

# Internal Antennas

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



Most antennas available at 80, 100, and 120mm cable lengths with MHF1/U.FL, MHF4L, and other connectors. Additional connectors and cable lengths available on request.

Technology	Family Name	Operating Frequency Range	Dimensions (mm)	Unique Advantage	RF Requirements				Image
					VSWR	Peak Gain dBi	Average Gain dBi	Efficiency, %	
Wi-Fi, Bluetooth, 802.15.4	FlexPIFA Single Band	2.4 GHz	11 x 40.1 x 2.5	Industry-first patented, flexible, adhesive-backed PIFA-style antenna with single, dual, and 6E solutions.	< 2.0:1	2.0	-1.5	--	
	FlexPIFA Dual Band	2.4 / 5 GHz	12.7 x 38.6 x 2.5		<2.5:1, <3.0:1	2.5, 3.0	-2.5, -3.4	--	
	FlexPIFA 6E	2.4 / 5 / 6 GHz	16 x 36 x 2.5		<2.5:1, <3.0:1, <3.0:1	2.2, 3.9, 3.8	--	59, 60, 60	
	i-FlexPIFA Series	2.4 GHz	11 x 40.9 x 2.9	Inverted FlexPIFA design radiates on adhesive side, allowing additional mount options for OEMs.	<2.5:1	3.4	-2.8	62	
	FlexMIMO	2.4 / 5 GHz	33.25 x 33.25 x 4.44	The world's first and only MIMO PIFA antenna in dual-band and Wi-Fi 6E.	<2.3:1	2.0, 3.0	1.7, 2.5	--	
	FlexMIMO 6E	2.4 / 5 / 6 GHz	39.5 x 39.5 x 4.7		<2.5:1	2.2, 3.8, 3.3	--	64.7, 62.3, 52.2	
	mFlexPIFA, peel-and-stick on metal	2.4 GHz	25.4 x 23.4 x 2.5	Industry-first patented, flexible, adhesive-backed PIFA-style Antenna optimized for placement on metal.	< 3.0:1	2.0	-4.2	--	
		2.4 / 5 GHz	29.5 x 26.5 x 2.6		<2.5:1, < 3.0:1	2.0, 5.8	1.9, 5.2	--	
	Mini NanoBlade Flex	2.4 / 5 GHz	12 x 36 x 0.1	Flexible omnidirectional PCB Mini NanoBlade with Wi-Fi 6E offering. Excellent efficiency for size.	<2.0:1	--	2.8, 3.4	68, 59	
	Mini NanoBlade Flex 6E	2.4 / 5 / 6 GHz	12 x 36 x 0.3		<2.0:1	2.4, 4.4, 5.2	2.0, 3.5, 4.6	68, 76, 74	
	Mini NanoBlade	2.4 / 5 GHz	12.1 x 36.1	Dual-band, vertically-polarized flexible omni antenna PCB at a smaller size than the Nanoblade.	<2.0:1	2.5, 4.8	2.25, 3.65	--	
	NanoBlue	2.4 GHz	12.7 x 44.45 x 0.81	Patented Microsphere PCB technology with integrated ground plane.	<2.5:1	--	2	--	
	NanoBlade	2.4 / 5 GHz	50.8 x 1.65 x 0.1	Dual-band at 0.1mm thick, ideal for wearable and thin devices. Easy integration.	(2:1)	--	2, 3.9, 4	--	
	FlexNotch	2.4 GHz	21.1 x 32	The only adhesive-backed, flexible notch antenna that can be custom-trimmed for maximum range within your enclosure.	<2.5:1	2.0	-1.6	--	
D-Puck; Embedded	2.4 / 5 GHz	16 x 16 x 6	Highly durable, cost-effective, small-scale metal antenna. Best average gain vs. ceramics.	<2.5:1	3.9 / 5.0	3.6 / 4.4	70 / 80		

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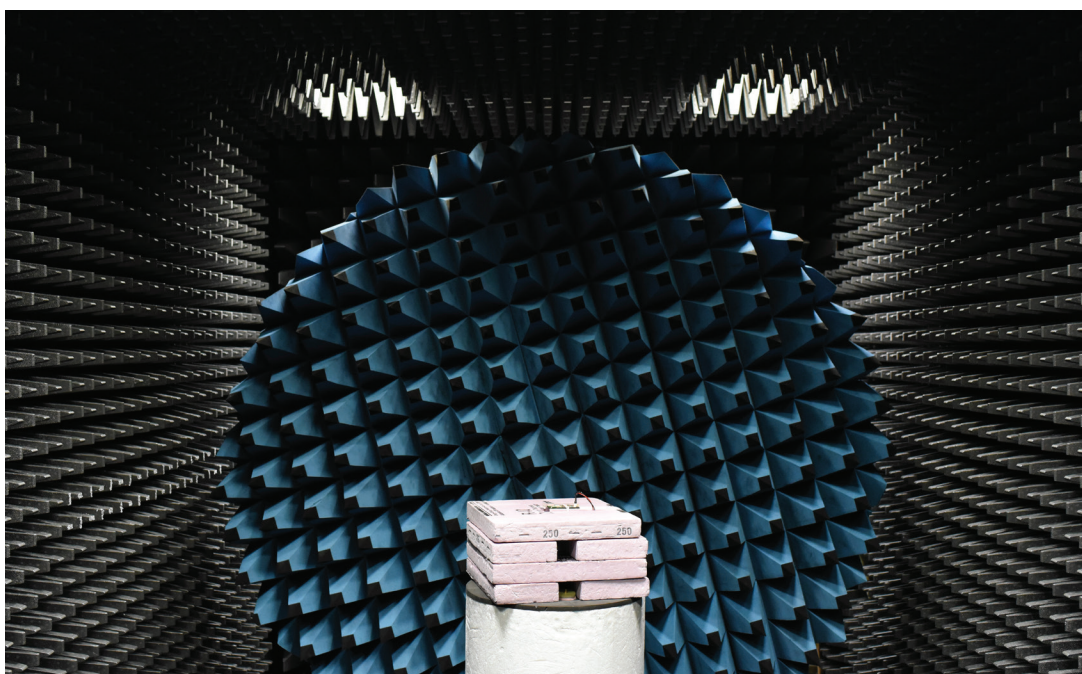
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ISM, 868/915 MHz 2G/3G	Revie Prime (Rigid PCB)	824-960 1710-2170	20 x 70 x 0.8	Dual Band ISM; Axial cable.	3.0:1, 2.5:1	--	2.2, 3.8	55, 69	
LTE, Cat M1, NB-IoT, 5G (2G, 3G, 4G)	Revie 700 (Flex)	698-6000	21 x 96 x 0.2	Only 96mm long. This product is a small antenna for 5G sub-6GHz devices.	2.5, 2.5, 2.0, 2.5	--	--	51, 80	
	Revie 600 (Flex)	600-5925	30 x 130 x 0.3	Powerful, full-spectrum antenna to support global cellular network operators' 5G networks. Some of the highest efficiencies in the market.	2.5, 2.0, 2.0, 2.2	4.3, 3.4, 3.3, 6.0	--	62, 82, 85, 74	
	Base Revie (Flex)	698-875, 1710-2500	20 x 90 x 0.16	Built specifically to support LTE-M and NB-IoT.	2.5:1	1.9, 3.7	--	51, 80	



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Laird Connectivity are wireless design experts at every step - in board design, prototyping, industrial materials and enclosures, software design, EMC testing, and much more. Our experienced team can custom design your ideal antenna in terms of frequency band, gain and pattern shaping, radiation efficiency, and required form factors, from low band VHF frequencies to 7.125 GHz.

Our antennas are designed and tested using on-site antenna patterning with a new automated 3D Antenna Measurement System. This system quickly and efficiently collects spherical antenna pattern data, then generates antenna plots and performance summaries that provide detailed insight into the performance of a product's antenna design.

We supply a broad range of internal antenna solutions that provide unmatched connectivity for your wireless devices, supporting:

- Wi-Fi including Wi-Fi 6 and Wi-Fi 6E
- IoT, M2M and LPWAN technologies including SIGFOX and LoRa
- Cellular, LTE, 5G, 4G, LTE-M and NB-IoT

To learn more visit [lairdconnect.com/internal-antennas](http://lairdconnect.com/internal-antennas) or contact us at [lairdconnect.com/contact](http://lairdconnect.com/contact)