

QUALITY • HONESTY • INTEGRITY



# MOBILE & FIXED STATION ANTENNAS



4G-LTE  
Telemetry  
LMR-Public Safety  
Portables  
Custom Design

**em**  
wave inc.



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## OUR MISSION

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**E/M Wave, Inc.** is committed to helping our customers communicate through innovative RF and wireless solutions, by exceeding your expectations for quality antenna design, performance, and reliability.

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"Finally someone is building a better antenna solution."

M10004 series 132-174 MHz



EMFLX-M10004 EMFLX-M10004-GPI

- O-ring seals for waterproof construction
- Durable Xenoy™ base with TPV over mold dust seal to professionally dress off installation, while providing a grip ring to ease antenna install and removal
- Black molded poly spring with black chrome finish whip adapter

	EMFLX-M10004	EMFLX-M10004-GPI	EM-M10004	EM-M10004-GPI	EM-M10004-LS	EM-M10004-GPI-LS
Frequency Band	132-174 MHz					
VSWR	<1.5:1 at center freq	<1.2:1 at center freq	<1.5:1 at center freq	<1.2:1 at center freq	<1.5:1 at center freq	<1.2:1 at center freq
Gain	3 dB	2 dBi	3 dB	2 dBi	3 dB	2 dBi
Powering Rating	150 W					
Ground Plane Independent	-	YES	-	YES	-	YES
Overall Length (max)	55 7/16 in. (1.408 m)	50 in. (1.17 m)	55 7/16 in. (1.408 m)	50 in. (1.17 m)	55 7/16 in. (1.408 m)	50 in. (1.17 m)
Whip Material	17-7 SS, Black Chrome					
Spring Material	Black molded poly with black chrome finish adapter		Stainless steel, black chrome		-	-
Base Material	Xenoy™ with TPV over mold grip ring					
Mounting App	NMO mount					



M10014 series 144-174 MHz



EMFLX-M10014 EMFLX-M10014-GPI

- O-ring seals for waterproof construction
- Durable Xenoy™ base with TPV over mold dust seal to professionally dress off installation, while providing a grip ring to ease antenna install and removal
- Black molded poly spring with black chrome finish whip adapter

	EMFLX-M10014	EMFLX-M10014-GPI	EM-M10014	EM-M10014-GPI	EM-M10014-LS	EM-M10014-GPI-LS
Frequency Band	144-174 MHz					
VSWR	<1.5:1 at center freq	<1.2:1 at center freq	<1.5:1 at center freq	<1.2:1 at center freq	<1.5:1 at center freq	<1.2:1 at center freq
Gain	3 dB	2 dBi	3 dB	2 dBi	3 dB	2 dBi
Powering Rating	150 W					
Ground Plane Independent	-	YES	-	YES	-	YES
Overall Length (max) @144 MHz	46 in. (1.17 m)	45 3/4 in. (1.16 m)	49 3/8 in. (1.25 m)	45 3/4 in. (1.16 m)	49 3/8 in. (1.25 m)	45 3/4 in. (1.16 m)
Whip Material	17-7 SS, Black Chrome					
Spring Material	Black molded poly with black chrome finish adapter		Stainless steel, black chrome		-	-
Base Material	Xenoy™ with TPV over mold grip ring					
Mounting App	NMO mount					



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# VHF Rooftop Mount Antenna

e/m-Flex™

EMFLX-M10008-WB **144-174 MHz** Wide Band



EMFLX-M10008-WB

- VHF Wide Band, fixed length, quarter-wave, *No Tuning Required*
- O-ring seals for waterproof construction
- Durable Xenoy™ base with TPV over mold dust seal
- Black molded poly spring with black chrome finish whip adapter

Frequency Band	144-174 MHz
VSWR	≤1.8:1
Gain	2 dBi gain
Powering Rating	150 W
Overall Length	18-7/8 inch (479.4mm)
Whip Material Finish	17-7 SS, Black Chrome
Base Material	Xenoy™ w/TPV over mold grip ring
Mounting Application	NMO mount



# VHF/UHF Rooftop Mount Antenna

M10001 series **108-520 MHz** Quarterwave

e/m-Flex™



EMFLX-M10001

- O-ring seals for waterproof construction
- Broad Band, Field Tunable
- Durable Xenoy™ base with TPV over mold dust seal to professionally dress off installation, while providing a grip ring to ease antenna install and removal

	EMFLX-M10001	EM-M10001	EM-M10001-LS
Frequency Band	108-520 MHz		
VSWR	(15 MHz Bandwidth @150 MHz) ≤2.0:1 (50 MHz Bandwidth @450 MHz) ≤1.5:1 (100 MHz @450 MHz) ≤2.0:1		
Gain	2 dBi		
Powering Rating	150W		
Overall Length	@108 MHz: 29 in. (737mm) @150 MHz: 19¼ in. (502mm) @450 MHz: 7¼ in. (197mm)		
Whip Material	17-7 SS, Black chrome		
Spring Material	Black molded poly with black chrome finish adapter	17-7 Stainless steel, black chrome	-
Base Material	Xenoy™ with TPV over mold grip ring		
Mounting App	NMO Mount		



EM-M10001

EM-M10001-LS

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## M10003 series 420-470 / 470-520\* / 380-520 MHz



EMFLX-M10003  
EMFLX-M10013\*

EMFLX-M10003-GPI

- 420-470 MHz and 380-520 MHz (GPI model)
- O-ring seals for waterproof construction
- Durable Xenoy™ base with TPV over mold dust seal to professionally dress off installation, while providing a grip ring to ease antenna install and removal

	EMFLX-M10003	EMFLX-M10003-GPI	EM-M10003	EM-M10003-GPI	EM-M10003-LS	EM-M10003-GPI-LS
Frequency Band (Tunable Range)	420-470 MHz	380-520 MHz	420-470 MHz	380-520 MHz	420-470 MHz	380-520 MHz
VSWR	<1.5:1	<1.2:1 across operational bandwidth	<1.5:1	<1.2:1 across operational bandwidth	<2:1	<2.2:1
Gain	3 dB	2 dBi	3 dB	2 dBi	3 dB	2 dBi
Powering Rating	150 W					
Ground Plane Independent	-	YES	-	YES	-	YES
Overall Length (max)	14 3/8 in. (365.1 mm)	16 1/8 in. (409.6 mm)	14 3/8 in. (365.1 mm)	16 1/8 in. (409.6 mm)	14 3/8 in. (365.1 mm)	16 1/8 in. (409.6 mm)
Whip Material	17-7 SS, Black Chrome					
Spring Material	Black molded poly with black chrome finish adapter		Stainless steel, black chrome		-	-
Base Material	Xenoy™ with TPV over mold grip ring					
Mounting App	NMO mount					

\*EMFLX-M10013 same specifications as EMFLX-M10003 except 470 - 520 MHz



EM-M10003

EM-M10003-LS

EM-M10003-GPI

EM-M10003-GPI-LS

## M10007 series 420-470 / 440-480 MHz



EMFLX-M10007

EMFLX-M10007-GPI

- 420-470 MHz and 440-480 MHz (GPI model)
- One-piece 17-7 SS Open Coil Whip for Reliability and Performance
- O-ring seals for waterproof construction
- Durable Xenoy™ base with TPV over mold dust seal to professionally dress off installation, while providing a grip ring to ease antenna install and removal

	EMFLX-M10007	EMFLX-M10007-GPI	EM-M10007	EM-M10007-GPI	EM-M10007-LS
Frequency Band (Tunable Range)	420-470 MHz	440-480 MHz (no tuning required)	420-470 MHz	440-480 MHz (no tuning required)	420-470 MHz
VSWR	<1.5:1	<2:1	<1.5:1	<2:1	<1.5:1
Gain	5 dB	5 dBi	5 dB	5 dBi	5 dB
Powering Rating	150 W				
Ground Plane Independent	-	YES	-	YES	-
Overall Length (max)	38 3/8 in. (975 mm)	31 1/4 in. (794 mm)	38 3/8 in. (975 mm)	31 1/4 in. (794 mm)	38 3/8 in. (975 mm)
Whip Material	17-7 SS, Black Chrome				
Spring Material	Black molded poly with black chrome finish adapter		17-7 Stainless steel, black chrome		-
Base Material	Xenoy™ with TPV over mold grip ring				
Mounting App	NMO Mount				



EM-M10007

EM-M10007-GPI

EM-M10007-LS

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# 700 / 800 / 900 MHz

	EM-M11005	EM-M11003	EM-M11008	EM-M11004	EM-M11014
Frequency Band	746-960 MHz	763-869 MHz	806-894 MHz	890-960 MHz	806-894 MHz
VSWR	<1.5:1	<2:1	<2:1	<2:1	<2:1
Gain	2 dBi	5 dBi	5 dBi	5 dBi	6 dBi
Powering Rating	100 W				
Overall Length	4 1/4 in. (108 mm)	14 1/2 in. (368 mm)	14 1/2 in. (356 mm)	12 1/2 in. (318 mm)	22 1/4 in. (565 mm)
Whip Material	17-7 Stainless Steel, Black Chrome				
Base Material	Xenoy™ with TPV over mold grip ring				
Mounting App	NMO mount (sold separately)				



Applications: Public Safety/LMR/P25/TETRA, ISM/SCADA/Utilities, Railroad/Train Control

- Rugged One-Piece SS Radiator with Limited "Lifetime Warranty"
- Durable and Highly Conductive Black Chrome Finish
- Tightly Wound Phasing Coil Delivers Flexibility while Resisting Low Hanging Obstructions
- Open Coil Whip Affords Higher Power Handling Capability (excluding EM-M11005)
- Brass BETA's Increase Operational Bandwidth up to 15%
- Durable Xenoy™ Base with TPV Over Mold Grip Eases Antenna Install and Removal

EM-M11005 746-960 MHz



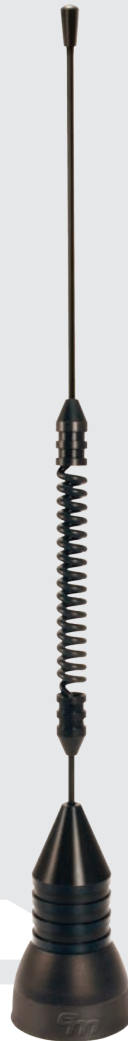
EM-M11003 763-869 MHz



EM-M11008 806-894 MHz



EM-M11004 890-960 MHz



EM-M11014 902-928 MHz



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# "X"-NUT™ Quarterwave Antenna

Exploded view showing all "X"-Nut components



Gain	0 dBd (2.0 dBi)
VSWR	1.5:1 typical, 1.9:1 max (except EM-MX0152, 1.5:1 typical, 2.0:1 max)
Powering Rating	100 W
Polarization	Linear, Vertical
Ground Plane	Required
Whip Material Finish	300 Series stainless steel, black chrome plated
Base Material	Xenoy™ w/TPV over mold grip ring
Mounting Application	NMO mount (sold separately)
Corrosion	Salt and UV resistant



- Stylish high-impact, dual shot Xenoy™/TPV base
- Insert molded antenna adapter and brass NMO ring truly eliminates mating concerns of dissimilar metals
- Dual seal construction for weatherproof protection
- Delivers up to 10% more operational bandwidth than comparable low-end chrome nut designs
- Durable black chrome finish for high conductivity and quality appearance
- Easy hand-installation for positive RF connection... No tools required!



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# Multi-Band Mobile Antenna

## LMR and LTE-Poly Pro Flexible Antennas

EM-M20007 698-960 MHz/1710-2700 MHz  
EM-M22001 for UHF/700-900 MHz NMO Apps



EM-M20007

EM-M22001

Patent No. US 9,520,640

- Capacitive Coupled Design Optimizes LTE and UHF Signal Performance while Maintaining Low-Profile Tapered Form Factor
- Flexible Elastomeric Polymer Housing Resists High Speed Impact and Damage from Low Hanging Obstructions
- Dust and O-Ring Seals for Reliable High Pressure Car Wash and Waterproof Performance (IP66)
- Next Generation LTE Model Incorporates Expanded Frequency Range and Reduced Height
- Rugged "All Brass" Construction with Black Chrome Finish and Silver Plated Contact Maximizing Conductivity and System Reliability

	EM-M20007	EM-M22001
Frequency Band	698-960 MHz / 1710-2700 MHz	450-520 MHz / 746-960 MHz
VSWR	1.5:1 typical, 2:1 max	
Gain	2 dBi @ 698-960 MHz 3 dBi @ 1710-2100 MHz 5 dBi @ 2100-2700 MHz	2 dBi @ 450-520 MHz 2 dBi @ 746-960 MHz
Powering Rating	100 W	150 W
Ground Plane	Required	
<b>Mechanical Specifications</b>		
Height	3.63 in. (92mm)	4.95 in. (125.8 mm)
Diameter	1.6 in. (40mm)	
Radiator Material	Brass / black chrome plating	Stainless Steel & brass w/black chrome
Radome Material	Elastomeric Polymer, proprietary	Xenoy™
Mounting Application	NMO mount type (sold separately)	

# Multi-Band Duplexer

EM-MBD41000-NJ 100-180 MHz/380-870 MHz



EM-MBD41000-NJ

- N-Jack Connectors
- Low Insertion Loss, All Bands
- High Power Handling
- 50 dB Port-to-Port Isolation
- Full Duplex/Bi-Directional Operation for Signal Combining or Splitting
- Specifically Designed to Augment Multi-Band LMR Applications

Frequency Band (VHF)	100-180 MHz
Frequency Band (UHF-870)	380-870 MHz
VSWR (All Ports)	≤1.3:1
Isolation (VHF↔UHF-870)	≥50 dB
Insertion Loss	≤0.2 dB (100-180 MHz) ≤0.3 dB (380-520 MHz) ≤0.5 dB (746-870 MHz)
Power Rating	150W (100-180 MHz) 100W (380-520 MHz) 75W (746-870 MHz)
Dimensions	3.27 x 2.1 x 1.1 in. (83 x 53 x 28 mm)
Connector	Type N, female
Mounting	Interior only, #8 PHMS

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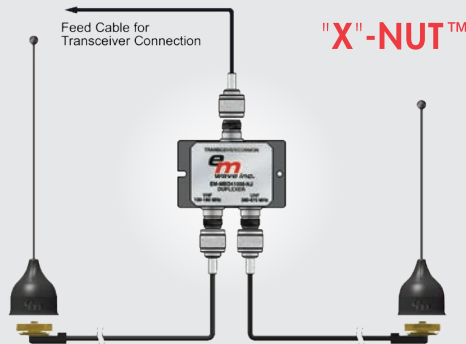




# Duplexed Antenna Kits

- Complete Dual-Band and Tri-Band expandable coverage for all LMR/Public Safety Bands operating in VHF 108-174 MHz, UHF 380-520 MHz and 746-870 MHz
- Optimal in-band performance with precision 50 ohm impedance, low insertion loss and field tunable VHF frequency selectivity
- Scalable to meet system performance requirements for all bands:
  - Frequency, field tune antennas including our most popular EM-Flex and X-Nut models
  - VSWR & Bandwidth
  - Gain
- Accommodates user/installer preference for ¼ wave, ½ wave, Dual Element Collinear and GPI antennas without compromising required system gain

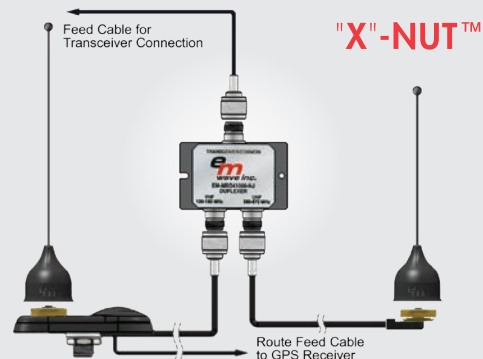
## Dual Band EM-MBD41002



- 108-174 MHz / 380-870 MHz
- Dual Band configuration for all LMR/Public Safety Bands, VHF through 870 MHz

Kit Includes (no substitutions):	Qty		Qty
Duplexer (VHF/UHF-870 MHz)	1	RG-58/U NMO Cable	1
N Male Connectors	3	EM-MX0108-FT Antennas	2
Low Loss 195 NMO Cable	1	RG-58/U Feed Cable	1

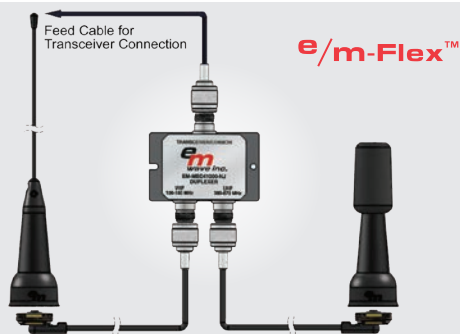
## Dual Band w/GPS EM-MBD41003



- 108-174 MHz / 380-870 MHz / + GPS
- Dual Band configuration for all LMR/Public Safety Bands, VHF through 870 MHz including GPS

Kit Includes (no substitutions):	Qty		Qty
Duplexer (VHF/UHF-870 MHz)	1	EM-MG11006-SP Mount NMO/GPS	1
N Male Connectors	3	EM-MX0108-FT Antennas	2
Low Loss 195 NMO Cable	1	RG-58/U Feed Cable	1

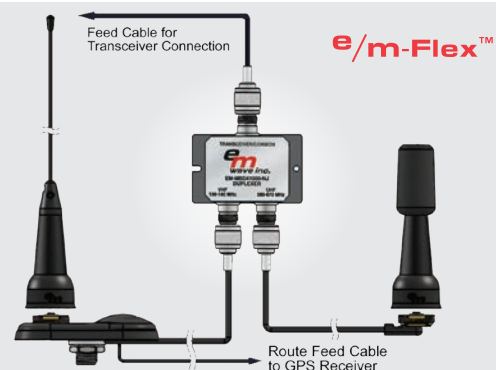
## Tri Band EM-MBD41005



- 108-174 MHz / 450-520 MHz / 746-870 MHz
- Complete Tri-Band coverage for all LMR/Public Safety Bands operating in VHF 108-174 MHz, UHF 450-520 MHz and 746-870 MHz

Kit Includes (no substitutions):	Qty		Qty
Duplexer (VHF/UHF-870 MHz)	1	EM-M11001-058 RG-58/U NMO Cable	1
N Male Connectors	3	EMFLX-M10001 Field Tune Antenna	1
EM-M11001-195 LL195 NMO Cable	1	RG-58/U Feed Cable	1
EM-M22001 (UHF/700-900 MHz)	1		

## Tri Band w/GPS EM-MBD41004



- 108-174 MHz / 450-520 MHz / 746-870 MHz / +GPS
- Complete Tri-Band coverage for all LMR/Public Safety Bands operating in VHF 108-174 MHz, UHF 450-520 MHz and 746-870 MHz including GPS

Kit Includes (no substitutions):	Qty		Qty
Duplexer (VHF/UHF-870 MHz)	1	EM-MG11006-SP Mount NMO/GPS	1
N Male Connectors	3	EMFLX-M10001 Field Tune Antenna	1
EM-M11001-195 LL195 NMO Cable	1	RG-58/U Feed Cable	1
EM-M22001 (UHF/700-900 MHz)	1		

# Mounts, Brackets & Cable Assemblies

## Base Station Conversion Adapter for GPI Antennas

- Frequency independent operation for all NMO type antennas
- Rugged all brass construction with bright nickel plating
- Integrated NMO sealing surface eliminates ingress potential between antenna and mounting surface or bulkhead
- Integrated bulkhead O-ring seal to protect electrical enclosures
- Mounts up to 11/32 in. thickness
- High power handling
- Mate with EMBKT-016SS to convert mobile ground plane independent antennas for base station, fixed point applications

**EM-BSA001  
NMO to N Type Jack**



Frequency Band	0 to 3000 MHz
VSWR	<1.2:1
Powering Rating	200 W
Overall Length	1.54 in. (39mm)

## Mounting Brackets for Mirror and Mast Installations



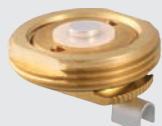
**Stainless Steel, Right Angle Mount**

- Accommodates 5/8 or 3/4 inch thru hole mounting for Bulkhead N Type, fixed station antennas
- Mate with EM-BSA001 to convert mobile ground plane independent antennas for base station, fixed point applications

	EMBKT-016SS	EMBKT-019SS
Bracket Material	Stainless Steel	
Mounting Hole Size	5/8 inch	3/4 inch

## NMO 3/4" Hole Mount Assembly

**EM-M11001  
NMO to N Type Jack**



- Low profile
- Ease of installation: Designed for a one-man installation from above
- All brass components with silver plated contact
- Heavy-duty mounting claw for reliable contact and ground connections
- For RG-58/U and 195 cable types



**EM-MTR11001  
Thick Panel**

Up to  
1/2 in. (12.7mm)  
thickness

- Self-adjusting NMO locking nut eliminates guesswork and decreases installation time
- All brass and stainless steel components for maximum reliability and corrosion resistance
- Non-rotational heavy-duty centering washer ensures perfect hole alignment while optimizing non-slip clamping pressure

Attached Cable Models	Standard Low Profile		Thick Panel Series	
	EM-M11001-058	EM-M11001-195	EM-MTR11001-058	EM-MTR11001-195
Frequency Band	30-1000 MHz			
VSWR	1.5:1 typical		<1.3:1 typical	
Powering Rating	100 W @1000 MHz		150 W for VHF 100 W for 700-1000 MHz	
Cable Type	RG-58/U	Low Loss 195	RG-58/U	Low Loss 195
Cable Length	17 ft. (5.1 m) standard length; 35 ft. (10.67 m) available			
Connector	Sold separately			
Mounting Material	Brass		Brass and stainless steel with bright nickel finish	

## Magnet Mount

**EM-MAG-058  
Magnet Mount**

- Magnet Mount Base with NMO mount



	EM-MAG-058	EM-MAG-195
Frequency Band	Up to 1000 MHz	
Magnetic Pull Force Retention	40 lb. (18.1 kg), includes protective UHMW PE pad	
Material Finish	High strength 14 ga steel, black powder coat	
Mounting App	NMO mount	
Connector	Sold Separately	
Cable	RG-58/U 17 ft. (5.1 m)	LL 195 type 17 ft. (5.1 m)

**EM-MAG-058-HD  
Heavy Duty Magnet Mount**

- All black, low-profile, 3 in. dia.
- Magnetic Base: Heavy-Duty 14ga Steel
- Surface Protection: Rubber Boot



	EM-MAG-058-HD	EM-MAG-195-HD
Frequency Band	Up to 1000 MHz	
Magnetic Pull Force Retention	50 lb. (22.6 kg), includes protective rubber boot	
Material Finish	High strength 14 ga steel, black powder coat	
Mounting App	NMO mount	
Connector	Sold Separately	
Cable	RG-58/U 17 ft. (5.1 m)	LL 195 type 17 ft. (5.1 m)

# Combination Mounts / GPS Antennas



## NMO/GPS Combination Mount

- Low-Profile aesthetics for reduced visibility
- UV Stabilized, High Impact Xenoy™ housing
- Rugged aluminum die cast base for high strength mechanical mounting and reliability
- Silicone Rubber gasket and dual O-ring seals for waterproof, high pressure car wash (IP66) applications



EM-MG11006-SP(-195)  
EM-MG11022-SP(-195)

## Magnet Mount GPS/GLN55

- Low-Profile, Rugged, Compact Design
- High-Impact Polycarbonate Housing UV Stabilized
- IP67 Rated
- High Rejection SAW Filter
- Low Current Consumption
- High strength magnetic mount
- SMA male plug
- 16.4 ft (5 m) RG-174/U Cable



EM-MG13004-SP

## GPS/GLN55 Antenna



EM-AG13007-NJ  
EM-AG13007-SP-174  
EM-AG13007-NP

- Low-Profile, Rugged, Compact Design
- Precision timing for fixed point networks
- Asset location and tracking
- Rated IPX7

	EM-AG13007-SP-174	EM-AG13007-NJ	EM-AG13007-NP
Frequency Band	1575-1610 MHz		
VSWR	<2.5:1		
Gain	30 ± 3 dB	30 ± 3 dB	34 ± 3 dB
Noise Figure	1.5 dB		
Cable Type	RG-174	N/A	N/A
Connector	SMA (m)	N Jack (f)	N male plug
Mounting Application	Bulkhead, 5/8 in. thru-hole		N-female bulkhead
ESD Protection	15kV		

	EM-MG11006-SP EM-MG11006-SP-195	EM-MG11022-SP EM-MG11022-SP-195
	GPS (L1) LNA	GPS/GLN55 LNA
Frequency Band	1575.42 ± 3 MHz	1575-1615 MHz
VSWR	<2.0:1	
Gain	30 dB Typical at 5 Vdc	28 dB Typical
Noise Figure	2.0 dB max	1.5 typical, 2.0 dB max
Oper. Voltage (Vdc)	3.0 - 5.5 V	2.5 - 5.5 V
Current Drain (Idc)	6.0 - 20.0 mA	5.0 - 20.0 mA max
Filter Type	SAW	
Attenuation	35 dB min (L1+50 MHz) 45 dB min (L1 +100 MHz)	28 dB min (DC-1522.5 MHz) 30 dB min (1662.5-3000 MHz)
Power Handling, Input	10W	
Connector	SMA Plug	
Cable	RG174	

Passive Antenna Element		
Center Freq Band	1575.42 MHz	1592.5 MHz
Antenna VSWR	1.5:1 max	2.:1 max
Gain	3 dBic	4 dBic
Polarization	RHCP	

Common NMO Mount Specifications	
Frequency Band	30 - 1000 MHz
VSWR	1.5:1 typical
Powering Rating	150 W max
Overall Length	4.5 in. (114.3mm)
Mounting Application	Bulkhead, 3/4 in. thru-hole
Connector	Sold separately
Cable	RG58/U (standard) or Low Loss 195 type (suffix -195)

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# Base & Fixed Station Antenna

## Multi-Band iDAS Indoor Ceiling Mount Antenna

698-960 / 1710-2700 MHz

LTE



EM-B40004-NJ

EM-B40005-NJ PIM Rated

- LTE/4G Performance
- Surface mount applications
- Aesthetic/Tamper Resistant design
- Low-Profile to minimize visual impact
- UV Stabilized housing



EMBKT-IDAS40004

- Twist-Lock Mounting Bracket for Fixed Surface Mount applications

Frequency Band	698-960 / 1710-2700 MHz
VSWR (698-760 MHz)	<1.8:1 typ., 2:1 max
VSWR (760-960 MHz)	<1.5:1 typ., 1.6:1 max
VSWR (1710-2700 MHz)	<1.3:1 typ., 1.5:1 max
Gain:	698-960 MHz: 2 dBi 1710-2100 MHz: 3 dBi 2100-2700 MHz: 5 dBi
E-Plane HPBW	80°, typical
H-Plane HPBW	Omnidirectional
Polarization	Vertical
Power Handling	50 W
PIM Rating (2x43 dBm)	<-150dBc (EM-B40005-NJ only)
<b>Mechanical Specifications</b>	
Height, As Mounted	4.5 in. (114.3 mm)
Diameter	8 in. (203 mm)
Mounting Hole Dia.	0.7 in. (18 mm)
Mounting Surface Thickness (max)	1.375 in. (35 mm)
Weight (Installed)	0.75 lb (0.34 kg)
Mounting Application / Type	Direct ceiling mount, thru-Hole
Mounting Bracket Kit	EMBKT-IDAS40004 (optional)
Connector Type	N Type, Jack
Cable Type, Length	RG-141 Teflon Type, 10 in. (254mm)

## Mobile/Fixed Station Antenna

LTE

### Broadband/Multiband

698-960 MHz  
1710-2200 MHz  
2200-2700 MHz



EM-A20003-SP

Black

EM-A20004-SP

White

- LTE/4G Performance
- Surface mount applications
- Aesthetic/Tamper Resistant design
- Low-Profile to minimize visual impact
- UV Stabilized, High Impact Xenoy™ and Polycarbonate housing

### Broadband/Multiband

746-960 MHz  
1710-2200 MHz  
2200-2700 MHz



EM-A40001

Black

EM-A40002

White

- LTE, LMR, Cellular/PCS, UMTS, WiFi, Wimax
- Tamper resistant bulkhead mount type
- Low Profile for interior/exterior fixed point applications
- Rugged dual seal design for exterior mobile and fixed point installations where ultra-reliable waterproof performance is required seal against the bulkhead
- O-ring seal for reliable waterproof construction and installation

	EM-A20003-SP EM-A20004-SP	EM-A40001 EM-A40002
Freq Band (1)	2 dBi Gain @ 698-960 MHz	2 dBi Gain @ 746-960 MHz
Freq Band (2)	2 dBi Gain @ 1710-2200 MHz	
Freq Band (3)	3.5 dBi Gain @ 2200-2700 MHz	
VSWR	<2.2:1 @ 698-710 MHz <2.0:1 @ 710-960 MHz <2.0:1 @ 1710-2700 MHz	2:1, max
Power Rating	10 W	
Polarization	Linear, vertical	
E-Plane	50°, nominal	35-50°, nominal
H-Plane	Omnidirectional	
<b>Mechanical Specifications</b>		
Height	3 in. (76.2 mm)	
Diameter	1.67 in. (42.4 mm)	
Radiator	PCB	
Housing Material	Xenoy™ / Polycarbonate	
Mounting Application	3/8 in. (M-10) Hole, Bulkhead	5/8 DD x 1/4 in. (6.35 mm) max, Bulkhead/panel mount
Cable	2 ft (610 mm) Low Loss 100	Sold separately
Connector	SMA Plug	N Jack (female)

Xenoy™ is a trademark of SABIC

# Base and Fixed Station Antenna

## Fiberglass Base Station Antenna

LTE

EM-BFG40006-NJ  
698-960/1710-2500 MHz  
2dBi 4G/LTE

EM-BFG11905-NJ  
900 MHz

- High input power handling
- All brass/silver plated feed and radiator structure
- High strength filament wound fiberglass radome (White)
- Includes hardware for 1½ in. offset pipe mast mounting

EM-BFG40006-NJ	EM-BFG40006-NJ	EM-BFG11905-NJ
Frequency Band	698-960/ 1710-2500 MHz	902-928 MHz
VSWR	≤1.8:1 typ, 2:1 max	≤2:1
Gain	2 dBi / 3 dBi	5 dBi / 2 dBd
Power Rating	100 W	
Polarization	Vertical	
Horizontal HPBW	Omnidirectional	
Vertical HPBW	65 - 72°, typical	35°, typical
Connector	Type N Jack	

EM-BFG11905-NJ

## GPS/GLNSS (L1) Timing Antenna

1574.4-1610 MHz



EM-BGT13006-TJ  
(includes mast mount kit)

- High selectivity dual filter RF architecture eliminates high power RFI operating within multi-located base station environment
- Impact resistant ASA radome
- Rugged die-cast aluminum base
- Integrated Bulkhead, TNC Jack
- IP67 Rated
- 3/4 in. NPT and 1"-14 marine mount compatible
- UV resistant/cool gray for reduced visibility

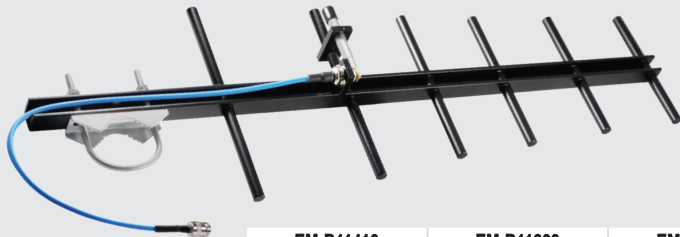


EM-BGT13005-TJ



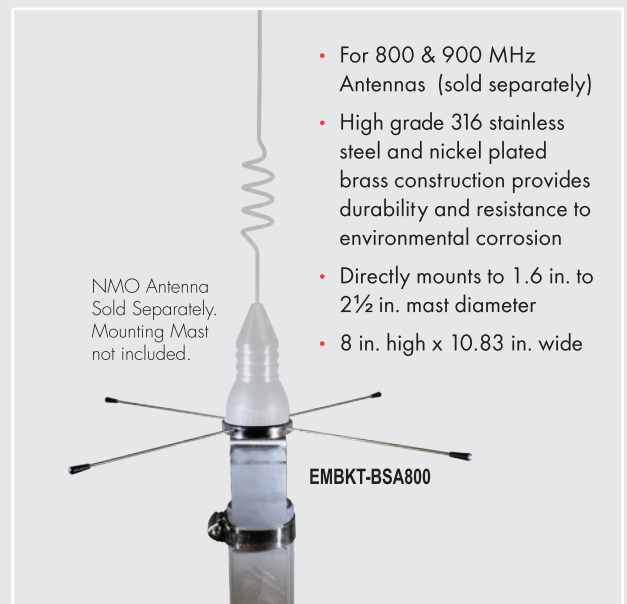
Frequency Band	1574.4-1610 MHz
VSWR	≤2.0:1
Gain	32 ± 3 dB at 5 V
Noise Figure	3.1 dB typical, 3.5 dB max
Oper. Voltage, Vdc	2.7 - 5.5 V
Current Drain, Idc	7-13 mA typical, 15 mA max at 5V, high temp
Rejection Out of Band	Up to 70 dB
DC Injection	Coaxial feed cable center conductor
<b>Mechanical Specifications</b>	
Height	4.88 in. (124 mm)
Width	3.25 in. (83 mm)
Connector	TNC Jack
Mounting Application	Pole/mast mount

## Yagi Fixed Station Antenna



	EM-B11410 7 Element	EM-B11809 6 Element	EM-B11909 6 Element
Frequency Band	450-470 MHz	760-870 MHz	890-960 MHz
VSWR	≤1.6:1, typical, 2:1 max	≤1.5:1, typical, 2:1 max	
Gain	10 dBi	9.5 dBi	
Powering Rating	150 W	125 W	
Dimensions	35.4 x 12.9 x 1.65 in. (900 x 328 x 42mm)	24x 7.52x 1.65 in. (610x 191x 42mm)	
Antenna Material	6000 Series Aluminum / Black powder coat finish		
Mounting Material	Stainless Steel & Steel / Dacron Finish		
Mounting Application	Pole/Mast Mount		
Cable / Connector Type	RG-141 UV & Plenum type cable / N Jack		

## Ground Plane Kit EMBKT-BSA800



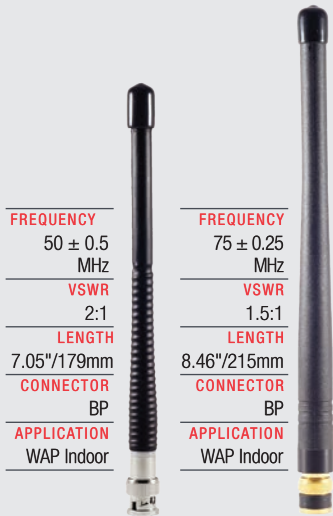
- For 800 & 900 MHz Antennas (sold separately)
- High grade 316 stainless steel and nickel plated brass construction provides durability and resistance to environmental corrosion
- Directly mounts to 1.6 in. to 2½ in. mast diameter
- 8 in. high x 10.83 in. wide

NMO Antenna Sold Separately. Mounting Mast not included.

EMBKT-BSA800

# Portable Antennas

## VHF (LOW)



**FREQUENCY**  
50 ± 0.5 MHz

**VSWR**  
2:1

**LENGTH**  
7.05"/179mm

**CONNECTOR**  
BP

**APPLICATION**  
WAP Indoor

**FREQUENCY**  
75 ± 0.25 MHz

**VSWR**  
1.5:1

**LENGTH**  
8.46"/215mm

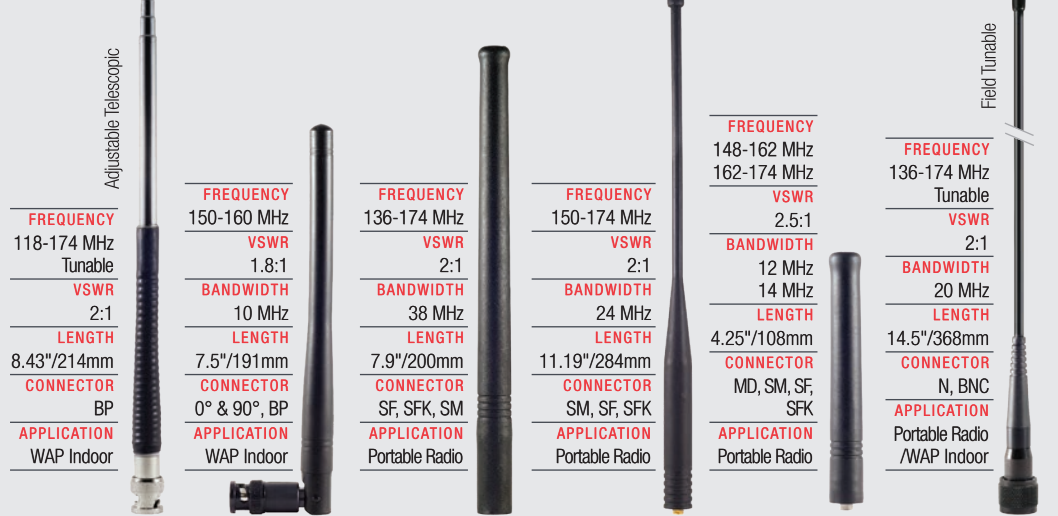
**CONNECTOR**  
BP

**APPLICATION**  
WAP Indoor

**EM-P90008**  
Unity Gain

**EM-P90012**  
Unity Gain

## VHF (HIGH)



**FREQUENCY**  
118-174 MHz Tunable

**VSWR**  
2:1

**LENGTH**  
8.43"/214mm

**CONNECTOR**  
BP

**APPLICATION**  
WAP Indoor

Adjustable Telescopic

**FREQUENCY**  
150-160 MHz

**VSWR**  
1.8:1

**BANDWIDTH**  
10 MHz

**LENGTH**  
7.5"/191mm

**CONNECTOR**  
0° & 90°, BP

**APPLICATION**  
WAP Indoor

**FREQUENCY**  
136-174 MHz

**VSWR**  
2:1

**BANDWIDTH**  
38 MHz

**LENGTH**  
7.9"/200mm

**CONNECTOR**  
SF, SFK, SM

**APPLICATION**  
Portable Radio

**FREQUENCY**  
150-174 MHz

**VSWR**  
2:1

**BANDWIDTH**  
24 MHz

**LENGTH**  
11.19"/284mm

**CONNECTOR**  
SM, SF, SFK

**APPLICATION**  
Portable Radio

**FREQUENCY**  
148-162 MHz  
162-174 MHz

**VSWR**  
2.5:1

**BANDWIDTH**  
12 MHz  
14 MHz

**LENGTH**  
4.25"/108mm

**CONNECTOR**  
MD, SM, SF, SFK

**APPLICATION**  
Portable Radio

**FREQUENCY**  
136-174 MHz Tunable

**VSWR**  
2:1

**BANDWIDTH**  
20 MHz

**LENGTH**  
14.5"/368mm

**CONNECTOR**  
N, BNC

**APPLICATION**  
Portable Radio /WAP Indoor

Field Tunable

**EM-P90007**  
Unity Gain

**EM-P90011**  
2 dBi Gain

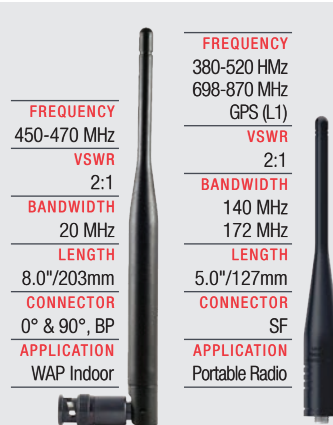
**EM-P90810**  
Unity Gain

**EM-P90918**  
Unity Gain

**EM-P90013**  
Unity Gain

**EM-P90014**  
Unity Gain

## UHF



**FREQUENCY**  
450-470 MHz

**VSWR**  
2:1

**BANDWIDTH**  
20 MHz

**LENGTH**  
8.0"/203mm

**CONNECTOR**  
0° & 90°, BP

**APPLICATION**  
WAP Indoor

**FREQUENCY**  
380-520 MHz  
698-870 MHz  
GPS (L1)

**VSWR**  
2:1

**BANDWIDTH**  
140 MHz  
172 MHz

**LENGTH**  
5.0"/127mm

**CONNECTOR**  
SF

**APPLICATION**  
Portable Radio

**EM-P90009**  
2 dBi Gain

**EM-PG91201**  
2 dBi Gain

## 700/800 MHz



**FREQUENCY**  
806-869 MHz

**VSWR**  
2:1

**BANDWIDTH**  
63 MHz

**LENGTH**  
9.8"/248mm

**CONNECTOR**  
0° & 90°, BP

**APPLICATION**  
WAP Indoor

**FREQUENCY**  
806-869 MHz

**VSWR**  
2:1

**BANDWIDTH**  
63 MHz

**LENGTH**  
2.1"/54mm

**CONNECTOR**  
SMA

**APPLICATION**  
Portable Radio

**FREQUENCY**  
698-870 MHz

**VSWR**  
2:1

**BANDWIDTH**  
172 MHz

**LENGTH**  
6.6"/168mm max.

**CONNECTOR**  
MD, SF, SM

**APPLICATION**  
Portable Radio

**FREQUENCY**  
698-870 MHz

**VSWR**  
2:1

**BANDWIDTH**  
172 MHz

**LENGTH**  
4.4"/111mm max.

**CONNECTOR**  
MD, SF, SFK

**APPLICATION**  
Portable Radio

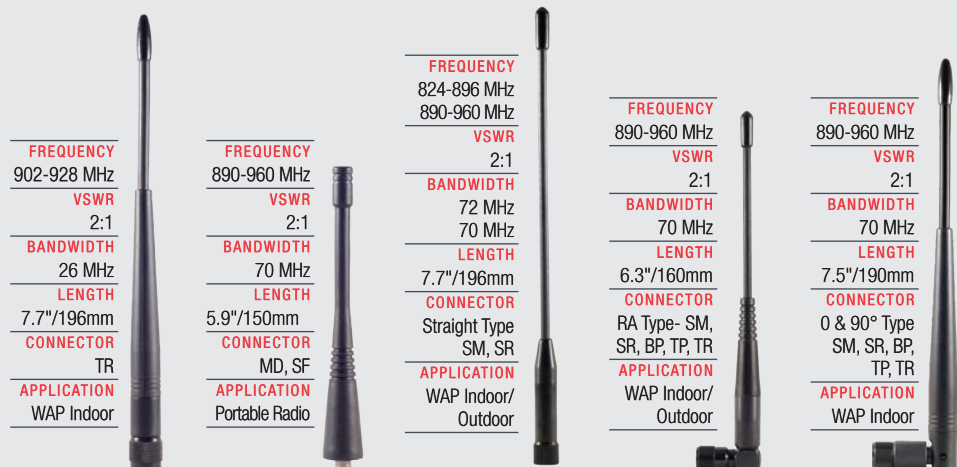
**EM-P90107**  
2 dBi Gain

**EM-P90108**  
Unity Gain

**EM-P90110**  
3 dBi Gain

**EM-P90111**  
1/4 Wave / 2 dBi Gain

## 900 MHz



**FREQUENCY**  
902-928 MHz

**VSWR**  
2:1

**BANDWIDTH**  
26 MHz

**LENGTH**  
7.7"/196mm

**CONNECTOR**  
TR

**APPLICATION**  
WAP Indoor

**FREQUENCY**  
890-960 MHz

**VSWR**  
2:1

**BANDWIDTH**  
70 MHz

**LENGTH**  
5.9"/150mm

**CONNECTOR**  
MD, SF

**APPLICATION**  
Portable Radio

**FREQUENCY**  
824-896 MHz  
890-960 MHz

**VSWR**  
2:1

**BANDWIDTH**  
72 MHz  
70 MHz

**LENGTH**  
7.7"/196mm

**CONNECTOR**  
Straight Type  
SM, SR

**APPLICATION**  
WAP Indoor/  
Outdoor

**FREQUENCY**  
890-960 MHz

**VSWR**  
2:1

**BANDWIDTH**  
70 MHz

**LENGTH**  
6.3"/160mm

**CONNECTOR**  
RA Type- SM,  
SR, BP, TP, TR

**APPLICATION**  
WAP Indoor/  
Outdoor

**FREQUENCY**  
890-960 MHz

**VSWR**  
2:1

**BANDWIDTH**  
70 MHz

**LENGTH**  
7.5"/190mm

**CONNECTOR**  
0 & 90° Type  
SM, SR, BP,  
TP, TR

**APPLICATION**  
WAP Indoor

**EM-P90102**  
2 dBi Gain

**EM-P90220**  
3 dBi Gain

**EM-P90112**  
2 dBi Gain

**EM-P90113**  
2.5 dBi Gain

**EM-P90114**  
2 dBi Gain



## Wi-Fi / WAN

**FREQUENCY**  
2.4-2.5 GHz

**VSWR**  
2:1

**BANDWIDTH**  
100 MHz

**LENGTH**  
5.38"/137mm

**CONNECTOR**  
SR

**APPLICATION**  
WAP Indoor



**EM-P90402**  
2 dBi Gain

**FREQUENCY**  
2.4-2.5 GHz

**VSWR**  
2:1

**BANDWIDTH**  
100 MHz

**LENGTH**  
7.36"/187mm

**CONNECTOR**  
TR

**APPLICATION**  
WAP Indoor



**EM-P90404**  
5 dBi Gain

**FREQUENCY**  
4.95-4.99 GHz

**VSWR**  
1.5:1

**BANDWIDTH**  
40 MHz

**LENGTH**  
7.36"/187mm

**CONNECTOR**  
TP

**APPLICATION**  
WAP Indoor



**EM-P90702**  
5 dBi Gain

**FREQUENCY**  
5.735-5.835 GHz

**VSWR**  
1.5:1

**BANDWIDTH**  
100 MHz

**LENGTH**  
7.36"/187mm

**CONNECTOR**  
TR

**APPLICATION**  
WAP Indoor



**EM-P90703**  
4.5 dBi Gain

**FREQUENCY**  
2.4-2.5 GHz  
4.9-5.35 GHz  
5.725-5.85 GHz

**VSWR**  
2:1

**BANDWIDTH**  
100 MHz  
450 MHz  
125 MHz

**LENGTH**  
4.22"/108mm

**CONNECTOR**  
0 & 90° Type  
SM, SR

**APPLICATION**  
WAP Indoor/  
Outdoor



**EM-P92301**  
0 dBi Gain

## LTE

**FREQUENCY**  
698-960 MHz  
1710-2170 MHz  
2500-2700 MHz

**VSWR**  
2:1

**BANDWIDTH**  
262 MHz  
460 MHz  
200 MHz

**LENGTH**  
9.33"/237mm

**CONNECTOR**  
0 & 90° Type  
SM, SR

**APPLICATION**  
WAP Indoor



**EM-P92201**  
1 dBi, 2 dBi, 3 dBi Gain

## Multi-Band

**FREQUENCY**  
135 MHz  
750 MHz

**VSWR**  
2:1

**LENGTH**  
7.87"/200mm

**CONNECTOR**  
SM

**APPLICATION**  
Portable Radio



**EM-P91101**  
Unity Gain

**FREQUENCY**  
890-960 MHz  
1710-1990 MHz

**VSWR**  
2:1

**BANDWIDTH**  
70 MHz  
280 MHz

**LENGTH**  
3.6"/92.5mm

**CONNECTOR**  
RA Type - SM

**APPLICATION**  
WAP Indoor/  
Outdoor



**EM-P91002**  
Unity Gain

**FREQUENCY**  
890-960 MHz  
1710-1990 MHz

**VSWR**  
2:1

**BANDWIDTH**  
70 MHz  
280 MHz

**LENGTH**  
3.0"/76mm

**CONNECTOR**  
Straight Type  
SM

**APPLICATION**  
WAP Indoor/  
Outdoor



**EM-P91003**  
Unity Gain

**FREQUENCY**  
380-520 MHz  
698-870 MHz

**VSWR**  
2:1

**BANDWIDTH**  
140 MHz  
172 MHz

**LENGTH**  
6.6"/168mm max.

**CONNECTOR**  
MD, SF, SM

**APPLICATION**  
Portable Radio



**EM-P91201**  
2 dBi Gain

**FREQUENCY**  
824-960 MHz  
1710-2170 MHz

**VSWR**  
2:1

**BANDWIDTH**  
136 MHz  
460 MHz

**LENGTH**  
5.81"/  
148mm

**CONNECTOR**  
NP, SM, SR

**APPLICATION**  
WAP Indoor



**EM-P92101**  
2 dBi Gain

**FREQUENCY**  
698-960 MHz  
1710-2170 MHz

**VSWR**  
2:1

**BANDWIDTH**  
262 MHz  
990 MHz

**LENGTH**  
7.32"/186mm

**CONNECTOR**  
0 & 90° Type  
SM, SR

**APPLICATION**  
WAP Indoor



**EM-P92202**  
2 dBi, 3 dBi Gain



**MD**  
M7x1



**SFK**  
SMA (f) Kenwood™ Type



**SF**  
SMA (f) Motorola™ Type



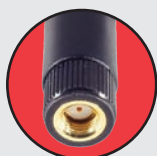
**SM**  
SMA (m)



**BP**  
BNC (m)



**NP**  
N (m)



**SR**  
SMA RP



**TP**  
TNC (m)



**TR**  
TNC RP Plug



Straight



Right Angle  
0° & 90°



Right Angle  
Fixed (RA)

# Replacement Parts

## Replacement Bases



**EM6A-01RP**

Replacement base for  
EM-M & MFLX-M10001  
EM-M11003  
EM-M11004  
EM-M11005  
EM-M11008  
EM-MX All Models



**EM6A-04RP**

Replacement base for  
EM-M10004  
EMFLX-M10004  
EM-M10014  
EMFLX-M10014

**EM6A-05RP**

Replacement base for  
EM-M10003  
EMFLX-M10003  
EM-M10007  
EMFLX-M10007



**EM6A-06RP**

Replacement base for  
EM-M10003-GPI  
EMFLX-M10003-GPI  
EM-M10007-GPI  
EMFLX-M10007-GPI



**EM6A-07RP**

Replacement base for  
EM-M10004-GPI  
EMFLX-M10004-GPI  
EM-M10014-GPI  
EMFLX-M10014-GPI



**EM6A-11RP**

Replacement base for  
EMFLX-M10008-WB



**Base O-Ring**

**EM9-02RP**  
(25 pack) fits all EM6A type bases

## Replacement Springs

**EMFLX3A-01RP**

Black Molded Poly Spring mates with any base using a standard 1/4 - 20 thread and accepts a whip diameter of 0.1 inch (2.5 mm).

Replacement for  
EMFLX-M10001  
EMFLX-M10003  
EMFLX-M10003-GPI  
EMFLX-M10004  
EMFLX-M10004-GPI  
EMFLX-M10014  
EMFLX-M10014-GPI



**EM3A-01RP**

Black Chrome SS Spring mates with any base using a standard 1/4 - 20 thread and accepts a whip diameter of 0.1 inch (2.5 mm).

Replacement for  
EM-M10001  
EM-M10003  
EM-M10003-GPI  
EM-M10004  
EM-M10004-GPI  
EM-M10014  
EM-M10014-GPI



**EMFLX3A-02RP**

Same as above but accepts a whip diameter of 3.0 mm.

Replacement for EMFLX-M10007

**EM3A-02RP**

Same as above but accepts a whip diameter of 3.0 mm.

Replacement for EM-M10007

## Connectors • All connectors fit either RG-58/U or 195 Type Cable

- PL-259 connector solder center pin
- Crimp sleeve (crimping tool required)



**EMPL259-CRIMP**

- Mini-UHF male plug connector



**EMMP-058**

- BNC male plug connector



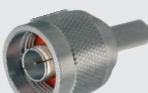
**EMBP-058**

- SMA male plug connector



**EMSP-058**

- N Plug (male) connector
- Nickel plated body
- Gold-plated centerpin
- Crimp/solder



**EMNP-058**

- TNC male plug connector



**EMTP-058**

## Replacement Whips

EM2A-08RP	Whip 30" black chrome for EM-M10001 & EMFLX-M10001
EM2A-11RP	Whip 55" tapered black chrome for EM-M10004, EM-M10004-GPI, EMFLX-M10004, EMFLX-M10004-GPI
EM2A-15RP	Whip 40" tapered open coil, UHF 5dB gain for EM-M10007 & EMFLX-M10007
EM2A-16RP	Whip 46" tapered black chrome, for EM-M10014, EM-M10014-GPI, EMFLX-M10014, EMFLX-M10014-GPI
EM2A-17RP	Whip 15" black chrome for EM-M10003, EMFLX-M10003, EM-M10003-GPI & EMFLX-M10003-GPI
EM2A-152RP	Whip assembly "X"-Nut™ model EM-MX0152
EM2A-450RP	Whip assembly "X"-Nut model EM-MX0450
EM2A-746RP	Whip assembly "X"-Nut model EM-MX0746
EM2A-890RP	Whip assembly "X"-Nut model EM-MX0890
EM2A-108-FTRP	Whip assembly "X"-Nut model EM-MX0108-FT

EM2A-08RP

EM2A-11RP

EM2A-15RP

EM2A-108-FTRP

EM2A-152RP

EM2A-162RP

EM2A-406RP

EM2A-450RP

EM2A-746RP

EM2A-890RP



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ALL QUOTATIONS AND SALES ARE SUBJECT TO THESE TERMS AND CONDITIONS

**1. ORDERS:** All orders and sales contracts are subject to written acceptance by the seller at its home office and are not binding upon Seller until accepted.

**2. PAYMENT TERMS:** Except as otherwise set forth on the quotation, order acknowledgement, or invoice: terms of payment are Net 30 days from date of invoice with approved credit. E/M Wave reserves the right to modify terms prior to shipment, require payment in advance, or delay or cancel any shipment or order by reason of Customer's creditworthiness or should Buyer fail to fulfill an obligation when due. Time and terms of payment are of the essence and if any default therein be made by the Buyer, or if the financial responsibility of the Buyer shall at any time become impaired or unsatisfactory to the Seller, Seller shall have the right to terminate this contract without any further liability to the Buyer or to defer or to discontinue further shipments until past due payments are made or satisfactory assurances of the buyer's financial responsibility are received by the Seller and such right shall continue irrespective of any prior failure on the part of the Seller to exercise such right. In such cases, the Seller will not be liable for nonperformance of this contract in whole or in part. If payment is not made by the Buyer when due, interest at 1 ½ % monthly will be charged on the unpaid amount from the due date thereof until paid.

**3. PRICE AND DELIVERY:** Prices are F.O.B. E/M Wave's facility; The Seller is not liable for damage to or loss of goods after title of goods passes to common carrier. Prices do not include any taxes, freight, handling, duty or other similar charges, payment of which will be the sole responsibility of the Buyer. Seller will attempt in good faith to meet delivery dates agreed upon, but in no event shall Seller be subject to liquidated, special, consequential or other damages for any delays or failures to comply with such delivery dates, however caused.

**4. CREDIT:** Net 30 Day terms sales will be extended (or modified) only to Buyers whose credit has been approved by the Seller.

**5. RETURNS AND CANCELLATIONS:** Order may not be cancelled or deliveries deferred from their original schedule without E/M Wave's prior written authorization and, in such event, Buyer will be liable to E/M Wave for any additional costs and expenses incurred by E/M Wave. A 20% restocking fee applies to all returned items unless other terms per signed agreement precede the standard restocking fee.

**6. CLAIMS:** Products are deemed accepted by customer unless customer notifies E/M Wave in writing within 10 days of delivery of product shortages, damage or defect. No returns may be made for any reason without a Return Materials Authorization (RMA) form issued by E/M Wave.

**7. WARRANTY AND LIABILITY:** Seller warrants for a period of two years from date of invoice that (a) all of its products will be free from defects in material and workmanship; (b) products furnished will conform to buyer's express written specifications to the extent accepted and agreed to by the Seller. Liability under these warranties is limited solely to the repair or, at Seller's option, replacement of or credit for any products found to be nonconforming or defective under normal use and service provided, however, that Buyer shall have given written notice to Seller describing in detail all alleged defects or nonconformity and such notice shall have been received by Seller within the applicable warranty period. These warranties shall not apply to products, which have been repaired or altered by persons other than Seller, or to defects that have been caused by misuse or abuse after delivery. Neither E/M Wave nor its suppliers will have any liability or obligation to Buyer for any claim, loss, damage, or expense caused in whole or in part, directly or indirectly, by the inadequacy of any products for any purpose, by any deficiency or defect in any product (whether or not covered by any warranty), by the use or performance of any products or by any failure or delay in E/M Wave's performance hereunder, or for any special, direct, indirect, incidental, consequential, exemplary or punitive damages, however caused, including, without limitation, personal injury or loss of business or profit, whether or not Buyer will have informed E/M Wave of the possibility or likelihood of any such damages.

**8. ENTIRE AGREEMENT:** These Terms and Conditions constitute the entire agreement between the Buyer and the Seller. Any terms or conditions in any purchase order or form of acknowledgement of the Buyer which are in addition to or in conflict with these terms and conditions are expressly objected to and rejected by the Seller and shall not be binding upon the Seller unless expressly accepted by the Seller in a separate writing. Upon acceptance of a shipment from the Seller, the Buyer is deemed to have accepted the Seller's Terms and Conditions. The laws of the State of Ohio shall govern the rights and obligations of the Buyer and Seller and the Buyer and Seller agree that any legal action or arbitration shall be brought within the State of Ohio.

### LIMITED WARRANTY STATEMENT E/M WAVE INCORPORATED

**WARRANTY:** Seller warrants for a period of two years from date of invoice that (a) all of its products will be free from defects in material and workmanship; (b) products furnished will conform to buyer's express written specifications to the extent accepted and agreed to by the Seller. Liability under these warranties is limited solely to the repair or, at Seller's option, replacement of or credit for any products found to be nonconforming or defective under normal use and service provided, however, that Buyer shall have given written notice to Seller describing in detail all alleged defects or nonconformity and such notice shall have been received by Seller within the applicable warranty period. These warranties shall not apply to products, which have been repaired or altered by persons other than Seller, or to defects that have been caused by misuse or abuse after delivery.

# CREDIT APPLICATION

DATE: \_\_\_\_\_

<b>Company Name:</b>			
Shipping Address:			
City:	State:	Zip:	PO Box:
Federal Tax ID (FEIN):		D&B DUNS:	
Phone:	Fax:	Web Site:	

<b>Accounts Payable Contact:</b>		
Phone:	Fax:	Email:

<b>Name Financial Institution:</b>	
Address:	
Contact:	
Telephone:	Fax and/or Email:
Account Number:	Type of Account:

<b>Trade Ref:</b>			<b>Trade Ref:</b>		
Account:			Account:		
Address:			Address:		
City:	State:	Zip:	City:	State:	Zip:
Contact:			Contact:		
Telephone:			Telephone:		
Fax and/or Email:			Fax and/or Email:		

<b>Trade Ref:</b>			<b>Trade Ref:</b>		
Account:			Account:		
Address:			Address:		
City:	State:	Zip:	City:	State:	Zip:
Contact:			Contact:		
Telephone:			Telephone:		
Fax and/or Email:			Fax and/or Email:		

The above information is submitted for the purpose of obtaining credit. Buyer authorizes E/M Wave Inc. to make such inquiries necessary to obtain information and authorizes Buyer's bank and / or suppliers to release information regarding Buyer's account(s). Buyers signature attests financial responsibility and willingness to pay our invoices in accordance with E/M Wave Inc. terms and conditions.

**TERMS:** Buyer agrees to pay all invoices within 30 days of invoice date. Buyer also understands that a service charge of 1.5% per month (which is an annual percentage rate of 18%) may be charged on all overdue balances. Buyer further agrees that the sale of venue for litigation between the parties is our Country and the prevailing party in an action is entitled to reasonable attorney fees and costs.  
Buyer's liability for any damages claimed by the Buyer and / or Buyers Company is limited to the purchase of goods or services in question.

Print Name:	Title:
Signature:	

# What Sets Us Apart from the Competition?

## "X"-NUT™

Exploded view showing all components

Exclusive built-in gasket seal to protect vehicle body and ensure weatherproof seal

Whip can easily be removed for carwash →



O-ring for base to mount seal



## Duplexer

Augments high performance antenna operation for "all-band" LMR applications

## Multi-Band GPS/GLNSS



Advanced Polymer Formula...  
**EM-FLEX™ poly springs**  
 Outperform and Outlast  
 Conventional Steel Springs

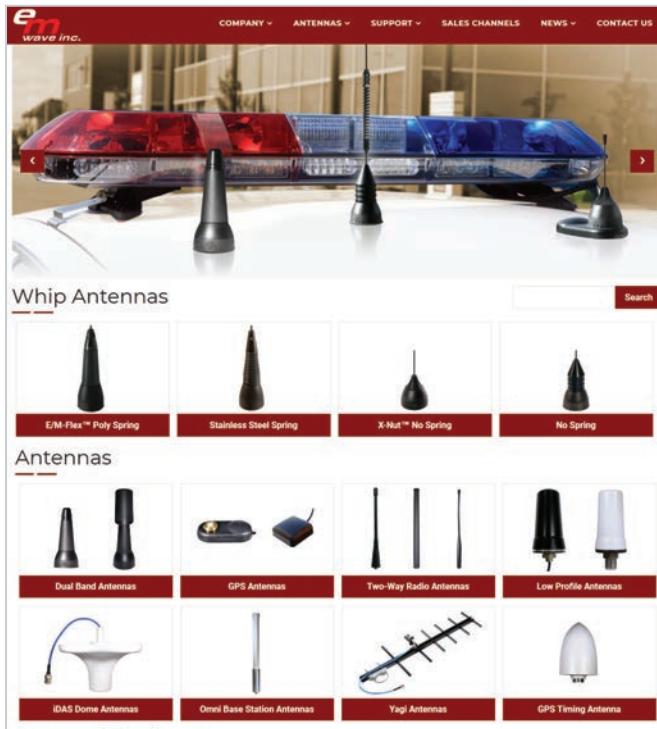
U.S. Patent  
 9,520,640  
 Capacitive  
 Coupled Design

Flexible  
 Elastomeric  
 Polymer Housing

**EM-M20007 Poly-Pro Antenna**  
 for LTE and LMR 700/800 MHz NMO  
 Applications



Dual Purpose - NMO/GPS Combination  
 3/4" Hole Mount Assembly



Be sure to visit **emwaveinc.com** and navigate through our new updated website filled with product information, technical data, download links, videos and links to our Reps and Stocking Distributors.



## Mobile & Fixed Station Antennas

**E/M Wave, Inc.** engineers and markets a growing line of unique mobile and fixed station communications antenna products. Our primary focus is to maximize the **Antenna Value** in every product to meet or exceed customer expectations! We incorporate unique quality features that deliver more **Value** that our customers can understand, experience, and appreciate. These are the attributes that set us apart from the competition. It's a **Quality** effort, and it's the right thing to do!



**e**  
**m**  
**wave inc.**

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