use a cable junction box or electric cable enclosures, these versatile solutions are essential for limited space and accessibility.

BUILD FUNCTIONAL PRODUCTS WITH:

PCB SUPPORT PILLARS – DUAL-LOCKING/SNAP-LOCK/SNAP-LOCK NATURAL NYLON

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- Unique snap locking for a secure fix
- Locking Bayonet for panel hole on one side
- Locking Arrowhead in a panel on the opposite side
- Nylon 6/6 PCB locking support
- Available in ratings UL94 V-2 or UL94 V-0
- Operating temperature range: -40°C to 85°C (-40°F to 185°F)

PCB CARD GUIDES – HORIZONTAL/ SNAP-IN/MULTI PANEL

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- PCB card guides with push-fit mounting method
- Tension wings provide firm retention of PCB board assembly
- Accepts panel board thickness of .079 inch
- Nylon 6/6
- Rated UL94 V-0
- Available in operating temperature ranges of -40°C to 110°C (-40°F to 230°F)

PCB SPACER – NON-THREADED/ ROUND/ACETAL

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- Acetal non threaded spacer: maximum operating temperature: Up to 85°C (203°F), UL94 HB
- No assembly equipment required – apply by hand
- Absorbs shock and vibration
- PCB plastic spacers are cost effective alternative to metal

Round spacers available in:

- Nylon 6/6, operating temperature range: -40°C to 85°C (-40°F to 185°F), UL94 V-2
- Heat Stabilised Nylon, black, operating temperature range: -40°C to 125°C (-40°F to 257°F), UL94 V-2
- Impact Modified Nylon, operating temperature range: -40°C to 65°C (-40°F to 149°F), UL94 V-2
- PVC, operating temperature range: 0°C to 50°C (32°F to 122°F), UL94 V-0
- Polystyrene, maximum operating temperature: Up to 75°C (167°F), UL94 HB
- Polyethylene, maximum operating temperature Up to 65°C (149°F)
- Polyoxymethylene, maximum operating temperature Up to 85°C (185°F)

WHITE GOODS

Washing Machines | Fridges | Ovens

A wide range of solutions designed to meet your specific requirements for performance and heat stability.

ENHANCE THE LIFE OF YOUR DESIGN WITH:

TOUCH CONTROL SPACER

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- Spring provides constant contact force between PCB mounted infrared sensors and the touch panel cover

PCB SUPPORT PILLARS – FIR TREE MOUNT SNAP-LOCK/FIRE TREE MOUNT SNAP-LOCK

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- PCB support pillars with flexible blind hole mount – locks into round, threaded, punched or drilled blind holes
- Fir tree fasteners on both ends, providing secure PCB locking support
- Nylon 6/6
- Ratings UL94 V-2
- Operating temperature range: -40°C to 85°C (-40°F to 185°F)

PCB STANDOFFS – ROUND/METRIC THREADED/INSULATOR/ NYLON & BRASS

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- Female to female threaded round standoffs
- No assembly equipment required – apply by hand
- Ideal for when high mechanical strength is required
- Provides sturdy, insulated spacing for high-power electronic applications
- Metric nylon standoffs with brass inserts
- Ratings UL94 V-2
- Operating temperature range: -40°C to 85°C (-40°F to 185°F)

OFFICE MACHINERY

Printers | Laptops | Projectors

Prevent malfunctions in applications that are in constant use with a wide range of industrial strength solutions

ENSURE CONSISTENT PERFORMANCE WITH:

PCB STANDOFFS – HEXAGONAL/THREADED/SELF-TAPPING

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- PVC female through standoffs
- Self-tapping standoff – screw threads the plastic for a strong hold
- Hexagonal body
- Rated UL94 V-0
- Operating temperature range: 0°C to 50°C (32°F to 122°F)

LED SPACERS – ROUND, METRIC SPACERS

View online ⬀

- Three different styles to accommodate both T-1 and T-1 3/4 LEDs
- Provides height control
- Lead wire retention and stability
- PVC
- Rated UL94 V-0
- Operating temperature range: 0°C to 50°C (32°F to 122°F)

PCB STANDOFFS – HEXAGONAL/PLASTIC

View online ⬀

- Hexagon standoff
- Male/male
- Install by hand – no assembly equipment required
- Easy assembly
- Plastic PCB standoffs – Nylon
- Rated UL94 V-2
- Operating temperature range: -40°C to 85°C (-40°F to 185°F)

DOWNLOAD FREE CADS
AND TRY BEFORE YOU BUY

Free CADs are available for most solutions, which you can download for free. You can also request free samples to ensure the solutions you've chosen are exactly what you need. If you're not quite sure which product will work best for your application, our experts are always happy to advise you.

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