

TSA5020

Ultra Rugged RAIN (UHF) RFID ANTENNA



Equipped with the familiar and industry leading the TSA5020 offers a compact footprint of only 150 mm square in a very smart-looking design. With an improved radiation than most other antennas of similar size in the market, the circularly polarized TSA5020 antenna creates a new benchmark for multi-purpose UHF RFID antennas. IP68 rated and built to Techsigno high standard for quality and robustness, the TSA5020 can be used for permanent outdoor applications. Its pleasing aesthetics and timeless design blends beautifully with most interiors, and makes the TSA5020 very suitable for customer facing environments. TSA5020 is ultra-high frequency (860-960Mhz) RFID antennas that are connected to the reader via a coaxial cable. The housing is made of high strength engineering plastic with high degree of protection.

Typical Applications

Deep Freezer (to -90°C)

The TSA5020 LX can operate at low-temperature extremes. High-value pharmaceutical assets can be tracked in fridges and freezers using the A5020 LX antenna. The slim design maximizes the usable space inside of a refrigerator.

The antenna can handle general purpose cleaning agents and is water resistant. The grey colored TSA5020 LX antenna is suitable for hospitals, medical laboratories, research industries and pharmaceutical laboratories.



Waste Management

The TSA5020 is IP68 rated, meaning it is suitable for permanent outdoor installations. The 'all-plastic'-housing prevents the antenna from corroding. The antenna can be water blasted. The -100° beam-width of the A5020 antenna makes wheelie bin detection easy and straight-forward. The antenna can be cleaned with cleaning agents. The physical size of the antenna is small and thus installation in waste management trucks is hassle free.



Food, Meat and Chemical Manufacturing Processes

The TSA5020 LX is IP69K rated so it can survive high pressure water cleaning which is often done in food processing industries.

The antenna cover is also resistant to general-purpose chemicals.



TSA5020

Specifications

Physical Characteristics		
Specifications	Working Frequency	865-868MHz / 902-928MHz
	Polarization	RHCP (Right Hand Circular Polarization)
	Far Field Gain	5.5dBiC
	Far Field Gain 3dB beam width (*)	115° in both planes
	VSWR	1.4 Typical
	Front to Back	-10dB
	Maximum Power	3W
	Axial Ratio	2dB typical
	Input Impedance	50Ω
	Antistatic Protection	YES DC Grounded
Physical Parameters	Antenna detection	10K Resistance
	Connector	SMA Female side connector
	Dimension	150.7 mm x 149.4 mm x 14,5 mm
	Weight	0.27Kg
	Fixed Type	Flush or VESA mount
Enviroments	Housing Material	UV-Resistant ABS
	Shell Color	White
	Operating Temperature	-40°C +65°C
	Storage Temperature	-40°C +85°C
	IP Protection Grade	IP68

Enviromental Test				
Test	Standard	Duration	Temperature	Notes
IPX Dust	AS60529 - 2004	8h		Severity: Vacuum, up to -2KPa
IPX8 Immersion	AS60529 - 2004	30min		Severity: 1.5 Depth
Basic Vibrations	IEC60068-2-64	1 Hrs per axis - 3 axis		Severity: Vehicle vibration 10-500 MHz 1.04g rms
Shock test	MIL-STS-810G	5 pulses/direction - 6 direction		Severity: Half sine 10g, 11ms
Thermal Shock	IEC60068-2-13	5 Cycles - 2 Hrs precondition	-65° to +65°	
Salt Fog	ASTMB117	24 Hrs	+35°	

Mounting Options

The recessed corner mounting holes of the TSA5020 support 100 x 100mm VESA spaced mounting brackets as shown in the picture. The innovative slim design of the TSA5020, equipped with an SMA connector, allows for totally flush mounting using the corner holes.

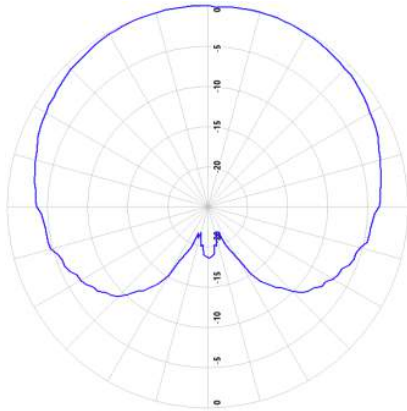


In situations where the antenna may be subject to stress on the connector or cable it is recommended to use our Connector Protection Backplate. These protect the connector from damage, especially when mounted on a bracket in free space. The Connector Protection Backplate can be used with right angled or straight cables.

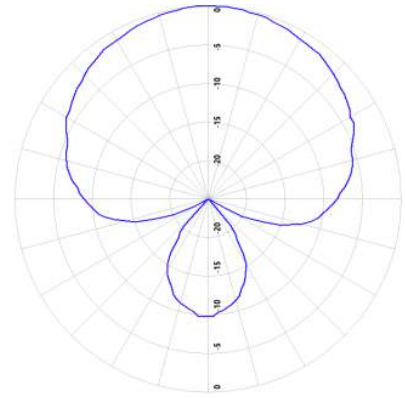


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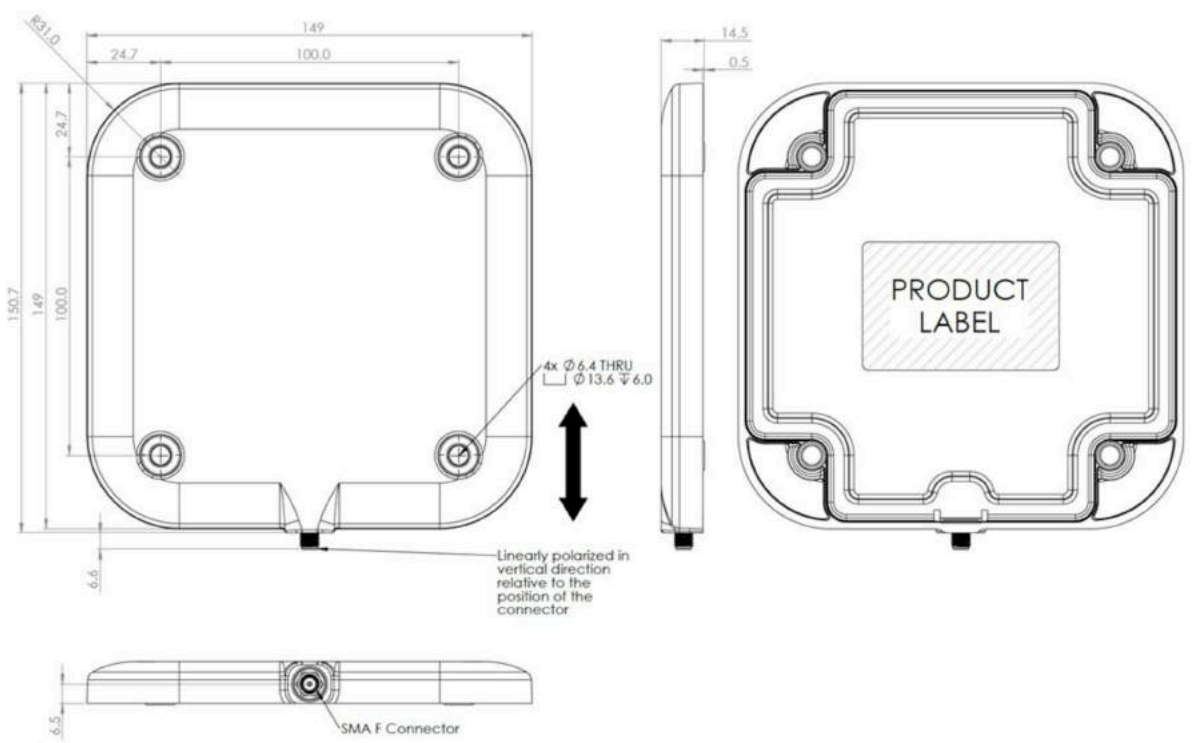
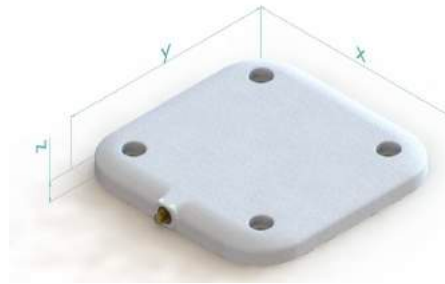
Specifications



XZ - Plane



YZ - Plane



TechSigno srl is an independent company that build RFID system and intelligent objects for multimedia, industrial, transportation, medical, and wireless applications. Working closely with our customers, we meet the specific made-to-order demands of our customer to achieve maximum functionality, efficiency, reliability and therefore satisfaction.

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