

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



150 mm / 5.9 in. footprint

IP68 and IP69K rating for permanent outdoor use and industrial applications

Rugged Design, typically reads up to 6m

One SKU for flush and VESA mount

The SlimLine™ A5020 LX

The A5020 Linear Extreme 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 LX offers a compact footprint of only 150 mm / 5.9-inch square in a very smart-looking design.

The A5020 LX is designed to operate in environments where temperature, dirt and water levels are extreme. Being IP69k rated It can withstand high pressure water cleaning making it ideal for situations where hygiene is critical and equipment is subject to regular and intense cleaning. It has also been designed for the medical industry's need to store vaccines, organs and tissue at temperatures as low as -90°C.

The A5020 range is built to Times-7's high standard for quality and ruggedness. Being rated IP69k the A5020 LX 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 LX very suitable for customer facing environments.

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

Antenna Product Code	Band	Part No.
A5020 LX	902-928 MHz / FCC	72386
A5020 LX	865-868 MHz / ETSI	72387

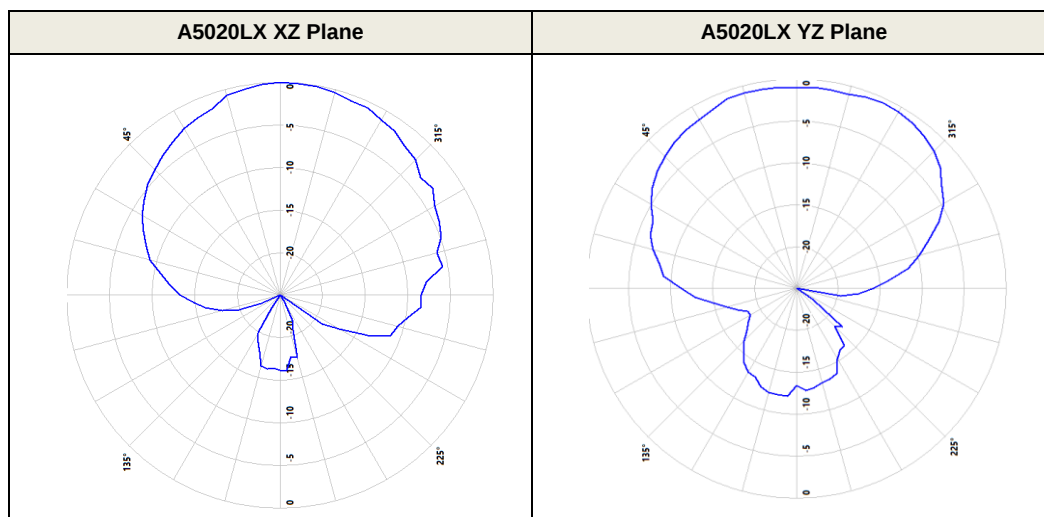
Physical / Environmental Specifications

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: 0.23 Kg / 0.51 lbs. Gross: 0.28 Kg / 0.62 lbs.
Radome Material and Color	UV-Resistant and Fire -Retardant GREY ABS
Environmental Rating	IP69K and IP68
Operating and Storage Temperature	-90° to +65°C / -130° 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	Silver colored wood screws

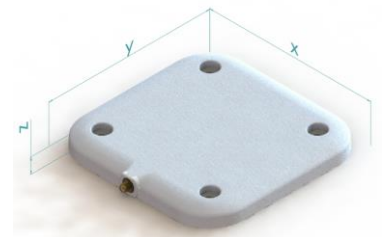
Electrical Specifications

Frequency Range	865-868 MHz (ETSI) / 902-928 MHz (FCC)
Polarization	Vertical-Linearly Polarized (Along Y axis)
Far-field Gain	5 dBi typical
Far-field 3dB beamwidth	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	Yes, DC Grounded
Antenna Detection	0 Ω resistance
Maximum Input Power	3 W

Radiation Pattern



Antenna Planes



Application examples for the A5020 LX

Deep Freezer (to -90°C)

The A5020 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.

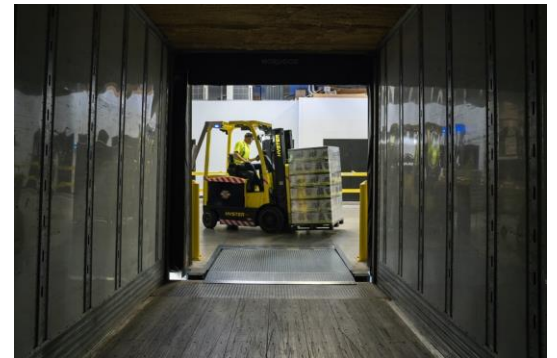
The antenna can handle general purpose cleaning agents and is water resistant. The grey colored A5020 LX antenna is suitable for hospitals, medical laboratories, research industries and pharmaceutical laboratories.



Ultra-rugged and High Gain

A5020 LX is sleek, yet ultra-rugged & compact, ideal for use in industrial applications. For example this antenna could be used on forklifts for asset tracking purposes.

The A5020 LX can also be used in drive-throughs, car parks and fleet management applications due to its high impact resistance. The LX has a high gain which means it can read at further distances. This antenna is also ideal for use in blast freezers or for tracking items in cold storage.



Food, Meat and Chemical Manufacturing Processes

The A5020 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.



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.

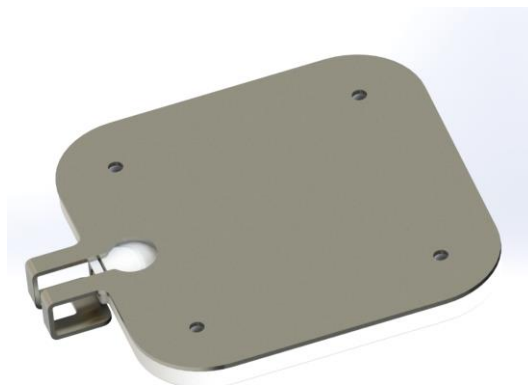


In situations where the antenna may be subject to stress on the connector or cable it is recommended to use our Connector Protection Backplate. These protect the connector from damage, especially when mounted on a bracket in free space. The Connector Protection Backplate can be used with right angled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

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 LX	902-928 MHz (FCC)	72386
A5020 LX	865-868 MHz (ETSI)	72387

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 NF	865-928 MHz / WB	72057

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](#).

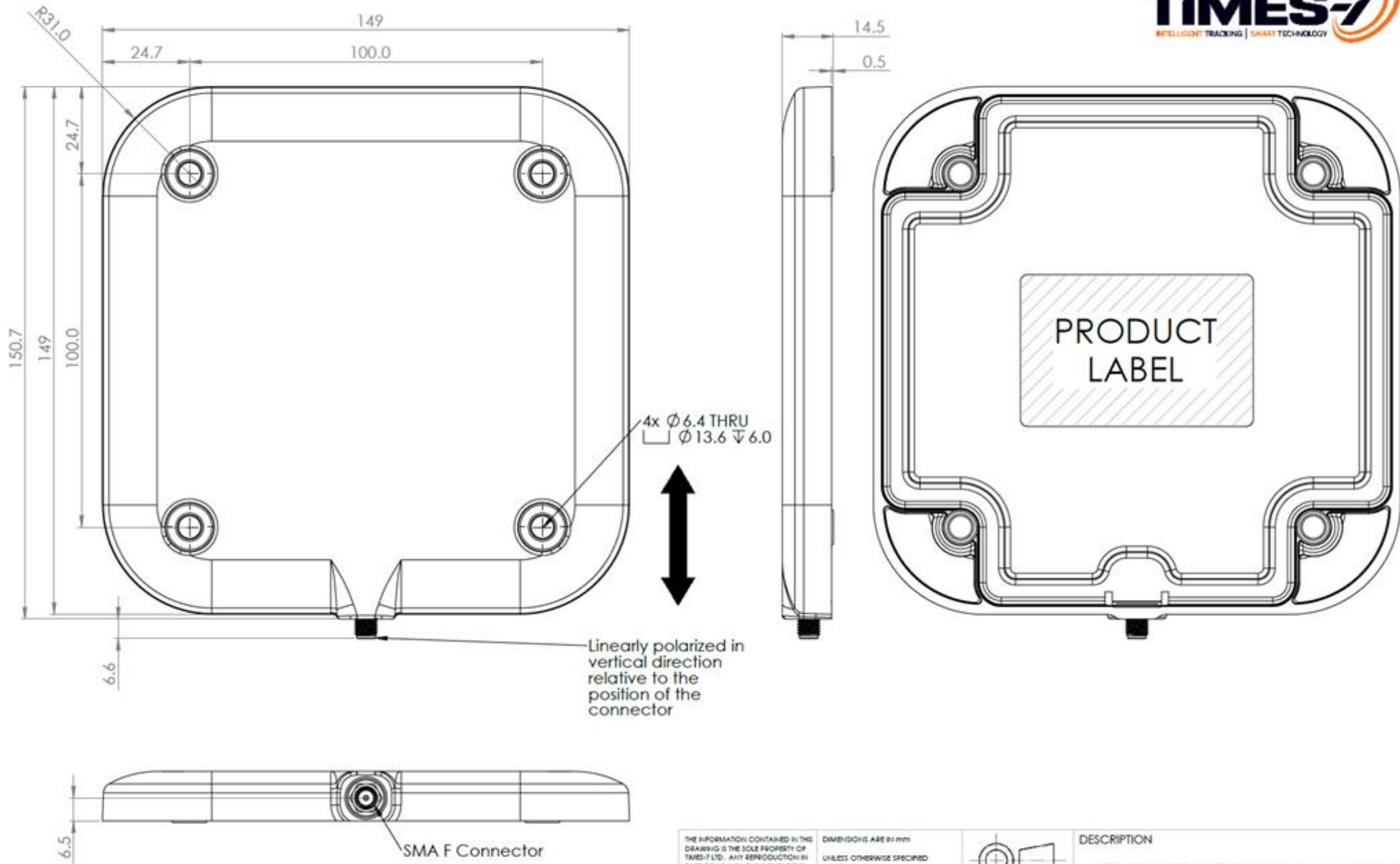
For additional information such as RoHS, CE, REACH or CAD models please contact us at sales@times-7.com.

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.

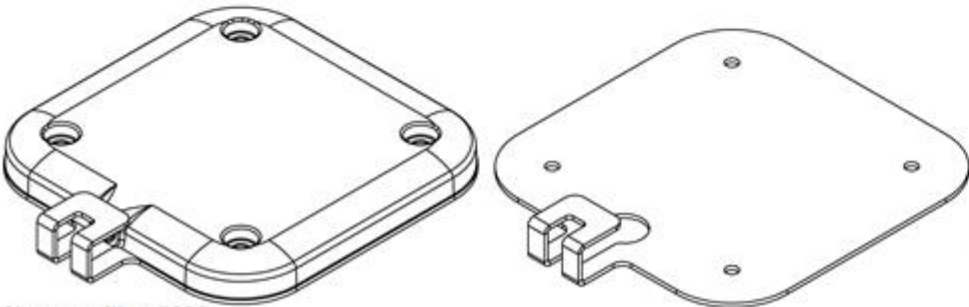
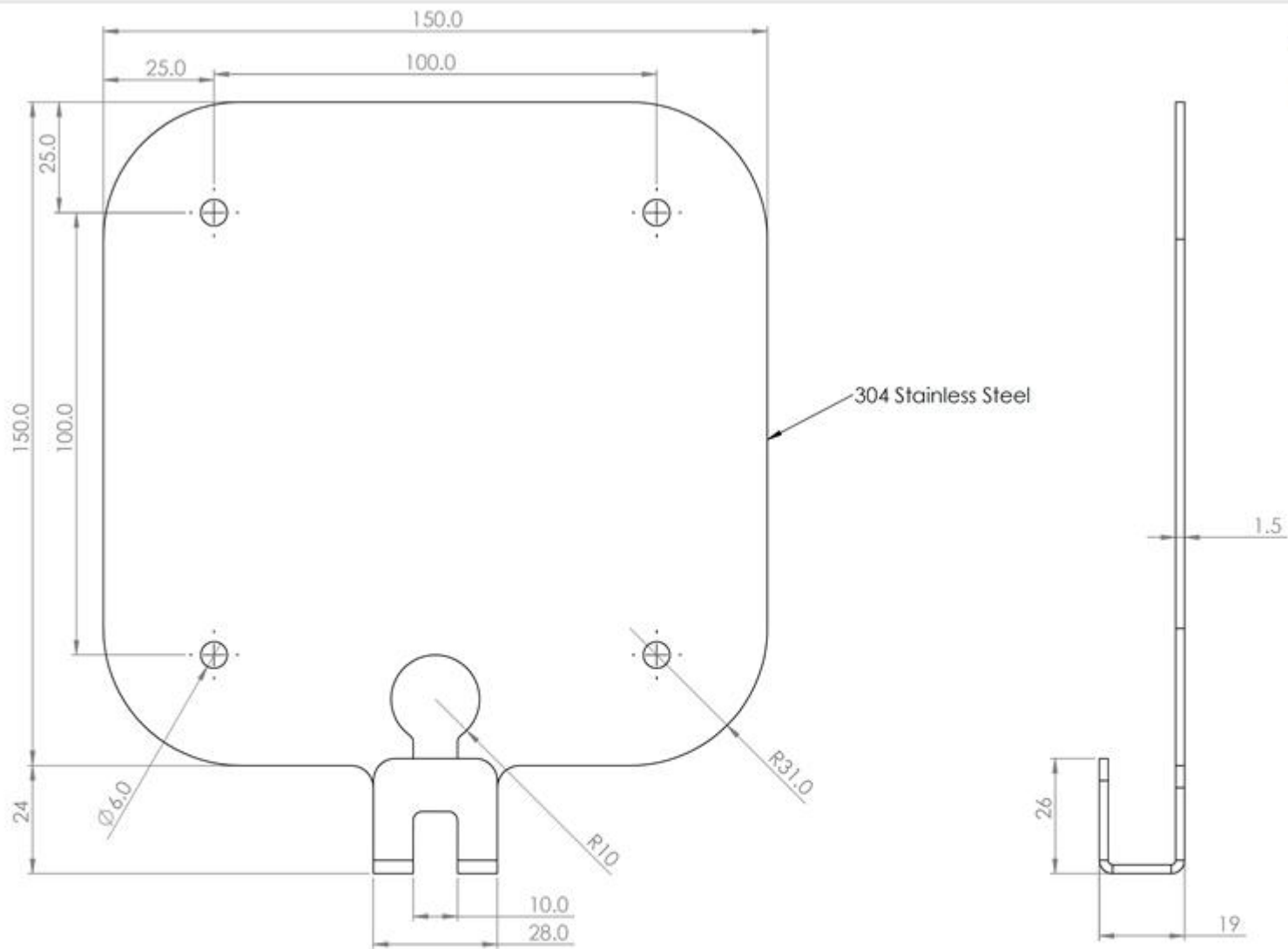
Times-7, and the stylized T-7 Antennas logo are trademarks or registered trademarks of Times-7 Research Ltd. All other trademarks are the property of their respective owners.
©2021 Times-7 Research Ltd. All rights reserved. Specifications are subject to change without notice.
Datasheet V1-09/21-5020LX

Mechanical Drawing for the A5020 LX



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 LX Far Field Linear Antenna		
DRAWN C Wilson	SIGNATURE	DATE 31/08/21	SIZE A3	PART NO. 72387 (ETSI), 72386 (FCC)	DEV B			
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 	DATE 04/08/20	SIZE A3		PART NO. 72308-FG		REV A
APPROVED C Wilson	SIGNATURE 	DATE 04/08/20	DO NOT SCALE DRAWING		SHEET 1 OF 1		