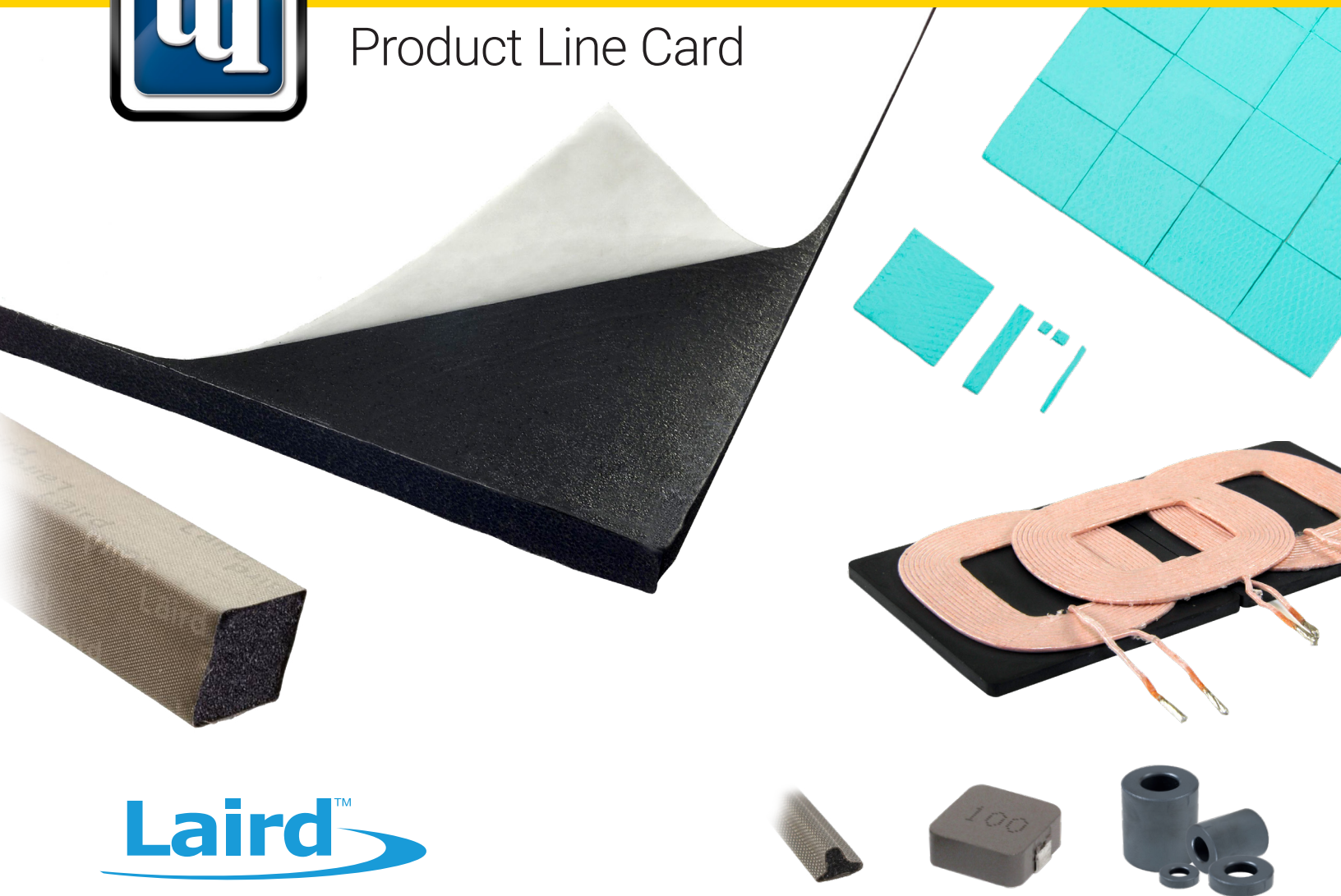




# Laird

## Product Line Card



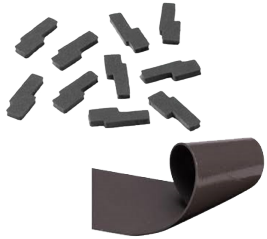
Laird Performance Materials delivers advanced, innovative thermal and electro-magnetic protection solutions for exceptional reliability, increased efficiency, and ultimate performance in minimizing your heat and EMI risks while maximizing your systems' productivity.

Laird's world-class materials science and engineering expertise has created a technology transforming process of product development, modeling, rapid prototyping and testing teams that produce customer-centric designs, reduced effort and costs, and increased time-to-market speed for your electronic projects.

**Reach your local sales team at 1.800.CALL.TTI**



Laird's impressive portfolio of device protection solutions include absorbers, EMC components and ferrite cores, wireless charging coils, EMI shielding, inductors and thermal interface materials that are ideal for your most rugged applications.



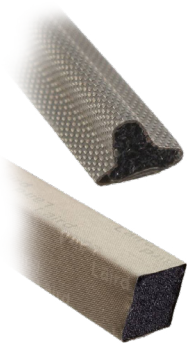
### Absorbers

- Microwave Absorber Products for Free Space and Cavity Resonance Applications
- Low-Loss, Dielectric-Filled Polymers and Custom-Molded Elastomeric and Reticulated Foam Along with Textile and Custom Composite Products
- Eccosorb Broadband Absorbing Foams and Films are Lightweight and Cost Effective
- Softzorb MCS is a Softer Gap Filler that Offers Lower Deflection
- Eccostock Low Loss Dielectric Materials Range from 1.05 to 20 Dielectric Constant
- Wide Range of Military Specialty Microwave and Custom Magnetic Absorbers



### EMC Components and Ferrite Cores

- Laird™ Steward™ Products are Lighter and Smaller with Low Profiles
- Common Mode Chokes Suppress Interference Cleanly and Efficiently
- Space-Saving Ferrite Cable Cores Resist Unwanted Noise
- Economical Ferrite Chip Beads Ensure Compact EMI Filtering for Densely Packed Designs
- Rugged Ferrite Differential Arrays Enable High-Frequency Suppression
- Superior EMI Suppression with Ferrite Rods Available in a Wide Range of Sizes and Shapes
- Ferrite Sheets Manage Magnetic Flux to Improve Overall Energy and Data Transfer
- Ferrite Toroids and Balun Cores Uniformly Distribute Excess Energy, Enabling Proper Voltage and Separate Signals of Different Frequencies



### EMI Shielding

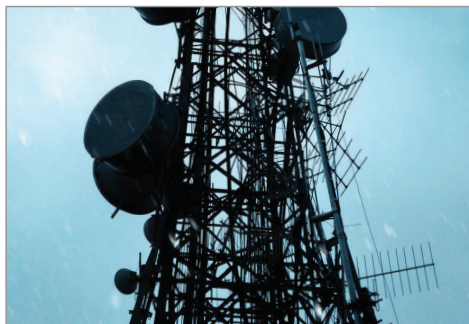
- Laird's Globally Recognized EMI-Shielding Metals Include Thin Gauge Stamped and Formed Precision Metal Components for Electrical and Fine Feature Structural Applications
- One-Piece, Two-Piece and Custom Board Level Shields Protect Billions of Devices
- Conductive Foam Gasket Shielding through Laird's EcoFoam Line Offers Innovative Approaches by Providing X, Y and Z-axis Conductivity, Enhancing Shield Effectiveness
- All-weather Electrically Conductive Elastomers Provide Environmental Sealing, Excellent Mechanical Functionality and EMI Shielding for the Best Protection Possible
- EMI Tapes Constructed from Nickel/Copper Metalized Fabric with a Conductive Pressure Sensitive Adhesive Provide Exceptional Shielding, Grounding and Flexibility
- Solder Reflow-Compatible SMD Foam Contacts Enable Circuit Grounding and Shielding of Surface Mount Technology Devices
- Electro-Air EMI/Dust Filtration, MaxAir and Electrovent Panels Provide Effective Shielding while Capturing Airborne Contaminants, Ensuring Quality Protection



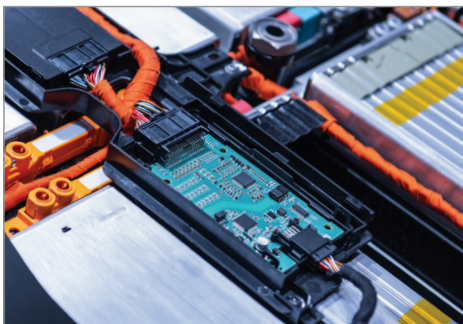
### Inductors

- Rigorously Tested, RoHS-Compliant Laird Steward Inductors Achieve the AEC-Q200 Standard, Maximize Power Efficiency and Resist Changes in Electrical Currents
- Molded Inductors Achieve Greater Inductance and Current with Less Overall Volume for Unobtrusive Placement within Tiny Devices
- Multilayer Inductors for General Circuit (Two-Terminal Ferrite Chip) of Monolithic Construction Provide a Compact, Cost-Effective EMI Filtering Solution
- Multilayer Power Inductors Filter Unwanted Noise, are Low Profile to Fit to Products without Compromising the Overall Design and Provide Extremely Low Signal Loss
- Low-Profile, Wire Wound SMT Power Inductors Enable a Large Current; Improve Performance, Reliability and Power Efficiency; and Feature Low DCR

# Common Applications



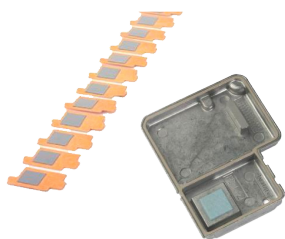
**5G Solutions**



**Automotive Component Sector**

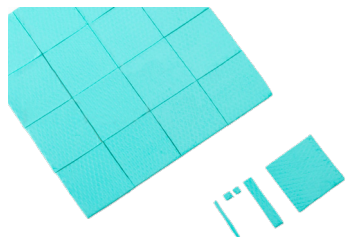


**Military Solutions**



## **Laird Integrated Solutions Engineered (ISE)**

- Laird Hybrid-ISE Solutions Include CoolZorb, Coolshield Flex, Graphite over Foam and Kzorb Merge Thermal, EMI Shielding and Microwave Absorbers
- Metal – ISE Products Capitalize on Laird's Extensive Automation Capabilities to Enhance Metal Components
- Structur – ISE Designs Improve the Performance of Smart Structural Components
- Textil – ISE Family Uses Selectively-Plated Flexible Fabrics to Create Assemblies, Providing a Conductive Path for Heating Elements, Capacitive Sensors and Pressure Switches



## **Thermal Interface Materials**

- Tflex and Tputty One- and Two-Part Dispensable Gap Fillers Effectively Transfer Heat While Eliminating Mechanical Stress or are for Bulk Automated Dispensing
- Thermal Conductivity and Softness Combined in Slim TIM and Tflex Gap Filler Pads
- Tgard Thermally Conductive Electrical Insulators are Ideal when Electrical Isolation is Critical Along with High Thermal Conductivity and Cut-Through Resistance
- Reliable Tpcm and Tmate Phase Change Materials are Used in Applications where Repeatability and Handling must be Controlled for Optimal Product Performance
- Tgrease is the Choice where a Minimum Bond Line, Constant Pressure and Ease of Screen Printing are Desired to Maximize Reliability and Eliminate Pump Out
- Tlam Thermally Conductive Circuit Boards Use Two of Laird's Unique Dielectric Materials to Improve Thermal Performance while Retaining Good Dielectric Isolation



## **Wireless Charging Coils**

- Laird Steward Wireless Charging Coil Modules and Customized Ferrite Products Deliver Superior Signal Integrity and EMI Filtering Solutions
- Transmitter Series Wireless Coil Charging Coil Module (AECQ-2—Standard) and its High Q Factor Create Maximum Charging Efficiency while Minimizing EMI
- High-Performance Wireless Charging Ferrite Plates and Sheets Provide Effective Shielding to Concentrate and Direct Magnetic Flux Between the Transmitter and Receiver Devices





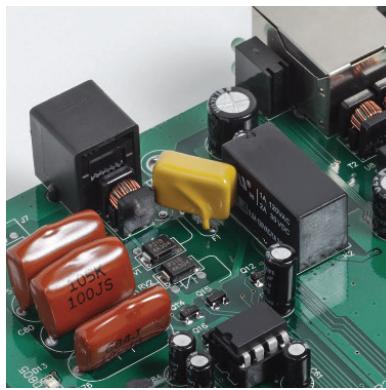
# Why Buy from the Specialist in Electronic Component Distribution?

Founded in 1971, TTI has steadily grown to become the world's leading interconnect, passive, electromechanical and discrete component distributor in the industry. The company was founded on the premise that passive component purchasing could be made more efficient by offering product specialization, customer-driven service, and proprietary supply chain solutions.



## Knowledgeable Product Experts

Specialization allows TTI product managers to provide much better product insight to support your manufacturing from design through production. TTI Specialists' commitment to our customers is key to our continued success.



## Broader and Deeper Inventories

TTI maintains extensive component inventories, stocking more than 500,000 part numbers in North America and over 850,000 globally – that's more interconnect, passive, electromechanical and discrete inventory available than from any other source.



## AIM - Advanced Inventory Management Platform

TTI's proprietary supply chain system is specifically designed for managing IP&E products and partnerships with premier manufacturers. This allows us to provide the BOM coverage necessary to deploy comprehensive solutions that reduce total cost of ownership and mitigate line down risk.

## Quality and Reliability

TTI is the first distributor to have all global warehouse locations ISO registered and currently are certified to ISO 9001 with AS9100C and ISO 14001 in North America, ISO 9001, EN 9100, ISO 14001 and EN 9120 in TTI Europe and ISO 9001 in TTI Asia.

**Year after year, customers rate our inventory availability, on-time delivery and accuracy among the very best in the industry – call your local TTI Specialists at 1.800.CALL.TTI and discover why.**



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