

**Laird**  
TECHNOLOGIES®



global solutions :  
local support.™

# Antennas

2007 Master Catalog



Laird Technologies is the world-leader in the design and supply of customized performance-critical products for wireless and other advanced electronic applications. Laird Technologies partners with its customers to help find solutions for applications in various industries such as:

Aerospace

Automotive Electronics

Computers

Consumer Electronics

Data Communications

Medical Equipment

Military

Network Equipment

Telecommunications

Laird Technologies offers its customers unique product solutions, dedication to research and development and a seamless network of manufacturing and customer support facilities located all across the globe.

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**Antenex and Centurion Wireless are now a part of Laird Technologies.**

**The evolution of Antenex and Centurion Wireless Technologies antenna product lines into the Laird Technologies brand provides a wider selection of products, enhanced customer services and additional design and manufacturing resources for wireless industry OEMs, ODMs, integrators, sales partners and end users**

Laird Technologies designs and manufactures antenna and accessory products to exacting electrical and mechanical specifications for critical applications in Defense, Public Safety, Transportation, Satellite, and Medical communications. We offer top quality mobile, portable and base antenna products that utilize our latest patented technologies, lean manufacturing techniques, custom automation and vertical integration. These products are widely used in wireless voice & data, security, military, asset tracking, two-way radio, public safety, and other mission critical applications. Many of our patented technologies offer solutions unavailable from other antenna manufacturers.



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## LAND MOBILE RADIO

Laird Technologies land mobile radio antennas are the industry standard for public safety agencies, fleet and transportation networks. From 27 MHz to 5.8 GHz, Laird Technologies designs and manufactures a wide variety of mobile antennas with a multitude of mounting options.

The patented whip-less Phantom® and Phantom Elite® low-profile antenna family has no equal with true field diversity performance. The patented technology utilizes dual polarization for unsurpassed performance in urban canyons as well as rural drop off areas. Laird Technologies also offers traditional mobile coil antennas, value conscious quarterwaves and A-base products with superior workmanship and design features. A wide array of specialty antennas including dual bands, elevated feed point and wide band models are also available. Tuf Duck® portable antennas have been the standard for two-way radio applications since their introduction over twenty-five years ago. Multiple cable options, connectors, mounts and bracket products provide a complete antenna system.

Model	Description	Frequency Range	Gain	Color	Radome Height	Max. Power
<b>VHF Tunable Unity Models</b>						
TRAT1420	Phantom VHF Antenna	142-160 MHz	Unity	White	2.375"	60 watt
TRABT1420	Phantom VHF Antenna	142-160 MHz	Unity	Black	2.375"	60 watts
TRAT1500	Phantom VHF Antenna	150-168 MHz	Unity	White	2.375"	60 watts
TRABT1500	Phantom VHF Antenna	150-168 MHz	Unity	Black	2.375"	60 watts
TRABT1500P	Phantom VHF Antenna P. Mt.	150-168 MHz	Unity	Black	2.375"	60 watts
TRAT1560	Phantom VHF Antenna	156-172 MHz	Unity	White	2.375"	60 watts
TRABT1560	Phantom VHF Antenna	156-172 MHz	Unity	Black	2.375"	60 watt
TRABT1560P	Phantom VHF Antenna P. Mt.	156-172 MHz	Unity	Black	2.375"	60 watts
TRA2100	Phantom VHF Antenna	210-225 MHz	Unity	White	2.375"	100 watts
TRAB2100	Phantom VHF Antenna	2	Unity		2.375"	100 watts
<b>UHF 3 dB-MEG Models</b>						
TRA4103	Phantom UHF Antenna	410-425 MHz	3-dB MEG	White	3.40"	150 watts
TRAB4103	Phantom UHF Antenna	410-425 MHz	3-dB MEG	Black	3.40"	150 watts
TRA4303	Phantom UHF Antenna	430-450 MHz	3-dB MEG	White	3.40"	150 watts
TRAB4303	Phantom UHF Antenna	430-450 MHz	3-dB MEG	Black	3.40"	150 watts
TRA4303P	Phantom UHF Antenna P. Mt.	430-450 MHz	3-dB MEG	White	3.40"	150 watts
TRAB4303P	Phantom UHF Antenna P. Mt.	430-450 MHz	3-dB MEG	Black	3.40"	150 watts
TRA4500N	Phantom UHF Antenna NGP	450-470 MHz	3-dB MEG	White	3.40"	150 watts
TRAB4500N	Phantom UHF Antenna NGP	450-470 MHz	3-dB MEG	Black	3.40"	150 watts
TRA4503	Phantom UHF Antenna	450-470 MHz	3-dB MEG	White	3.40"	150 watts
TRAB4503	Phantom UHF Antenna	450-470 MHz	3-dB MEG	Black	3.40"	150 watts
TRA4503P	Phantom UHF Antenna P. Mt.	450-470 MHz	3-dB MEG	White	3.40"	150 watts
TRAB4503P	Phantom UHF Antenna P. Mt.	450-470 MHz	3-dB MEG	Black	3.40"	150 watts
TRA4703	Phantom UHF Antenna	470-490 MHz	3-dB MEG	White	3.40"	150 watts
TRAB4703	Phantom UHF Antenna	470-490 MHz	3-dB MEG	Black	3.40"	150 watts
TRA4703P	Phantom UHF Antenna P. Mt.	470-490 MHz	3-dB MEG	White	3.40"	150 watts
TRAB4703P	Phantom UHF Antenna P. Mt.	470-490 MHz	3-dB MEG	Black	3.40"	150 watts
TRA4903	Phantom UHF Antenna P. Mt.	490-512 MHz	3-dB MEG	White	3.40"	150 watts
TRAB4903	Phantom UHF Antenna	490-512 MHz	3-dB MEG	Black	3.40"	150 watts
<b>700 MHz - 5.8 GHz 3 dB-MEG Models</b>						
TRA7463	Phantom Antenna	746-796 MHz	3-dB MEG	White	2.70"	150 watts
TRAB7463	Phantom Antenna	746-796 MHz	3-dB MEG	Black	2.70"	150 watts
TRA8063	Phantom Antenna	806-866 MHz	3-dB MEG	White	2.70"	150 watts
TRAB8063	Phantom Antenna	806-866 MHz	3-dB MEG	Black	2.70"	150 watts
TRA8063P	Phantom Antenna P. Mt.	806-866 MHz	3-dB MEG	White	2.70"	150 watts
TRAB8063P	Phantom Antenna P. Mt.	806-866 MHz	3-dB MEG	Black	2.70"	150 watts
TRA8063NP	Phantom Antenna P. Mt./NGP	806-866 MHz	3-dB MEG	White	2.70"	150 watts
TRAB8063NP	Phantom Antenna P. Mt./NGP	806-866 MHz	3-dB MEG	Black	2.70"	150 watts
TRA8213	Phantom Antenna	821-896 MHz	3-dB MEG	White	2.70"	150 watts
TRAB8213	Phantom Antenna	821-896 MHz	3-dB MEG	Black	2.70"	150 watts
TRA8213P	Phantom Antenna P. Mt.	821-896 MHz	3-dB MEG	White	2.70"	150 watts
TRAB8213P	Phantom Antenna P. Mt.	821-896 MHz	3-dB MEG	Black	2.70"	150 watts
TRA8213NP	Phantom Antenna P. Mt./NGP	821-896 MHz	3-dB MEG	White	2.70"	100 watts
TRAB8213NP	Phantom Antenna P. Mt./NGP	821-896 MHz	3-dB MEG	Black	2.70"	100 watts
TRA8903	Phantom Antenna	890-960 MHz	3-dB MEG	White	2.70"	150 watts
TRAB8903	Phantom Antenna	902-928 MHz	3-dB MEG	Black	2.70"	150 watts
TRA9023	Phantom Antenna	902-928 MHz	3-dB MEG	White	2.70"	150 watts
TRAB9023	Phantom Antenna	902-928 MHz	3-dB MEG	Black	2.70"	150 watts



## Phantom®

- U.S. Patent nos. 45,977,931 and 6,292,156 - do not be fooled by imitators that have no gain or no field diversity
- Phantom true field diversity design ensures uninterrupted video and data transmissions in urban canyons and rural drop off areas
- 3 dB MEG gain outperforms a 3 dB whip in many applications
- For mobile and fixed applications with NMO or permanent N female mount



TRA4503





# LAND MOBILE RADIO

## Phantom®



TRA4503P



## Phantom Elite®

The exclusive low-profile stealth antenna with Patented Field Diversity™ technology etched on a circuit board

- VHF, UHF, Dual Band, and 2.4 GHz solutions
- Dual Band ETRA821/18503 antenna operates simultaneously on cellular 821-896 MHz and PCS 1850-1990 MHz
- Available in 32 outdoor, indoor, mobile and permanent variations

Model	Description	Frequency Range	Gain	Color	Radome Height	Max. Power
TRA9023P	Phantom Antenna P. Mt.	902-928	3-dB MEG	White	2.70"	150 watts
TRAB9023P	Phantom Antenna P. Mt.	902-928	3-dB MEG		2.70"	150 watts
TRA9023NP	Phantom Antenna P. Mt./NGP	902-928	3-dB MEG	White	2.70"	100 watts
TRAB9023NP	Phantom Antenna P. Mt./NGP	902-928	3-dB MEG		2.70"	100 watts
TRA24003	Phantom Antenna	2.4-2.5 GHz	3-dB MEG	White	2.70"	100 watts
TRAB24003	Phantom Antenna	2.4-2.5 GHz	3-dB MEG		2.70"	100 watts
TRA24003P	Phantom Antenna P. Mt.	2.4-2.5 GHz	3-dB MEG	White	2.70"	100 watts
TRAB24003P	Phantom Antenna P. Mt.	2.4-2.5 GHz	3-dB MEG		2.70"	100 watts
TRA24003NP	Phantom Antenna P. Mt./NGP	2.4-2.5 GHz	3-dB MEG	White	2.70"	100 watts
TRAB24003NP	Phantom Antenna P. Mt./NGP	2.4-2.5 GHz	3-dB MEG		2.70"	100 watts
TRA58003	Phantom Antenna	4.9-6.0 GHz	3-dB MEG	White	3.40"	150 watts
TRAB58003	Phantom Antenna	4.9-6.0 GHz	3-dB MEG	Black	3.40"	150 watts
TRA58003P	Phantom Antenna P. Mt.	4.9-6.0 GHz	3-dB MEG	White	3.40"	150 watts
TRAB58003P	Phantom Antenna P. Mt.	4.9-6.0 GHz	3-dB MEG		3.40"	150 watts

### Multi-Band 3 dB-MEG Models

TRA821/18503	Phantom Cell/PCS Antenna	821-896 MHz 1850-1990 MHz	3-dB MEG	White	2.70"	100 watts
TRAB821/18503	Phantom Cell/PCS Antenna	821-896 MHz 1850-1990 MHz	3-dB MEG	Black	2.70"	100 watts
TRA821/18503P	Phantom Cell/PCS Permanent Mt.	821-896 MHz 1850-1990 MHz	3-dB MEG	White	2.70"	100 watts
TRAB821/18503P	Phantom Cell/PCS Permanent Mt.	821-896 MHz 1850-1990 MHz	3-dB MEG	Black	2.70"	100 watts
TRA806/17103	Phantom DCS/GSM/UMTS Antenna	806-960 MHz 1710-2500 MHz	3-dB MEG	White	2.70"	100 watts
TRAB806/17103	Phantom DCS/GSM/UMTS Antenna	806-960 MHz 1710-2500 MHz	3-dB MEG	Black	2.70"	100 watts
TRA806/17103P	Phantom DCS/GSM/UMTS Permanent Mt.	806-960 MHz 1710-2500 MHz	3-dB MEG	White	2.70"	100 watts
TRAB806/17103P	Phantom DCS/GSM/UMTS Permanent Mt.	806-960 MHz 1710-2500 MHz	3-dB MEG	Black	2.70"	100 watts

### VHF Unity Models

ETRA1440	Phantom Elite VHF Antenna	144-148 MHz	Unity	White	2.375"	60 watts
ETRA1440	Phantom Elite VHF Antenna	144-148 MHz	Unity	Black	2.375"	60 watts
ETRA1500	Phantom Elite VHF Antenna	150-155 MHz	Unity	White	2.375"	60 watts
ETRA1500	Phantom Elite VHF Antenna	150-155 MHz	Unity	Black	2.375"	60 watts
ETRA1550	Phantom Elite VHF Antenna	155-160 MHz	Unity	White	2.375"	60 watts
ETRA1550	Phantom Elite VHF Antenna	155-160 MHz	Unity	Black	2.375"	60 watts
ETRA1650	Phantom Elite VHF Antenna	165-170 MHz	Unity	White	2.375"	60 watts
ETRA2100	Phantom Elite VHF Antenna	210-225 MHz	Unity	White	2.375"	100 watts
ETRA2100	Phantom Elite VHF Antenna	210-225 MHz	Unity	Black	2.375"	100 watts

### UHF 3 dB-MEG Models

ETRA4103	Phantom Elite UHF Antenna	410-425 MHz	3-dB MEG	White	3.40"	150 watts
ETRA4103	Phantom Elite UHF Antenna	410-425 MHz	3-dB MEG	Black	3.40"	150 watts
ETRA4303	Phantom Elite UHF Antenna	430-450 MHz	3-dB MEG	White	3.40"	150 watts
ETRA4303	Phantom Elite UHF Antenna	430-450 MHz	3-dB MEG	Black	3.40"	150 watts
ETRA4303P	Phantom Elite UHF Antenna P. Mt.	430-450 MHz	3-dB MEG	White	3.40"	150 watts
ETRA4303P	Phantom Elite UHF Antenna P. Mt.	430-450 MHz	3-dB MEG	Black	3.40"	150 watts
ETRA4500N	Phantom Elite UHF Antenna NGP	450-470 MHz	3-dB MEG	White	3.40"	150 watts
ETRA4500N	Phantom Elite UHF Antenna NGP	450-470 MHz	3-dB MEG	Black	3.40"	150 watts
ETRA4503	Phantom Elite UHF Antenna	450-470 MHz	3-dB MEG	White	3.40"	150 watts
ETRA4503	Phantom Elite UHF Antenna	450-470 MHz	3-dB MEG	Black	3.40"	150 watts

Model	Description	Frequency Range	Gain	Color	Radome Height	Max. Power
ETRA4503P	Phantom Elite UHF Antenna P. Mt	450-470 MHz	3-dB MEG	White	3.40"	150 watts
ETRAB4503P	Phantom Elite UHF Antenna P. Mt	450-470 MHz	3-dB MEG	Black	3.40"	150 watts
ETRA4703	Phantom Elite UHF Antenna	470-490 MHz	3-dB MEG	White	3.40"	150 watts
ETRAB4703	Phantom Elite UHF Antenna	470-490 MHz	3-dB MEG	Black	3.40"	150 watts
ETRA4703P	Phantom Elite UHF Antenna P. Mt	470-490 MHz	3-dB MEG	White	3.40"	150 watts
ETRAB4703P	Phantom Elite UHF Antenna P. Mt	470-490 MHz	3-dB MEG	Black	3.40"	150 watts



ETRAB8063

## Phantom Elite®

### 700 MHz - 2.4 GHz 3 dB-MEG Models

ETRA7463	Phantom Elite Antenna	746-796 MHz	3-dB MEG	White	2.70"	150 watts
ETRAB7463	Phantom Elite Antenna	746-796 MHz	3-dB MEG	Black	2.70"	150 watts
ETRA8063	Phantom Elite Antenna	806-866 MHz	3-dB MEG	White	2.70"	150 watts
ETRAB8063	Phantom Elite Antenna	806-866 MHz	3-dB MEG	Black	2.70"	150 watts
ETRA8063P	Phantom Elite Antenna P. Mt.	806-866 MHz	3-dB MEG	White	2.70"	150 watts
ETRAB8063P	Phantom Elite Antenna P. Mt.	806-866 MHz	3-dB MEG	Black	2.70"	150 watts
ETRA8063NP	Phantom Elite Antenna P. Mt./NGP	806-866 MHz	3-dB MEG	White	2.70"	150 watts
ETRAB8063NP	Phantom Elite Antenna P. Mt./NGP	806-866 MHz	3-dB MEG	Black	2.70"	150 watts
ETRA8213	Phantom Elite Antenna	821-896 MHz	3-dB MEG	White	2.70"	150 watts
ETRAB8213	Phantom Elite Antenna	821-896 MHz	3-dB MEG	Black	2.70"	150 watts
ETRA8213P	Phantom Elite Antenna P. Mt.	821-896 MHz	3-dB MEG	White	2.70"	150 watts
ETRAB8213P	Phantom Elite Antenna P. Mt.	821-896 MHz	3-dB MEG	Black	2.70"	150 watts
ETRA8213NP	Phantom Elite Antenna P. Mt./NGP	821-896 MHz	3-dB MEG	White	2.70"	100 watts
ETRAB8213NP	Phantom Elite Antenna P. Mt./NGP	821-896 MHz	3-dB MEG	Black	2.70"	100 watts
ETRA8903	Phantom Elite Antenna	890-960 MHz	3-dB MEG	White	2.70"	150 watts
ETRAB8903	Phantom Elite Antenna	902-928 MHz	3-dB MEG	White	2.70"	150 watts
ETRAB9023	Phantom Elite Antenna	902-928 MHz	3-dB MEG	Black	2.70"	150 watts
ETRAB9023P	Phantom Elite Antenna P. Mt.	902-928 MHz	3-dB MEG	Black	2.70"	150 watts
ETRAB9023NP	Phantom Elite Antenna P. Mt./NGP	902-928 MHz	3-dB MEG	Black	2.70"	100 watts
ETRA24003	Phantom Elite Antenna	2.4-2.5 GHz	3-dB MEG	White	2.70"	100 watts
ETRAB24003	Phantom Elite Antenna	2.4-2.5 GHz	3-dB MEG	Black	2.70"	100 watts
ETRA24003P	Phantom Elite Antenna P. Mt.	2.4-2.5 GHz	3-dB MEG	White	2.70"	100 watts
ETRAB24003P	Phantom Elite Antenna P. Mt.	2.4-2.5 GHz	3-dB MEG	Black	2.70"	100 watts
ETRA24003NP	Phantom Elite Antenna P. Mt./NGP	2.4-2.5 GHz	3-dB MEG	White	2.70"	100 watts
ETRAB24003NP	Phantom Elite Antenna P. Mt./NGP	2.4-2.5 GHz	3-dB MEG	Black	2.70"	100 watts



ETRAB1500

### Multi-Band 3 dB-MEG Models

ETRA821/18503	Phantom Elite Cell/PCS Antenna	821-896 MHz 1850-1990 MHz	3-dB MEG	White	2.70"	100 watts
ETRAB821/18503	Phantom Elite Cell/PCS Antenna	821-896 MHz 1850-1990 MHz	3-dB MEG	Black	2.70"	100 watts
ETRA821/18503P	Phantom Elite Cell/PCS P. Mt.	821-896 MHz 1850-1990 MHz	3-dB MEG	White	2.70"	100 watts
ETRAB821/18503P	Phantom Elite Cell/PCS P. Mt.	821-896 MHz 1850-1990 MHz/24-29	3-dB MEG	Black	2.70"	100 watts

### Wifi Indoor Solutions

ETRA24003DTM	Desktop Version White	2.4-2.5 GHz	3-dB MEG	White	2.70"	100 watts
ETRAB24003DTM	Desktop Version Black	2.4-2.5 GHz	3-dB MEG	Black	2.70"	100 watts
ETRA24003WM	Wall Mount	2.4-2.5 GHz	3-dB MEG	White	2.70"	100 watts
ETRA24003CM	Ceiling Tile Mount	2.4-2.5 GHz	3-dB MEG	White	2.70"	100 watts

#### Drop Ceiling Antenna Adaptors

TRADCA	No Ground Plane
TRADCAGP	With 6 x 6 Inch Ground Plane



ETRA24003CM  
with Ceiling Mount

# LAND MOBILE RADIO



B1443S

## Mobile Load Coil

- Low loss coil form adds dimensional and frequency stability
- ABS material is injection molded around solid brass inserts to create a virtually indestructible housing that is virtually leak proof
- All silver soldered joints ensure electrically and mechanically secure connections



Gold Contact  
Lifetime Product Identification



B1443

B4505C

C27

Model	Description	Frequency	Center Freq	Gain	Overall Length	Whip Style
<b>Lowband DC Ground Base Models</b>						
C27	1/4 Wave	26.75-31 MHz	Tunable	Unity	52.5	49" Tapered
C30	1/4 Wave	30 - 35 MHz	Tunable	Unity	52.5	49" Tapered
C34	1/4 Wave	34 - 37 MHz	Tunable	Unity	52.5	49" Tapered
C37	1/4 Wave	37 - 40 MHz	Tunable	Unity	52.5	49" Tapered
C40S	1/4 Wave w/Spring	40 - 47 MHz	Tunable	Unity	52.5	49" Tapered
C40	1/4 Wave	40 - 47 MHz	Tunable	Unity	52.5	49" Tapered
C47	1/4 Wave	47 - 50 MHz	Tunable	Unity	52.5	49" Tapered
<b>VHF Models</b>						
B66	1/4 Wave Broadband	66 - 174 MHz	Tunable	Unity	51	49" Tapered
B132	1/4 Wave Broadband	132 - 928 MHz	Tunable	Unity	23	21" Straight
B132S	1/4 Wave Broadband	132 - 525 MHz	Tunable	Unity	23	21" Straight
B1323S	5/8 Wave w/Spring	132 - 174 MHz	Tunable	3 dB	59	55" Tapered
B1323	5/8 Wave	132 - 174 MHz	Tunable	3 dB	57	55" Tapered
B1443	5/8 Wave	144 - 174 MHz	Tunable	3 dB	51- 3/8	49" Tapered
B1443S	5/8 Wave w/Spring	144 - 174 MHz	Tunable	3 dB	53- 3/8	49" Tapered
B2003	5/8 Wave	200 - 225 MHz	Tunable	3 dB	35	33" Straight
B2503	5/8 Wave	250 - 280 MHz	Tunable	3 dB	26.5	24 1/2" Straight
B1322N	NGP Base Loaded 1/2 Wave	132 - 174 MHz	Tunable	2.4 dB	57	55" Tapered
B1442NS	NGP Base Loaded 1/2 Wave w/Spring	144 - 174 MHz	Tunable	2.4 dB	53	49" Tapered
B1442N	NGP Base Loaded 1/2 Wave	144 - 174 MHz	Tunable	2.4 dB	51	49" Tapered
B2002N	NGP Base Loaded 1/2 Wave	200 - 225 MHz	Tunable	2.4 dB	31.5	29 1/2" Straight
<b>UHF Models</b>						
B4063	5/8 Wave	406 - 430 MHz	Tunable	3 dB	15	13" Straight
B4303	5/8 Wave	430 - 450 MHz	Tunable	3 dB	14	11 13/16" Straight
B4503	5/8 Wave	450 - 470 MHz	Tunable	3 dB	13	11" Straight
B4703	5/8 Wave	470 - 490 MHz	Tunable	3 dB	12.5	10 11/16" Straight
B4903	5/8 Wave	490 - 512 MHz	Tunable	3 dB	12.5	10 1/2" Straight
B4065C	Closed Coil Collinear	406 - 430 MHz	Tunable	5 dB	39.5	37 3/8" Collinear
B4305C	Closed Coil Collinear	430 - 450 MHz	Tunable	5 dB	36	34 1/8" Collinear
B4505CS	Closed Coil Collinear w/Spring	450 - 470 MHz	Tunable	5 dB	37	32 3/4" Collinear
B4505C	Closed Coil Collinear	450 - 470 MHz	Tunable	5 dB	35	32 3/4" Collinear
B4705C	Closed Coil Collinear	470 - 490 MHz	Tunable	5 dB	33	31 1/4" Collinear
B4905C	Closed Coil Collinear	490 - 512 MHz	Tunable	5 dB	31	29 1/8" Collinear
B4062N	NGP 1/2 Wave	406 - 430 MHz	Tunable	2.4 dB	14.31	11 9/16" Straight
B4302N	NGP 1/2 Wave	430 - 450 MHz	Tunable	2.4 dB	12.5	10 5/8" Straight
B4502N	NGP 1/2 Wave	450 - 470 MHz	Tunable	2.4 dB	12.5	10 5/16" Straight
B4065CN	NGP Closed Coil Collinear	406 - 430 MHz	Tunable	5 dB	36	34 1/8" Collinear
B4305CN	NGP Closed Coil Collinear	430 - 450 MHz	Tunable	5 dB	35	32 7/8" Collinear
B4505CN	NGP Closed Coil Collinear	450 - 470 MHz	Tunable	5 dB	32.5	30 1/2" Collinear
B4705CN	NGP Closed Coil Collinear	470 - 490 MHz	Tunable	5 dB	30.5	28 7/16" Collinear
B4905CN	NGP Closed Coil Collinear	490 - 512 MHz	Tunable	5 dB	29	27 1/8" Collinear

## Antenna Ordering Guide

### BB4505CNS =

B-Mobile Load Coil, Black Chrome Finish, 450-470 MHz, 5 dB Gain, Closed Coil Collinear, No Ground Plane, Spring

<b>B</b>	Antenna Style	B = B Mobile Load Coil	
<b>B</b>	Finish	Blank = Chrome	B = Black
<b>450</b>	Frequency	Initial frequency rating component of part number	
<b>5</b>	Gain	Blank = Unity (Lowband Models)	
		0 = Unity	3 = 3 dB      5 = 5 dB
<b>C</b>	Phasing Coil	Blank = Straight Rod   C = Close	
<b>N</b>	Ground Plane	N = No Ground Plane   Blank = Ground Plane	
<b>S</b>	Spring Option	S = Spring Option	

Items printed in green are in-stock and available for immediate delivery



Model	Description	Frequency	Center Freq	Gain	Overall Length
<b>700 - 900 MHz Models</b>					
B7603	Base Loaded 5/8 Wave	760 - 870 MHz	812 MHz	3 dBi	4 7/8" Straight
B7643	Base Loaded 5/8 Wave	764 - 870 MHz	812 MHz	3 dBi	4 7/8" Straight
B8063	Base Loaded 5/8 Wave	806 - 866 MHz	Tunable	3 dB	4 7/8" Straight
B8963	Base Loaded 5/8 Wave	896 - 970 MHz	933 MHz	3 dBi	4 7/8" Straight
B8065C	Base Loaded Closed Collinear	806 - 866 MHz	Tunable	5 dB	16" Collinear
B8965C	NGP Closed Collinear	896 - 970 MHz	Tunable	5 dB	13 3/4" Collinear
B8062N	NGP Bases Loaded 1/2 Wave	806 - 866 MHz	Tunable	2.4 dB	4 7/8" Straight
B8065CN	NGP Closed Collinear	806 - 866 MHz	Tunable	5 dB	16" Collinear
B8965CN	NGP Closed Collinear	896 - 970 MHz	Tunable	5 dB	13 3/4" Collinear

### Options and Accessories

B	Add Black Chrome Finish
S	Add Shock Spring
SB	Add Black Shock Spring
RO49T	49" tapered whip and ball
ROB49T	Black 49" tapered whip and ball

### Wideband - Lowband

CW27	Base Loaded 1/4 Wave	26.8 - 29.7 MHz	28.25 MHz	Unity	67.5
CW30	Base Loaded 1/4 Wave	30 - 34 MHz	32 MHz	Unity	63.5
CW34	Base Loaded 1/4 Wave	34 - 40 MHz	37 MHz	Unity	66
CW37	Base Loaded 1/4 Wave	37 - 46 MHz	41.5 MHz	Unity	60-3/4
CW42	Base Loaded 1/4 Wave	42 - 48 MHz	45 MHz	Unity	54-3/4

### Wideband - VHF Models

CW1320	End Fed 1/4 Wave	132 - 174 MHz	Tunable	Unity	18-3/4"
CW1443	Base Loaded 5/8 Wave	144 - 156 MHz	150 MHz	3 dB	50-1/2
CW1503	Base Loaded 5/8 Wave	150 - 162 MHz	156 MHz	3 dB	48-1/2
CW1533	Base Loaded 5/8 Wave	153 - 169 MHz	161 MHz	3 dB	49-1/2
CW1623	Base Loaded 5/8 Wave	162 - 174 MHz	168 MHz	3 dB	43-1/2

### Wideband - UHF Models

CW4065C	Closed Coil Collinear	406 - 430 MHz	418 MHz	5 dB	37-1/2
CW4405C	Closed Coil Collinear	440 - 470 MHz	455 MHz	5 dB	35-1/2

### Options and Accessories

B	Black Finish Add:
S	Shock Spring for B and C Coils

### Elevated Feed Point - UHF Model

EB4503C	Black	450-470 MHz	460 MHz	3 dB	Closed coil Collinear
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### 800/900 MHz Models

E8063	Chrome	806 - 896 MHz	851 MHz	3 dB	Open coil collinear
E8063C	Chrome	806 - 896 MHz	851 MHz	3 dB	Closed coil collinear
E8065C	Chrome	806 - 896 MHz	851 MHz	5 dB	Closed coil collinear
EB8063	Black	806 - 896 MHz	851 MHz	3 dB	Open coil collinear
EB8063C	Black	806 - 896 MHz	851 MHz	3 dB	Closed coil collinear
EB8065C	Black	806 - 896 MHz	851 MHz	5 dB	Closed coil collinear
EB8965C	Black	896 - 970 MHz	933 MHz	5 dB	Closed coil collinear



## Mobile Load Coil



## Wideband

- Feature unique dual tuned circuit design
- Allows operation over a broad range of channels/frequencies
- Self tuning feature with no rod trimming allows for faster installations

## Elevated Feed Point

- Ensure signal over high roof lines
- Internal circuit board design provides stable high performance
- No ground plane allows versatile mounting options
- Fiberglass feed shaft for heat resistance, strength, and rigidity

E8065C



# LAND MOBILE RADIO



A8063C

## A-Base

- Quarterwave, Collinear or Broad Band options
- Exclusive Laird Technologies gold-plated push-pin contact provides the most corrosion resistance and power transfer over time
- Long tuning ferrule allows for greater freedom in frequency adjustment without trimming

## Dual Band & Special Applications

- Built in O-ring provides weather-tight seal
- Dual-band is only 38" tall



C150/  
450CS

Q27S

Model	Frequency	Color	Gain	Radiator
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### VHF Models

AFT	118 - 896 MHz	Chrome	Unity	0.100" Dia. 1/4 Wave
ABFT	118 - 896 MHz	Black	Unity	0.100" Dia. 1/4 Wave
A150	150 - 174 MHz	Chrome	Unity	0.100" Dia. 1/4 Wave
AB150	150 - 174 MHz	Black	Unity	0.100" Dia. 1/4 Wave

### UHF Models

A450	450 - 470 MHz	Chrome	Unity	0.100" Dia. 1/4 Wave
AB450	450 - 470 MHz	Black	Unity	0.100" Dia. 1/4 Wave
A4503	450 - 470 MHz	Chrome	3.5 dB	Open Collinear
A4503C	450 - 470 MHz	Chrome	3.5 dB	Closed Collinear
AB4503	450 - 470 MHz	Black	3.5 dB	Open Collinear
AB4503C	450 - 470 MHz	Black	3.5 dB	Closed Collinear

### 800 MHz Antennas

A8063	806 - 896 MHz	Chrome	3 dB	Open Collinear
A8963	896 - 970 MHz	Chrome	3 dB	Open Collinear
A8063C	806 - 896 MHz	Chrome	3.5 dB	Closed Collinear
A8065CT	806 - 896 MHz	Chrome	5 dB	Closed Trilinear
AB8065CT	806 - 896 MHz	Black	5 dB	Closed Trilinear
AB8063	806 - 896 MHz	Black	3 dB	Open Collinear
AB8963	896 - 970 MHz	Black	3 dB	Open Collinear
AB8063C	806 - 896 MHz	Black	3.5 dB	Closed Collinear

### 800 MHz Models with Spring

A8063S	806 - 896 MHz	Chrome	3 dB	Open Collinear
A8063CS	806 - 896 MHz	Chrome	3.5 dB	Closed Collinear
A8065CTS	806 - 896 MHz	Chrome	5 dB	Closed Trilinear
AB8063S	806 - 896 MHz	Black	3 dB	Open Collinear
AB8063CS	806 - 896 MHz	Black	3.5 dB	Closed Collinear
AB8065CTS	806 - 896 MHz	Black	5 dB	Closed Trilinear

### Springs

AS	Low Profile Base Chrome Spring w/Key & Set Screw
ASB	Low Profile Base Black Spring w/Key & Set Screw

Model	Color	Frequency	Gain	Phasing Coil
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### Dual Band & Special Applications

#### Chrome Models

A150/450C	Chrome	150-174/450-470	Unity	Closed coil trap
C144/440C	Chrome	144-148/440-450	2/5 dB	Closed coil collinear
C150/450C	Chrome	150-174/450-470	2/5 dB	Closed coil collinear
C144/440CS	Chrome	144-148/440-450	2/5 dB	Closed coil collinear w/Spring
C150/450CS	Chrome	150-174/450-470	2/5 dB	Closed coil collinear w/Spring
AB150/450C	Black	150-174/450-470	Unity	Closed coil trap
CB144/440C	Black	144-148/440-450	2/5 dB	Closed coil collinear
CB150/450C	Black	150-174/450-470	2/5 dB	Closed coil collinear
CB144/440CS	Black	144-148/440-450	2/5 dB	Closed coil collinear w/Spring
CB150/450CS	Black	150-174/450-470	2/5 dB	Closed coil collinear w/Spring

### Disguise Antennas (Cellular Look-alike)

#### Chrome Models

AD150	Chrome	150-174 MHz		Short 1/4 Wave
AD450	Chrome	450-470 MHz		Short 1/4 Wave

#### Black Models

ADB150	Black	150-174 MHz		Short 1/4 Wave
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### Scanner Antennas

#### Chrome Model

ASCANC	Chrome	150/450/800	Rx Only	Closed Collinear
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#### Black Model

ABSCANC	Black	150/450/800	Rx Only	Closed Collinear
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AS	Chrome Spring for above add...
ASB	Black Spring for above add...

Model	Finish	Frequency	Gain	Overall Length	Whip Style
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### Unity Gain Models

Stainless Models					
QZ75	Stainless	27 - 54 MHz	Unity	102	1/4 Wave
QW***	Stainless	Customer Specified	Unity	Customer Spec.	1/4 Wave
QW136	Stainless	136 - 144 MHz	Unity	22	1/4 Wave
QW144	Stainless	144 - 152 MHz	Unity	19	1/4 Wave
QW152	Stainless	152 - 162 MHz	Unity	18	1/4 Wave
QW162	Stainless	162 - 174 MHz	Unity	17	1/4 Wave
QW220	Stainless	220 - 225 MHz	Unity	12.5	1/4 Wave
QW406	Stainless	406 - 430 MHz	Unity	7	1/4 Wave
QW430	Stainless	430 - 450 MHz	Unity	6.5	1/4 Wave
QW450	Stainless	450 - 470 MHz	Unity	6	1/4 Wave
QW470	Stainless	470 - 490 MHz	Unity	5.75	1/4 Wave
QW490	Stainless	490 - 512 MHz	Unity	5.5	1/4 Wave
QW800	Stainless	806 - 896 MHz	Unity	3.3	1/4 Wave
QW900	Stainless	896 - 970 MHz	Unity	3	1/4 Wave
QWFT120	Stainless	118 - 970 MHz	Unity	24	1/4 Wave

Black Models					
QWB***	Black	Customer Specified	Unity	Customer Spec.	1/4 Wave
QWB136	Black	136 - 144 MHz	Unity	22"	1/4 Wave
QWB144	Black	144 - 152 MHz	Unity	19"	1/4 Wave
QWB152	Black	152 - 162 MHz	Unity	18"	1/4 Wave
QWB162	Black	162 - 174 MHz	Unity	17"	1/4 Wave
QWB220	Black	220 - 225 MHz	Unity	12.5"	1/4 Wave
QWB406	Black	406 - 430 MHz	Unity	7"	1/4 Wave
QWB430	Black	430 - 450 MHz	Unity	6.5"	1/4 Wave
QWB450	Black	450 - 470 MHz	Unity	6"	1/4 Wave
QWB470	Black	470 - 490 MHz	Unity	5.75"	1/4 Wave
QWB490	Black	490 - 512 MHz	Unity	5.5"	1/4 Wave
QWB800	Black	806 - 896 MHz	Unity	3.3"	1/4 Wave
QWB900	Black	896 - 970 MHz	Unity	3"	1/4 Wave
QWFTB120	Black	118 - 970 MHz	Unity	24	1/4 Wave

### 3 dB Gain Models

Stainless Models					
QW8063	Stainless	806 - 866 MHz	3 dB	16.25	Open Coil Flexible
QW8253	Stainless	825 - 896 MHz	3 dB	15.5	Open Coil Flexible
QW8963	Stainless	896 - 970 MHz	3 dB	14.5	Open Coil Flexible

Black Models					
QWB8063	Black	806 - 866 MHz	3 dB	16.25	Open Coil Flexible
QWB8253	Black	825 - 896 MHz	3 dB	15.5	Open Coil Flexible
QWB8963	Black	896 - 970 MHz	3 dB	14.5	Open Coil Flexible

### Accessories

QWNUT	Quarterwave Nut - Chrome
QWNUTB	Quarterwave Nut - Black
QWRC	Quarterwave Rain Cap - Chrome
QWRCB	Quarterwave Rain Cap - Black

Model	Frequency
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### NMO Mount MODELS

Ground Plane	
DISC806M	806-866 MHz
DISC824M	824-896 MHz

### Self Adhesive Models with Pigtail Jumper

No Ground Plane		
DISC2400PNSM	Black	2400-2500 MHz
DISCW2400PNSM	White	2400-2500 MHz

QWB800

## Quarterwave

QW450

- All Quarterwaves are built with gold plated contacts for corrosion resistance and best power transfer
- Stand-up™ grommet will not degrade over time
- High spring temper rod stays straighter longer
- Stainless steel corona ball stays on the rod - no dissimilar metal interaction associated with competitor designs



Gold Plated Contact



## Discadoo®

- Low profile with big performance
- Low angle omni-directional radiation provided by Planar-Inverted-F antenna design

# LAND MOBILE RADIO



MABD

## Mobile Mounts

- All brass construction and gold plated contact design ensure the most corrosion resistance and best power transfer available
- 78 Rockwell Hardness brass material resists corrosion
- Silver soldered ground lug and contact virtually eliminates RF noise or static
- Multiple cable options are available



VTPM800

Gold Plated Contact



MB8

"O" Ring Seal



Silver Solder

## Model Connector Type

### 3/4" Or 3/8" Hole Alternative Mounts (Cable Not Included)

MO	3/4 Steel Mount
MBO	3/4 Brass Mount for use with RG58 size Cable
MBOX	3/4 Brass Mount for RG8X size Cable
MBOF	3/4 Brass Mount for Teflon® Cable
MABO	3/8 Brass Mount for use with RG58 size Cable
MABTO	3/4 or 3/8 Brass Thick Plate Mount for 3/16" to 1/4" thick surfaces
MABVTO	3/4 or 3/8 Hole 1/2" Thick Plane Adjustable Mount Only
MXGPO	3/8" snap-in Ground Plane Mount
MXO	Snap-in Mount

### 5/8" Hole Alternative Mounts

VTPM	1" Thick Plate Mount (UHF Barrel)
VTPM800	800 MHz Extra Thick Plate Mount (N Barrel)

### 3/4 Hole Brass Mounts\*

#### Models with 17' of RG58A/U Stranded Center Conductor Cable

MB8	No Connector
MB8B	BNC Crimp
MB8M	Mini UHF Crimp
MB8N	N Crimp
MB8NS	N Solder
MB8P	UHF (PL259) Crimp
MB8PS	UHF (PL259) Solder
MB8PST	UHF (PL259) Teflon® Solder
MB8T	TNC Crimp

#### Models with 17' of RG58U Solid Center Conductor Cable

MB8U	No Connector
MB8UB	BNC Crimp
MB8UM	Mini UHF Crimp
MB8UN	N Crimp
MB8UNS	N Solder
MB8UP	UHF (PL259) Crimp
MB8UPST	UHF (PL259) Teflon® Solder
MB8UT	TNC Crimp

#### Models with 17' of RG8X Low Loss Solid Center Conductor Cable

MB8X	No Connector
MB8XB	BNC Crimp
MB8XM	Mini UHF Crimp
MB8XN	N Crimp
MB8XNS	N Solder
MB8XP	UHF (PL259) Crimp
MB8XPST	UHF (PL259) Teflon® Solder
MB8XT	TNC Crimp

#### Models with 17' of Teflex™ Cable

MBD	No Connector
MBDB	BNC Crimp
MBDM	Mini UHF Crimp
MBDN	N Crimp
MBDNS	N Solder
MBDP	UHF (PL259) Crimp
MBDPST	UHF (PL259) Teflon® Solder
MBDT	TNC Crimp

#### Models with 17' of Teflon® Cable

MBF	No Connector
MBFB	BNC Crimp
MBFM	Mini UHF Crimp
MBFN	N Crimp

#### Models with 17' of ATX195 Cable

MB195	No Connector (Good for higher frequency)
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### Installation Accessories

P34	N/A	Package of 6 - 3/4" Hole Plugs
MOGSK	N/A	Package of 6 - 3/4 Mount Gaskets
MORNG	N/A	Package of O-rings for "M" Mounts

\*All connectors are shipped loose. Choose "I" option for installed connectors

**Model Connector Type**

**3/8 Hole Brass Mounts\***

**Models with 17' of RG58A/U Stranded Center Conductor Cable**

MAB8	No Connector
MAB8B	BNC Crimp
MAB8M	Mini UHF Crimp
MAB8N	N Crimp
MAB8NS	N Solder
MAB8P	UHF (PL259) Crimp
MAB8PS	UHF (PL259) Solder
MAB8PST	UHF (PL259) Teflon® Solder
MAB8T	TNC Crimp

**Models with 17' of RG58U Solid Center Conductor Cable**

MAB8U	No Connector
MAB8UB	BNC Crimp
MAB8UM	Mini UHF Crimp
MAB8UN	N Crimp
MAB8UNS	N Solder
MAB8UP	UHF (PL259) Crimp
MAB8UPST	UHF (PL259) Teflon® Solder
MAB8UT	TNC Crimp

**Models with 17' of RG8X Low Loss Solid Center Conductor Cable**

MAB8X	No Connector
MAB8XB	BNC Crimp
MAB8XM	Mini UHF Crimp
MAB8XN	N Crimp
MAB8XNS	N Solder
MAB8XP	UHF (PL259) Crimp
MAB8XPST	UHF (PL259) Teflon® Solder
MAB8XT	TNC Crimp

**Models with 17' of Teflex™ Coax**

MABD	No Connector
MABDB	BNC Crimp
MABDM	Mini UHF Crimp
MABDN	N Crimp
MABDNS	N Solder
MABDP	UHF (PL259) Crimp
MABDPST	UHF (PL259) Teflon® Solder
MABDT	TNC Crimp

**Thick Plane Models\* - up to 1/4"**

**Models with 17' of RG58A/U Stranded Center Conductor Cable**

MABT8	No Connector
MABT8B	BNC Crimp
MABT8M	Mini UHF Crimp
MABT8N	N Crimp
MABT8P	UHF (PL259) Crimp
MABT8PS	UHF (PL259) Solder

**Models with 17' of RG58U Solid Center Conductor Cable**

MABT8U	No Connector
MABT8UB	BNC Crimp
MABT8UM	Mini UHF Crimp
MABT8UN	N Crimp
MABT8UP	UHF (PL259) Crimp

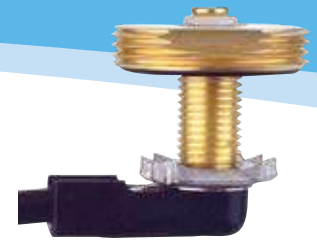
**Thick Plane Models\* - up to 1/2"**

**Models with 17' of RG58A/U Stranded Center Conductor Cable**

MABVT8	No Connector
MABVT8M	Mini UHF Crimp
MABVT8B	BNC Crimp
MABVT8UP	UHF (PL259) Crimp

**Model with 17' of RG58U Solid Center Conductor Cable**

MABVT8U	
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**MABVT8**  
Adjusts Up to  
1/2" Thick Mtg. Surface  
3/8" or 3/4" Hole Mount

**Ordering Guide**

**MB8PS114 =**

3/4" Brass Mount, PL259 Solder Installed,  
14' of RG58A/U

- MB** Mount Style & Hole Style  
M = 3/4" Steel Hole Mounts  
MAB = 3/8" Brass Hole Mounts  
MABT = 3/8" or 3/4" Brass Mounts for Thick Plate up to 1/4"  
MABVT = 3/8" or 3/4" Brass Hole Mounts Adjustable up to 1/2"  
MB = 3/4" Brass Hole Mounts  
MX = 3/8" Brass Snap-in Hole Mount

- 8** Cable Style  
8 = RG58A/U  
8U = RG58U  
8X = RG8X "low loss"  
D = Teflex™  
F = Teflon® Coax Cable  
O = Only (Mount Only-No Cable)  
195=ATX195

- PS** Connector Style  
Blank = No connector  
B = BNC crimp  
M = Mini UHF crimp  
N = N crimp  
NS = N solder  
P = PL259 crimp  
PS = PL259 solder  
PST = PL259 solder Teflon®  
SM = SMA Crimp  
T = TNC crimp

- I** Installation Option  
Blank = Loose connector  
I = Installed connector  
(Add \$1.00 for crimp, \$1.50 for solder.)

- 14** Cable Length  
Blank = Standard 17 ft. cable length  
14 = Optional 14 ft. cable length  
Other lengths available upon request

\*All connectors are shipped loose.  
Choose "I" option for installed connectors



# LAND MOBILE RADIO



GBR8

## Magnetic Mounts

- Corrosion resistant materials used throughout for high durability and weather resistance
- Neoprene seal for moisture protection
- High 80lb pull strength will allow antenna to stay put
- Optional rubber boot provides additional protection to mounting surface
- Triple reinforced coax strain relief eliminates cable pull out



MBC800

## Mobile-to-Base Converters

- Value conscious option for VHF, UHF, 800 MHz and up applications

**Model**                      **Connector Type**

### 3/4" Style Magnetic Mounts\*

#### Chrome Models with 12' of RG58A/U Stranded Center Cable

G8	No Connector
G8B	BNC Crimp
G8BI	BNC Crimp, Installed
G8MI	Mini UHF Crimp, Installed
G8N	N Crimp
G8NS	N Solder
G8P	UHF (PL259) Crimp
G8PI	UHF (PL259) Crimp, Installed
G8PPI	UHF (PL259) Crimp, Installed
G8PS	UHF (PL259) Solder
G8PST	UHF (PL259) Teflon® Solder
G8TI	TNC Crimp, Installed

#### Chrome Models with 12' of RG58U Solid Center Conductor Cable

G8U	No Connector
G8UB	BNC Crimp
G8UM	Mini UHF Crimp
G8UN	N Crimp
G8UNS	N Solder
G8UP	UHF (PL259) Crimp
G8UPST	UHF (PL259) Teflon® Solder
G8UT	TNC Crimp

#### Chrome Models with 12' of RG8X Low Loss Cable

G8X	No Connector
G8XBI	BNC Crimp, Installed
G8XM	Mini UHF Crimp
G8XNI	N Crimp, Installed
G8XNS	N Solder
G8XP	UHF (PL259) Solder
G8XPST	UHF (PL259) Teflon® Solder

#### Chrome Models with 12' of Teflex™ Cable

GD	No Connector
GDBI	BNC Crimp, Installed
GDM	Mini UHF Crimp
GDNI	N Crimp, Installed
GDNS	N Solder
GDPI	UHF (PL259) Crimp, Installed
GDPST	UHF (PL259) Teflon® Solder
GDT	TNC Crimp

GRO Rubber Boot add:

For Black on all models add:

#### Black Models with 12' of RG58A/U Stranded Center Cable

GB8	RG58A/U
GBR8PI	Rubber Boot Option - RG58A/U with PL259 Installed

Customer specified cable lengths available. Contact your customer service representative.

**Model**                      **Frequency Range**

### Mobile To Base Converter

MBC	Mobile-to-base Converter for VHF and UHF, S0239 Terminated
MBCN	Mobile-to-base Converter for VHF and UHF, N Terminated
MBC800	Mobile-to-base Converter for 800 and 900 MHz, N Terminated
MBC800LT	Mobile-to-base Converter for 800 and up, wall mount, N Terminated

\*All connectors are shipped loose.  
Choose "I" option for installed connectors

**Model**                      **Connector Type**

### 3/4" Style Mini-magnetic Mounts\*

#### Chrome Models with 12' of RG58A/U Stranded Center Cable

GM8	No Connector
GM8B	BNC Crimp
GM8M	Mini UHF crimp
GM8N	N Crimp
GM8NS	N Solder
GM8P	UHF (PL259) Crimp
GM8PI	UHF (PL259) Crimp, Installed
GM8PS	UHF (PL259) Solder
GM8PST	UHF (PL259) Teflon® Solder
GM8T	TNC Crimp

#### Chrome Models with 12' of RG58U Solid Center Conductor Cable

GM8U	No Connector
GM8UB	BNC Crimp
GM8UM	Mini UHF Crimp
GM8UN	N Crimp
GM8UNS	N Solder
GM8UP	UHF (PL259) Crimp
GM8UPST	UHF (PL259) Teflon® Solder
GM8UT	TNC Crimp

#### Chrome Models with 12' of Teflex™ Cable

GMD	No Connector
GMDB	BNC Crimp
GMDM	Mini UHF Crimp
GMDN	N Crimp
GMDNS	N Solder
GMDPI	UHF (PL259) Crimp, Installed
GMDPST	UHF (PL259) Teflon® Solder
GMDT	TNC Crimp

#### Black Models with 12' of RG58A/U Stranded Center Cable

GM88	No Connector
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GMRO Rubber Boot add:

For Black on all models add:

### Mini-trunk Lid Mounts\*

#### Models with 17' RG58A/U Stranded Center Conductor Cable

TM8	No Connector
TMB8	No Connector
TM8B	BNC Crimp
TM8M	Mini UHF Crimp
TM8N	N Crimp
TM8NS	N Solder
TM8P	UHF (PL259) Crimp
TM8PS	UHF (PL259) Solder
TM8PST	UHF (PL259) Teflon® Solder
TM8T	TNC Connector

#### Models with 17' of RG58U Solid Center Conductor Cable

TM8U	No Connector
TMB8U	No Connector
TM8UB	BNC Crimp
TM8UM	Mini UHF Crimp
TM8UN	N Crimp
TM8UNS	N Solder
TM8UP	UHF (PL259) Crimp
TM8UPST	UHF (PL259) Teflon® Solder
TM8UT	TNC Crimp

For Black on all models add:



GM8

## Miniature Magnetic Mounts

- Ideal for small antennas
- 50lb pull strength
- Brass, ceramic magnet, and chrome plated steel materials are very durable and resist corrosion
- Gold plated contact



TM8

## Mini-Trunk Lid Mounts

- Stainless steel brackets and hardware are the ultimate in corrosion resistance
- Elegant design enables proper fit on high tolerance trunk lid seams
- Non staining rubber cushion minimizes scratches and stains
- Gold plated contact

\*All connectors are shipped loose.  
Choose "I" option for installed connectors

# LAND MOBILE RADIO



LBBMB8

## Mobile Mount Kits & Brackets

- Conductive black chrome or bright stainless steel trunk groove bracket
- Reliable ground and high durability
- Extruded aluminum mirror mount brackets are stronger and more durable
- Stainless steel hardware - the ultimate in lifetime durability

Model	Description
<b>Mirror Mount Models</b>	
LBM9034	"L" Bracket for Mirror Mount at 90°, 3/4" Hole
LBM9038	"L" Bracket for Mirror Mount at 90°, 3/8" Hole
LBM4534	Rt Angle "L" for Mirror Mount at 45°, 3/4" Hole
LBM4538	Rt Angle "L" for Mirror Mount at 45°, 3/8" Hole

Black Mirror Mount Models	
LBBM9034	Black "L" Bracket for Mirror Mount, 3/4" Hole
LBBM9038	Black "L" Bracket for Mirror Mount, 3/8" Hole
LBBM4534	Black Rt Angle "L" for Mirror at 45°, 3/4" Hole
LBBM4538	Black Rt Angle "L" for Mirror at 45°, 3/8" Hole

Mirror Mount Bracket With 3/4 Mount	
LBBM8PS	17ft RG58 Cble with sol PL259 on conn
LBBM8	17ft RG58 Cable with no connector

Black Mirror Mount Br.acket With 3/4 Mount	
LBBM8	17ft RG58 Cable no connector

Stainless Trunk Groove Models	
LBH3400	Heavy Duty Fender Mount, 3/4" Hole
LBT3400	"L" Bracket for Trunk Groove, 3/4" Hole
LBT3800	"L" Bracket for Trunk Groove, 3/8" Hole
LBT8	"L" Bracket for Trnk Grv, 3/4" Hole w/NMO Mount and Cable

Black Stainless Trunk Groove Models	
LBTB3400	Black "L" Bracket for Trunk Groove, 3/4" Hole
LBTB3800	Black "L" Bracket for Trunk Groove, 3/8" Hole

Stainless Straight Trunk Groove Models	
SBT3400	Straight Bracket - 3/4" Hole
SBTB3400	Black Straight Bracket - 3/4" Hole
SBH3400	"L" Bracket for Dodge Ram Trucks

Model	Description
<b>Ferrule Set Screws - Package of 12 -</b>	
HWS0308	#10-32 x 1/8" - for A-Base Antennas
HWSB0308	#10-32 x 1/8" - for A-Base Black Antennas
HWS0316	#10-32 x 3/16" - for B & C Coil Antennas
HWSB0316	#10-32 x 3/16" - for B & C Coil Black Antennas
HWS8316	#8-32 x 3/16"
HWSB8316	#8-32 x 3/16" Black

O-rings and Gaskets - Package of 6	
BCORNG	O-Rings for B & C Coils
MOGSK	Mount Gaskets for NMO Mt.
MORNG	Mount O-Rings for NMO Mt.

Black Body Hole Plugs - Package of 6	
P34	3/4" Hole Plugs
P38	3/8" Hole Plug

Quarterwave Field Tunable Ball	
QWFTBL	Chrome Ball
QWFTBBL	Black Ball

Brass Nut	
MABNUT	Outer 3/8" mount
MBNUT	Outer 3/4" mount

## Mobile Accessories



Brass Nuts



B&C Coil Springs

**Model**                      **Description**

**Heat Shrink Tubes**

SEALTUBE 1	1 1" x 1"
SEALTUBE 2	2 2" x 1"

**Mocap Tape and Strips**

IASFST	36' Roll
IASFST10	Six Pack of 10" Strips

**Magnetic Base Rubber Boots**

GRO	Magnetic Mount
GMRO	Miniature Magnetic Mount

**Quarterwave Nuts**

QWNUT	Chrome
QWNUTB	Black

**Quarterwave Rain Caps**

QWRC	Chrome
QWRCB	Black

**Springs**

AS	Low Profile Base Chrome Spring
ASB	Low Profile Base Black Spring
S	B & C Coil Chrome Spring
SB	B & C Coil Black Spring

**SpringGuard™**

SG	B & C Chrome
SGB	B & C Black

**A-Base**

AO	Low Profile Base
----	------------------

**X-Act™ Hole Saws**

HS34	3/4"
HS38	3/8"
HS34RB	3/4" Repl. Blades (2)
HS34DB	3/4" Repl. Pilot Drill Bit
HS38DB	3/8" Repl. Pilot Drill Bit

**Blackhawk™ Noise Suppressors**

NS1535	35 Volt 15 Amp
NS3035	35 Volt 30 Amp

**Trapper™ Lightning Arrestors**

LABH350NN	Bulkhead N to N
LAIL350NN	Inline N to N
LABH2400NN	Bulkhead 2.4 GHz N to N

**Replacement Whips**

RO49T	Chrome 42" Tapered w/Ball
ROB49T	Black 42" Tapered w/Ball

Many cable assembly combinations available. Call for information.



X-Act™ Hole Saw  
U.S. Patent No. D377,495



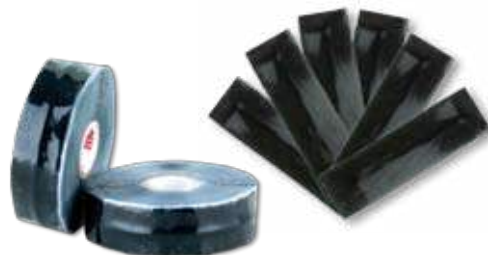
SpringGuard™



Trapper™  
Lightning Arrestor



Magnetic Base Rubber Boot



Mocap Tape roll and strips



Blackhawk™ Noise  
Suppressor

# LAND MOBILE RADIO

## Cables/ connectors

- All Cable assemblies and jumpers 100% tested before shipping ensures best performance
- Most popular lengths in stock
- Custom coaxial cables available
- Automated cable processing for highest accuracy at competitive pricing



Model	Description	Connector Type
<b>Bulk Cable</b>		
R8100	100 foot spool of RG58A/U	None
R8500	500 foot spool of RG58A/U	None
R81000	1000 foot spool of RG58A/U	None
R8U100	100 foot spool of RG58U	None
R8U500	500 foot spool of RG58U	None
R8U1000	1000 foot spool of RG58U	None
R195100	100 foot spool of ATX195	None
R195500	500 foot spool of ATX195	None
R59100	100 foot spool of RG59U (75 Ohm)	None
R59500	500 foot spool of RG59U (75 Ohm)	None
R591000	1000 foot spool of RG59U (75 Ohm)	None
R8X100	100 foot spool of RG8X	None
R8X500	500 foot spool of RG8X	None
RD100	100 foot spool of Teflex™ Teflon® Dual Shield	None
RD500	500 foot spool of Teflex™ Teflon® Dual Shield	None
RF100	100 foot spool of Teflon®	None
RF500	500 foot spool of Teflon®	None
RF1000	1000 foot spool of Teflon®	None
R9913100	100 foot spool of 9913	None
R9913500	500 foot spool of 9913	None
R400100	100 foot spool of high performance ATX400	None
R400500	500 foot spool of high performance ATX400	None

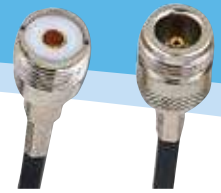
<b>Precision Cable Assemblies™</b>		
PT4003NN	Pigtail 3 foot ATX400	Crimp N/Crimp N
PT40010NN	Pigtail 10 foot ATX400	Crimp N/Crimp N
PT40015NN	Pigtail 15 foot ATX400	Crimp N/Crimp N
PT40012NNF	Pigtail with 12 foot ATX400	Crimp N/Crimp N Female
PT40025NN	Pigtail 25 foot ATX400 N to N	Crimp N/Crimp N
PT40035NN	Pigtail 35 ft. ATX400 N to N	Crimp N/Crimp N
PT40050NN	Pigtail 50 foot ATX400 N to N	Crimp N/Crimp N
PT40075NN	Pigtail 75 foot ATX400 N to N	Crimp N/Crimp N
PT400100NN	Pigtail 100 foot ATX400 N to N	Crimp N/Crimp N
PT40050NPS	Pigtail 50 foot ATX400	N male/PL259 male solder
PT400100NPT	Pigtail 100 foot ATX400	N male/PL259 Teflon® male
PT815NB	Pigtail 15 foot RG58	Crimp N/Crimp BNC
PT820NN	Pigtail 20 foot RG58	Crimp N/Crimp N
PT850NP	Pigtail 50 foot RG58A/U	N male/PL259 male
PT8U40NT	Pigtail 40 foot RG58U	Crimp N/TNC Male
PT8X25NN	Pigtail 25 foot RG8X	Crimp N male/Crimp N male
PT8X50NP	Pigtail 50 foot RG8X	N male/PL259 male
PTD5NN	Pigtail 5 foot Teflex™	Crimp N male/Crimp N male
PTD20PP	Pigtail 20 foot Teflex™	PL259 male/PL259 male
PT825PPF	Pigtail 25 foot RG58A/U	PL259 male/PL259 female

<b>Crimp Tools, Heat Shrink Tubing And Connector Sealant</b>	
SEALTUBE1	Heat shrink tube 1 inch diameter by 1 inch long
SEALTUBE2	Heat shrink tube 1 inch diameter by 2 inch long
SEALTUBE3	Self adhesive lined heat shrink tube 3 inch diameter by 1 inch long
SEALTUBE4	Self adhesive lined heat shrink tube 4 inch diameter by 1 inch long
IA3MTP22	Tar pad connector seal
CCT	Heavy duty crimp tool for RG58 family of connectors
CCT213	Heavy duty crimp tool for 213/ATX400 family of connectors
IASFST10	MOCAP Installation Tape - Six pack of 10" strips
IASFST	MOCAP Installation Tape - 36 ft. roll

<b>Adapters</b>	
CNFNF	Type N female to type N female barrel
CNF3	3 way type N female "T" silver plated
CNUHFF	Type N male to UHF female
CPL9CFF	UHF female to UHF female barrel
CPL9CF3	3 way UHF female "T"
CUG175	UG175U adapter for PL259 to 58 size coax
CUG176	UG176U adapter for PL259 to 8X size coax



Model	Type	Attach	Coax	Finish
<b>Connectors</b>				
CBNC58	BNC Male	Crimp-on	RG58	N
CMUHF58	Mini UHF Male	Crimp-on	RG58	N
CMUHF58	Mini UHF FML	Crimp-on	RG58	N
CN58	Type N Male	Crimp-on	RG58	N
CN58S	Type N Male	Solder-on	RG58	N
CNF58	Type N Female	Crimp-on	RG58	N
CPL9C	PL259 Male	Crimp-on	RG58	N
CPL9CE	PL259 M (ext.nut)	Crimp-on	RG58	N
CPL9CT	PL259 Male	Crimp-on	RG58	S
CPL9CF	PL259 Female	Crimp-on	RG58	N
CPL9S	PL259 Male	Solder-on	RG58	N
CPL9TS	PL259 Male	Solder-on	RG58	S
CSN58	Type N Male	Crimp-on	RG58	S
CTNC58	TNC Male	Crimp-on	RG58	N
CTNC58F	TNC Female	Crimp-on	RG58	N
CSMA58	SMA Male	Crimp-on	RG58	N
CBNC8X	BNC Male	Crimp-on	RG8X	N
CMUHF8X	Mini UHF Male	Crimp-on	RG8X	N
CN8X	Type N Male	Crimp-on	RG8X	N
CPL9C8X	PL259 Male	Crimp-on	RG8X	N
CTNC8X	TNC Male	Crimp-on	RG8X	N
CN213	Type N Male	Crimp-on	213/8U	N
CN213S	Type N Male	Solder-on	213/8U	N
CBNC316	BNC Male	Crimp-on	RG316/U	N
CTNCF316	TNC Female	Crimp Jack	RG316/U	N
CBNC400	BNC Male	Crimp-on	ATX400	N
CN400	Type N Male	Crimp-on	ATX400	N
CN400S	Type N Male	Solder-on	ATX400	N
CNF400	Type N Female	Crimp-on	ATX400	N
CNF400S	Type N Female	Solder-on	ATX400	N
CPL9C400	PL259 Male	Crimp-on	ATX400	S
CTNC400	TNC Male	Crimp-on	ATX400	N
CSMA174	SMA Male	Crimp-on	RG316	N



CPL9CF CNF58



CMUHF58 CBNC316



CN400 CN400S

Type	Center Conductor	Outer Jacket	Dielectric Material	Nominal O.D.	Nominal Impedance (ohms)	Nominal Capacitance (pf/ft)	Nominal Velocity of Propagation	Shield Cover	Attenuation (dB/100 ft)		
									150MHz	450MHz	900MHz
RG58A/U	Stranded	Black	Solid PVC	0.193" Polyethylene	50.0	30.8	66%	95% Braid	6.20	12.50	20.00
RG58/U	Solid	Black	Solid PVC	0.193" Polyethylene	53.5	28.5	66%	95% Braid	5.40	10.20	16.10
ATX 195	Solid BC	Black	Foam Polyethylene	0.195" Polyethylene	50.0	24.3	85%	100% Braid 100% Foil	4.40	7.80	11.10
RG59/U	Solid	Black	Gas Injected PVC	0.242" Foam	75.0	16.5	82%	67% Braid 100% Foil	3.80	7.00	10.10
Teflex™	Solid	White	Solid Teflon® PVC	0.195" FEP	50.0	30.0	69%	95% Braid 100% Foil	5.80	10.00	14.50
Teflon®	Stranded	White	Solid Teflon®	0.160" Teflon®	50.0	28.5	69%	95% Braid	4.80	9.00	13.50
RG8X	Solid	Black	Solid PVC	0.242" Polyethylene	50.0	33.0	66%	95% Braid	3.60	6.80	10.70
RG174	Stranded	Black	Solid Polyethylene	0.108" Polyethylene	50.0	30.8	66%	88% Braid	8.60	15.20	22.00
RG213/U	Stranded	Black	Solid PVC	0.405" Polyethylene	50.0	32.2	66%	95% Braid	2.30	4.50	7.60
RG316/U (Non-Plenum)	Stranded	Tan	TFE	0.092"	50.0	29.0	69.5%	95% Braid	10.30	18.70	27.30
RG316/U (Plenum)	Stranded	White	Solid	0.102" Teflon®	50.0	29.0	70.0%	95% Braid	12.00	22.00	36.00
R9913	Solid	Black	Semi Solid PVC	0.405" Polyethylene	50.0	24	84%	88% Braid 100% Foil	1.86	3.40	4.90
ATX400	Solid	Black	Gas Injected Polyethylene	0.405" Polyethylene	50.0	23.9	85%	90% Braid 100% Foil	1.50	2.70	3.90

# LAND MOBILE RADIO



Model	Frequency	Connectors	Photo	Avg. length
<b>Low Band 27-88 MHz</b>				
A+Frequency+connector	27-88MHz	BN, HT, KR, MX, PL, & TN	1	6"-10"
A+Frequency+connector+6	27-88MHz	BN, HT, KR, MX, PL, & TN	1	6"-10"
<b>EXL Models</b>	<b>25-29 MHz</b>	<b>HT, KR, MX, BNX, TNX</b>	<b>2</b>	
EXL25	25-29 MHz		2	10.75"-11.10"
EXL30	30-36 MHz		2	10.75"-11.10"
EXL36	36-42 MHz		2	10.75"-11.10"
EXL42	42-50 MHz		2	10.75"-11.10"
EXL66	66-76 MHz		2	10.75"-11.10"
EXL76	76-88 MHz		2	10.75"-11.10"
EXW30	30-88 MHz	BNX, TNX	3	12"
<b>VHF 118-225 MHz</b>				
<b>DR</b>	<b>118-225 MHz</b>	<b>BN, MX, SF</b>	<b>4</b>	<b>19"</b>
<b>EXB Models</b>		<b>HT, KR, MX, BN, BNX, MD, MXI, SF, SFJ, SFU, SM, TN, TNX, PL</b>	<b>5</b>	
EXB118	118-127 MHz			7.8"
EXB127	127-136 MHz			7.6"
EXB136	136-144 MHz			6.48"-7.3"
EXB144	144-148 MHz			6.25"-6.9"
EXB150	150-162 MHz			5.95"-6.5"
EXB155	155-164 MHz			5.8"-6.3"
EXB161	161-174 MHz			5.9"
EXB164	164-174 MHz			5.6"-6"
EXB220	220-225 MHz			4.1"-4.9"
EXB0	Untuned			7.12'
<b>SXB Models</b>		<b>MX, SF, SFU</b>	<b>6</b>	
SXB145	136-149 MHz			5.5"
SXB155	150-161 MHz			5.5"
SXB165	162-174 MHz			5.5"
<b>EXH Models</b>		<b>SM, SMI, SMV, TN, BN, KR, MD, MX, MXI, SF, SFU</b>	<b>7</b>	
EXH150	145-155 MHz			10.5"
EXH155	150-160 MHz			10.5"
EXH160	155-165 MHz			10.5"
EXH170	165-175 MHz			10.5"
<b>EXR Models</b>		<b>BN, BNX, MX, MXI, SFU, SMI, SMV</b>	<b>8</b>	
EXR136	136-220 MHz			7"-8"
EXR144	144-148 MHz			7"-8"
EXR148	148-155 MHz			7"-8"
EXR150	150-162 MHz			7"-8"
EXR155	155-164 MHz			7"-8"
EXR164	164-174 MHz			7"-8"
EXR220	220-225 MHz			7"-8"
<b>EXS Models</b>		<b>HT, KR, MX, BN, BNX, MXI, SF, SFJ, SFU, SM, SMI, SMV, TN, TNX</b>	<b>9</b>	
EXS118	118-127 MHz			5.10"
EXS127	127-136 MHz			3.62"-4.4"
EXS136	136-144 MHz			3.62"-4.4"
EXS144	144-148 MHz			3.55"-4.45"
EXS148	148-155 MHz			3.50"-4.39"
EXS150	150-162 MHz			3.50"-4.39"
EXS155	155-164 MHz			3.45"-4.20"
EXS164	164-174 MHz			3.30"-3.95"
EXS220	220-225 MHz			3.50"-4.39"
<b>EXW Models</b>		<b>BNX, MX, TNX</b>	<b>3</b>	
EXW136	136-162MHz			8.75"
EXW148	148-174MHz			8.75"
EXW220	220-225MHz			8.75"
EXW 225	225-240MHz			8.75"
<b>TS Models</b>		<b>HT, KR, MX, BN, TN</b>	<b>10</b>	
<b>TS 118</b>	<b>118-174MHz</b>			<b>17"</b>
TS	Continuous Order 150			
<b>V Models</b>		<b>HT, KR, MX, BN, TN</b>	<b>11</b>	
V118	118-127 MHz			17"
V127	127-136 MHz			17"
V136	136-144 MHz			17"
V144	144-148 MHz			17"
V148	148-155 MHz			17"
V150	150-162 MHz			17"
V164	164-174 MHz			17"
V220	220-225 MHz			17"

Connector Guide



MX

MD

KR

HT

BN

BNX

Items printed in green are in-stock and available for immediate delivery



Model	Frequency	Connectors	Photo	Avg. length
<b>UHF 300-512 MHz and Dual Band</b>				
<b>EXC Models</b>		<b>KR, MD, MX, BN, BNX, MXI, SF, SFU, SM, SMI, SMV, TN, TNX</b>	<b>12</b>	
EXC308	308-322 MHz			6.5"-7"
EXC312	312-318 MHz			6.5"-7"
EXC400	400-420 MHz			6.5"-7"
EXC410	410-430 MHz			6.5"-7"
EXC420	420-450 MHz			6.5"-7"
EXC440	440-460 MHz			6.5"-7"
EXC450	450-470 MHz			6.1"-6.8"
EXC470	470-512 MHz			5.9"-6.6"
EXC0	Untuned			6"
<b>EXD Models</b>		<b>HT, KR, MD, MX, BN, BNX, MXI, SF, SFJ, SFU, SM, SMI, SMV, TN, TNX</b>	<b>13</b>	
EXD308	308-322 MHz			3.2"-4.1"
EXD312	312-318 MHz			3.2"-4.1"
EXD400	400-420 MHz			3.2"-4.1"
EXD410	410-430 MHz			3.1"-3.4"
EXD420	420-450 MHz			3.2"-4.1"
EXD450	450-470 MHz			2.95"-3.88"
EXD470	470-512 MHz			2.8"-3.6"
<b>EXR Models</b>		<b>KR, MX, BN, TN</b>	<b>14</b>	
EXR308	308-322 MHz			6.62"-6.95"
EXR312	312-318 MHz			6.62"-6.95"
EXR400	400-420 MHz			6.62"-6.95"
EXR420	420-450 MHz			6.62"-6.95"
EXR450	450-470 MHz			6.62"-6.95"
EXR470	470-512 MHz			6.62"-6.95"
EXW400	400-512 MHz	<b>BNX, TNX</b>	<b>3</b>	9"
<b>G Models</b>		<b>BN, TN</b>	<b>15</b>	
G400	400-420 MHz			10"
G420	420-450 MHz			10"
G450	450-470 MHz			10"
G470	470-512 MHz			10"
<b>SXD Models</b>		<b>MX, SF, SFU</b>	<b>16</b>	
SXD420	420-450 MHz			3.5"
SXD440	440-470 MHz			3.5"
<b>Trunking and SMR Applications</b>				
EXC806	806-866 MHz	<b>HT, KR, MD, MX, BN, BNX, MXI, SF, SFU, SM, SMI, SMV, TN, TNX</b>	<b>17</b>	3.70"-4.6"
EXC821	821-902 MHz	<b>BN, BNX, MD, TNX</b>		3.70"-4.6"
EXC902	902-960 MHz	<b>SF, SFJ, SFU, SM, SMI, SMV, TN</b>		3.5"-3.65"
<b>EXE Models</b>		<b>BN, BNX, MD, SF, SFU, SM, TN, TNX</b>	<b>18</b>	
EXE806	806-866 MHz			8-8.9"
EXE821	821-802 MHz			8"
EXE902	902-960 MHz			8.3"
EXE2400	2400-2500 MHz			
EXP806	806-869 MHz	<b>MD, SF, SFJ, SFU</b>	<b>19</b>	6.9"
EXP902	896-940 MHz	<b>MD, SF, SFU, SFJ, SMS</b>		6.9"
<b>EXR Models</b>		<b>BN, TN</b>	<b>20</b>	
EXR806	806-869 MHz			9.25-9.5"
EXR821	821-902 MHz			9.16"
EXR902	902-960 MHz			9.25-9.5"
EXR1850	1850-1970 MHz			9.25-9.5"
<b>EXS Models</b>		<b>MD, SF, SFJ, SFU, SM, SMS, TN</b>	<b>21</b>	
EXS806	806-866 MHz			2.25
EXS902	902-960 MHz			2.25



Model	Radiator	Connectors	Length
<b>2.4 GHz Antennas</b>			
EXC2400SM	1/4 Wave	SMA	2.5"
EXCN2400RTN	1/4 Wave	Reverse Polarity TNC	4"
EXCN2400TN	1/4 Wave	TNC	4"
EXE2400TNX	1/2 Wave	Covered TNC	8"
EXC2400SM	1/2 Wave	SMA	2.5"
EXR2400RSM	1/2 Wave	Reverse Polarity SMA	Right Angle
EXR2400SMA	1/2 Wave	SMA	Right Angle
EXRN2400RBN	1/2 Wave	Reverse Polarity BNC	Right Angle
EXRN2400RTN	1/4 Wave	Reverse Polarity TNC	Right Angle
EXSN2400RSM	1/4 Wave	Reverse Polarity SMA	4"
WRX2400TN	1/2 Wave	TNC	4"



Connector Guide



global solutions :  
local support™



## GPS/Telematics

Laird Technologies GPS/Telematics antennas are low profile, high performance and cost-effective solutions for your mobile communications needs. Available in combinations that cover all primary cellular frequencies plus GPS and Satellite Radio, Laird Technologies GPS/Telematic antennas feature small form factors allowing easy installation virtually anywhere inside or outside a vehicle. Phantom AVL/GPS antennas are currently utilized by ocean bound freighters, monitoring temperature and data while withstanding extreme temperatures, salt water and vibration. With integrated research, tooling, molding, assembly and accelerated life testing facilities around the world, our engineers will quickly and efficiently create solutions to your wireless challenges.

Model	Description	Center Freq	Gain	Overall Height	Connector Type	Coax Type
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**NMO Mountable**

GPSU15M	NMO GPS - 3 or 5 Volt Bias	1575.42 MHz	26 dB	1.5	NMO	NA
GPSUW15M	NMO GPS - 3 or 5 Volt Bias - White	1575.42 MHz	26 dB	1.5	NMO	NA

**Standard AVL**

GPS1575P	Low Profile AVL	1575.42 MHz	26 dB	1.25"	TNC-Male	RG174
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**Dual-Band GPS/Land Based Bar Antenna**

GPSDB150P	Low Profile Phantom Wideband VHS/GPS	137 - 150 MHz	3 dB-MEG*	2.2"	N-Male	RG58
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**Dual-Band GPS/Land Based AVL**

GPSD4503P	Low Profile AVL w/Phantom	450 - 470 MHz	3 dB-MEG*	3.5"	TNC-Male	ATX195
GPSD7463P	Low Profile AVL w/Phantom	746 - 786 MHz	3 dB-MEG*	1.25"	TNC-Male	ATX195
GPSD8063P	Low Profile AVL w/Phantom	806 - 866 MHz	3 dB-MEG*	1.25"	TNC-Male	ATX195
GPSD8213P	Low Profile AVL w/Phantom	821 - 896 MHz	3 dB-MEG*	1.25"	TNC-Male	ATX195
GPSD8903P	Low Profile AVL w/Phantom	890 - 960 MHz	3 dB-MEG*	1.25"	TNC-Male	ATX195
GPSD9023P	Low Profile AVL w/Phantom	806 - 866 MHz	3 dB-MEG*	1.25"	TNC-Male	ATX195

**Trunk Mount GPS**

TM8GPS	Trunk Mount GPS	1575.42 MHz		.75"		
TMB8GPS	Black Trunk Mount GPS	1575.42 MHz		.75"		

**Micro GPS Magnetic Base**

GPSM15GBNC	Micro GPS Antenna Magnetic Base	1575.42 MHz		.55"	BNC	23' RG174/U
GPSM15GSMA	Micro GPS Antenna Magnetic Base	1575.42 MHz		.55"	SMA	23' RG174/U
GPSM15GSMB	Micro GPS Antenna Magnetic Base	1575.42 MHz		.55"	SMB	23' RG174/U
GPSM15GTNC	Micro GPS Antenna Magnetic Base	1575.42 MHz		.55"	TNC	23' RG174/U

**GPS Add On Bracket**

GPSNMOAO	Bright Stainless Bracket with GPS	1575.42 MHz		.75"		17' - RG174
GPSBNMOAO	Black Stainless Bracket with GPS	1575.42 MHz		.75"		17' - RG174

**Tri-Band GPS AVL**

GPS1575P	Low Profile AVL	1575.42 MHz	26 dB	1.25"	TNC-Male	RG174
GPST821/18503P	Cell/PCS/GPS Low Profile	821-896 MHz/ 1850-1990 MHz	3 dB-MEG*	1.25"	TNC-Male	17' - RG174

Model	Description	Center Freq	Gain	Overall Length	Connector Type	Coax Length
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**Survivor™**

GPSDS1370P	Survivor - VHF plus GPS	137 - 150 MHz	Unity	21.75"	Optional	14'
GPSDS1370PLP	Survivor - Low Profile VHF plus GPS	137 - 150 MHz	Unity	7.25"	Optional	14'
GPSDS1370G	Survivor - VHF/GPS w/ Magnetic Base	137 - 150 MHz	Unity	7.25"	Optional	14'
GPSDS8060P	Survivor - 800 MHz + Unity Gain	806 - 866 MHz	Unity	6"	Optional	14'
GPSDS8063P	Survivor - 800 MHz + 3 db Gain	806 - 866 MHz	3 dB	14.285"	Optional	14'
GPSDS8065P	Survivor - 800 MHz + 5 db Gain	806 - 866 MHz	5 dB	26.25"	Optional	14'



Tri-Band  
GPST821/18503PP



Micro GPS with Magnetic  
or Adhesive Base  
GPS15MGSMB  
Bottom or Side Exit



Trunk Mount GPS with  
NMO Bracket  
TM8GPS



Survivor™ with  
Magnetic Base and  
Boot Option  
GPSDS13780GR

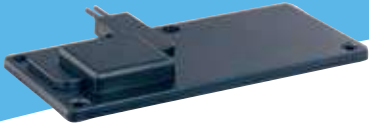
Survivor™  
GPSDS1370PLP

**GPSx™**

- Monitor location with GPS models available in NMO, magnetic, and trunk mount options
- Multiple applications - heavy equipment to luxury automobiles
- Heavy duty spring available on some models
- GPSDS1370P model is ideal for ORBCOMM® applications



# GPS/TELEMATICS



## Internal Mercury™ Tri-band GPS

- 3 and 5 volt versions
- AMPS/PCS/GPS or GSM/DCS/GPS frequencies available
- High gain solution maximizes coverage area
- Small size (5" x 2.5" x .5") allow for stealth (Covert) in-vehicle applications such as fleet management and asset tracking



## External Mercury™ Tri-band GPS

- 3 and 5 volt versions
- AMPS/PCS/GPS or GSM/DC/GPS frequencies available
- 5.625" x 5.125" x .875"

## Quad-Band MicroBlade™

- AMPS/GSM/DCS/PCS/GPS frequency
- GPSQ measures only 4.94" x 1.34" x .25"



Model	Description	Frequency	Gain	Connector Type	GPS Connector	Coax Type
<b>Internal Mercury™ Tri-band</b>						
<b>3V AMPS/PCS/GPS</b>						
GPST3I824/18503	3V Tri-Band Internal Mercury	AMPS: 824-896 MHz PCS: 1850-1990 MHz GPS: 1575.42 MHz"	3.5 dBi	SMA	SMA	17' RG-174
<b>5V AMPS/PCS/GPS</b>						
GPST5I824/18503	5V Tri-Band Internal Mercury	AMPS: 824-896 MHz PCS: 1850-1990 MHz GPS: 1575.42 MHz"	3.5 dBi	SMA	SMA	17' RG-174
GPST5I880/17103	5V Tri-Band Internal Mercury	AMPS: 880-960 MHz 1710-1880 MHz GPS: 1575.42 MHz"	3.5 dBi	SMA	SMA	17' RG-174
<b>External Mercury™ Tri-band</b>						
<b>3V AMPS/PCS/GPS</b>						
GPST3E824/18503	3V Tri-Band Internal Mercury	AMPS: 824-896 MHz PCS: 1850-1990 MHz GPS: 1575.42 MHz"	3.5 dBi	SMA	SMA	17' RG-174
<b>5V AMPS/PCS/GPS</b>						
GPST5E824/18503	5V Tri-Band Internal Mercury	AMPS: 824-896 MHz PCS: 1850-1990 MHz GPS: 1575.42 MHz"	3.5 dBi	SMA	SMA	17' RG-174
Model	Description	Frequency	Gain	Connector Type	GPS Connector	Coax Length
<b>Quad-Band MicroBlade™ with and without GPS</b>						
GPSQ	MicroBlade1 QuadBand & GPSIM15 Antenna	AMPS: 824-896 MHz GSM: 880-960 MHz DCS: 1710-1880 MHz PCS: 1850-1990 MHz GPS: 1575.42 MHz	2.3 dBi 2.3 dBi 2.1 dBi 3.1 dBi 2.5 dBi	SMC SMA		5' 5'
Microblade1	MicroBlade1 Antenna	AMPS: 824-896 MHz GSM: 880-960 MHz DCS: 1710-1880 MHz PCS: 1850-1990 MHz	2.3 dBi 2.3 dBi 2.1 dBi 3.1 dBi	SMC		5' '
GPSIM15	Internal GPS Antenna - 3 volt	GPS: 1575.42 MHz	2.5 dBi	SMA		5'
Microblade1W	MicroBlade1 Antenna Waterproof	AMPS: 824-896 MHz GSM: 880-960 MHz DCS: 1710-1880 MHz PCS: 1850-1990 MHz	2.3 dBi 2.3 dBi 2.1 dBi 3.1 dBi	SMC		5'

Items printed in green are in-stock and available for immediate delivery



global solutions :  
local support™



## Infrastructure/In-Building Wireless Antennas

Laird Technologies offers an extensive array of base station and in-building wireless antennas. Responding to the ever-increasing variety of frequencies and applications, Laird Technologies offers VHF, UHF, 700 MHz, Cell/PCS dual-band and GSM/UMTS tri-band variations. Leading the industry with the internally matched, fully welded, gold anodized Yagi, all Laird Technologies base station antennas represent high performance, long-lasting value. For example, Laird Technologies omni-directional models are the antennas of choice for research bases in Antarctica.

Laird Technologies also offers a full range of in-building and outdoor antennas with multiple frequency, connector and cable length options. The omnidirectional, bidirectional and directional antennas provide versatility for optimal coverage of your application. Optional mounting hardware and cable assemblies ensure maximum adaptability.

# INFRASTRUCTURE/IBW



**FG8066**  
Shown with FM2  
Mounting Option

## Fiberglass Omnidirectional

- Includes VHF through 2.4 GHz models
- High performance and reliable collinear J-pole design surrounded by durable high density fiberglass
- Durable gold anodized sleeve and cap will not oxidize
- Custom tuning available
- FedEx/UPS shippable on most models



**FG8063**  
Shown with FM2  
Mounting Option

Model	Frequency Range	Tuned Frequency	Gain	Length	Maximim Power
<b>VHF Models</b>					
FG1400	140-144 MHz	142 MHz	Unity	92"	150 watts
FG1403	140-144 MHz	142 MHz	3 dBd	107"	150 watts
FG1440	144-148 MHz	146 MHz	Unity	92"	150 watts
FG1443	144-148 MHz	146 MHz	3 dBd	107"	150 watts
FG1480	148-152 MHz	150 MHz	Unity	68"	150 watts
FG1483	148-152 MHz	150 MHz	3 dBd	107"	150 watts
FG1520	152-156 MHz	154 MHz	Unity	68"	150 watts
FG1523	152-156 MHz	154 MHz	3 dBd	107"	150 watts
FG1560	156-162 MHz	159 MHz	Unity	68"	150 watts
FG1563	156-162 MHz	159 MHz	3 dBd	107"	150 watts
FG1620	162-168 MHz	165 MHz	Unity	68"	150 watts
FG1623	162-168 MHz	165 MHz	3 dBd	107"	150 watts
FG1683	168-174 MHz	171 MHz	3 dBd	107"	150 watts
FG2200	220-225 MHz	222.5 MHz	Unity	68"	150 watts
FG2203	220-225 MHz	222.5 MHz	3 dBd	107"	150 watts
<b>UHF Models</b>					
FG3603	360-380 MHz	370 MHz	3 dBd	44"	100 Watts
FG3803	380-390 MHz	385 MHz	3 dBd	44"	100 Watts
FG4060	406-416 MHz	411 MHz	Unity	26"	100 Watts
FG4063	406-416 MHz	411 MHz	3 dBd	44"	100 Watts
FG4065	406-416 MHz	411 MHz	5 dBd	76"	100 Watts
FG4100	410-430 MHz	420 MHz	Unity	26"	100 Watts
FG4103	410-420 MHz	415 MHz	3 dBd	44"	100 Watts
FG4203	420-430 MHz	425 MHz	3 dBd	44"	100 Watts
FG4205	420-430 MHz	425 MHz	5 dBd	76"	100 Watts
FG4300	430-450 MHz	440 MHz	3 dBd	26"	100 Watts
FG4303	430-440 MHz	435 MHz	3 dBd	44"	100 Watts
FG4305	430-440 MHz	435 MHz	5 dBd	76"	100 Watts
FG4403	440-450 MHz	445 MHz	3 dBd	44"	100 Watts
FG4405	440-450 MHz	445 MHz	5 dBd	76"	100 Watts
FG4407	440-450 MHz	445 MHz	7 dBd	110"	100 Watts
FG4500	450-470 MHz	460 MHz	Unity	26"	100 Watts
FG4503	450-460 MHz	455 MHz	3 dBd	44"	100 Watts
FG4505	450-460 MHz	455 MHz	5 dBd	76"	100 Watts
FG4505W	450-470 MHz	460 MHz	5 dBd	76"	100 Watts
FG4507	450-460 MHz	455 MHz	7 dBd	107"	100 Watts
FG4603	460-470 MHz	465 MHz	3 dBd	44"	100 Watts
FG4605	460-470 MHz	465 MHz	5 dBd	76"	100 Watts
FG4607	460-470 MHz	465 MHz	7 dBd	107"	100 Watts
FG4705	470-480 MHz	475 MHz	5 dBd	76"	100 Watts
FG4900	490-512 MHz	501 MHz	Unity	26"	100 Watts
FG4907	490-500 MHz	495 MHz	7 dBd	107"	100 Watts
FG5003	500-512 MHz	506 MHz	3 dBd	44"	100 Watts
FG5007	500-512 MHz	506 MHz	7 dBd	107"	100 Watts

Model	Frequency Range	Tuned Frequency	Gain	Length	Maximim Power
<b>700 - 900 MHZ Models</b>					
FG7463	746-796 MHz	771 MHz	3 dBd	23 1/2"	100 Watts
FG7466	746-796 MHz	771 MHz	6 dBd	61"	100 Watts
FG8060	806-866 MHz	813.5 MHz	Unity	15"	100 Watts
FG8063	806-866 MHz	813.5 MHz	3 dBd	25"	100 Watts
FG8063WPTNF	806-896 MHz	851 MHz	3 dBd	29"	100 Watts
FG8066	806-866 MHz	813.5 MHz	6 dBd	65"	100 Watts
FG8240	824-896 MHz	835 MHz	Unity	15"	100 Watts
FG8243	824-896 MHz	835 MHz	3 dBd	25"	100 Watts
FG8246	824-896 MHz	835 MHz	6 dBd	65"	100 Watts
FG8693	869-902 MHz	882 MHz	3 dBd	25"	100 Watts
FG8960	896-940 MHz	898 MHz	Unity	15"	100 Watts
FG8963	896-940 MHz	898 MHz	3 dBd	25"	100 Watts
FG8966	896-940 MHz	898 MHz	6 dBd	65"	100 Watts
FG9023	902-928 MHz	915 MHz	3 dBd	25"	100 Watts
FG9026	902-928 MHz	915 MHz	6 dBd	65"	100 Watts
FG9283	928-970 MHz	930 MHz	3 dBd	25"	100 Watts
FG9360	936-970 MHz	953 MHz	Unity	15"	100 Watts
FG9286	928-970 MHz	930 MHz	6 dBd	65"	100 Watts
FG9366	936-970 MHz	953 MHz	6 dBd	65"	100 Watts

<b>2.4 GHZ Models</b>					
FG24005	2400-2500 MHz	2450 MHz	5 dBi	14"	100 Watts
FG24008	2400-2500 MHz	2450 MHz	8 dBi	24"	100 Watts

<b>Dual Band Model</b>					
FG821/18503	821-896 MHz	858.5 MHz	Unity	14"	100 watts
	1850-1990 MHz	1920 MHz	3 dBd		

<b>Fiberglass Base Antennas Mounting Options</b>	
FM1	Stainless Steel U-Bolt Mount (2)
FM2	Fiberglass Mounting Bracket (2)
FMS9	9 Inch Standoff (2)
FMW4	4 Inch Wall Mount

<b>Fiberglass Base Antenna Accessories</b>	
LAIL350NN	In-Line Lightning Arrestor N to N
LABH350NN	Bulk Head Lightning Arrestor N to N
LABH2400NN	Bulkhead Lightning Arrestors N to N
CCT213	Heavy Duty Crimp Tool
CN400	Type N Male
R400100	100' Spool High Performance ATX400
R400500	500' Spool High Performance ATX400
PT40025NN	Pigtail 25 ft. ATX400 N to N
PT40050NN	Pigtail 50 ft. ATX400 N to N
PT40075NN	Pigtail 75 ft. ATX400 N to N
PT400100NN	Pigtail 100 ft. ATX400 N to N
IASFST	36 ft. Roll of MOCAP Installation Tape
IASFST10	Six pack of 10" strips of MOCAP Installation Tape

## Heavy Duty Omnidirectional



- New high gloss white tapered radome is UV treated to resist sun damage
- High density fiberglass construction is rated to withstand 145 mph winds
- Heavy wall, gold anodized aluminum mounting sleeve

FGM1505  
Shown with FM3W  
Mounting Kit Option

Model	Frequency Range	Tuned Frequency	Gain	Length	Maximim Power
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### VHF

FGM1505	150-155 MHz	152 MHz	5 dBd	24'	500 watts
FGM1555	155-160 MHz	157 MHz	5 dBd	24'	500 watts
FGM1605	160-165 MHz	163 MHz	5 dBd	24'	500 watts

### 220 MHz 5 dBd GAIN MODELS

FGM2165	216-225 MHz	220 MHz	5 dBd	18'	500 watts
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### UHF

FGM4507	450-460 MHz	455 MHz	7 dBd	22'	350 watts
FGM4607	460-470 MHz	465 MHz	7 dBd	22'	350 watts
FGM45010	450-460 MHz	455 MHz	10 dBd	22'	350 watts
FGM46010	460-470 MHz	465 MHz	10 dBd	22'	350 watts

### ATX Coax Options

R400100	100' Spool High Performance ATX400
R400500	500' Spool High Performance ATX400

### Mountaineer Accessories

FM3	Heavy Duty Large Base Antenna Mount (2) 3"
FM3W	Heavy Duty Large Base 3" Antenna Mount with Center Weld (2)
LAIL350NN	Inline Lightning Arrestors N to N
LABH350NN	Bulkhead Lightning Arrestors N to N
CN400	N Male For ATX400
CCT213	Heavy Duty Crimp Tool
IA3MTP22	3M 2200 Tar Seal
IASFST	36 ft. Roll of MOCAP Installation Tape
IASFST10	Six pack of 10" strips of MOCAP Installation Tape

## Voyager®

- Field tunable for quick field deployment
- Match encased in a dry synthetic rubber material which virtually eliminates detuning from moisture and vibration resistant for the ultimate in portable durability
- UV inhibiting insulators will not crack, decay, or disassemble with UV exposure



VG1505, VG4505  
Voyager Antennas  
shown with FM2  
Mounting Kit option

Model	Frequency Range	Gain	Length	Extended Length
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### VHF Models

VG1502	150-174 MHz	2 dBi	55"	102"
VG1325	132-150 MHz	5 dBi	55"	102"
VG1505	150-174 MHz	5 dBi	55"	102"
VG1326	132-150 MHz	6 dBi	55"	102"
VG1506	150-174 MHz	6 dBi	55"	102"
VG2002	200-225 MHz	2 dBi	55"	102"

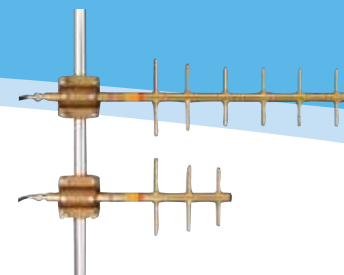
### UHF Models

VG4065	406-450 MHz	5 dBi	25"	35"
VG4505	450-512 MHz	5 dBi	25"	35"
VG4506	450-512 MHz	6 dBi	25"	35"

Model	Description	Mast
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### Mounting Options

FM1	Stainless Steel U Bolt Mount (2)	1 7/8"
FM2	Heavy Duty Base Mounting Bracket (2)	2 1/2"



Model	Frequency	Elements	Gain	Front-Back Ratio
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### Fully Welded Gold Anodized VHF Models

YXXX3W	User Defined	3	7.1 dBd	17 dB
YXXX5W	User Defined	5	9.2 dBd	20 dB

### Gold Anodized VHF Models

Y1363	136-150 MHz	3	7.1 dBd	17 dB
Y1365	136-150 MHz	5	9.2 dBd	20 dB
Y1503	150-174 MHz	3	7.1 dBd	17 dB
Y1505	150-174 MHz	5	9.2 dBd	20 dB
Y2203	220-250 MHz	3	7.1 dBd	17 dB
Y2205	220-250 MHz	5	9.2 dBd	20 dB

### Fully Welded Gold Anodized UHF Models

Y4065	406-430 MHz	5	9.2 dBd	20 dB
Y4066	406-430 MHz	6	10.2 dBd	20 dB
Y4303	430-450 MHz	3	7.1 dBd	17 dB
Y4305	430-450 MHz	5	9.2 dBd	20 dB
Y4306	430-450 MHz	6	10.2 dBd	20 dB
Y43012	430-450 MHz	12	11 dBd	20 dB
Y4503	450-470 MHz	3	7.1 dBd	17 dB
Y4505	450-470 MHz	5	9.2 dBd	20 dB
Y4506	450-470 MHz	6	10.2 dBd	20 dB
Y45012	450-470 MHz	12	11 dBd	20 dB
Y4705	470-490 MHz	5	9.2 dBd	20 dB
Y4706	470-490 MHz	6	10.2 dBd	20 dB

### Gold Anodized Fully Welded 800/900 MHz Models

Y8063	806-896 MHz	3	6 dBd	15 dB
Y8066	806-896 MHz	6	9 dBd	16 dB
Y80612	806-896 MHz	12	11 dBd	20 dB
Y8963	896-970 MHz	3	6 dBd	15 dB
Y8966	896-970 MHz	6	9 dBd	16 dB
Y89612	896-970 MHz	12	11 dBd	20 dB
Y80618	806-896 MHz	18	14 dBd	25 dB
Y89618	896-870 MHz	18	14 dBd	25 dB

### Black Anodized Fully Welded UHF Models

YB4505	450-470 MHz	5	9.2 dBd	20 dB
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### Black Anodized Fully Welded 800/900 MHz Models

YB8066	806-896 MHz	6	9 dBd	16 dB
YB8966	896-970 MHz	6	9 dBd	16 dB
YB80618	806-896 MHz	18	14 dBd	25 dB
YB89618	896-970 MHz	18	14 dBd	25 dB

### Replacement Mounting Kits

YM78	HD Mount Bracket for 7/8" Boom Yagi Accommodates up to 2-13/32" Diameter Boom
YM78HD	HD Yagi Mounting Kit for 7/8" Boom
YM100HD	HD Yagi Mounting Kit for 1" Boom
YM125HD	HD Mount Bracket for 1-1/4" Boom Yagi Accommodates up to 2-13/32" Diameter Boom

### Silver Series VHF Models

YS1363	136-150 MHz	3	7.1 dBd	17 dB
YS1503	150-174 MHz	3	7.1 dBd	17 dB
YS1505	150-174 MHz	5	9.2 dBd	20 dB
YS2165	216-225 MHz	5	9.2 dBd	20 dB
YS2203	220-250 MHz	3	7.1 dBd	17 dB
YS2205	220-250 MHz	5	9.2 dBd	20 dB

## Directional Yagis

- 360° Fully Welded Gold Anodized models or value leader Silver Series available
- Line up includes 3 element/7.1 dBd gain to 18 element/14 dBd gain variations
- Internal matching design will not ice up, detune, or corrode
- VHF Custom tuning available





## Silver Series Yagis

- Broad bandwidth allows gain performance to be more consistent through the frequency range

Model	Frequency	Elements	Gain	Front-Back Ratio
<b>Silver Series UHF Models</b>				
YS4063	406-430 MHz	3	7.1 dBd	17 dB
YS4065	406-430 MHz	5	9.2 dBd	20 dB
YS4303	430-450 MHz	3	7.1 dBd	17 dB
YS4305	430-450 MHz	5	9.2 dBd	20 dB
YS4306	430-450 MHz	6	10.2 dBd	20 dB
YS43012	430-450 MHz	12	11 dBd	20 dB
YS4503	450-470 MHz	3	7.1 dBd	17 dB
YS4505	450-470 MHz	5	9.2 dBd	20 dB
YS4506	450-470 MHz	6	10.2 dBd	20 dB
YS45012	450-470 MHz	12	11 dBd	20 dB
YS47012	470-490 MHz	12	11 dBd	20 dB
YS4906	490-512 MHz	6	10.2 dBd	20 dB

### Silver Series 800/900 MHz Models

YS8063	806-896 MHz	3	6 dBd	15 dB
YS8066	806-896 MHz	6	9 dBd	16 dB
YS80612	806-896 MHz	12	11 dBd	20 dB
YS8963	896-970 MHz	3	6 dBd	15 dB
YS8966	896-970 MHz	6	9 dBd	16 dB
YS89612	896-970 MHz	12	11 dBd	20 dB

Model	Description	Gain	Front-Back Ratio
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### Enclosed 2.4 -4.9 GHz Models

YE24006	2.4-2.5 GHz	11.2 dBi	20 dB
YE24007	2.4-2.5 GHz	12.7 dBi	20 dB
YE240015	2.4-2.5 GHz	15 dBi	20 dB
YE525012	5.25-5.35 GHz	14.5 dBi	20 dB
YE5490012	4.9-5.8 GHz	14.5 dBi	20 dB

### Antenna Masts

YMST4	4'x1-1/4" OD x .065" wall alum. mast
YMST8	8'x1-1/4" OD x .065" wall alum. mast
YMST18	18'x1-1/4" OD x .065" wall alum. mast (2p)

### Yagi Accessories

LAIL350NN	Trapper Inline Lightning Arrestor N to N
LABH350NN	Trapper Bulk Head Lightning Arrestor N to N
LABH2400NN	Trapper Bulkhead Lightning Arrestor N to N
CCT213	Crimp Tool For ATX400
CN400	N Connector For ATX400
R400100	100 ft. Roll of ATX400
R400500	500 ft. Roll of ATX400
IASFST	36 ft. Roll of MOCAP Installation Tape
IASFST10	Six pack of 10" strips of MOCAP Installation Tape

## Enclosed Yagi

- 2.4 GHz is completely sealed and is strong enough for outdoor use
- 15 dBi high gain moves your lower power ISM or WLAN signal from point to point with minimal signal loss



YE240015  
Enclosed Yagi



Trapper™  
Lightning Arrestor

Model	Frequency Range	Omni Gain	Offset Gain	Dipole Bays
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### Dipole Arrays 2 Bays

YDA1502	150-174	3 dBd	6 dBd	2
YDA4502	450-470	3 dBd	6 dBd	2

### Single Or Replacement Dipoles

YDA***1	Specify Freq.	Unity	N/A	
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### Dipole Arrays 4 Bays

YDA1364	136-150	6 dBd	9 dBd	4
YDA1504	150-174	6 dBd	9 dBd	4
YDA4504	450-470	6 dBd	9 dBd	4
YDA4704	470-490	6 dBd	9 dBd	4
YDA4904	490-512	6 dBd	9 dBd	4

Model	Description
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### Antenna Masts

YMST4	4'x1-1/4" OD x .065" wall alum. mast
YMST8	8'x1-1/4" OD x .065" wall alum. mast
YMST18	18'x1-1/4" OD x .065" wall alum. mast (2 pieces)

### Replacement Power Dividers / Stacking Harnesses

YPD***2N	For 2 bay array or to stack 2 Yagis (N)
YPD***2P	For 2 bay array or to stack 2 Yagis (PL259)
YPD***4N	For 4 bay array (N)
YPD***4P	For 4 bay array (PL259)
YPD8**2N	For stacking 2 800 MHz Yagis (N)
YPD9**2N	For stacking 2 900 MHz Yagis (N)

### Dipole Array Accessories

IASFST	36 ft. Roll of MOCAP Installation Tape
IASFST10	Six pack of 10" strips of MOCAP Installation Tape

Model	Frequency	Gain	Dipole Spacing	Bays
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### Folded Dipole Array 2 Bay Antennas

YDAF1382	138-174 MHz	5.5 dBd	¼ wave	2 Bay
YDAF13822	138-174 MHz	5.5 dBd	½ wave	2 Bay
YDAF4032	403-470 MHz	5.5 dBd	¼ wave	2 Bay

### Folded Dipole Array 4 Bay Antennas

YDAF1384	138-174 MHz	8.5 dBd	¼ wave	4 Bay
YDAF13842	138-174 MHz	8.5 dBd	½ wave	4 Bay
YDAF2204	220-240 MHz	8.5 dBd	¼ wave	4 Bay
YDAF4034	403-470 MHz	8.5 dBd	¼ wave	4 Bay
YDAF40342	403-470 MHz	8.5 dBd	½ wave	4 Bay

Model	Description
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### Mounting Options

FM3	Heavy Duty Large Base Antenna Mount (2)
FM3W	Heavy Duty Large Base w/ Center Weld (2)

### Folded Dipole Array Accessories

IASFST	36 ft. Roll of MOCAP Installation Tape
IASFST10	Six pack of 10" strips of MOCAP Installation Tap

## Dipole Array

- Custom pattern performance at installation
- 360 degree welds around each element to boom joints on UHF models eliminates pattern degradation and maintains dimensional stability
- Nickel plated brass N female connector provide durability and performance



## Folded Dipole

- Heavy duty, gold anodized broadband antenna
- Available in 1/4 wave and 1/2 wave dipole-to-mast spacing
- Ideally suited for multi-coupled systems
- Features internal cabling and fixed dipoles



## Megasphere™

- Cylindrical form factor
- High gain omnidirectional antenna
- Mounts to suspended ceiling grid or clamps to I-beam, etc.
- Excellent choice for open-air installation - (parking lot, storage yard, shipping/receiving, warehouse, etc.)



## Multiversity™

- Utilizes Dipole version of the Phantom element to provide effective and clear communications and eliminate fading
- Ceiling and wall mount versions available

## Microsphere™

- Omnidirectional pattern provides optimal in-building coverage
- 450, 850, 900, 1800, 1900, 2100 MHz, 2.4 GHz, Dual and Multi-band versions available
- Toroidal field pattern provides omnidirectional coverage in any plane around the long axis, and two lobes in any plane parallel to the long axis



Model	Description	Frequency	Gain	Cable	Connector	Max Input Power
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### Megasphere™/Indoor

IG2450-NF12	MegaSphere	2.4-2.5 GHz	6 dBi	12"	N-Female	50W
IG2450-NF36	MegaSphere	2.4-2.5 GHz	6 dBi	36"	N-Female	50W
IG2450-NM36	MegaSphere	2.4-2.5 GHz	6 dBi	36"	N-Male	50W
IG2450-RB12	MegaSphere	2.4-2.5 GHz	6 dBi	12"	RP-BNC	50W
IG2450-RB36	MegaSphere	2.4-2.5 GHz	6 dBi	36"	RP-BNC	50W
IG2450-RS36	MegaSphere	2.4-2.5 GHz	6 dBi	36"	RP-SMA	50W
IG2450-RT36	MegaSphere	2.4-2.5 GHz	6 dBi	36"	RP-TNC	50W
IG2450-SM36	MegaSphere	2.4-2.5 GHz	6 dBi	36"	SMA Male	50W

### Outdoor/Indoor Megasphere™

IGO2450-NF12	Outdoor/Indoor MegaSphere	2.4-2.5 GHz	5 dBi	12"	N-Female	50W
IGO2450-RT12	Outdoor/Indoor MegaSphere	2.4-2.5 GHz	5 dBi	12"	RP-TNC	50W
IGO2450-SM12	Outdoor/Indoor MegaSphere	2.4-2.5 GHz	5 dBi	12"	SMA Male	50W

### Multiversity™ Indoor

MIA8063	Wall Mount Multiversity™	806-869 MHz	3 dB-MEG*	N-Female	100W
MIA8063ST	Ceiling Mount Multiversity™	806-869 MHz	3 dB-MEG*	N-Female	100W
MIA24003	Wall Mount Multiversity™	2.4-2.5 GHz	3 dB-MEG*	N-Female	100W
MIA24003ST	Ceiling Mount Multiversity™	2.4-2.5 GHz	3 dB-MEG*	N-Female	100W

### Microsphere™

IF450-SM00	450 MHz Microsphere™		3 dBi	none	SMA Male	50W
IF850-SF00	850 MHz MicroSphere™	806-960 MHz	3 dBi	none	SMA Female	50W
IF900-SF00	900 MHz MicroSphere™	880-960 MHz	3 dBi	none	SMA Female	50W
IF1800-SF00	1800 MHz MicroSphere™	1710-1880 MHz	3 dBi	none	SMA Female	50W
IF1900-SF00	1900 MHz MicroSphere™	1850-1990 MHz	3 dBi	none	SMA Female	50W
IF2100-SF00	2100 MHz UMTS MicroSphere™	1920-2170 MHz	3 dBi	none	SMA Female	50W
IF2450-SF00	2.4 GHz MicroSphere™	2.4-2.5 GHz	3 dBi	none	SMA Female	50W

### Dual-Band Microsphere™

IF8519-SF00	850 & 1900 MHz Dual-band MicroSphere™	806-896 MHz 1850-1990 MHz	3 dBi	none	SMA Female	50W
IF9018-SF00	900 & 1800 MHz Dual-band MicroSphere™	880-960 MHz	3 dBi	none	SMA Female	50W

Model	Description	Frequency	Gain	Cable	Connector	Max Input Power
<b>Multi-Band MicroSphere™/Ultrasphere™</b>						
IFMULT-NF00	Multi-Band MicroSphere™	AMPS 806-896 MHz GSM 880-960 MHz DCS 1710-1880 MHz PCS 1850-1990 MHz UMTS 1920-2170 MHz	3 dBi	none	N-Female	50W
IFMULT-SF00	Multi-Band MicroSphere™	AMPS 806-896 MHz GSM 880-960 MHz DCS 1710-1880 MHz PCS 1850-1990 MHz UMTS 1920-2170 MHz	3 dBi	none	SMA-Female	50W
IFMULT-SFRA00	Multi-Band MicroSphere™	AMPS 806-896 MHz GSM 880-960 MHz DCS 1710-1880 MHz PCS 1850-1990 MHz UMTS 1920-2170 MHz	3 dBi	none	SMA-Female	50W
IFULTRA-SF00	Multi-Band Ultrasphere™	AMPS 806-896 MHz GSM 880-960 MHz DCS 1710-1880 MHz PCS 1850-1990 MHz UMTS 1920-2170 MHz ISM (BT) 2400-2500 MHz	3 dBi	none	SMA-Female	50W

<b>2.4 GHz MicroSphere™ Diversity</b>						
IFD2450-RB36	2.4 GHz MicroSphere™ Diversity	2.4-2.5 GHz	3 dBi	36"	RP-BNC x 2	50W
IFD2450-RS36	2.4 GHz MicroSphere™ Diversity	2.4-2.5 GHz	3 dBi	60"	RP-SMA x 2	50W
IFD2450-RT36	2.4 GHz MicroSphere™ Diversity	2.4-2.5 GHz	3 dBi	36"	RP-BNC x 2	50W
IFD2450-RT60	2.4 GHz MicroSphere™ Diversity	2.4-2.5 GHz	3 dBi	60"	RP-BNC x 2	50W

<b>Sphere™</b>						
IO850-NF36	850 MHz Sphere™	824-896 MHz	3 dBi	36" RG-142	N-Female	50W
IO850-SM36	850 MHz Sphere™	824-896 MHz	3 dBi	36" RG-142	SMA-Male	50W
IO1900-NF12	1900 MHz Sphere™	1850-1990 MHz	3 dBi	12" RG-142	N-Female	50W
IO1900-NF36	1900 MHz Sphere™	1850-1990 MHz	3 dBi	36" RG-142	N-Female	50W
IO1900-SM36	1900 MHz Sphere™	1850-1990 MHz	3 dBi	36" RG-142	SMA-Male	50W
IO2450-NF12	2.4 GHz Sphere™	2.4-2.5 GHz	3 dBi	12" RG-142	N-Female	50W
IO2450-RN12	2.4 GHz Sphere™	2.4-2.5 GHz	3 dBi	12" RG-142	RP-N-Female	50W
IO2450-RS60	2.4 GHz Sphere™	2.4-2.5 GHz	3 dBi	60" RG-142	RP-SM	50W
IO2450-RT36	2.4 GHz Sphere™	2.4-2.5 GHz	3 dBi	36" RG-142	RP-TNC	50W
IO2450-RT60	2.4 GHz Sphere™	2.4-2.5 GHz	3 dBi	60" RG-142	RP-TNC	50W
IO2450-RT84	2.4 GHz Sphere™	2.4-2.5 GHz	3 dBi	84" RG-142	RP-TNC	50W
IO2450-SM12	2.4 GHz Sphere™	2.4-2.5 GHz	3 dBi	12" RG-142	SMA-Male	50W
IO5250-RT36	5 GHz Sphere™	5.15-5.35 GHz	5 dBi	36" RG-142	RP-TNC	50W

<b>2.4 GHz Sphere Diversity™</b>						
IOD2450-NF12	2.4 GHz Sphere™ Diversity	2.4-2.5 GHz	3 dBi	12" RG-142	N-Female x 2	50W
IOD2450-RT36	2.4 GHz Sphere™ Diversity	2.4-2.5 GHz	3 dBi	36" RG-142	RP-TNC x 2	50W

## Microsphere™



Dual Band MicroSphere™



## Ultrasphere™

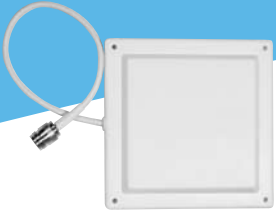
- So small it can be hidden almost anywhere
- Omnidirectional coverage
- 179.2x 80.4 x 1.7 mm



2.4 GHz Sphere™

## Sphere™

- Omnidirectional pattern provides optimal in-building coverage
- 850, 1900, 2100 MHz, 2.4 and 5 GHz versions available
- Quick installation with a standard ceiling tile frame metal clip
- Considerable gain improvement over traditional dipole antennas



## Whisper™

- Directional pattern provides targeted coverage to a specific area
- 850, 1900, 2.4 and 5 GHz versions available
- Self contained in its durable radome, the Whisper blends in anywhere
- Patented technology provides inexpensive reliability

Model	Description	Frequency	Gain	Cable Length	Connector
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### Whisper Directional

#### 850 MHz Whisper™

ID0850-NF00	850 MHz Outdoor Whisper	806-896 MHz	7.5 dBi	N/A	N-Female
ID850-SF00	850 MHz Indoor Whisper	806-896 MHz	7.5 dBi	N/A	SMA-Female

#### 1900 MHz Whisper™

ID1900-NF12	1900 MHz Indoor Whisper	1850-1990 MHz	7.5 dBi	1 ft.	N-Female
ID1900-NF36	1900 MHz Indoor Whisper	1850-1990 MHz	7.5 dBi	3 ft.	N-Female
ID1900-SM36	1900 MHz Indoor Whisper	1850-1990 MHz	7.5 dBi	3 ft.	SMA-Male
ID01900-SM12	1900 MHz Outdoor Whisper	1850-1990 MHz	7.5 dBi	1 ft.	SMA-Male
ID01900-SM36	1900 MHz Outdoor Whisper	1850-1990 MHz	7.5 dBi	3 ft.	SMA-Male

#### 2.4 GHz Indoor Whisper™

ID2450-NF12	2.4 GHz Indoor Whisper	2.4-2.5 GHz	9 dBi	1 ft.	N-Female
ID2450-NF36	2.4 GHz Indoor Whisper	2.4-2.5 GHz	9 dBi	3 ft.	N-Female
ID2450-NM12	2.4 GHz Indoor Whisper	2.4-2.5 GHz	9 dBi	1 ft.	N-Male
ID2450-NM36	2.4 GHz Indoor Whisper	2.4-2.5 GHz	9 dBi	3 ft.	N-Male
ID2450-NM60	2.4 GHz Indoor Whisper	2.4-2.5 GHz	9 dBi	5 ft.	N-Male
ID2450-RN12	2.4 GHz Indoor Whisper	2.4-2.5 GHz	9 dBi	1 ft.	RP-N-Female
ID2450-RS36	2.4 GHz Indoor Whisper	2.4-2.5 GHz	9 dBi	3 ft.	RP-SMA
ID2450-RS60	2.4 GHz Indoor Whisper	2.4-2.5 GHz	9 dBi	5 ft.	RP-SMA
ID2450-RT12	2.4 GHz Indoor Whisper	2.4-2.5 GHz	9 dBi	1 ft.	RP-TNC
ID2450-RT36	2.4 GHz Indoor Whisper	2.4-2.5 GHz	9 dBi	3 ft.	RP-TNC
ID2450-RT60	2.4 GHz Indoor Whisper	2.4-2.5 GHz	9 dBi	5 ft.	RP-TNC
ID2450-RT120	2.4 GHz Indoor Whisper	2.4-2.5 GHz	8 dBi	10 ft.	RP-TNC

#### 2.4 GHz Outdoor Whisper™

ID02450-NF12	2.4 GHz Outdoor Whisper	2.4-2.5 GHz	7.5 dBi	1 ft.	N-Female
ID02450-RT12	2.4 GHz Outdoor Whisper	2.4-2.5 GHz	7.5 dBi	1 ft.	RP-TNC
ID02450-RS36	2.4 GHz Outdoor Whisper	2.4-2.5 GHz	7.5 dBi	3 ft.	RP-SMA
ID02450-RT36	2.4 GHz Outdoor Whisper - Marine Rated	2.4-2.5 GHz	7.5 dBi	3 ft.	RP-TNC

#### 5 GHz Indoor Whisper™

ID5250-NF12	5 GHz Indoor Whisper	5.15-5.35 GHz	9 dBi	1 ft.	N-Female
ID5250-NF36	5 GHz Indoor Whisper	5.15-5.35 GHz	9 dBi	3 ft.	N-Female
ID5250-RT12	5 GHz Indoor Whisper	5.15-5.35 GHz	9 dBi	1 ft.	RP-TNC
ID5250-RT36	5 GHz Indoor Whisper	5.15-5.35 GHz	9 dBi	3 ft.	RP-TNC
ID5250-RS12	5 GHz Indoor Whisper	5.15-5.35 GHz	9 dBi	1 ft.	RP-SMA
ID5250-RS36	5 GHz Indoor Whisper	5.15-5.35 GHz	9 dBi	3 ft.	RP-SMA
ID5250-SM36	5 GHz Indoor Whisper	5.15-5.35 GHz	9 dBi	3 ft.	SMA-Male

### Terrace™ Bidirectional

#### 2.4 GHz Terrace™

IB2450-NF12	2.4 GHz Indoor Terrace	2.4-2.5 GHz	5 dBi	1 ft.	N-Female
IB2450-NF36	2.4 GHz Indoor Terrace	2.4-2.5 GHz	5 dBi	1 ft.	N-Female
IB2450-RN12	2.4 GHz Indoor Terrace	2.4-2.5 GHz	5 dBi	3ft.	RP-N-Female
IB2450-RS36	2.4 GHz Indoor Terrace	2.4-2.5 GHz	5 dBi	3ft.	RP-SMA
IB2450-RT12	2.4 GHz Indoor Terrace	2.4-2.5 GHz	5 dBi	3 ft.	N-Female
IB2450-RT36	2.4 GHz Indoor Terrace	2.4-2.5 GHz	5 dBi	3ft.	RP-TNC



## Terrace™

- Bi-directional pattern provides optimal corridor & hallway coverage
- 2.4 and 5 GHz versions available
- Supplied with standard wall-mount kit

Model	Description	Frequency	Gain	Cable Length	Connector
<b>2.4 GHz Terrace™ Diversity (cables exit backplate)</b>					
IDD2450-NF12	2.4 GHz Terrace Diversity	2.4-2.5 GHz	5 dBi	1 ft.	N-Female x 2
IDD2450-NF36	2.4 GHz Terrace Diversity	2.4-2.5 GHz	5 dBi	3 ft.	N-Female x 2
IDD2450-RS12	2.4 GHz Terrace Diversity	2.4-2.5 GHz	5 dBi	1 ft.	RP-SMA x 2
IDO2450-RT07E	2.4 GHz Terrace Diversity, Marine-Rated	2.4-2.5 GHz	5 dBi	7 in.	RP-TNC x 2
IDD2450-RT36	2.4 GHz Terrace Diversity	2.4-2.5 GHz	5 dBi	3 ft.	RP-TNC x 2
<b>2.4 GHz Terrace™ Diversity (cables exit edge/side)</b>					
IDD2450-RS12E	2.4 GHz Terrace Diversity	2.4-2.5 GHz	5 dBi	1 ft.	RP-SMA x 2
IDD2450-RS36E	2.4 GHz Terrace Diversity	2.4-2.5 GHz	5 dBi	3 ft.	RP-SMA x 2
IDD2450-RT36E	2.4 GHz Terrace Diversity	2.4-2.5 GHz	5 dBi	3 ft.	RP-TNC x 2
<b>5 GHz Terrace™ Diversity</b>					
IDD5250-NF12	5.25 GHz Terrace Diversity	4.9-6.0 GHz	5 dBi	1 ft.	N-Female x 2
IDD5250-NF36	5.25 GHz Terrace Diversity	4.9-6.0 GHz	5 dBi	3 ft.	N-Female x 2
IDD5250-RS12	5.25 GHz Terrace Diversity	4.9-6.0 GHz	5 dBi	1 ft.	RP-SMA x 2
IDD5250-RS36	5.25 GHz Terrace Diversity	4.9-6.0 GHz	5 dBi	3 ft.	RP-SMA x 2
IDD5250-RSRA36	5.25 GHz Terrace Diversity	4.9-6.0 GHz	5 dBi	3 ft.	RP-SMA R.A. x 2
IDD5250-RT12	5.25 GHz Terrace Diversity	4.9-6.0 GHz	5 dBi	3 ft.	RP-TNC x 2
IDD5250-RT36	5.25 GHz Terrace Diversity	4.9-6.0 GHz	5 dBi	3 ft.	RP-TNC x 2
IDD5250-RS36E	5.25 GHz Terrace Diversity	4.9-6.0 GHz	5 dBi	3 ft.	RP-SMA x 2

<b>I ceilings</b>						
IFC8519-SF00**	I Ceiling Ceiling Tile Antenna	One 850/1900 MHz Dual-band	3 dBi	none	SMA Female	50W
IFCMULT-SF00**	I Ceiling Ceiling Tile Antenna	One 850-1900 MHz Dual-band One 1900 MHz Two 2.4 GHz	3 dBi	none	SMA Female	50W
IFC2450-SF00**	I Ceiling Ceiling Tile Antenna	Two 2.4 GHz	3 dBi	none	SMA Female	50W
IFE8519-SF00**	I Ceiling Ceiling Tile Antenna	One 850-1900 MHz Dual-band One 1900 MHz	3 dBi	none	SMA Female	50W

Model	Description	Coax Length	Connector(s)
<b>Cable Assemblies</b>			
ICSM-RT36	3' SMA-male / RP-TNC	3 ft.	SMA-Male/RP-TNC
ICSM-RT60	5' SMA-male / RP-TNC	5 ft.	SMA-Male/RP-TNC
ICSM-RB60	5' SMA-male / RP-BNC	5 ft.	SMA-Male/RP-BNC
ICSM-SM60	5' SMA-male / SMA-male	5 ft.	SMA-Male/SMA-Male
ICSM-NM60	5' SMA-male / N-male	5 ft.	SMA-Male/N-Male
ICSM-NF60	5' SMA-male / N-female	5 ft.	SMA-Male/N-Female
ICSM-RN08	8" SMA-male / RP-N-female	8 in.	SMA-Male/RP-N-Female

<b>Mounting Hardware</b>	
IMI-02A	2" Indoor Pan/Tilt Mount (for ID1900)
IMI-02B	2" Indoor Pan/Tilt Mount (for ID2450)
IMI-02C	2" Indoor Pan/Tilt Mount (for ID850)
IMI-02D	2" Indoor Pan/Tilt Mount (for IDD5250)
IMI-05A	5" Indoor Pan/Tilt Mount (for ID1900)
IMI-05B	5" Indoor Pan/Tilt Mount (for ID2450, ID5250)
IMI-05C	5" Indoor Pan/Tilt Mount (for ID850)
IMI-05D	5" Indoor Pan/Tilt Mount (for IDD5250)
IMO-05A	5" Outdoor Metal Pan/Tilt Mount N/A N/A N/A (for ID01900, ID02450)
IMO-05B	5" Outdoor Metal Pan/Tilt Mount (for ID0850)
IMP-08A	8" Outdoor Metal Pan/Tilt, Wall/Pole Mount (for ID0850)



## Terrace Diversity™

- Multi-port spatial diversity within a single, compact radome
- Bi-directional pattern provides optimal corridor & hallway coverage
- 2.4 and 5 GHz versions available



## I Ceiling

- Omnidirectional 850, 1900 and/or 2400 MHz
- Patent-pending design embeds the latest antenna technology into standard Armstrong ceiling panels
- Specifically tuned and tested to perform in suspended panel ceilings

## Cable Assemblies

## Mounting Hardware







global solutions :  
local support™



## Wireless Data

Laird Technologies will design, develop and manufacture the optimal antenna to meet your specifications, on schedule, without compromise. This large selection of antennas are utilized in all types of wireless devices, from industrial portable terminals to consumer grade WLAN access points. With integrated research, design, tooling, molding, assembly and accelerated life testing facilities around the world, our engineers will quickly and efficiently create solutions to your wireless challenges.





Model #	Reference #	Antenna Description	Gain	Size (L x W x H)	Cable	Connectors
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### BlackChip

WIC2452-A	MAF95029	Tri-Band BlackChip w/ lead free solder (Tape+Reel, 2K/Reel)	4 dBi	8 x 6 x 2.5 mm	N/A	N/A
WIC2452-A-SM	MAF95032	Tri-Band BlackChip on Evaluation Board	4 dBi	8 x 6 x 2.5 mm	N/A	SMA-female edge-mount

### D-Puck

WID2452	MAF94192	Tri-Band D-Puck Internal SMT PIFA (Tape+Reel, 400/Reel, 8 Reels/Cartron)	3 dBi	16 x 66 x 6 mm	N/A	N/A
WID2452-SM	CAF94377	Tri-Band D-Puck Internal SMT PIFA on Evaluation Board	3 dBi	16 x 66 x 6 mm	N/A	SMA-female Panel

### Revie

AAF95003		900/1800/1900 MHz Internal Multi-band	1.0 dBi	80 x 30 x 1.5 mm	12" Brown RG-178	MMCX
AAF95004		900/1800/1900 MHz Internal Multi-band	1.0 dBi	80 x 30 x 1.5 mm	Call	Murata GSC

### Revie Pro

AAF95035		868/900/1800/1900 MHz Internal Multi-band	1.0 dBi	80 x 30 x 1.5 mm	12" Brown RG-178	MMCX
AAF95013		868/900/1800/1900 MHz Internal Multi-band	1.0 dBi	80 x 30 x 1.5 mm	2.625" Brown RG-178	MMCX
AAF95004		868/900/1800/1900 MHz Internal Multi-band	1.0 dBi	80 x 30 x 1.5 mm	10" Brown RG-178	
MAF95017		868/900/1800/1900 MHz Internal Multi-band	1.0 dBi	80 x 30 x 1.5 mm	8" 1.13 dia coax	MHF
MAF95021		868/900/1800/1900 MHz Internal Multi-band	1.0 dBi	80 x 30 x 1.5 mm	32" RG-174 coax	RP-SMA
MAF95022		868/900/1800/1900 MHz Internal Multi-band	1.0 dBi	80 x 30 x 1.5 mm	4" Brown RG-178	MMS RA Plug
MAF95050		868/900/1800/1900 MHz Internal Multi-band	1.0 dBi	80 x 30 x 1.5 mm	1.85" Brown RG-178	MMCX
MAF95004		868/900/1800/1900 MHz Internal Multi-band	1.0 dBi	80 x 30 x 1.5 mm	10" Brown RG-178	SSMB

### Pifa

WIP2450	CAF94251	2.4-2.5 GHz Internal	2.0 dBi Peak	17.75 x 6 x 5 mm	N/A	N/A
WIP2450-SM	CAF94264	2.4-2.5 GHz Internal	2.0 dBi Peak	17.75 x 6 x 5 mm	N/A	SMA Female Edge-Mount

## BlackChip™

- For Bluetooth & IEEE 802.11 devices
- Wide bandwidth, ultra-wide band capable
- Tape & reel packaging

## Tri-band Dpuck



- For Bluetooth & IEEE 802.11 devices
- Tape & reel packaging for high volume pick-and-place manufacturing processes



## Revie

- Compliments GSM module offerings
- Designed for hand-held data devices or access points
- Ground plane independent designs minimizes engineering resources



## Dielectric Loaded PIFA

- For Bluetooth & IEEE 802.11 devices
- Directional pattern with low backscatter

# INTERNAL WIRELESS



## NanoBlade

- For Bluetooth & IEEE 802.11 devices
- Covers 2.4 to 2.5 GHz for 802.11b, and 4.9 to 6 GHz for 802.11a, and all US, European, and Japanese WLAN applications

## NanoBlue

- For Bluetooth & IEEE 802.11 devices
- Designed for easy connection to radio cards



- Patented PCB MicroSphere technology
- Ground plane incorporated into the resonator structure

## NanoAnt

- Low cost, small size
- Bluetooth, 802.11, 2.4 – 2.5 GHz, 3.4 - 3.8 GHz, and 5.725 - 5.85 GHz frequency range
- Available on tape and reel



Model #	Reference #	Antenna Description	Gain	Size (L x W x H)	Cable	Connectors
<b>NanoBlade</b>						
MMCX4	CAF94504	Tri-Band 2.4/4.9-6 GHz Internal Embedded Antenna	2.8-4 dBi	2" x 0.65"	100mm, RG-178	R.A. MMCX Plug
IP04	CAF94505	Tri-Band 2.4/4.9-6 GHz Internal Embedded Antenna	2.8-4 dBi	2" x 0.65"	100mm, 1.13 mm dia coax	MHF
IP04FB	MAF95025	Tri-Band 2.4/4.9-6 GHz Internal Embedded Antenna with Ferrite bead	2.8-4 dBi	2" x 0.65"	100mm, 1.13 mm dia coax	MHF
<b>NanoBlue</b>						
IP04	MAF94045	2.4 GHz Internal Embedded Antenna	2 dBi	1.88" x .5" x .032" 1.13 mm dia coax	100mm,	MHF
IP08	MAF95060	2.4 GHz Internal Embedded Antenna	2 dBi	1.88" x .5" x .032" 1.13 mm dia coax	203mm,	MHF
IP02	MAF94148	2.4 GHz Internal Embedded Antenna	2 dBi	1.88" x .5" x .032" 1.13 mm dia coax	47mm,	MHF
<b>NanoGreen</b>						
IP04	MAF94109	2.4 GHz/802.11b and 4.9 GHz/802.11a WLAN Embedded Antenna	.9 dB (2.45 GHz) 2.3 dBi (4.9 GHz) 3.1 dBi (5.25 GHz) 4.8 dBi (5.875 GHz)	2" x 0.65 "	100mm, 1.13 mm	IPEX MHF
FL04		2.4 GHz/802.11b and 4.9 GHz/802.11a	Above	2" x 0.65 "	100mm, RG-178	Flying Lead
Model #	Reference #	Antenna Description		Size (L x W x H)		Connectors
<b>NanoAnt</b>						
WiMax2p3 1.0	CAF93512	2.4 GHz Internal Embedded Antenna - Tape and Reel		2.5 x 2.0 x 2.0 mm		SMT
WiMax2p3 1.0	CAF96140	2.4 GHz Internal Embedded Antenna - Evaluation Board		2.5 x 2.0 x 2.0 mm		SMA Female
BT 1.0	CAF93512	Bluetooth, 802.11, 2.4 GHz Embedded Antenna - Tape and Reel		2.5 x 2.0 x 2.0 mm		SMT
BT 1.0	CAF94890	Bluetooth, 802.11, 2.4 GHz Embedded Antenna - Evaluation Board		2.5 x 2.0 x 2.0 mm		SMA Female
WiMax2p5 1.0	CAF93512	2.4 GHz Internal Embedded Antenna- Tape and Reel		2.5 x 2.0 x 2.0 mm		SMT
WiMax2p5 1.0	CAF96141	2.4 GHz Internal Embedded Antenna - Evaluation Board		2.5 x 2.0 x 2.0 mm		SMA Female

Items printed in green are in-stock and available for immediate delivery



Model #	Reference #	Antenna Description	Gain	Size (L x W x H)	Cable	Connectors
WiMax2p6 1.0	CAF93512	2.6 GHz Internal Embedded Antenna - Tape and Reel		2.5 x 2.0 x 2.0 mm		SMT
WiMax2p6 1.0	CAF96142	2.6 GHz Internal Embedded Antenna - Evaluation Board		2.5 x 2.0 x 2.0 mm		SMA Female
WiMax3p4 1.0	CAF96144	2.6 GHz Internal Embedded Antenna - Tape and Reel		2.5 x 2.0 x 2.0 mm		SMT
WiMax2p6 1.0	CAF96143	2.6 GHz Internal Embedded Antenna - Evaluation Board		2.5 x 2.0 x 2.0 mm		SMA Female
BT 2.0	CAF96136	WLAN 802.11b/g and 802.11 - MIMO Embedded Antenna - Tape and Reel		10 x 3.0 x 4.0 mm		SMT
BT 2.0	CAF94890	WLAN 802.11b/g and 802.11 - MIMO Embedded Antenna - Evaluation Board		10 x 3.0 x 4.0 mm		SMA Female
GPS 1.0	CAF96136	GPS - 1575 MHz Embedded Antenna - Tape and Reel		10 x 3.0 x 4.0 mm		SMT
GPS 1.0	CAF94890	GPS - 1575 MHz Embedded Antenna - Evaluation Board		10 x 3.0 x 4.0 mm		SMA Female
ISM5G 1.0	CAF96136	5 GHz ISM band 3/5.725 GHz Embedded Antenna - Tape and Reel		10 x 3.0 x 4.0 mm		SMT
ISM5G 1.0	CAF94890	5 GHz ISM band 3/5.725 GHz - Evaluation Board		10 x 3.0 x 4.0 mm		SMA Female
WLAN5G 1.0	CAF96136	Public Safety/WLAN 802.11a 4.9/5.35 GHz Embedded Antenna Tape and Reel		10 x 3.0 x 4.0 mm		SMT
WLAN5G 1.0	CAF94890	Public Safety/WLAN 802.11a 4.9/5.35 GHz - Evaluation Board		10 x 3.0 x 4.0 mm		SMA Female

## NanoAnt

- Omnidirectional radiation pattern
- Flexible implementation requiring minimal matching circuitry

# EXTERNAL WIRELESS

## EXR

Connector Mount

- For Bluetooth & IEEE 802.11 devices
- Injection molded high performance flexible cable antenna



## Dipole ComAer 2.4: WCP

- Snap-in / Captive 802.11b/g, Bluetooth
- Fits in .25" case up to .070" thick
  - Alignment notches to prevent rotation



## Dipole ComAer 2.4: WCR

- Snap-in 802.11b/g, Bluetooth
- 1/2 wave coaxial dipole
  - Clutch allows 360° rotation
  - Flexible element



## WRR

Connector Mount 802.11b/g, Bluetooth

- Covers 802.11b for all US and Japanese WLAN applications



Model #	Reference #	Antenna Description	Gain	Size (L)	Cable	Connectors
<b>EXR Series</b>						
EXR2400-BNRP-G	CAF28915	2.4 GHz Half-Wave Dipole, Knuckle Elbow, 5.5", Gray (G)	3.0 dBi	14 cm	N/A	RP-BNC
EXR2400-BNRP-B	CAF28896	2.4 GHz Half-Wave Dipole, Knuckle Elbow, 5.5", Black (B)	3.0 dBi	14 cm	N/A	RP-BNC
<b>WCP Series</b>						
WCP2400-MMCX2	CAF28841	2.4 GHz ComAer Dipole w/ Pigtail, Straight/Captive, 7 cm	2.5 dBi	7 cm	2" RG-178	MMCXjackR.A.
WCP2400-MMCX4	CAF28841	2.4 GHz ComAer Dipole w/ Pigtail, Straight/Captive, 7 cm	2.5 dBi	7 cm	4" RG-178	MMCXjackR.A.
WCP2400-MMCX6	CAF28841	2.4 GHz ComAer Dipole w/ Pigtail, Straight/Captive, 7 cm	2.0 dBi	7 cm	6" RG-178	MMCXjackR.A.
WCP2400-MMCX8	CAF28841	2.4 GHz ComAer Dipole w/ Pigtail, Straight/Captive, 7 cm	1.5 dBi	7 cm	8" RG-178	MMCXjackR.A.
WCP2400-MMCX12	CAF28841	2.4 GHz ComAer Dipole w/ Pigtail, Straight/Captive, 7 cm	1.0 dBi	7 cm	12" RG-178	MMCXjackR.A.
<b>WCR Series</b>						
WCR2400-MMCX	WCR2400MMCX	2.4 GHz ComAer Dipole, Knuckle Elbow, 10 cm	1.0 dBi	8 cm	N/A	MMCX Straight
WCR2400-SMA	WCR2400SMA	2.4 GHz ComAer Dipole, Knuckle Elbow, 10 cm	2.0 dBi	8 cm	N/A	SMA-Male
WCR2400-SMRP	WCR2400SMRP	2.4 GHz ComAer Dipole, Knuckle Elbow, 10 cm	1.0 dBi	8 cm	N/A	RP-SMA-Male
WCR2400-FL04	MAF94015	2.4 GHz ComAer Dipole, Snap-in, Knuckle Elbow	2.0 dBi	7.6 cm (90° bent), 10.8 cm (straight)	100 mm	RG-178 Flying Lead
WCR2400-IP04	MAF94017	2.4 GHz ComAer Dipole, Snap-in, Knuckle Elbow	2.0 dBi	7.6 cm (90° bent), 10.8 cm (straight)	100 mm, 1.13mm	MHF
<b>WRR Series</b>						
WRR2400-RPSMA-B	MAF94028	2.4 GHz Dipole, Knuckle Elbow, Black (B)	1.3 dBi (2.45 GHz)	8.8 cm (90° bent), 10.9 cm (straight)	N/A	
WRR2400-RPSMA-G	MAF94046	2.4 GHz Dipole, Knuckle Elbow, Gray (G)	1.3 dBi (2.45 GHz)	8.8 cm (90° bent), 10.9 cm (straight)	N/A	RP-SMA
WRR2400-IP04-B	MAF94019	2.4 GHz Dipole, Snap-in, Knuckle Elbow, Black (B)	1.3 dBi (2.45 GHz)	8.8 cm (90° bent), 10.9 cm (straight)	100 mm, 1.13mm	MHF
WRR2400-IP04-G	MAF94048	2.4 GHz Dipole, Snap-in, Knuckle Elbow, Gray (G)	1.3 dBi (2.45 GHz)	8.8 cm (90° bent), 10.9 cm (straight)	100 mm, 1.13mm	MHF
WRR2400-FL04-B	MAF94027	2.4 GHz Dipole, Snap-in, Knuckle Elbow, Black (B)	1.3 dBi (2.45 GHz)	8.8 cm (90° bent), 10.9 cm (straight)	100 mm RG-178	Flying Lead
WRR2400-FL04-G	MAF94047	2.4 GHz Dipole, Snap-in, Knuckle Elbow, Gray (G)	1.3 dBi (2.45 GHz)	8.8 cm (90° bent), 10.9 cm (straight)	100 mm RG-178	Flying Lead
WRR2400-RPTN	MAF94260	2.4 GHz Half-Wave Dipole, Knuckle Elbow, 5.5", Black	2.5 dBi	14 cm	N/A	RP-TNC

Items printed in green are in-stock and available for immediate delivery

Model # Description	Reference # Gain	Antenna Description Size (L)	Gain Cable	Size (L Model # Connectors)	Reference # Cable	Antenna Connectors
<b>WTBP</b>						
(Blade parallel to Rotation)						
WTBP2450-IP04-F	MAF94003	Tri-Band 2.4/4.9-6 GHz Blade - Fixed elbow (F)	2.0 dBi- 2.45 GHz, 3.0 dBi - 4.9 GHz, 3.7 dBi - 5.25 GHz, 3.6 dBi - 5.875 GHz	4" (90° bent), 4.6" (straight)	100 mm, 1.13mm	MHF
WTBP2450-IP04-K	MAF94009	Tri-Band 2.4/4.9-6 GHz Blade - Knuckle elbow (K)	Same as above	4" (90° bent), 4.6" (straight)	100 mm, 1.13mm	MHF
WTBP2450-FL04-F	MAF94023	Tri-B and 2.4/4.9-6 GHz Blade - Fixed elbow (F)	Same as above 4.6" (straight)	4" (90° bent),	100 mm RG-178	Flying Lead
WTBP2450-FL04-K	MAF94025	Tri-Band 2.4/4.9-6 GHz Blade - Knuckle elbow (K)	Same as above 4.6" (straight)	4" (90° bent),	100 mm RG-178	Flying Lead

### WTBR Series

(Edge parallel to Rotation)

WTBR2450-IP04-K	MAF94007	Tri-Band 2.4/4.9-6 GHz Blade - Knuckle elbow (K)	2.0 dBi- 2.45 GHz, 3.7 dBi - 5.25 GHz, 3.0 dBi - 4.9 GHz, 3.6 dBi - 5.875 GHz	4" (90° bent), 4.6" (straight)	100 mm, 1.13mm	MHF
WTBR2450-IP04-F	MAF94010	Tri-Band 2.4/4.9-6 GHz Blade - Fixed elbow (F)	Same as above	4" (90° bent), 4.6" (straight)	100 mm, 1.13mm	MHF
WTBR2450-FL04-K	MAF94024	Tri-Band 2.4/4.9-6 GHz Blade - Knuckle elbow (K)	Same as above	4" (90° bent), 4.6" (straight)	100 mm RG-178	Flying Lead
WTBR2450-FL04-F	MAF94026	Tri-Band 2.4/4.9-6 GHz Blade - Fixed elbow (F)	Same as above	4" (90° bent), 4.6" (straight)	100 mm RG-178	Flying Lead

### WTC Series

WTC2450-IP04-F	MAF94005	Tri-Band 2.4/4.9-6 GHz Cylindrical - Fixed elbow (F)	2.5 dBi- 2.45 GHz, 3.8 dBi - 4.9 GHz, 4.6 dBi - 5.25 GHz, 5.2 dBi - 5.875 GHz	4.25" (90° bent), 4.9" (straight), 6" diam.	100 mm, 1.13mm	MHF
WTC2450-IP04-K	MAF94006	Tri-Band 2.4/4.9-6 GHz Cylindrical - Knuckle elbow (K)	Same as above	Same as above	100 mm, 1.13mm	MHF
WTC2450-FL04-F	MAF94022	Tri-Band 2.4/4.9-6 GHz Cylindrical - Fixed elbow (F)	Same as above	Same as above	100 mm RG-178	Flying Lead
WTC2450-FL04-K	MAF94021	Tri-Band 2.4/4.9-6 GHz Cylindrical - Knuckle elbow (K)	Same as above	Same as above	100 mm RG-178	Flying Lead

## WTBP WLAN Tri-Band Blade

Snap-in / Captive  
802.11a/b/g, Bluetooth

- Covers 2.4 to 2.5 GHz for 802.11b, and 4.9 to 6 GHz for 802.11a and all US, European, and Japanese WLAN applications



## WTBR WLAN Tri-Band Blade

Snap-in / Captive  
802.11a/b/g, Bluetooth

- Covers 2.4 to 2.5 GHz for 802.11b, and 4.9 to 6 GHz for 802.11a and all US, European, and Japanese WLAN applications



## WTC WLAN Tri-Band

Snap-in / Captive  
802.11a/b/g, Bluetooth

- Covers 2.4 to 2.5 GHz for 802.11b, and 4.9 to 6 GHz for 802.11a and all US, European, and Japanese WLAN applications





# EXTERNAL WIRELESS

## WTS WLAN Tri-Band Small

Connector Mount

802.11a/b/g, Bluetooth

- Covers 2.4 to 2.5 GHz for 802.11b, and 4.9 to 6 GHz for 802.11a and all US, European, and Japanese WLAN applications



## WXE

Connector Mount

802.11b/g, Bluetooth

- Injection molded high performance flexible cable antenna
- 1/2 wave coaxial dipole design for improved performance



## WXR

Connector Mount

802.11b/g, Bluetooth

- Injection molded high performance flexible cable antenna
- 1/2 wave coaxial dipole design for improved performance



Model #	Reference #	Antenna Description	Gain	Size (L)	Cable	Connectors
<b>WTS Series</b>						
WTS2450-RPSMA	MAF94051	Tri-Band 2.4/4.9-6 GHz Small Diameter - Knuckle elbow	2.5 dBi - 2.45 GHz, 3.6 dBi - 4.9 GHz, 3.0 dBi - 5.25 GHz, 3.4 dBi - 5.875 GHz	75.4mm (90° bent), 95.9mm (straight), 9.3mm diam.	N/A	RP-SMA
WTS2450-IP04	MAF94016	Tri-Band 2.4/4.9-6 GHz, Snap-in, Small Diameter Knuckle elbow	Same as above	Same as above	100 mm, 1.13mm	MHF
WTS2450-FL04	MAF94035	Tri-Band 2.4/4.9-6 GHz, Snap-in, Small Diameter	Same as above	Same as above	100 mm RG-178 Knuckle elbow	Flying Lead
<b>WXE Series</b>						
WXE2400-SM	CAF29155	2.4 GHz Half-Wave Dipole, Straight, 5.5"	3.0 dBi	5.5"	N/A	SMA-Male Flush
WXE2400-SMLH	CAF28832	2.4 GHz Half-Wave Dipole, Straight, 5.5"	3.0 dBi	5.5"	N/A	SMLH-Male Flush
<b>WXR Series</b>						
WXR1850-TN	CAF28793	1850 MHz Half-Wave Dipole, Knuckle Elbow, 7"	1.0 dBi	7"	N/A	TNC-Male
WXR2400-TN	CAF28778	2.4 GHz Half-Wave Dipole, Knuckle Elbow, 7"	1.0 dBi	7"	N/A	TNC-Male
Model #	Reference #	Antenna Description	Gain	Size (L x W x H)	Cable	Connectors
<b>Nanobox</b>						
Nanobox-IP24	MAF94106	Tri-Band 2.4/4.9-6 GHz, desktop	1.0-4.0 dBi	24 x 6.0 x 6.0 mm	610 mm, 1.37 mm dia coax	MHF
<b>Accessory</b>						
Ferrite Bead (B)	for Std. Dipole external antennas		N/A	4x25x1.5 mm	100 mm, 1.13mm	MHF
Ferrite Bead (S)	for Std. Dipole external antennas		N/A	4x10x2 mm	100 mm, 1.13mm	MHF

## NORTH AMERICA

Our USA toll-free telephone number +1.800.843.4556

### Chicago, USA

1751 Wilkening Court  
Schaumburg, IL 60173  
Phone +1.847.839.6000  
Fax +1.847.839.6036

### Cleveland, USA

4707 Detroit Avenue  
Cleveland, OH 44102  
Phone + 1.888.246.9050  
Fax +1.216.939.2310

### Delaware Water Gap, USA

Shielding Way  
P.O. Box 650  
Delaware Water Gap, PA 18327  
Phone +1.570.424.8510  
Fax +1.570.424.6213

### Detroit, USA

4360 Baldwin Road  
Holly, MI 48442  
Phone +1.81.695.9810  
Fax +810.695.9851

### Chattanooga, USA

1200 East 36th Street  
Chattanooga, TN 37401  
Phone +1.423.308.1690  
Fax +1.423.308.1622

### Hermosillo, Mexico

Ave. Obrero Mundial # 9  
Parque Industrial Dynatech  
Hermosillo, Sonora 83170  
Mexico  
Phone +52.662.260.48.32  
Fax +52.662.216.12.02

### Kansas City, USA

11160 Thompson Avenue  
Lenexa, KS 66219  
Phone +1.913.492.2320  
Fax +1.913.492.1243

### Lincoln, USA

3300 Folkways Circle  
Lincoln, NE 68504  
Phone +1.402.325.3100  
Fax +1.402.467.4528

### Manchester, USA

48 Perimeter Road  
Manchester, NH 03103  
Phone +1.603.627.7877  
Fax +1.603.627.1764

### Reynosa, Mexico

Industrial Center #5  
Parque Industrial Reynosa  
Calle Brecha E.99 NORTE  
Lote 23, Reynosa  
Tamaulipas 88780  
Phone +52.899.921.9000  
Fax +52.899.921.9038

### San Diego, USA

1825 Diamond Street  
San Marcos, CA 92069  
Phone +1.760.736.7007  
Fax +1.760.736.7008

### San Jose, USA

2030 Fortune Drive  
Suite 100  
San Jose, CA 95131  
Phone +1.408.544.9500  
Fax +1.408.577.0691

### San Rafael, USA

819 A Street  
San Rafael, CA 94901  
Phone +1.415.459.3777  
Fax +1.415.258.9963

### St. Louis, USA

3481 Rider Trail South  
St. Louis, MO 63045  
Phone +1.314.344.9300  
Fax +1.314.344.9333

### Trenton, USA

1040 Spruce Street  
Trenton, NJ 08648  
Phone +1.609.393.4178  
Fax +1.609.393.9461

## EUROPE

### Liberec, Czech Republic

Prumyslova 497  
462 11 Liberec  
Czech Republic  
Phone +420.48.8575111  
Fax +420.48.8575303

### Paris, France

13.15 rue des Entrepreneurs  
91560 Crosne, France  
Phone +33.1.69497979  
Fax +33.1.69497980

### Rosenheim, Germany

AuBere OberaustraBe 22  
83026  
Rosenheim, Germany  
Phone +49.8031.24600  
Fax +49.8031.246050

### Hildesheim, Germany

Daimlerring 31  
DE.31135  
Hildesheim, Germany  
Phone +49.5121.2068.112  
Fax +49.51.21.20.68.299

### Szomertely, Hungary

Puskas Tivadar u 3  
Szombathely, Hungary HU.9700  
Phone +0.36.94.513.850  
Fax +00.36.94.513.860

### Stockholm, Sweden

Box 500,  
Nasvagen 15 SE.184 25  
Akersberga, Sweden  
Phone +46.8.555.722.00  
Fax 46.8.555.722.10

### Goteborg, Sweden

Banehagsgatan 1 b  
S.41451  
Goteborg, Sweden  
Phone +46.31.704.67.55  
Fax +46.31.24.79.09

### East Grinstead, UK

Birches Industrial Estate  
East Grinstead, West Sussex  
RH19 1XH UK  
Phone +44.1342.315044  
Fax +44.1342.312969

### Livingston, UK

5 Cochrane Square  
Brucefield Industrial Park  
Livingston EH54 9DR  
Scotland, UK  
Phone +44.0.1.506.414200  
Fax +44.0.1.506.410694

## ASIA

### Beijing, China

No. 14, Jin Xiu Street  
BDA, Beijing 100176, P. R. China  
Phone + 86 10 6780 5500  
Fax +86 10 6787 6384

### Kunshan, China

28 Huanghe South Road  
Kunshan Economical & Technical  
Development Zone  
Kunshan City, China  
Phone +86.512.5737.6767  
Fax +86.512.5737.6766

### Quanzhou, China

Quanzhou Melcor Hua Yu  
Thermoelectric Co., Ltd  
3rd Floor Tuchan Industrial  
Building, North Xinhua Road,  
Quanzhou, Fujian, PRC  
Phone +86.595.223.90.818  
Fax +86.595.223.70.879

### Shanghai, China

Building 1, Number 58  
Hua Ning Road, Lane 4018  
Shanghai, P.R. China 201108  
Phone +86.21.6442.8018  
Fax +86.21.6489.6055

### Shenzhen, China

No. 2 Building, 2nd Industry Park  
Tangxiayong Songgang Town  
Baoan District, Shenzhen City  
Guangdong Province  
China 518105  
Phone +86.755.2714.1166  
Fax +86.755.2714.1199

### Shunde, China

Fuan Industrial Zone, Leliu Town  
Shunde District, Foshan City  
Guangdong Province  
P.R. China, 528322  
Phone +86.757.2563.8860  
Fax +86.757.2563.8862

### Suzhou, China

No. 228 Tongyuan Road  
Suzhou Industry Park  
Suzhou, P.R.China 215006  
Phone +86.512.6252.6590  
Fax +86.512.6252.7226

### Tianjin, China

Building C3/C4, Hongtai  
Industrial Park  
No. 87 TaiFeng Road, TEDA  
Tianjin, PRC 300457  
Phone +86.22.6629.8160  
Fax +86.22.6629.8158

### Yokohama, Japan

2.12.8 Sachiura, Kanazawa.ku  
Yokohama.shi,  
236.0003, Japan  
Phone +81.45.7851063  
Fax +81.45.7851064

### Seoul, Korea

A.4th Floor, Woorim Lion's Valley  
371.28,Gasan.Dong,  
Gumcheon.Gu,  
Seoul 153.786 Korea  
Phone +82.2.830.2095  
Fax +82.2.830.1945

### Bucheon, Korea

160.1 4F, Dodang.dong, Wonmi.gu  
Bucheon.si, Gyeonggi.do  
420.805 Korea  
Phone +82.32.684.1370  
Fax +82.32.684.1360

### Johor, Malaysia

No. 8 Jalan Sri Plentong  
Taman Perindustrian  
Sri Plentong 81750 Plentong  
Johor, Malaysia  
Phone +11.607.387.9298  
Fax +11.607.387.9198

### Penang, Malaysia

Plot No. 522,  
Lorong Perusahaan Baru 3  
Perai Industrial Estate,  
13600 Perai,  
Penang, Malaysia  
Phone +60.4.398.9298  
Fax +60.4.398.9198

### Singapore

750E Chai Chee Road #03.07/08  
Technopark@Chai Chee  
Singapore 469005  
Phone +65.624.38022  
Fax +65.624.38021

### Taiwan

4F, No. 6 Hou.Sheng Road  
Luchu, Taoyuan, Taiwan 338  
Phone +886.33.129292  
Fax +886.33.129090

### Taiwan

6/F, 94 Shi.Weï Street  
San Chung City  
Taipei Hsien, Taiwan, ROC 24152  
Phone +88.2.2287.4187  
Fax +886.2.2287.4173

### Taiwan

3F, No 92, Shi.Weï Street  
San Chung City, Taipei Hsien  
Taiwan, ZIP 241  
Phone +866.2.2286.2828 ext 37  
Fax +886.2.2286.2323

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1751 Wilkening Ct  
Schaumburg  
IL 60173  
USA  
Tel: +1.847.839.6006  
Fax: +1.847.839.6036

3300 Folkways Circle  
Lincoln  
NE 68504  
USA  
Tel: +1.402.325.3100  
Fax: +1.402.467.4528

Call Toll Free +800.323.3757  
[sales@lairdtech.com](mailto:sales@lairdtech.com)  
[www.lairdtech.com](http://www.lairdtech.com)

