

## UHF ANTENNA

### MR A5020 CP



### PRODUCT DESCRIPTION

iDTRONIC's Mid-Range UHF Antenna MR A5020 CP is a high-performance device which can be used in combination with our RFID UHF Readers and Embedded UHF Modules.

Equipped with an industry-leading ultra-low profile, the MR A5020 CP offers a compact footprint of only 150 mm / 5.9-inch square in a very smart-looking design. With a significantly improved radiation pattern than most other antennas of similar size in the market, the A5020 CP antenna creates a new benchmark for multi-purpose UHF RFID antennas.

It enables Mid-Range reading of up to 4 meters. Through its circular polarized setting, the user will be able to read out the tags in multiple 3D orientations.

Being rated IP68, the A5020 CP can be used for permanent outdoor applications. As well as being durable, its pleasing and timeless design blends beautifully with most interiors and makes the A5020 CP very suitable for customer-facing environments.

To provide the device's SMA-connector with extra protection, iDTRONIC optionally provides Connector Protection Backplates\* to protect the connector from hits, especially when mounted on a bracket in free space. The backplate can be used with right-angled or straight cables.

#### ► APPLICATIONS

- Industrial Application
- Supply Chain
- Asset Tracking
- Access Control

#### ► FEATURES

- Small dimensions
- Up to 4 m Reading Range
- Circular polarized
- Easy to integrate with UHF Mid-Range-Reader

#### ► RFID OPTIONS

- 864 – 868 MHz (ETSI)
- 902 – 928 MHz (FCC)

## TECHNICAL DATA

### ELECTRICAL SPECIFICATIONS

Frequency Range	864 – 869 MHz (EU)   902 – 928 MHz (US)
Polarization	RHCP (Right Hand Circular Polarized)
Operating Distance	up to 4 m*
Connector Type	SMA female side connector
Antenna Gain	5 dBiC typical
Beam width	105° in both planes
VSWR	1.4 typical
Front to back	-10 dB
Axial Ratio	2 dB typical
Nominal Impedance	50 Ω
Anti-static protection	DC Grounded
Antenna Detection	10K Ω resistance
Maximum Input Power	3 W

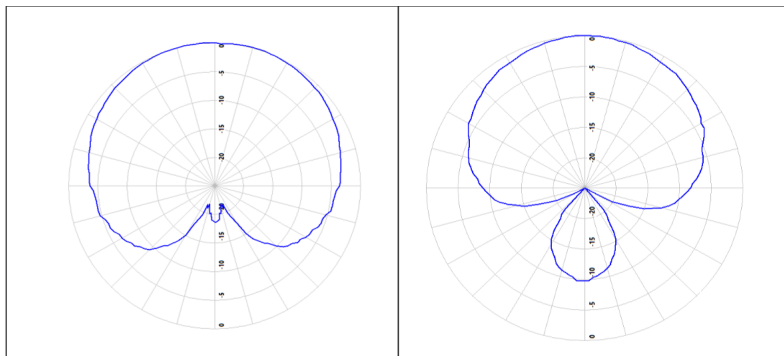
### MECHANICAL | ENVIRONMENTAL SPECIFICATIONS

Dimensions	150 × 150 × 14 mm
Weight	0.25 kg
Housing-Material	UV-Resistant / Fire-Retardant ABS
Environmental Rating	IP68
Operating & Storage Temperature	-30 ° to +65 °C
Mounting	Flush or VESA mount using four mounting holes
Humidity	5% to 95%

### SUPPORTED TRANSPONDERS

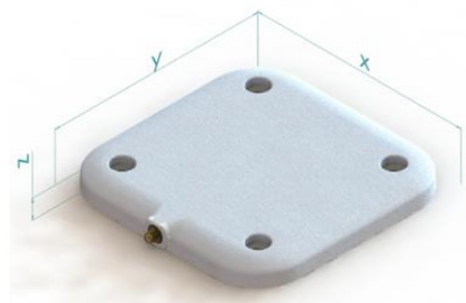
Standard ISO 18000-6C (EPC Class 1 Generation 2)  
E.g.: Alien Higgs 2/3/4, Impinj Monza, NXP UCODE, etc.

## RADIATION PATTERN & ANTENNA PLANES



MR A5020 CP XZ Plane

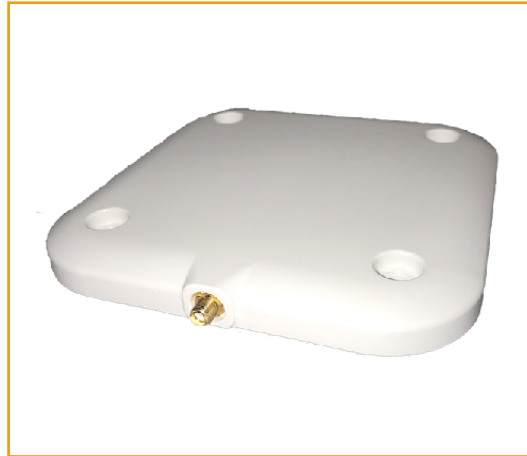
MR A5020 CP YZ Plane



## ORDER CODE

VERSION	ORDER CODE
MR A5020 CP UHF Antenna - ETSI	R-IN-UHF-A5020
MR A5020 CP UHF Antenna - FCC	R-IN-UHF-A5020-FCC
ACCESSORIES	ORDER CODE
Connector Protector Back Plate	R-IN-UHF-A5020-CBP

## PRODUCT PICTURES



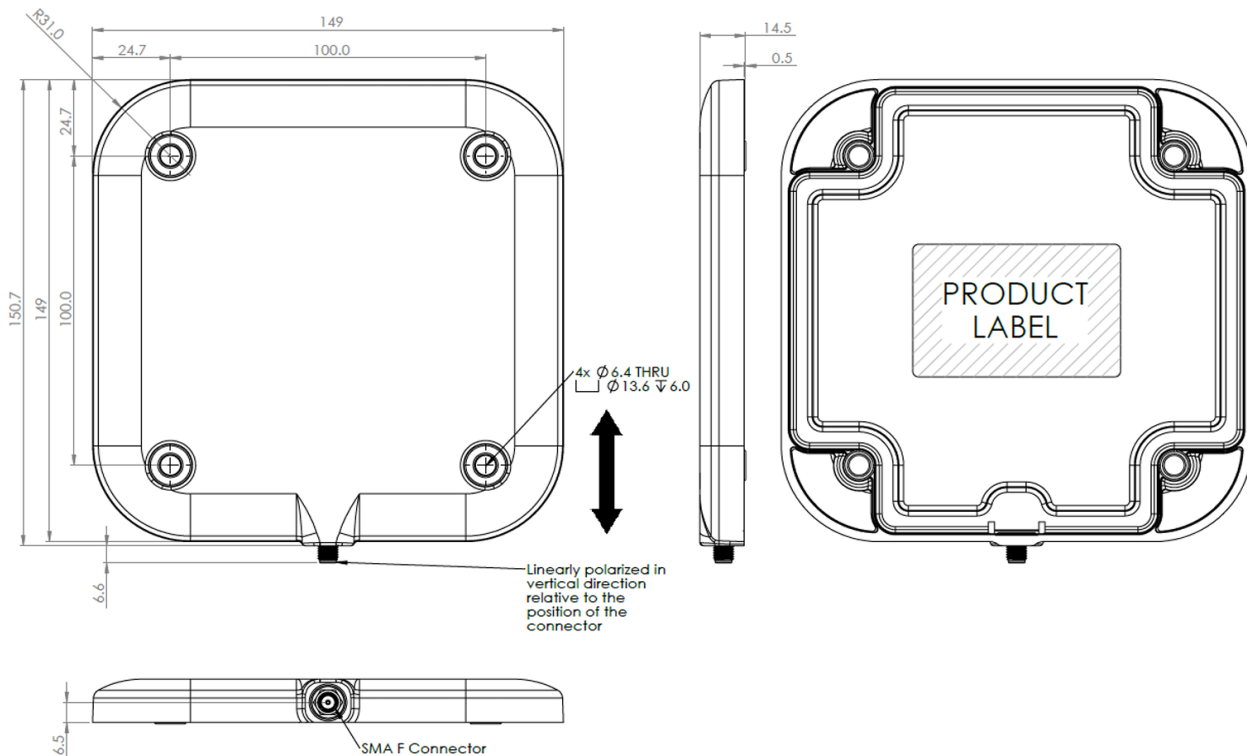
## MOUNTING



## CONNECTOR PROTECTION BACKPLATE\*



## DIMENSIONS





## APPLICATION EXAMPLES

### WASTE MANAGEMENT

The antenna is IP68 rated, meaning it is suitable for permanent outdoor installations. The 'all-plastic'-housing prevents the antenna from corroding. The antenna is moderately impact resistant and can be water blasted. The ~100° beam-width of the antenna makes wheellie bin detection easy and straight-forward. The antenna can be cleaned with cleaning agents and it would not be adversely affected. The physical size of the antenna is small and thus installation in waste management trucks is hassle free.



### RETAIL MANAGEMENT

The antenna can easily be deployed in space constrained environments such as retail. With its superb aesthetics and compact design, the antenna blends well into the retail back drop.

The antenna sends an signal to the computer when the shelf of products is empty. The employee's can react quickly and fill up the empty shelf immediately. This ensures the revenue of the retail market and immerses the customer satisfaction.



### MEDICAL & PHARMACEUTICAL

The antenna can operate at low-temperature extremes. High-value pharmaceutical assets can be tracked in fridges and freezers using the 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 white colored antenna antenna is suitable for hospitals, medical laboratories, research industries and pharma labs.

