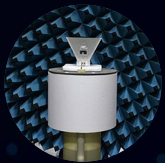


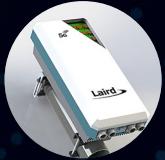


# The Industry Leader in Antenna Performance and Reliability

# Why Choose Laird Connectivity As Your Antenna Supplier Of Choice?



State-of-the-Art Production  
and Testing Facilities,  
Specializing in PIM Performance



Broad Expertise from  
5G Massive MIMO to  
Ultra-small Embedded Antennas



Custom OEM Solutions -  
Simulation, Design and  
Manufacturing



Free Tier 1 FAE Support



Best-In-Class 5-year Warranty



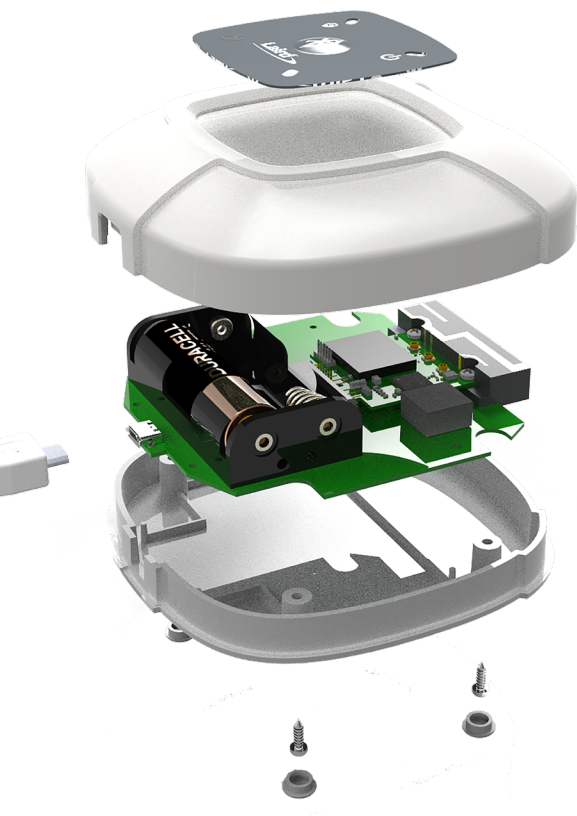
Extensive Support Materials and Guides



Industry Leading Antenna  
Performance and Reliability



Additional IoT Product  
Development Services

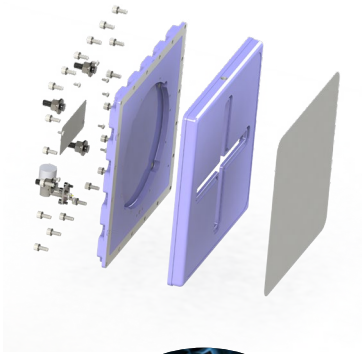


# Accelerate Your Wireless Product Development

Laird Connectivity, the custom antenna supplier for many of the world's leading brands, offers turnkey OEM custom design services for a wide variety of antennas.

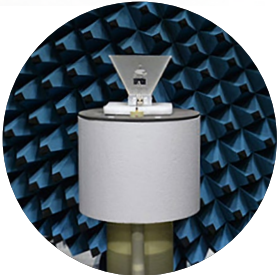
## Our Capabilities

- Extensive Antenna Design Portfolio
- Fastest Time to Market
- Leading Edge Simulation Tools
- 3D Antenna Test Chambers located Worldwide
- Low Cost, In-House Manufacturing



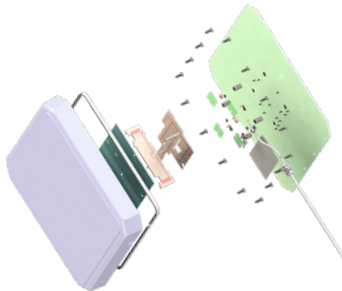
## Custom IoT Product Development and Antenna Design

Laird Connectivity offers state-of-the-art, turnkey OEM custom design services for a wide variety of radio technologies. With decades of design engineering and OEM manufacturing experience, our superior design, RF engineering, and testing practices have set the standard for high performance and reliability.



## EMC Testing and Product Certifications

Laird Connectivity has its own, independently-managed, certified FCC/IC/CE test laboratory. Whether your product needs compliance certification for the U.S., Canadian, or European markets, our in-house testing capabilities save an enormous amount of time, so you can bring your wireless solution to market faster.




















































































## Design Expertise

Laird Connectivity's highly experienced team will work directly with you to evaluate antenna characteristics and performance factors critical to developing the optimal antenna solutions, including frequency band, gain and pattern shaping, radiation efficiency, and required form factors.

[Learn More](#)

# Antenna Solutions Overview

	VHF 132-285 MHz	UHF 340-520 MHz	FirstNet 700 MHz	Public Safety 800-960 MHz	LoRaWAN 902-928 MHz	SigFox 902-928 MHz	RFID 915 MHz	Wi-Fi 2400 MHz	Bluetooth 2400 MHz	WMTS 1395-1400 MHz	Telecom 698-2700 MHz	CBRS 3500 MHz	Public Safety 4940-4990 MHz	Wi-Fi 5800 MHz	LAA 5800 MHz
Base Station															
Small Cell															
Access Point Gateway															
In-Building															
Backhaul															
Mobile															
Portable															
Embedded															
External															
M2M /EIoT															

# Embedded Antennas

Laird Connectivity offers a broad portfolio of cost-effective, embedded antenna solutions that provide unmatched connectivity for your wireless devices. Whether for Wi-Fi/Bluetooth or Multiband/ Cellular IoT and M2M applications, the small size and form factor of our antennas make them easily concealable within a product's enclosure, eliminating any negative impact on product aesthetics.



## FlexPIFA

The industry's first patented, flexible, adhesive-backed, PIFA-style antenna with 2.4 GHz & Dual-band options



## mFlexPIFA

The Industry's first patented, flexible, adhesive-backed PIFA-style antenna, optimized for placement on metal



## Nanoblade

Dual-band, 2.4 GHz, & 5 GHz, 0.1 mm thick. Ideal for wearable and thin devices.



## Nanoblade

Patented Microsphere PCB technology with 2.4 GHz Wi-Fi or Bluetooth



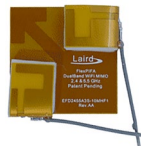
## Revie Flex

Flexible, omnidirectional PCB antenna with a broad frequency range for LTE CAT M1 and NB-IoT devices



## Revie Series

M2M and IoT antenna series supporting 868/900/1800/1900 MHz and UMTS bands



## FlexMIMO

The world's first and only embedded dual-band PIFA MIMO antenna

[Learn More](#)

# Cellular Antennas



## CFD/CMD Series MIMO

- Ceiling Mount
- Ultra low profile/low profile
- Aesthetics + performance
- Low PIM
- Wideband operation
- Flexible mounting options
- Carrier certified
- New CMD69423P services CBRS and 5G spectrum to 4200 MHz



## CFSA Series Low PIM Ultra Low Profile Ceiling Mount

- Multi-band options
- Industry's thinnest, smallest ceiling mounted wideband antenna
- Indoor suitable
- Campus/hotels/hospitals/ malls/multi-tenant, multi-use buildings



## OC Series Outdoor Omni

- 3G/4G/CBRS/LAA/LTE-U/Wi-Fi
- Uniform omni coverage
- Indoor/outdoor suitable
- UV Stable
- Mast mounting hardware included



## 5G MMIMO

- Massive MIMO arrays
- 20-200 antenna elements
- Beam steering
- Beam scanning
- RF isolation between elements

[Learn More](#)

# Infrastructure Wi-Fi Antennas



**PDQ Series 4-port MIMO  
Directional Panel**

- Four radiating elements optimized for 802.11 MIMO applications
- Horizontally and vertically polarized
- Articulating mast or wall mount can be oriented for maximum signal radiation
- IP67 dust & water ingress-rated



**CMQ Series  
2-4 Port MIMO**

- Dual-band, 2.4 GHz, & 5 GHz
- 2-4 port omnidirectional
- Low-profile, ceiling mounted
- Ideal for high-density deployments



**PDM Series  
4-Port MIMO Panel**

- Dual-band, 2.4 GHz, & 5 GHz
- 4-port vertically and horizontally polarized
- Ideal for high-density deployments
- Indoor and outdoor use
- Various mounting options



**OP Series  
3-Port MIMO**

- Dual-band, 2.4 GHz, & 5 GHz
- 3-6 port omnidirectional
- Indoor and outdoor use
- Various pole mounting options

[Learn More](#)

# RFID Antennas



## **PAL Series Circular Polarity RFID Panel**

- Operates in either 863-876 MHz or 902-928 MHz bands
- High gain 9.0 dBic performance
- Available in both left-hand and right-hand circular polarizations
- Heavy-duty articulating mount for maximum installation flexibility



## **S8658W Series Circular Polarity RFID Panel**

- Broadband 865-960 MHz operation for EMEA and US applications in a single solution
- High gain 8.0 dBic performance
- Available in both left-hand and right-hand circular polarization
- Flush mount



## **S9025P Series Circular Polarity RFID Panel**

- Operates in the 902-928 MHz band
- High gain, 5.5 dBic performance
- Available in both left-hand (S9025PL) and right-hand (S9025PR) circular polarizations
- Heavy-duty articulating mount for maximum installation flexibility



## **S8656XR Circular Polarity RFID Panel**

- Operates in the 865-870 MHz band
- Meets all criteria for forklift applications
- All metal antenna. No exterior radome enclosure is required to protect critical components
- High gain, 6.0 dBic performance
- Flush mount

[Learn More](#)

# GPS Antennas



**GPSU15M Series  
GPS Antenna**

- Operates from 1574.4 to 1576.4 MHz
- Active GPS with 3 dBic gain and a LNA gain of 27 dB
- Right hand, circular polarization
- Fully waterproof O-ring sealing
- NMO style



**GPS1575P Mini  
GPS Antenna**

- Operates from 1572.4 to 1578.4 MHz
- Active GPS with 2.5 dBic gain and an LNA gain of 25-31 dB
- Right hand circular polarization
- IP67-rated for use in highly demanding environments and operating conditions
- Rugged impact resistant housing
- Stud and nut mount



**GPST Series  
Antenna**

- Available in combinations that cover all primary cellular and GPS frequencies
- Dual-band and tri-band models available covering UHF/Cellular/GPS
- 2-port antenna
- 27 dB active GPS patch



**GPS15MG Series  
GPS Antenna**

- Operates over 1574.4 to 1576.4 MHz
- Active GPS with 4 dBic gain and an LNA gain of 29 dB.
- Right hand circular polarization
- Magnetic and/or adhesive mount
- IP66 rated

[Learn More](#)

# Land Mobile Radio



## Phantom Fin Multiband Roof Mount

- Four-port, multi-band, 4G-LTE, Wi-Fi.
- UHF & GPS capability
- Single hole mount minimizes intrusion
- IP67 rated, aerodynamic housing



## YF Series Directional Yagi Antenna

- Weatherproof, internal matching
- Industry 1st - IP67 dust & water ingress-rated
- Gold or fully black, anodized finish



## EXM Series Multiband Antenna

- Covers 136-174 MHz, 380-520 MHz, 764-870 MHz, and 1560-1620 MHz
- Operates simultaneously in four frequency bands supporting VHF, UHF, 700/800 MHz and GNSS
- Slim profile with antenna length of 22 cm



## CMS38606P Ceiling Mount SISO Antenna

- Operates from 380-960/1395-6000 MHz
- Low PIM design mitigates interference, improving in-building wireless network coverage and capacity
- IP67-rated and ROHS compliant
- Compliant with in-building International Fire Code (IFC) & National Fire Protection Association (NFPA) regulations

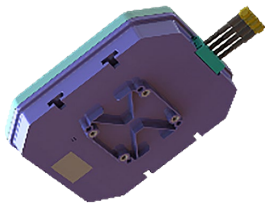


## CFSA Series Ultra- Low Profile Ceiling Mount

- Low PIM/Indoor suitable
- Industry's thinnest, smallest ceiling mounted wideband antenna with multi-band options
- Campus/hotels/hospitals/malls/ multi-tenant, multi-use buildings
- New CFSA35606P operates at 350-520/600-6000 MHz for public safety/ FirstNet applications

[Learn More](#)

# LPWAN/M2M/IoT



## Custom Antennas

- Superior performance designed specifically for your product and application
- State-of-the-art simulation tools address challenges such as ambient noise, radio interference, and design/housing constraints
- Laird Connectivity's Artificial Intelligence Optimizer application ensures the smallest antenna design with optimal performance



## Vandal Resistant Antenna

- Custom enclosure to withstand direct hit from a baseball bat
- Dual-band 868/900 MHz LoRA frequency bands
- Ultra-low profile design
- IP67 weatherproof enclosure



## EXC Series Antenna

- Injection molded, 1/4 wave, flexible cable antenna
- High durability, high efficiency
- Textured finish with strain relief base
- Available in various standard connectors



## OF86315-CS1 LoRA Omni Antenna

- Dual-band, 5 dBi at 863-928 MHz
- High density fiberglass, with protective, ultraviolet coating
- Phased to provide maximum gain in the horizontal plane
- Durable gold anodized sleeve and cap with N-female connector



## HCF69273

- 4G LTE, 2G/3G Cellular, and the UMTS/AWS-3 frequency bands
- Low Visibility: For environments where aesthetics and wide-angle coverage are required
- Comes with a coaxial pigtail cable with SMA male connector
- IP67 Rated: Tight dust seal and water immersion protection

[Learn More](#)

# Antennas for Public Safety and FirstNet



## In-Building Public Safety DAS Antennas

- **CFSA35606P-30NF** - Circular Shape UHF TETRA Band / LTE 700 / 800 Trunking Band, 900 MHz Trunking Band
- **CFSA69383P-30NF** - Circular Shape / LTE 700 / 800 Trunking Band, 900 MHz Trunking Band
- **CFS69383P-30NF** - Rectangular Shape / LTE 700 / 800 Trunking Band, 900 MHz Trunking Band
- **CMS38606P-30NF** - Dome Shape / UHF TETRA Band / LTE 700 / 800 Trunking Band, 900 MHz Trunking Band
- **PAV69278PI-30NF** - Square Shape / LTE 700 / 800 Trunking Band, 900 MHz Trunking Band



## Outdoor Public Safety Antennas

- **PAV69278PO-30NF** - Square Shape / LTE 700 (FirstNet) / 800 Trunking Band, 900 MHz Trunking Band / IP67 rated
- **OC69271** - Stick Shape / LTE 700 (FirstNet) / 800 Trunking Band, 900 MHz Trunking Band / Weatherproof UV stable radome



## Low Profile Phantom (In-Building Parking Garages / Open Ceilings)

- **TRA6927M3PB-001** - Phantom Black / LTE 700 / 800 Trunking Band, 900 MHz Trunking Band, IP67 rated
- **TRA6927M3PW-001** - Phantom White / LTE 700 / 800 Trunking Band, 900 MHz Trunking Band, IP67 rated
- **TRAB7603P** - Phantom Black / LTE 700 / 800 Trunking Band, IP67 rated

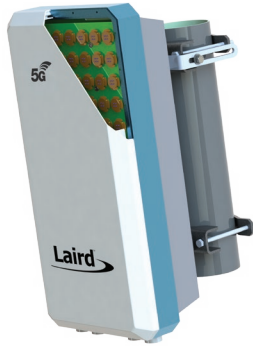


## Vehicular Antennas

- **VLT69273** - 3-port, disk puck, 2-port 3G/4G LTE and 1 port GPS or 1-port 3G/4G LTE, 1-port Wi-Fi and 1-port GPS options, IP67 rated
- **VHP69273** - 5-port, disk puck, 2-port 3G/4G LTE, 2-port Wi-Fi and 1-port GPS, IP 67 rated
- **VLQ 69273** - 4-port, disk puck, 2-port 3G/4G LTE, 1-port Wi-Fi and 1-port GPS, 2-port 3G/4G LTE, 1-port GPS, or 4-ports Wi-Fi, IP67 rated
- **FHQ69273CE** - Phantom Fin, 4-port, roof mount, 1-port 4G/LTE, 1-port Wi-Fi, 1-port GPS, 1-port UHF, IP67 rated
- **Gar (VFP69383B22JN)** - 5-port, with 2-port MIMO over 3G/4G/ISM/CBRS bands, 2-port MIMO operation over low/high frequency Wi-Fi bands, 5th port for GNSS global navigation services
- **Barracuda (VFH69383B23JW)** - 6-port, with 2-port MIMO operation over 3G/4G/ISM/CBRS bands, 3-port MIMO operation over low/high frequency Wi-Fi bands, 6th port for GNSS global navigation services

[Learn More](#)

# 5G Technology Leader



## Advanced Antenna Solutions

- MMIMO assemblies
- Novel element technology, achieving best-in-class performance
- Suitable for high volume production
- Suitable for filter integration
- Unmatched production process



## iDAS

### CFSA/CFS

- SISO
- Slimmest aesthetics
- Excellent PIM and radiation performance
- 698 – 4000 MHz

### CFD

- 2x2 MIMO
- Slimmest aesthetics
- Excellent PIM and radiation performance
- 698- 4000 MHz

# Industry Leading Antenna Performance and Reliability

Laird Connectivity simplifies the enablement of wireless technologies with market-leading wireless modules and antennas, integrated sensor and gateway platforms, and customer-specific wireless solutions.

Our best-in-class support and comprehensive engineering services help reduce risk and improve time to market. When you need unmatched wireless performance to connect electronics with security and confidence, Laird Connectivity delivers—no matter what.

**[lairdconnect.com/rf-antennas](https://lairdconnect.com/rf-antennas)**



ANTENNA-v082019.1