

# Laird

A blue swoosh graphic that starts under the 'L' and 'a' of 'Laird', curves under the 'i' and 'r', and ends under the 'd'.

Value through Innovation

## Introduction to Laird PLC

# Contents

## Culture

- [Vision](#)
- [Mission](#)
- [Values](#)

## Key Facts

- [Executive Team](#)
- [Organisation](#)
- [Key Facts](#)
- [Core Competencies](#)
- [Serving Industry Leaders](#)

## Products

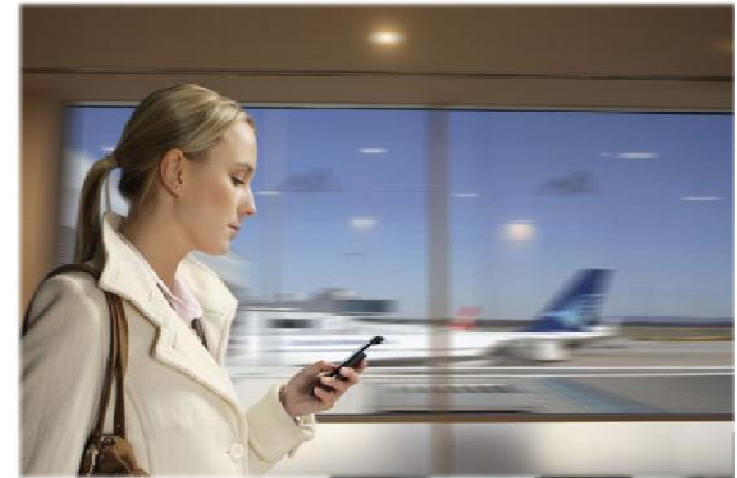
## Capabilities

## Markets and Applications

# Culture

# VISION

A global leader in the supply of products and technology solutions used in network infrastructure, wireless connectivity, displays and industrial controls



[Overview](#)  
[Vision](#)

[Why](#)  
[Mission](#)

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[What](#)

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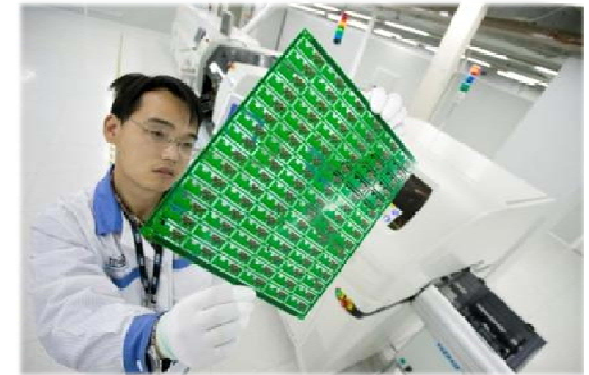
**Innovative Technology**  
for a **Connected World**





# MISSION

To be the leader in the design and supply of customised, performance-critical products for wireless and other advanced electronics ... applications



[Overview](#)  
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Innovative **Technology**  
for a **Connected** World

# 7 Core Values

Global Teamwork



Customer Centric



Delivering on Commitments



Continuous Improvement



Caring



Entrepreneurial Spirit



Bias for Action





Extraordinary People



# Global Teamwork



Global footprint – local resources



Global design centers combined with local technical support



# Customer Centric

Serving Industry Leaders



Broad product lines enable supply chain simplification



Leading solutions provider with more capabilities than niche suppliers

# Delivering on Commitments

Integrated systems linked closely with our customers' supply chain



Trusted supplier with over 30 years of technology experience



Key customer access and relationships



# Continuous improvement

Intellectual property supporting product & process development



**Laird TECHNOLOGIES**

**LT Quality Policy**  
*Laird Technologies is committed to delivering Best-In-Class Quality to customers, and the relentless pursuit of 100% Customer Satisfaction and Continuous Improvement.*

We will accomplish this by instilling the following principles at all LT operations:

1. Management Commitment (Driving Quality & Customer Satisfaction as a competitive advantage)
2. Ownership for Quality (Each employee takes ownership and is held accountable for the quality of their product/service and process)
3. Responsiveness (< 24 hour response to customers)
4. WCB practices to drive continuous improvement in our systems and methods (such as Kaizen, Goal Deployment, 5S, and Mistake Proofing)

*[Signature]* CEO  
*[Signature]* V.P. Global Quality



709 patents  
705 patents pending



**Six Sigma Certifications**

- 427 Green Belts
- 75 Black Belts
- 3 Master Black Belts



**ISO 9001** – 25 sites  
**ISO 14001 / OHSAS 18001** – 14 sites  
**TS 16949** – 11 sites



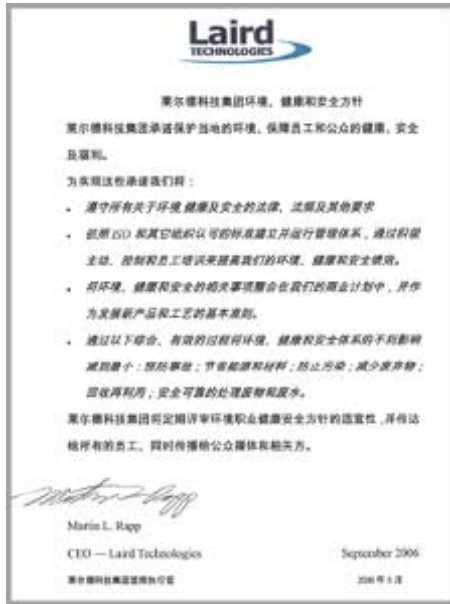
Laird Technologies is committed to protecting the environment

# Caring

RoHS and REACH compliant



All manufacturing sites ISO and OHSAS Certified in 2010



Laird Technologies receives "The Best Safety Practice Award" from Beijing Administration Of Work Safety Bureau





Convergence Technology

# Entrepreneurial Spirit

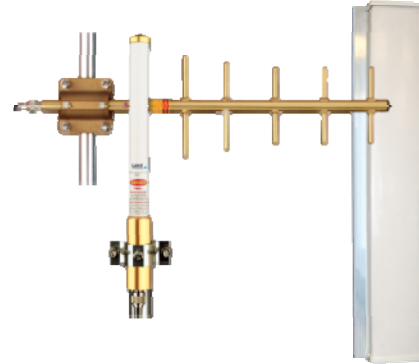
Identify and integrate complementary products to better service customers

Cutting edge corporate research laboratory



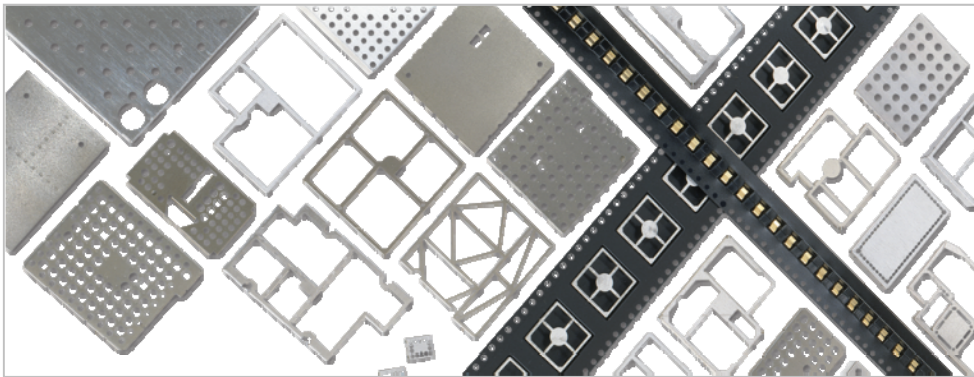


Market leader in EMI, antennae, thermal, metals and reception system solutions for a broad range of electronics products and markets



# Bias for Action

Thousands of products customized for customers every year



# Key Facts



Who we are

# Divisional Structure

## Performance Materials Division

EMI Solutions

Thermal Management Solutions

Signal Integrity Products

## Wireless Systems

Wireless M2M & Telematics

Infrastructure Antenna Systems

Cattron (Wireless Remote Control)



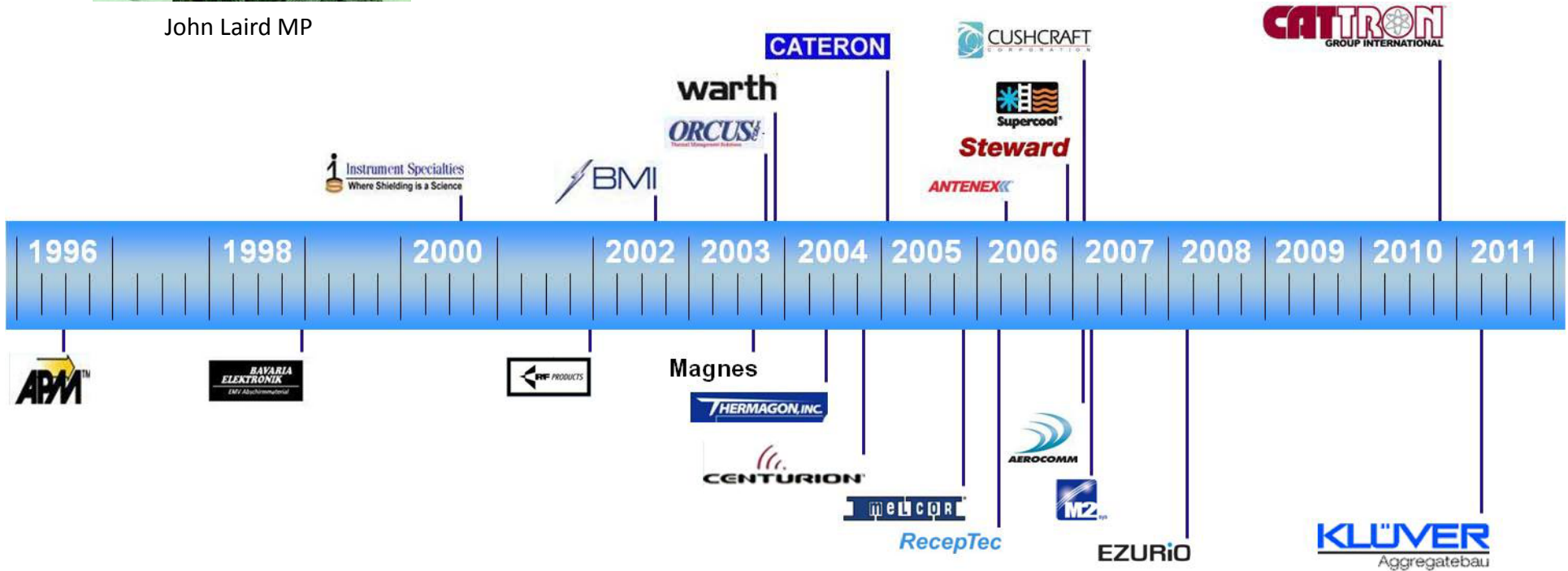
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Who we are

# Timeline



John Laird MP



Listed on the London Stock Exchange 1949

## Who we are

Headquartered in London, UK, with corporate offices in Saint Louis, Missouri, USA and Hong Kong, China SAR

Approximately 9,000 employees globally in 49 engineering, manufacturing, and sales facilities





# Core Competencies



- World class designer and supplier of performance critical electronic components
  - Leading solutions provider with more capabilities than niche suppliers
  - Market leader in EMI, antennae, thermal, metals, remote control, and reception solution systems
  - Ability to bundle technology with vertical integration – “convergence products”
  - Track record of intellectual property supporting product & process development
- Deep, broad relationships with industry leaders
  - Trusted supplier with over 30 years of technology experience
- Global presence and customer support
  - Global footprint – local resources
  - International manufacturing and supply chain management, “excellence in execution”
  - Worldwide design centers & technology leadership

# Serving Industry Leaders



Sony Ericsson



Nokia Siemens  
Networks





# Products

# Products



[EMI Solutions](#)

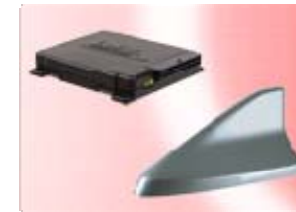
[Thermal Management Solutions](#)

[Signal Integrity Products](#)

[Wireless M2M & Telematics](#)

[Infrastructure and Mobile Antennae Systems](#)

[Industrial Remote Control](#)



# EMI Solutions



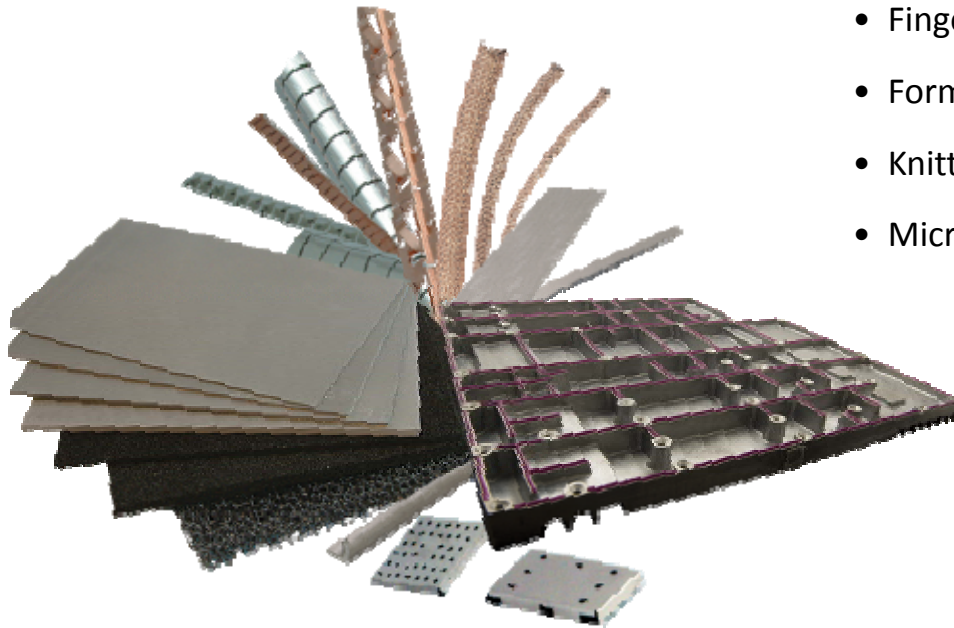
- Pioneer and industry-leading EMI expert
- Leader in innovative board-level solutions
- EMI components leader for the most demanding requirements
- Innovative designs that meet the size and performance requirements
- State-of-the-art global manufacturing and testing
- Dedicated partner able to custom design for specific EMI needs



# EMI Solutions

## Product Offering

- Board-Level Shields
- Electrically Conductive Elastomers
- Fabric-over-Foam
- Fingerstock
- Form-in-Place
- Knitted Wire Mesh
- Microwave Absorbers



# Thermal Management Solutions

- An industry leader in active and passive thermal management
- Broad product offering featuring state-of-the-art thermal interface materials as well as thermoelectric devices and compressor-based cooling
- Convenient access to world-class network of thermal design centers
- In-house design, assembly, and manufacturing expertise
- A wide range of standard and customized high-performance thermoelectrics



# Thermal Management Solutions

## Product Offering:

- Phase Change Materials
- Gap Fillers
- Electrically Conductive Materials
- Thermally Conductive Insulators
- Thermally conductive grease
- Thermal BLS, Heat Spreaders
- Thermally Conductive PCBs
- Thermoelectric Modules
- Thermoelectric Assemblies
- Compressor-based Cooling Systems



## Signal Integrity Products



- Complete line of ferrite products
- A leading global supplier of custom-designed and manufactured ferrite solutions
- Worldwide research & development staff supporting quick turnaround customized solutions
- Extensive array of standard & customized ferrites specifically for the automotive industry
- Vertically integrated manufacturing



# Signal Integrity Products

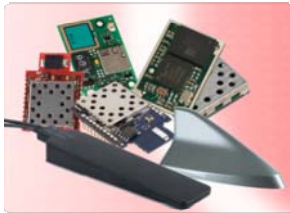
## Product Offering

- Cores & Specialty Products
  - Cable Cores
  - Disks & Plates
  - Axial Lead Beads
  - Toroids and Two-Hole Cores
  - Automotive Ferrites
- Board-Level Products
  - Chip Beads
  - Monolithic Common Mode Chokes
  - Chip Inductors
  - Differential Arrays





# Wireless M2M & Telematics Solutions



- Low form factor antennae with high-gain cellular performance
- Smart antennae technology
- Industry-leading RF performance
- Radio modules with simple user interface and configuration tools for easy design integration
- Low-profile, high-performance and cost-effective mobile communication solutions
- State-of-the-art vehicle tracking technology
- Remote monitoring



# Wireless M2M

## Product Offering:

- Bluetooth®
- Zigbee®
- Proprietary
- Access Point Gateway
- WLAN
- Development Tools



# Telematics Solutions

## Product Offering:

- Telematics & Tracking Devices
- Smart/software controlled Antennae
- Satellite Radio Antennae
- GPS Antennae
- AM/FM Antennae and Electronics
- Cellular Antennae
- Combination Antennae
- Integrated Antennae Systems



# Infrastructure and Mobile Antennae Systems

## Product Offering

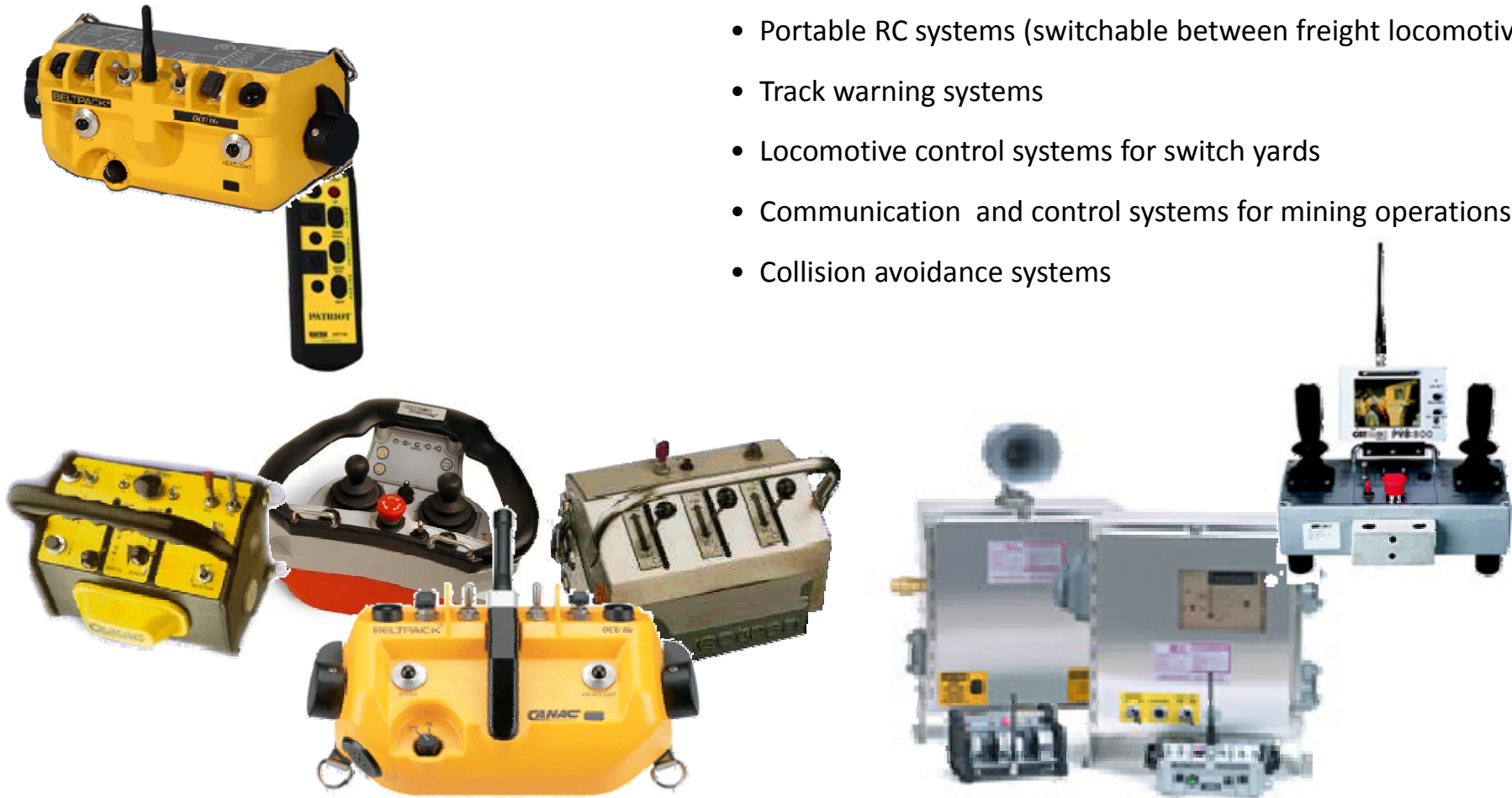
- BWA, WISP, WiMAX, and LTE
- Wireless LAN (WLAN)
- In-Building Cellular
- Backhaul
- RFID
- Security and Vehicular
- Portable Radio
- Industrial computing
- Mobile computing
- Battery pack assemblies



# Industrial Remote Controls

## Product Offering:

- Handheld, Belt-worn, joystick wireless remote controls
- Portable RC systems (switchable between freight locomotives)
- Track warning systems
- Locomotive control systems for switch yards
- Communication and control systems for mining operations
- Collision avoidance systems



# Capabilities

# Capabilities

What we do Capabilities

[Manufacturing](#)

[R&D and Product Development](#)

[Materials Expertise Systems and Processes](#)

[World Class Testing](#)

[Tooling](#)

[Global Supply Chain Management](#)

[Convergence Technology](#)

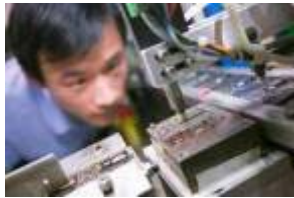




# Manufacturing

## Customised, performance critical processes:

- 20 global manufacturing sites
- Global support and localized manufacturing
- Large volume production experience/Innovations in mass production
- Automated packaging
- 100% in-line production testing
- ISO and RoHS compliant
- Surface mount technology
- Clean rooms
- “Just in time” for Customers



**ISO 9001** – 25 sites  
**ISO 14001 / OHSAS 18001** – 14 sites  
**TS 16949** – 11 sites



# State-of-the-Art R&D and Product Development



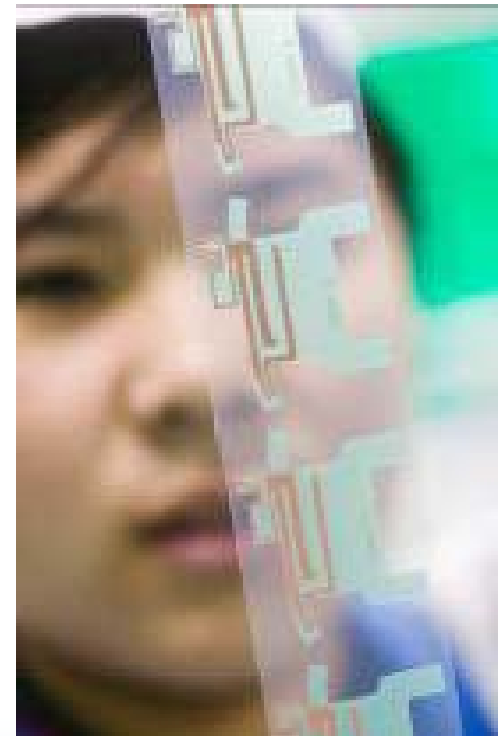
- 20 global sites for research and development, including Corporate Research Laboratory
- Rapid design assistance & fast prototyping
- In-house tool design
- Subject Matter Experts (SMEs) & advanced technical research
- Product innovation for future platforms



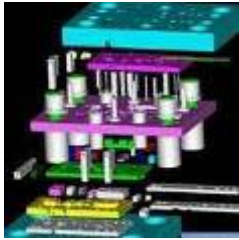
# World Class Testing



- Online testing applications for thermal, EMI design, and antenna products
- Testing to meet ISO 9001, 14001 and OHSAS 18001 certifications
- RoHS Testing Lab – ISO/IEC 17025-2005 certified
- RF testing facilities located in 10 sites worldwide incorporating 15 chambers and 3 ranges
- Validation Testing
  - Bogey Testing
  - Test to Failure
  - Degradation Testing
  - Key Life Testing
  - Tail Testing
  - Accelerated Testing
  - Environmental Testing



# Tooling



- In-house capabilities
  - Stamping with Assembly
  - Automation
  - Stamping
  - In-Die Assembly
  - In-Line Assembly
- Standard and custom tooling
  - Mainstream tooling
  - Prototyping
  - Short run/low volume
  - Long run
- Global design support – FEA for tooling analysis
- Global tooling standards
- Virtual tool design software
- Efficient and functional maintenance

# Global Supply Chain Management

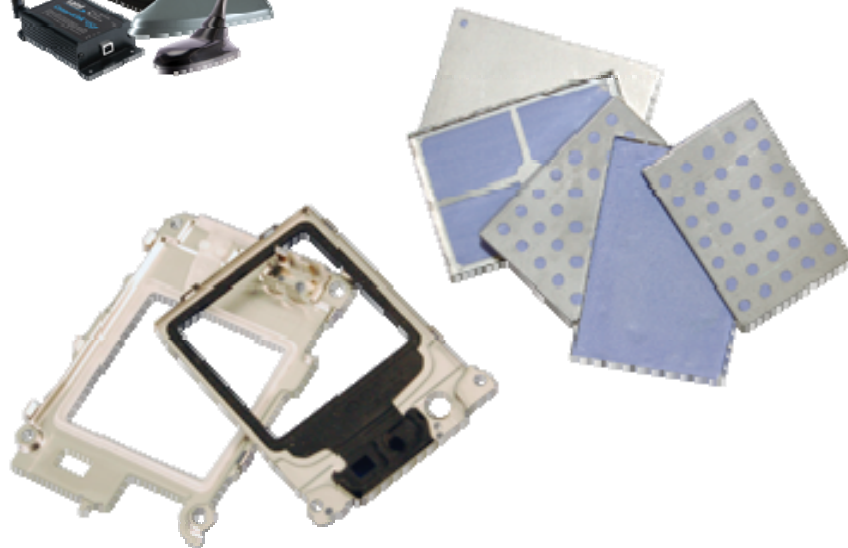
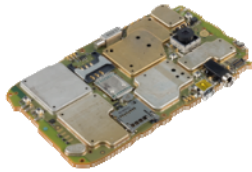


- World class supply chain integrated closely with our customers
- Fully committed to highest standards and ethical practices when doing business with its suppliers
- Integrated standardized global logistics
- Broad awareness and compliance to all regions of company-wide import and export policies and guidelines
- Scalable and cost-efficient
- Worldwide strategic partnerships
- Enhanced supplier processes and transactions
  - Continued development of supply base
  - Cost reduction
  - Supplier technical capabilities
  - Supplier capacity
  - Supplier quality
  - Supplier localization/lead-time reduction
  - Supply base consolidation

# Convergence Solutions

## Product Offering:

- Antennas Integrated with System Mechanical Parts
- Absorbers combined with Board-Level Shields
- Smart Antennas and Tracking Modules
- Thermally Enhanced Board-Level Shields
- Wireless M2M module combined with GPS receiver and Software
- M2M gateway with modular functionality
- Web-based software + hardware for remote monitoring



# Markets and Applications



# Markets and Applications

[Automotive Electronics](#)

[Consumer Electronics](#)

[Handsets and Mobile Devices](#)

[Industrial, Instrumentation, Medical and Military](#)

[Industrial Remote Control](#)

[IT/Computing](#)

[Telecommunications](#)

[Telematics-Asset Tracking](#)

[Wireless & M2M](#)



# Automotive Electronics



- Tier 1/OEM supplier
- Aftermarket/consumer and commercial supplier
- Standard or customized solutions
- Rapid prototyping
- Automation
  - World-class automation design and development capabilities
  - Extensive knowledge base of automation design, next generation automation technologies, and global automation support
- Global leader in automotive antenna solutions
- TS-16949 Certified



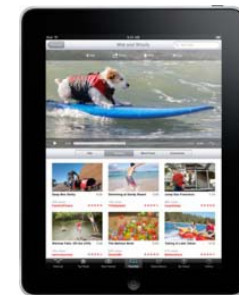
# Integrated Automotive Electronics Solutions

- Audio, Entertainment, & Connectivity
  - Antennae & Reception solutions
  - EMI solutions
  - Signal integrity products
  - Thermal management solutions
  - Wireless M2M & Telematics
- Body Systems
  - Antennae & Reception solutions
  - Signal integrity products
  - Thermal management solutions
- Chassis and Steering systems
  - Signal integrity products
  - Thermal management solutions
- Electrical/Electronic Architecture
  - Signal integrity products
  - Thermal management solutions
- Interior systems
  - Signal integrity products
  - Thermal management solutions
  - Wireless M2M & Telematics
- Powertrain systems
  - Signal integrity products
  - Thermal management systems
- Safety & Security systems
  - Antennae & Reception solutions
  - Signal integrity products
  - Thermal management solutions
  - Wireless M2M & Telematics



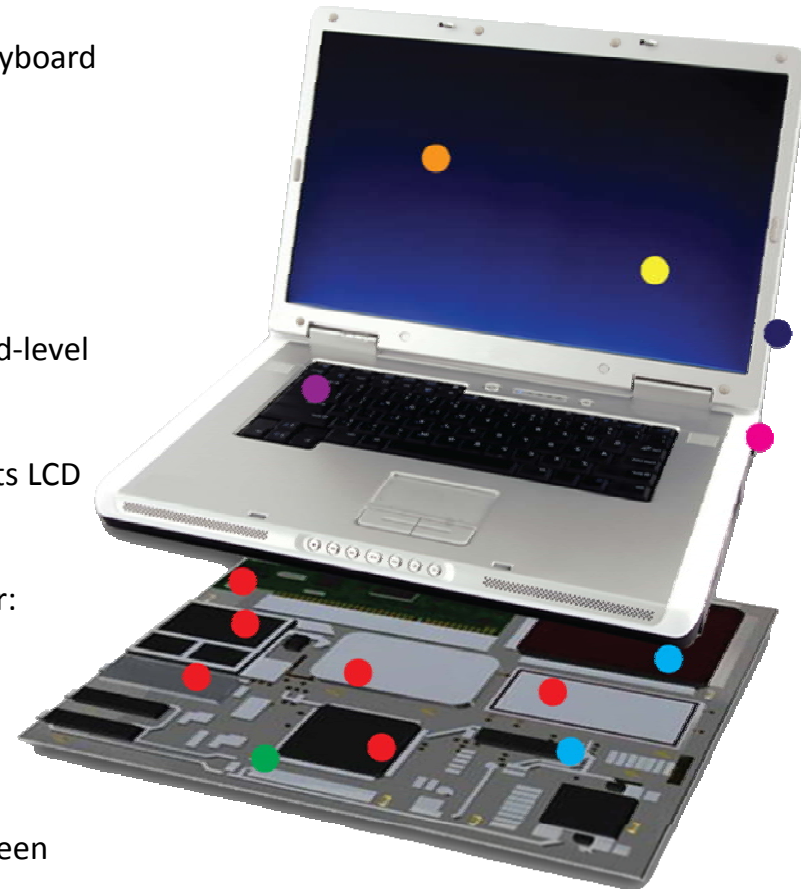
# Consumer Electronics

- Standard and customized critical components for a broad spectrum of consumer electronics
- Global manufacturing, support, and supply chain
- Vertical integration and synergy – component manufacture and supply all under one roof
- Convergence technologies as a single source solution provider



# Consumer Electronics

- Conductive Foam for back screen grounding and vibration dampening
- Form-in-Place/Electrically Conductive Elastomers for grounding keyboard to motherboard
- Board-level Shielding
- Board-level Contacts and Contact Clips
- Microwave Absorbers on chip set, top of hard drive or under Board-level Shields
- Fabric-over-Foam or Foil Tape wrapping around cable that connects LCD monitor and keyboard
- Metal Stampings and/or Fabric-over-Foam back plane shielding for:
  - RJ45 phone connector
  - CAT 5 cable (Ethernet cable) connector
  - Audio/visual ports
  - USB ports
  - I/O ports like D-sub
- Fabric-over-Foam or Die-Cut Aluminium Foil Laminate for back screen grounding





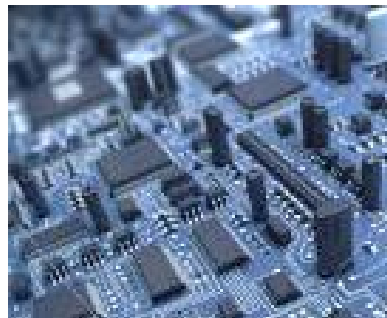
# Industrial, Instrumentation, Medical and Military



- EMI, thermal, and antenna solutions to thousands of industrial customers every year
- Engineering expertise to fit unique applications in these industries
- Security clearance enabling design, prototyping and production for military applications
- ITAR compliance
- Experience with state-of-the-art eHealth & intricate medical application solutions
- Leading-edge RFID (Radio Frequency Identification) technology
- Providing best-in-class antennas for readers used in warehouses, conveyors, forklifts and many other applications



# IT/Computing/Network



- Technological capability to adjust to constant market changes
- Ability to meet the diverse needs of constantly changing industry
- Leading provider of EMI solutions for computers and networking equipment
- Industry-leading thermal solutions for the most powerful PC processors
- High-performance antennae solutions for access points and client devices, offering both externally attached and embedded solutions
- Enables broadband connectivity

# Telecommunications



- MESH Networks that perform in rugged environments
- Proprietary AIO software to optimize antennas beyond what other providers can do
- Provides industry-leading EMI, thermal, and antenna solutions to telecommunications OEMs and network operators around the globe
- Custom elastomers and conductive fillers designed specifically to ensure material compatibility, environmental and EMI sealing, and long-term reliability
- Critical to performance of telecomm infrastructure

# Telematics and Asset Tracking



- Global leader of telematics design, manufacture, and supply since 1998
- Broad antennae and integrated reception system portfolio designed to meet the multiple communications requirements of modern vehicles
- Provides industry-leading solutions to Tier 1/OEM automobile manufacturers and service providers and integrators
- Selection of telematics solutions supported by the world's broadest line of EMI, thermal interface, ferrite, metals and wireless antenna products
- Convergence products work together for optimal efficiency
- Dedicated engineering team, in addition to a worldwide manufacturing, sales, and support network

# Wireless M2M Communications



- Industry's widest range of wireless modules and systems for OEMs and system integrators:

- Bluetooth®
- ZigBee®
- WLAN
- Proprietary



- Incorporates RF functionality, efficient protocol stacks, and development tools to deliver leading-edge performance
- Full range of proprietary RF modules, covering the 868 MHz, 910 MHz, and 2.4 GHz ISM bands
- Widest range of high-performance Bluetooth wireless modules





# Industrial Remote Control



- The most comprehensive collection of Radio Remote Control brands for:
  - ✓ Cranes
  - ✓ Locomotives
  - ✓ Material handling equipment
  - ✓ Mining machinery
  - ✓ Mobile equipment
  - ✓ Ship loaders
  - ✓ Agricultural machinery

*...Virtually any equipment where the operator can be moved to a safer, more efficient location*



## How to Connect

[www.laird-plc.com](http://www.laird-plc.com)

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

The screenshot shows the top section of the Laird Technologies website. It features the company logo with the tagline "Value through Innovation". A navigation menu includes "Home", "About Laird", "Investor Relations", "Media Centre", and "CSR". A large banner image shows a woman and a man in a professional setting. Text on the banner states: "Laird is a leader in the design, manufacture and supply of customised, performance critical products, systems and controls for wireless and other advanced electronic applications; Technology for a connected world." Below the banner are three buttons: "Learn more about our business", "Innovation Connectivity", and "Convergence Expertise".

**SHARE PRICE**  
200.00 GBp 0.50 p 0.25 %  
Last trade: 21/06/2011 12:55  
→ Share price information

**LATEST NEWS**  
17 June 2011  
EXIT FROM HANDSET ANTENNAE BUSINESS AND UPDATE ON TRADING  
→ More releases

**LAIRD TECHNOLOGIES**  
A global leader in the design and manufacture of EMI shielding, thermal management products, telematics, wireless antenna solutions and RF modules.  
→ Antenna & Reception Solutions  
→ EMI Solutions  
→ Telematics Solutions  
→ Ferrite Signal Integrity Products  
→ Thermal Management Solutions  
→ Wireless Solutions & M2M  
→ Visit the Laird Technologies website

**APPROACH FROM COOPER INDUSTRIES**  
Information relating to the approach from Cooper Industries can be found on a dedicated page in the IR section.

**CSR**  
As a member of the FTSE4Good index, we recognise the need to behave as a good corporate citizen and remain committed to a programme of continuous  
FTSE4Good

The screenshot shows a product page on the Laird Technologies website. The header includes the logo, tagline "Innovative Technology for a Connected World", and a search bar. A navigation menu on the left lists "Products", "Industries", and "About Laird Technologies". The main banner features the text "In a world where success demands connectivity, we deliver." and an image of a woman using a mobile device. Below the banner, a paragraph describes the company's focus on customized, performance-critical products for wireless and advanced electronics applications. A "Career Opportunities" section is visible on the right. The "STANDARD PRODUCT CATEGORIES" section lists: "Antenna & Reception Solutions", "EMI Solutions", "Thermal Management Solutions", and "Wireless M2M & Telematic Solutions". A "Latest News" section on the right lists recent articles with dates and titles.

**LAIRD TECHNOLOGIES**  
Innovative Technology for a Connected World

In a world where success demands connectivity, we deliver.

Learn more about Laird Technologies

**STANDARD PRODUCT CATEGORIES**

- Antenna & Reception Solutions
- EMI Solutions
- Thermal Management Solutions
- Wireless M2M & Telematic Solutions

**Latest News**

- 06.23.10 Laird Technologies M2M Expert to be Featured Guest on The Peggy Smedley Radio Show
- 06.12.10 Laird Technologies Releases New OCH4-S-10B Horizontally Polarized Directional Antenna
- 06.02.10 Laird Technologies Partners with Sprint to Extend M2M Product Line to a Variety of Businesses