



# ZEBRA RFID ANTENNA FAMILY

## COMPREHENSIVE RFID ANTENNA PORTFOLIO FOR DIVERSE APPLICATION NEEDS

Zebra's family of Radio Frequency Identification (RFID) Antennas offers the versatility and performance required to meet diverse environmental and application needs — including customer-facing areas, warehouses and outdoor environments. When used in conjunction with Zebra's Fixed RFID Readers, communication with Electronic Product Code (EPC™)-compliant RFID tags is accurate, fast and efficient. Vital components in reader-tag communications, our family of efficient, high-performance antennas can meet the needs of any RFID solution.

### ZEBRA RFID ANTENNAS— A VITAL RFID SYSTEM COMPONENT

RFID Antennas complement the portfolio of Zebra enterprise mobility solutions that enable organizations to capture, move and manage critical information to and from every point of business activity. In combination with Zebra's fixed readers, these efficient antennas deliver high-throughput, high capacity communication of EPC-compliant RFID tag data.

### SERVICES COMPLETE THE SOLUTION

To help you seamlessly and successfully integrate your RFID Antennas into your environment, Zebra offers a complete suite of services that span the entire solution lifecycle — from initial planning and assessment through ongoing training and support.

For more information about Zebra RFID antennas for fixed readers and how our enterprise mobility solutions can give your organization a competitive advantage, please visit us on the web at [www.zebra.com/antennas](http://www.zebra.com/antennas) or access our global directory at [www.zebra.com/contact](http://www.zebra.com/contact).

## VERSATILITY AND PERFORMANCE TO MEET YOUR DIVERSE APPLICATION NEEDS

### ON THE FLOOR ...



IN THE FIELD ...



IN THE WAREHOUSE ...



## CHOOSE THE RIGHT ANTENNA FOR YOUR APPLICATION

Zebra's complete family of RFID antennas meets the needs of virtually any RFID application. Choose the antenna that is designed for your environment — carpeted, industrial or outdoors, delivers the right level of performance, meets mounting requirements and fits in your budget.

## GENERAL PURPOSE

### AN480: WIDE BAND ANTENNA FOR WORLDWIDE USE

#### FEATURES AND APPLICATIONS

##### AN480: FEATURES

- Excellent wide frequency band antenna response covering 865 Mhz ~ 956 Mhz , ideally suited for global deployments
- Available in right and left hand polarization.

##### APPLICATIONS

- Ceilings and walls to create superior read zones around shelves
- Doorways and chokepoints where boxes and pallets are moving through
- Portals, outdoor gates and conveyors
- Indoor and outdoor applications



The AN480 single port antenna offers maximum performance and flexibility. The low axial ratio is nearly 50 percent lower than typical competitive devices, delivering a more uniform gain — and better performance. The wide frequency range enables this antenna to be utilized in worldwide deployments, providing cost-efficiencies and a simplified RFID infrastructure. The AN480 can be installed throughout the enterprise in manufacturing and warehouse floor environments, or any dock door receiving application. As with all Zebra antennas, the AN480 uses Zebra's standard mounting bracket — mounting the antenna for the first time or upgrading an existing Zebra antenna with the AN480 is fast and easy.

The AN700 Series antennas offer all the features required for carpeted and customer-facing environments. A perfect complement to Zebra's FX7400 RFID Reader, the AN700 Series antennas are extremely compact, offering the aesthetics required for the most discreet installation in the most space constrained areas — for example, under the point of sale (POS) counter. The integrated mounting bracket enables easy installation in minutes. The AN710 is designed for inside the four walls. The rugged AN720 is designed to withstand exposure to rain, snow and extreme temperatures — ideal for the receiving dock doors or outdoor shopping areas.

	GENERAL PURPOSE			SLIM LINE		COMPACT	
ANTENNA ENVIRONMENT	AN200	AN440	AN480	AN610	AN620	AN710	AN720
BUSINESS-CLASS		•	•	•	•	•	•
INDUSTRIAL-CLASS – INDOOR	•	•	•	•	•		•
INDUSTRIAL-CLASS – OUTDOOR	•	•	•				•
VALUE SOLUTION			•			•	
COMPACT				SLIM	SLIM	•	•
HIGH PERFORMANCE/ HIGH GAIN (DB)	•	•	•				
POLARIZATION	R & L Circular	R & L Circular/ Dual	R & L Circular	L Circular	L Circular	L Circular	L Circular
SPECIFICATIONS							
	AN200		AN440		AN480		
PHYSICAL							
DIMENSIONS WITHOUT MOUNTING SCREWS:	11.1 in. L x 11.1 in. W x 1.9 in. D 281.9 mm L x 281.9 mm W x 48.3 mm D		22.6 in. L x 10.2 in. W x 1.32 in. D 575.1 mm L x 259.1 mm W x 33.52 mm D		10.2 in. L x 10.2 in. W x 1.32 in. D 259.1 mm L x 259.1 mm W x 33.5 mm D		
DIMENSIONS WITH MOUNTING SCREWS:	11.1 in. L x 11.1 in. W x 1.9 in. D 281.9 mm L x 281.9 mm W x 48.3 mm D		22.6 in. L x 10.2 in. W x 1.32 in. D 575.1 mm L x 259.1 mm W x 33.52 mm D		10.2 in. L x 10.2 in. W x 1.98 in. D 259.1 mm L x 259.1 mm W x 50.3 mm D		
CONNECTOR	Type “N” female		Type “N” female (2 qty)		Type ‘N’ female		
CONNECTOR POSITION			Rear		Pig-tail		
MOUNTING BRACKET	Integrated mounting holes						
WEIGHT	3 lbs./1.36 kg		7 lbs./3.2 Kg		2.5 lbs./1.13 kg		
CASING	Aluminum with plastic cover		UV Stable ASA, White		Aluminium with white plastic cover		
OPERATIONAL							
FREQ. RANGE	900-928MHz		EU: 865-868MHz; US*: 902-928MHz (AN440 optimized for US)		865-956 MHz		
GAIN			6.0 dBiL		6.0 dBiL		
VSWR (RETURN			1.22 : 1(20 dB)		1.3 : 1		

LOSS)

FRONT TO BACK RATIO	> 10dB	20dB	18dB
POLARIZATION	LHCP or RHCP	1 x LHCP / 1 x RHCP	LHCP or RHCP
3DB BEAM WIDTH	60°	70° in both phases	65°
MAX POWER	20 watts	10 Watts	2 watts
AXIAL RATIO	< 3 db	1dB typical	1.5 dB
ENVIRONMENTAL			
OPER. TEMPS	-40° F to +149° F, -40° C to +65° C	-22°F to +158°F , -30°C to +70°C	-13° F to +158° F, -25° C to +70° C
ENVIRONMENTAL SEALING	Weep holes	IP-67	IP-54
STORAGE TEMPERATURE	-40°F to +158° F, -40°C to +70° C	-40°F to +185°F, -40°C to +85°C	-40°F to +158° F, -40°C to +70° C
VIBRATION	IEC-68-2-6 (10 to 150 Hz, 0.5 g, one hour in each of two axes) (Random Vibration)		IEC-68 series
HUMIDITY	IEC-68-2-30 (-13° F to 104° F, -25° C to 40° C) 24 hour cycles of 90% relative humidity	MIL-Std 810G, METHOD 507.5, Procedure II - Aggravated	IEC 68-2-30
COMPLIANCE			
TAA COMPLIANT	YES		NO
PORT TO PORT ISOLATION	38dB		
SPECIFICATIONS			
	AN610		AN620
PHYSICAL			
DIMENSIONS:	10.8 in. L x 8.42 in. W x 0.47 in. D 275 mm L x 214 mm W x 12 mm D	15.39 in. L x 10.82 in. W x 0.47 in. D 391 mm L x 275 mm W x 12 mm D	
CONNECTOR	Type "N" female		
CONNECTOR POSITION	Side		
MOUNTING BRACKET	Integrated mounting holes		
WEIGHT	1.3 lbs./ 0.6 kg		2.2 lbs./ 1.0 Kg
CASING	Superior Kydex		
OPERATIONAL			
FREQ. RANGE	864-868 MHz (EU Version) 902-928 MHz (US Version)		
GAIN	1.0 dBiL		4.0 dBiL
VSWR (RETURN LOSS)	1.4 : 1		
FRONT TO BACK RATIO	18 dB		22 dB
POLARIZATION	LHCP		

3DB BEAM WIDTH	80° in both phases	75° horizontal , 48° vertical
MAX POWER	6 watts	
AXIAL RATIO	< 2 dB	
ENVIRONMENTAL		
OPER. TEMPS	-22° F to +149° F, -30° C to +65° C	
STORAGE TEMPERATURE	-40° F to +158° F, -40°C to +70° C	
VIBRATION	IEC-68-2-6 (10 to 150 Hz, 0.5 g, one hour in each of two axes) (Random Vibration)	
HUMIDITY	IEC-68-2-30 (-13° F to 104° F, -25° C to 40° C) 24 hour cycles of 90% relative humidity	
	AN710	AN720
PHYSICAL		
DIMENSIONS WITHOUT MOUNTING SCREWS:	5.75 in. L x 5.75 in. W x 0.69 in. D 146.05 mm L x 146.05 mm W x 17.53 mm D	5.2 in. L x 5.2 in. W x 0.7 in. D 132.8 mm L x 132.8 mm W x 18.1 mm D
DIMENSIONS WITH MOUNTING SCREWS:	N/A	
CONNECTOR	Type 'N' female	
CONNECTOR POSITION	Pig-tail	Rear
MOUNTING BRACKET	includes articulating mount	
WEIGHT	1.1 lbs/0.5 kg	0.8 lbs/0.37 kg
CASING	White ABS plastic	Aluminium with white plastic cover
OPERATIONAL		
FREQ. RANGE	900-928 MHz (US) & 867-870 MHz (EU)	900-928 MHz (US) & 865-868 MHz (EU)
GAIN	3.0 dBiL	US/Canada: 3.0 dBiL; Europe: 3.5 dBiL
VSWR (RETURN LOSS)	2 : 1	1.5 : 1
FRONT TO BACK RATIO	> 10dB	8db
POLARIZATION	LHCP	
3DB BEAM WIDTH	80°	100°
MAX POWER	10 watts	
AXIAL RATIO	< 3 db	2 dB
ENVIRONMENTAL		
OPER. TEMPS	-22° F to +158° F, -30° C to 70° C	-13° F to +158° F, -25° C to +70° C
ENVIRONMENTAL SEALING	IP 65 Vented	IP67

STORAGE TEMPERATURE	-40° F to +158° F, -40° C to +70° C	-40° F to +158° F, -40° C to +70° C
VIBRATION	EN 61373, IEEE 1478, Mil-810G	MIL-STD-810
HUMIDITY	Not Spec'd	IEC-68-2-30
COMPLIANCE		
TAA COMPLIANT	YES	

The antenna frequency specification and label is a characteristic trait of the antenna's peak frequency response. The RFID reader, when professionally installed and selected for a country of operation, dictates the actual frequency of transmission/reception to ensure regulatory compliance for operation in a designated country. The actual frequency specification of the antenna is not material to regulatory compliance.

The AN200 will perform reasonably well in EU frequency in most applications.



Repairs of Zebra RFID antennas for fixed readers may require the use of Zebra proprietary parts (and/or Zebra proprietary information). Zebra will sell these parts (and provide this proprietary information) only to end-user customers for self-service. Applicable in the U.S. For all other countries, please contact your Zebra account manager or the local Zebra Customer Service representative in your area for further detail

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