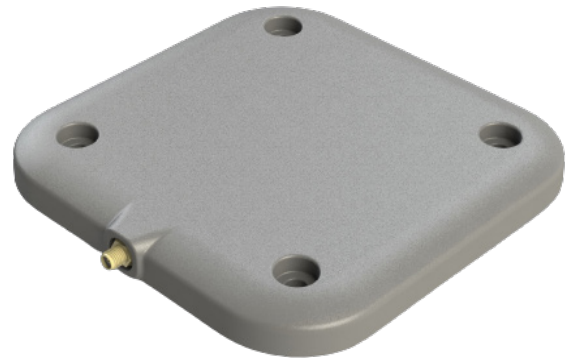


UHF ANTENNA

MR A5020 LX



PRODUCT DESCRIPTION

iDTRONIC's Mid-Range UHF Antenna MR A5020 Linear Extreme is designed to operate in environments where temperature, dirt and water levels are extreme and can be used in combination with our RFID UHF Readers and Embedded UHF Modules.

Being IP69k rated, this antenna can withstand high-pressure water cleaning, making it ideal for critical hygiene situations, where equipment is subject to regular and intense cleaning. It has also been designed for the medical industries to store vaccines, organs and tissue at temperatures as low as -90°C.

Equipped with an industry-leading ultra-low profile, the MR A5020 LX offers a compact footprint of only 150 mm / 5.9-inch square in a very smart-looking design and enables Mid-Range reading of up to 6 meters.

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 Applications
- Supply Chain & Logistics
- Asset Tracking
- Medical / Pharmaceutical

► FEATURES

- Extreme Rugged - IP69k
- Up to 4 m Reading Range
- Vertical Linear Polarized
- Easy to integrate with UHF Mid-Range-Reader

► RFID OPTIONS

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

TECHNICAL DATA

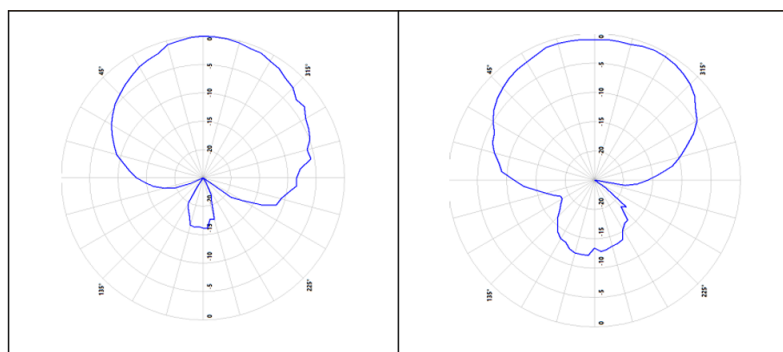
ELECTRICAL SPECIFICATIONS	
Frequency Range	864 – 869 MHz (EU) 902 – 928 MHz (US)
Polarization	Vertically Polarized (along the Y axis)
Operating Distance	up to 4 m*
Connector Type	SMA female side connector
Antenna Gain	5 dBiC typical
Beam width	100° in XZ and 105° in YZ plane
VSWR	2.5 typical
Front to back	-12 dB
Axial Ratio	Not Applicable
Nominal Impedance	50 Ω
Anti-static protection	DC Grounded
Antenna Detection	0 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	IP69K and IP68
Operating & Storage Temperature	-90 ° to +65 °C
Mounting	Flush or VESA mount using four mounting holes
Humidity	5% to 95%

SUPPORTED TRANSPONDERS

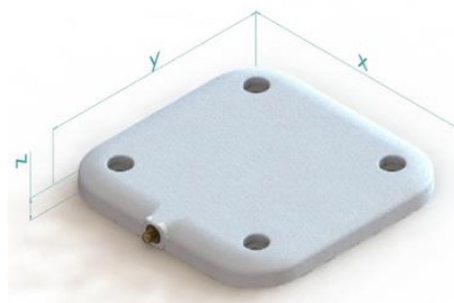
Standard ISO 18000-6C (EPC Class 1 Generation 2)
E.g.: Alien Higgs 2/3/4, Impinj Monza, NXP UCODE, etc.

RADIATION PATTERN & ANTENNA PLANES



MR A5020LX XZ Plane

MR A5020LX YZ Plane



ORDER CODE

VERSION	ORDER CODE
MR A5020 LX UHF Antenna - ETSI	R-IN-UHF-A5020LX
MR A5020 LX UHF Antenna - FCC	R-IN-UHF-A5020LX-FCC
ACCESSORIES	ORDER CODE
Connector Protector Back Plate	R-IN-UHF-A5020-CBP

PRODUCT PICTURES



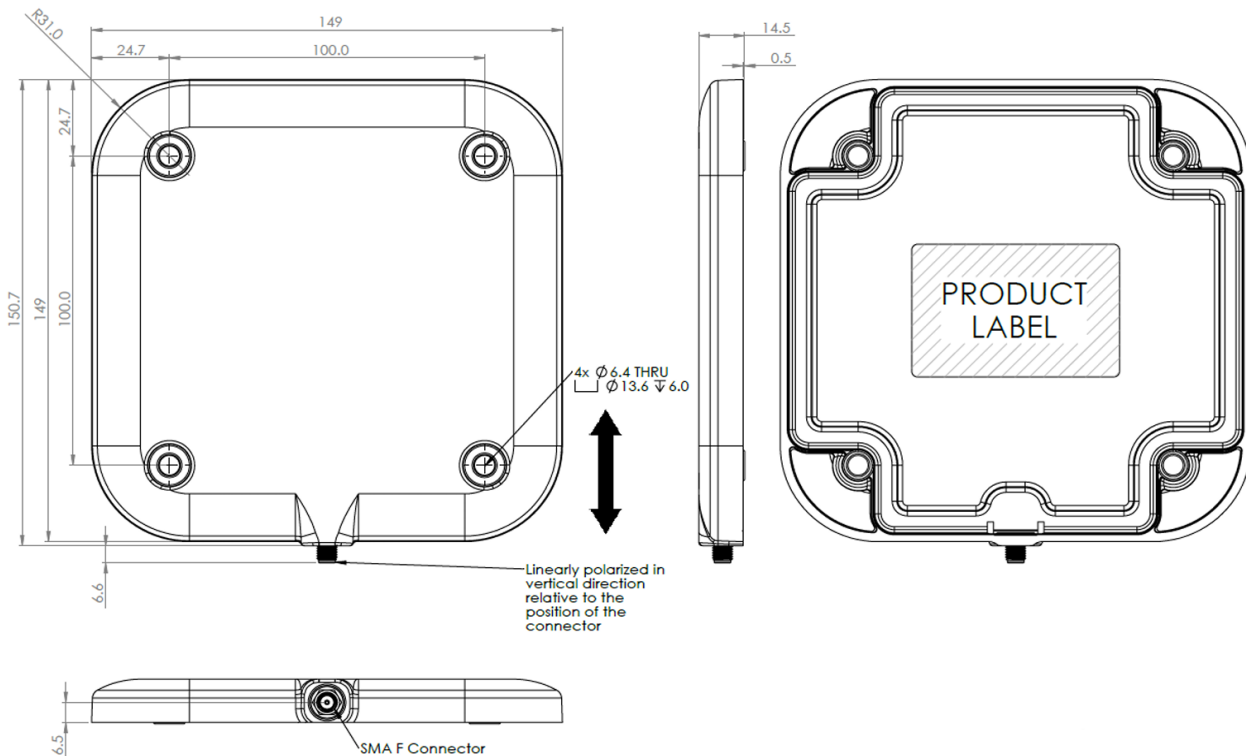
MOUNTING



CONNECTOR PROTECTION BACKPLATE*



DIMENSIONS



APPLICATION EXAMPLES

DEEP FREEZER (TO -90°C)

The MR A5020LX excels in low-temperature extremes, enabling tracking of high-value pharmaceutical assets in fridges and freezers. Its slim design maximizes the usable space inside a refrigerator, providing a reliable solution for temperaturesensitive asset tracking in critical environments. The antenna can handle general-purpose cleaning agents and is water-resistant. The grey-colored MR A5020LX is suitable for hospitals, medical laboratories, research industries, and pharmaceutical laboratories.



ASSET TRACKING

The MR A5020LX is sleek, ultra-rugged, and compact, ideal for industrial applications. For example, this antenna could be used on forklifts for asset-tracking purposes.

The MR A5020LX can also be used in drive-throughs, car parks, and fleet management applications due to its high impact resistance. The MR A5020LX has a high gain, meaning it can read further distances.



FOOD PROCESSING / CHEMICAL MAUFACTURING

The MR A5020LX is IP69K rated meaning it can survive highpressure water cleaning, which is often done in food processing industries.

The antenna cover is also resistant to general-purpose chemicals and perfectly suited to harsh manufacturing environments.

