RFID Antenna Family

RFID antennas for fixed readers

Comprehensive RFID antenna portfolio for diverse application needs
Radio Frequency Identification (RFID) Antennas from Motorola offer versatility and performance to meet diverse application needs. When used in conjunction with Motorola's Fixed RFID Readers, communication with Electronic Product Code (EPC™) — compliant RFID tags is accurate, fast and efficient. Vital components in reader-tag communications, Motorola's family of efficient, high-performance antennas can meet the needs of any RFID solution.

AN480: Single Port Antenna for worldwide use
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 antenna offers the environmental sealing required to enable indoor and outdoor use. As with all Motorola antennas, the AN480 uses Motorola's standard mounting bracket — mounting the antenna for the first time or upgrading an existing Motorola antenna with the AN480 is fast and easy.

AN400: High-Performance Area Antenna for high-capacity, high throughput environments
Get the capacity and range you need to enable RFID tag reading in large areas with the AN400 High-Performance Area Antenna. This general-purpose area antenna is optimized to perform in all environments. Easy to mount on ceilings and walls, the AN400 enables the easy creation of superior read zones around shelves, doorways and dock doors — anywhere boxes and pallets are moving into and out of a facility.

These packaged, rectangular antenna arrays offer a wide read field and high-speed RF signal conversion for fast and optimal communication of EPC-compliant passive tag data. High-Performance Area Antennas are typically used in applications requiring the longest read ranges and highest levels of performance. They meet standard technical requirements for any RFID implementation and are deployment-ready with Motorola RFID fixed readers.

AN200: General Purpose Antenna for indoor or outdoor application

Get the convenience of a versatile antenna that can be utilized throughout your enterprise, from the warehouse floor and production line to outside the dock door. Able to withstand extreme heat and cold as well as moisture and vibration, the AN200 is ideal for nearly any application, including retail, manufacturing, wholesale distribution, healthcare, government and more.

This all-purpose antenna can be used in standard RFID applications with power levels up to one watt, as well as custom high-power applications requiring up to 20 watts. The antenna is traditionally used in pairs, with right and left hand polarization.

Motorola RFID antennas — A vital RFID system component

RFID Antennas complement the portfolio of Motorola enterprise mobility solutions that enable organizations to capture, move and manage critical information to and from every point of business activity. In combination with Motorola'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, Motorola 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, on Motorola RFID antennas for fixed readers and how Motorola's enterprise mobility solutions can give your organization a competitive advantage, contact us at +1.800.722.6234 or +1.631.738.2400, or visit us on the web at www.symbol.com/rfidantennas

RFID Antennas Specifications

AN480: High-Performance Worldwide Indoor-Outdoor Single Port Antenna*

Physical Characteristics	
Dimensions:	Without mounting screws: 10.2 in. L x 10.2 in. W x 1.32 in. D 25.91 cm L x 25.91 cm W x 3.35 cm D Without mounting screws: 10.2 in. L x 10.2 in. W x 1.98 in. D 25.91 cm L x 25.91 cm W x 5.03 cm D
Weight:	2.5 lbs./1.13 kg
Polarization:	LHCP and RHCP
User Environment	
Frequency:	865-956 MHz
Environmental Sealing:	IP54
Connectors:	Type "N" female
Max. VSWR Free Space:	1.22:1
Max. VSW Ground at .15 Meter:	1.3:1
Nominal Impedance:	50 Ohm
Horizontal 3 dB Beam Width:	65°
Vertical 3 dB Beam Width:	65°
Gain:	6 dBil max.
Axial Ratio:	1.5 dB max.
DC Resistance:	10K Ohm
Front to Back Ratio:	18 dB
Power:	2 Watts
Transport Vibration:	IEC-68 series
UV Rating:	F2 per UL 746C

AN400: High-Performance Area Antenna*

Physical Characteristics	
Dimensions:	28.3 in. L x 12.5 in. W x 1.5 in. D 71.7 cm L x 31.7 cm W x 3.8 cm D
Weight:	8 lbs./3.6 Kg
Casing:	Aluminum with polycarbonate cover
Polarization:	Two circular polarized patch array
User Environment	
Operating Temperature:	+32° to +122° F/0° to +50° C
Storage Temperature:	-4° to +158° F/-20° to +70° C
Connectors:	2 type "N" female connectors
Voltage Standing Wave Ratio (VSWR):	1.25
Isolation:	-37 db
3db Beam Width:	60°
Gain:	6.0 dBi linear

AN200: General Purpose Indoor-Outdoor Antenna*

Physical Characteristics	
Dimensions:	11.1 in. L x 11.1 in. W x 1.9 in. D 28.19 cm L x 28.19 cm W x 4.83 cm D
Weight:	3 lbs./1.26 kg
User Environment	
Frequency Range:	900-928 MHz
Operating Temperature:	-40° to +149° F/-40° to +65° C
Connector:	Type "N" female
Connector Position:	Rear
Return Loss (VSWR):	20 dB (1.22)
Cold Test:	IEC-68-2-1 (-40° F/-40° C for 24 hours)
Heat Test:	IEC-68-2-2 (158° F/70° C for 24 hours)
Temperature Shock Test:	IEC-68-2-14 (-40° F rising to 158° F/-40° Crising to 70° C in 10 cycles of 60 minutes each)
Humidity Test:	IEC-68-2-30 (77° to 104° F/-25° to 40° C 24 hour cycles of 90% relative humidity
Rain Test:	IEC-68-2-18 (8 hr min in rain chamber at 43 psi)
Salt Fog Test:	IEC-68-2-11 (96 hours, repetitive cycling)
Random Vibration Test:	IEC-68-2-6 (10 to 150 Hz, 05 g, 1 hour in each of 2 axes)
Nominal Impedence:	50 Ohm
Gain in dBi linear:	6.0
Impedence, DC:	10 kOhm +/- 5%
Polarization:	RHCP or LHCP
Axial Ratio at Boresight:	< 3 db AZ, EL BW: 60°
Front to Back Ratio:	<10 db
Max Input Power:	20 watts