

ABOUT TIMES-7

We are a high-tech company specializing in the design and manufacture of RAIN (UHF) RFID antennas. Founded in 2006, Times-7 has developed the largest portfolio of fixed RAIN RFID reader antennas. Based in Lower Hutt, New Zealand we export all over the world through an authorized network.

Times-7 antennas are famous for their quality and performance.

In addition to our world-class products and in-depth expertise, our customers appreciate Times-7's customer service and technical support.

We are responsive in supporting a large global customer base and ensuring the success of our customer's implementations.

Times-7 Research Ltd
29 Railway Avenue
Lower Hutt 5010
New Zealand

NEW ZEALAND
P: +64 4 974 6566

USA/CANADA
P: +1 408 769 5025

E: sales@times-7.com

www.times-7.com



Patent Info: www.times-7.com/patents



True NearField:
Up to 10 cm / 4" read range

Ideal for tap 'n go & touch applications

IP68 rating

One SKU for flush and VESA Mount

150 mm / 5.9 in. square footprint

The SlimLine™ A5020 NF

The A5020 Near Field antenna is a member of our A5020 family, a versatile range of high performing antennas for a variety of applications. Our A5020 antenna range includes some of our best-selling antennas because they are robust yet compact.

Equipped with the familiar and industry leading Times-7 ultra-low profile, the A5020 NF offers a compact footprint of only 150 mm / 5.9-inch square in a very smart-looking design.

The A5020 NF is designed to operate in 'tap and go' environments where only objects that come into close contact with the antenna will be tracked. This prevents stray reads and is ideal for situations where accuracy is paramount, like access control and point of sale. It is specifically tuned to read only in the near field zone of 0.1 meters (4 inches).

The A5020 range is built to Times-7's high standard for quality and ruggedness. Being rated IP68 the A5020 NF can also 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 NF very suitable for customer facing environments.

Ordering Information (please quote product code, band and part no.)

Antenna Product Code	Band	Part No.
A5020 NF	865-928 MHz / Wide Band	72057

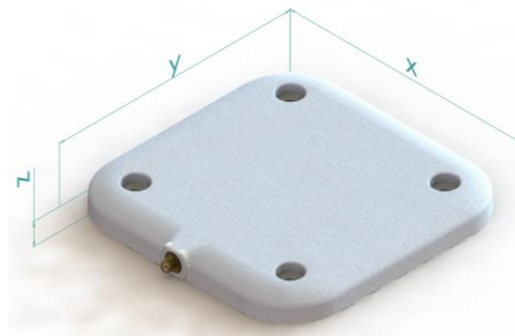
Physical / Environmental Specifications

Dimensions (L x W x D)	150.7 mm x 149.4 mm x 14.5 mm 5.93" x 5.88" x 0.57"
Boxed Unit Dimensions (L x W x D)	180 mm x 155 mm x 25 mm 7.09" x 6.10" x 0.98"
Weight	Net: 0.18 kg / 0.38 lbs. Gross: 0.23kg / 0.5 lbs.
Radome Material and Color	UV Resistant and Fire-Retardant WHITE ABS
Environmental Rating	IP68
Operating and Storage Temperature	-30° to +65°C / -22° to +149°F
Mounting	Flush or 100 x 100 mm VESA mount using the four mounting holes
Connector Type / Position	SMA female (Jack) side connector
A5020 Flush Screws	30mm 8g Phillips, white wood screws

Electrical Specifications

Frequency Range	865-928 MHz (ETSI & FCC)
Polarization	Not Applicable
Far-field Gain	Equivalent to -30 dBi
Far-field 3dB beamwidth	Not Applicable
VSWR	1.4 typical
Front to back	Not Applicable
Axial Ratio	Not Applicable
Nominal Impedance	50 Ω
Anti-static Protection	Yes, DC Grounded
Antenna Detection	100 Ω resistance
Maximum Input Power	3 W

Antenna Planes



Application examples for the A5020 NF

Direct Contact Reads

The A5020 NF antenna is best used when you only want to read things that come in direct contact of the antenna.

To record the usage of a high-value precision instrument or tool it would need to be scanned before the lock can be released. Only an antenna with a proximity reader and no far-field reading ability is suitable for these needs.



Access Control

As UHF RFID is getting prevalent these days, a single RFID system is often preferred for inventory, asset tracking, people tracking and for access control and anti-theft usecases.

For 'Tap and authenticate' enabled doors, the A5020 NF is perfect as it complies with RFID technology standards. This antenna wont detect other tags such as someone going past the door.



Tap 'n Go Payment

The A5020 NF antenna impresses with an extremely close read range of 10 cm / 4" from the antenna's surface suitable for purchase and payment applications.

Although the A5020 NF cannot read credit/debit cards which are equipped with HF RFID, it is widely used to scan proprietary UHF badges for purchase of goods. For example employees can scan their badges to pay for food bought from their cafeteria.



Mounting Information

The recessed corner mounting holes of the A5020 support 100 x 100mm VESA spaced mounting brackets as shown in the picture.

The innovative slim design of the A5020, equipped with an SMA connector, allows for totally flush mounting using the corner holes.

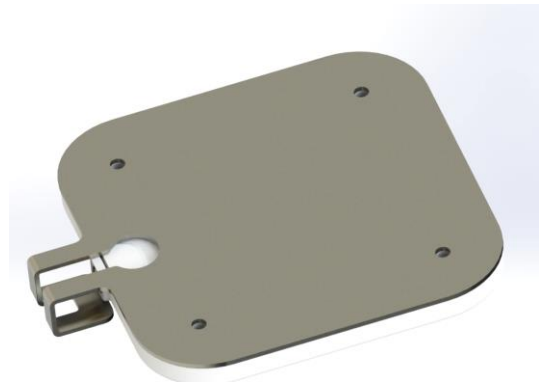


In situations where the antenna may be subject to stress on the connector or cable it is recommended to use our Connector Protection Backplates. These protect the connector from damage, especially when mounted on a bracket in free space. The Connector Protection Backplate can be used with right angled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

Caution:

- Ensure that only finger tightness is used for the SMA connector.
- Use of tools to tighten the connector will apply excessive force and will damage the connector
- Avoid any load or bending force from the cable on the connector.

For further information please refer to the drawings below.



Order Information

When ordering A5020 LX antennas please quote the product code, band & part no.

Antenna Product Code	Band	Part No.
A5020 NF	865-928 MHz / WB	72057

When ordering cable accessories please quote the product code, cable type, & part no.

Antenna Product Code	Band / Model	Part No.
A5020 CP	902-928 MHz / FCC	60010
A5020 CP	865-868 MHz / ETSI	60011
A5020 MR	902-928 MHz / FCC	72388
A5020 MR	865-868 MHz / ETSI	72389
A5020 LX	902-928 MHz / FCC	72386
A5020 LX	865-868 MHz / ETSI	72387

Cable Accessories Product Code	Cable Type	Part No.
Cable 2 m, SMA to RPTNC	T7 195 / 240 / 400	71436 / 71782 / 72042
Cable 4 m, SMA to RPTNC	T7 240 / 400	71784 / 72043
Cable 6 m, SMA to RPTNC	T7 240 / 400	71904 / 72044
Cable 8 m, SMA to RPTNC	T7 240 / 400	71788 / 72045

Low-Temperature and Water Resistant Cable Accessories Product Code	Cable Type	Part No.
Cable 2 m, RT SMA to RPTNC	T7 RG-142 type	72395
Cable 4 m, RT SMA to RPTNC	T7 RG-142 type	72396
Cable 6 m, RT SMA to RPTNC	T7 RG-142 type	72397
Cable 8 m, RT SMA to RPTNC	T7 RG-142 type	72398

Other Accessories	Compatibility	Part No.
A5020 Connector Protection Backplate	A5020 LP / CP / MR / NF	72394

View the Times-7 Cable Accessory datasheet [here](#).

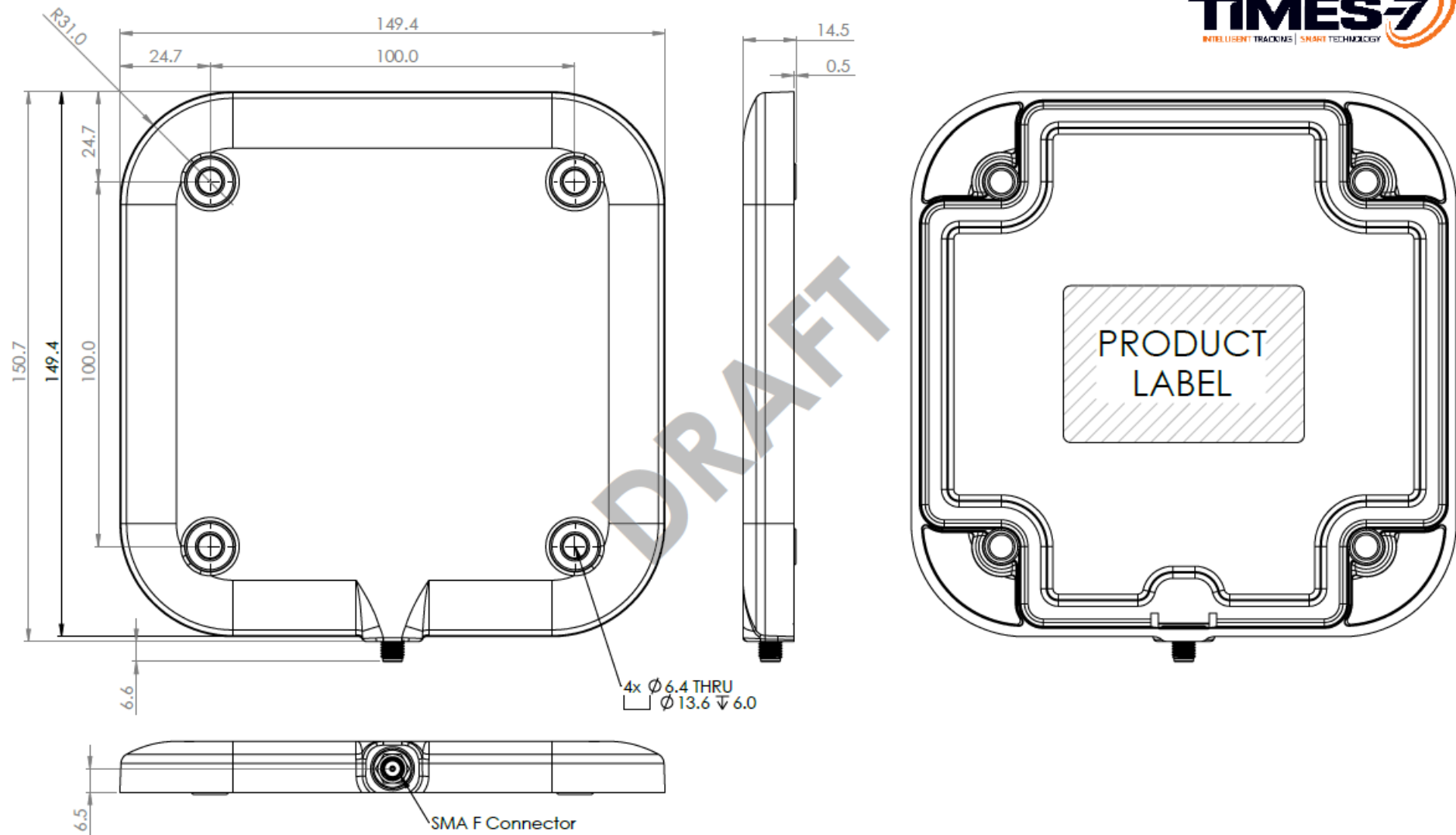
For additional information such as RoHS, CE, REACH or CAD models please contact us at sales@times-7.com.

The technical data contained in this publication is not a guarantee for which Times-7 Research Ltd assumes legal accountability. It is indicative of typical performance, and if required should be relied on for specific applications only after due verification.

All technical data, specifications and other information contained herein are deemed to be the proprietary intellectual property of Times-7 Research Ltd. No reproduction, copy or use thereof may be made without the express written consent of Times-7 Research Ltd.

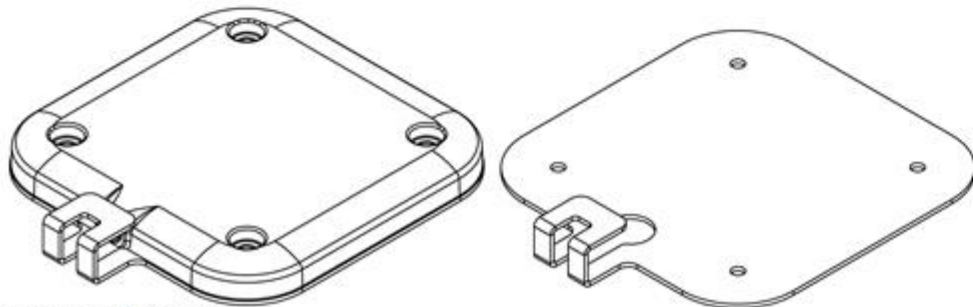
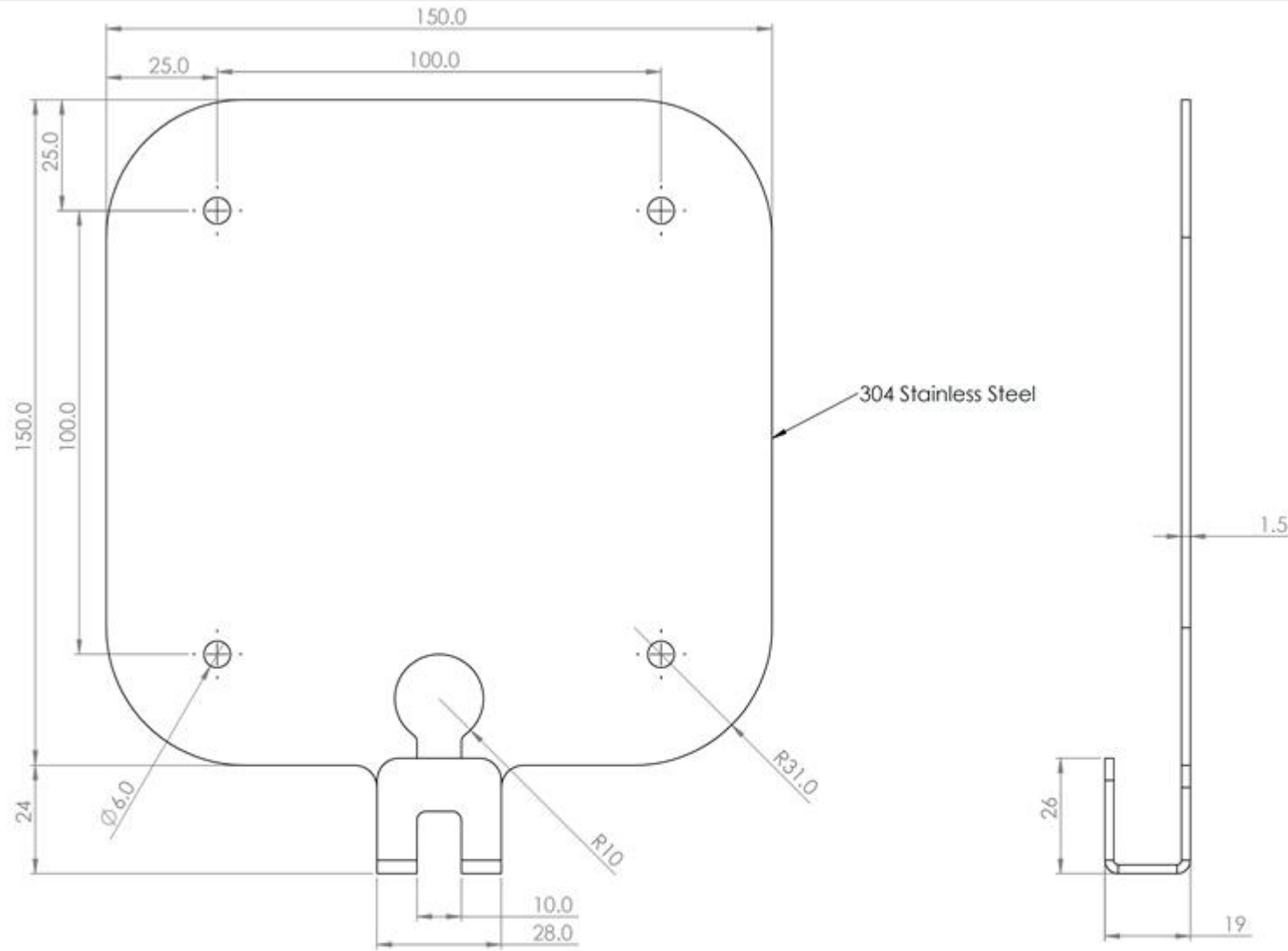
Times-7, and the stylized T-7 Antennas logo are trademarks or registered trademarks of Times-7 Research Ltd. All other trademarks are the property of their respective owners. ©2021 Times-7 Research Ltd. All rights reserved. Specifications are subject to change without notice. Datasheet V1-09/21-5020NF

Mechanical Drawing for the A5020 NF



<small>THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF TIMES-7 LTD. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF TIMES-7 IS PROHIBITED.</small>	<small>DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED TOLERANCES: NO DECIMAL PLACES ± 1 ONE PLACE DECIMAL ± 0.5</small>		DESCRIPTION A5020 NF Near Field Antenna		
	DRAWN C Wilson		SIGNATURE 	DATE 02/09/21	SIZE A3
APPROVED	SIGNATURE	DATE	DO NOT SCALE DRAWING		SHEET 1 OF 1

Mechanical Drawing for the Connector Backplate



Shown with A5020 attached

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF TIMES-7 LTD. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF TIMES-7 IS PROHIBITED.

DIMENSIONS ARE IN mm
UNLESS OTHERWISE SPECIFIED
TOLERANCES:
NO DECIMAL PLACES ± 1
ONE PLACE DECIMAL ± 0.5



DESCRIPTION

A5020 Connector Protection Backplate

DRAWN
R Lopez

SIGNATURE *[Signature]*

DATE
04/08/20

APPROVED
C Wilson

SIGNATURE *[Signature]*

DATE
04/08/20

SIZE
A3

PART NO.
72308-FG

REV
A

DO NOT SCALE DRAWING

SHEET 1 OF 1