

ABOUT TIMES-7

We are a high-tech company specializing in the design and manufacture of RAIN (UHF) RFID antennas.

Our journey began in 2006, when Times-7 was founded. Since then, we have developed the largest portfolio of fixed RAIN RFID reader antennas, which are famous for their quality and performance.

We are based in Lower Hutt, New Zealand, but our reach extends worldwide as we export our products through our authorized partner network.

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.



A5020LX Linear Extreme Antenna

The A5020LX Linear Extreme Antenna is a member of our versatile and high-performing A5020 family. This antenna range includes some of our best-selling antennas, known for their robustness and compact design, making them ideal for various applications. Equipped with our familiar and industry-leading ultra-low profile, the A5020LX offers a compact footprint of only 150.7mm / 5.93" square in a very smart-looking design.

The A5020LX 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 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 (194°F).

Being IP69k rated, the A5020LX can be used for permanent outdoor applications. As well as being durable, its pleasing design blends with most interiors and makes the A5020LX suitable for customer-facing environments.

Ordering Information

Note: Please quote the product code, band, cable type & part number

Antenna Product Code	Band	Part Number
A5020LX	902-928 MHz / FCC	72386
A5020LX	865-868 MHz / ETSI	72387
Cable Accessories Product Code	Cable Type	Part Number
Cable 2m, SMA to RPTNC	T7 195 / 240 / 400	71436 / 71782 / 72042
Cable 4m, SMA to RPTNC	T7 240 / 400	71784 / 72043
Cable 6m, SMA to RPTNC	T7 240 / 400	71904 / 72044
Cable 8m, SMA to RPTNC	T7 240 / 400	71788 / 72045
Other Accessories	Compatibility	Part Number
A5020 Connector Protection Backplate	A5020 LP / CP / MR / NF	72394



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

For additional information such as RoHS, CE, REACH, please contact us
View the Times-7 Cable Accessory datasheet [here](#).

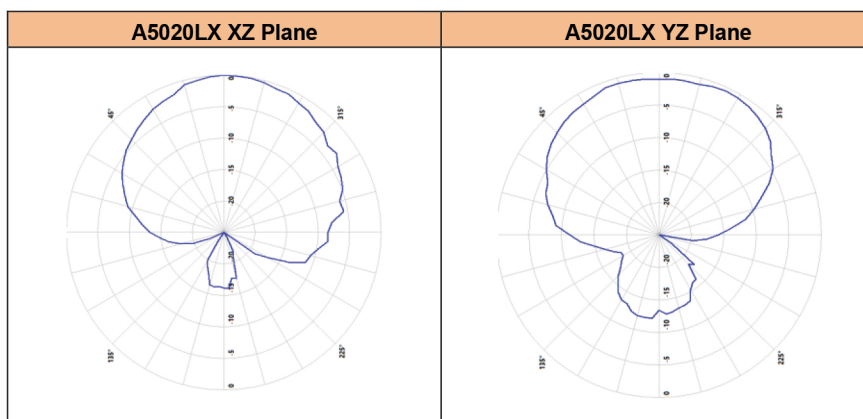
Physical / Environmental Specifications

Unboxed Dimensions: *Length (x) x Width (y) x Depth (z)	150.7 x 149.4 x 14.5mm 5.93 x 5.88 x 0.57"
Boxed Unit Dimensions: (L x W x D)	180 x 155 x 25mm 7.09 x 6.10 x 0.98"
Weight:	Net: 0.23kg / 0.51lb. Gross: 0.28kg / 0.62lb.
Radome Material:	Flame retardant and UV resistant grey ABS
Environmental Rating:	IP69K and IP68
Operating / Storage Temperature:	-90° to +65°C / -130° to +149°F
Mounting:	Flush or 100 x 100mm VESA mount using the four mounting holes
Connector Type:	SMA female (Jack) side connector
A5020 Flush Screws:	30mm 8g Phillips, silver wood screws

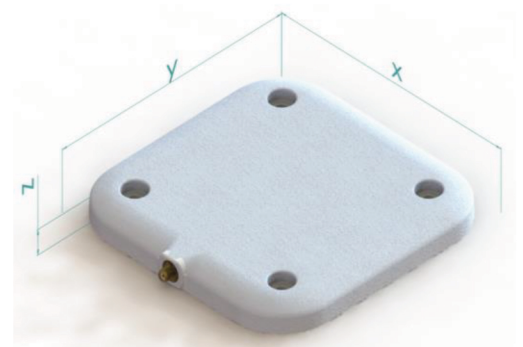
Electrical Specifications

Frequency Range:	865-868 MHz (ETSI) / 902-928 MHz (FCC)
*Polarization:	Vertically Polarized (along the Y axis)
Far-Field Gain:	5dBi typical
*Far-Field 3dB Beamwidth:	100° in XZ and 105° in YZ plane
VSWR:	2.5 typical
Front-To-Back Ratio:	-12dB
Axial Ratio:	Not Applicable
Nominal Impedance:	50Ω
Anti-Static Protection:	Yes, DC Grounded
Antenna Detection:	0Ω resistance
Maximum Input Power:	3W

Radiating Patterns



*Azimuth Planes



Applications

Deep Freezer (to -90°C)

The 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 temperature-sensitive asset tracking in critical environments.

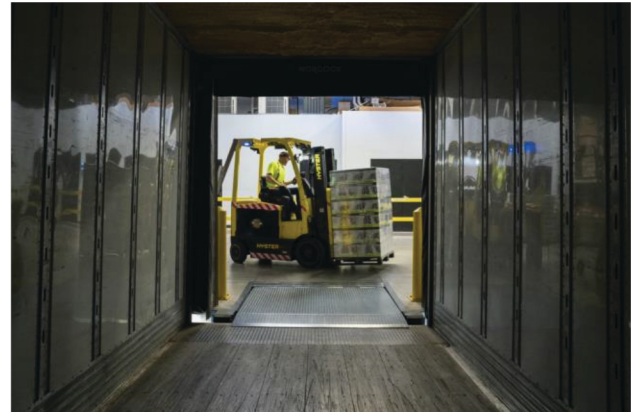
The antenna can handle general-purpose cleaning agents and is water-resistant. The grey-colored A5020LX is suitable for hospitals, medical laboratories, research industries, and pharmaceutical laboratories.



Ultra-Rugged and High Gain

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



Food, Meat, and Chemical Manufacturing Processes

The A5020LX is IP69K rated meaning 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 A5020LX features recessed corner mounting holes compatible with 100 x 100mm VESA spaced mounting brackets, as illustrated in the accompanying image.

The A5020LX's innovative slim design, in conjunction with its SMA connector, provides a distinctive advantage by allowing for flush mounting, which can be easily achieved through the utilization of the corner holes.



In situations where stress may impact the antenna's connector or cable, we recommend using our Connector Protection Backplate. This backplate safeguards the connector, especially when the antenna is mounted on a bracket in free space. It is compatible with both right-angled and straight cables.

Please note the following precautions:

- 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.

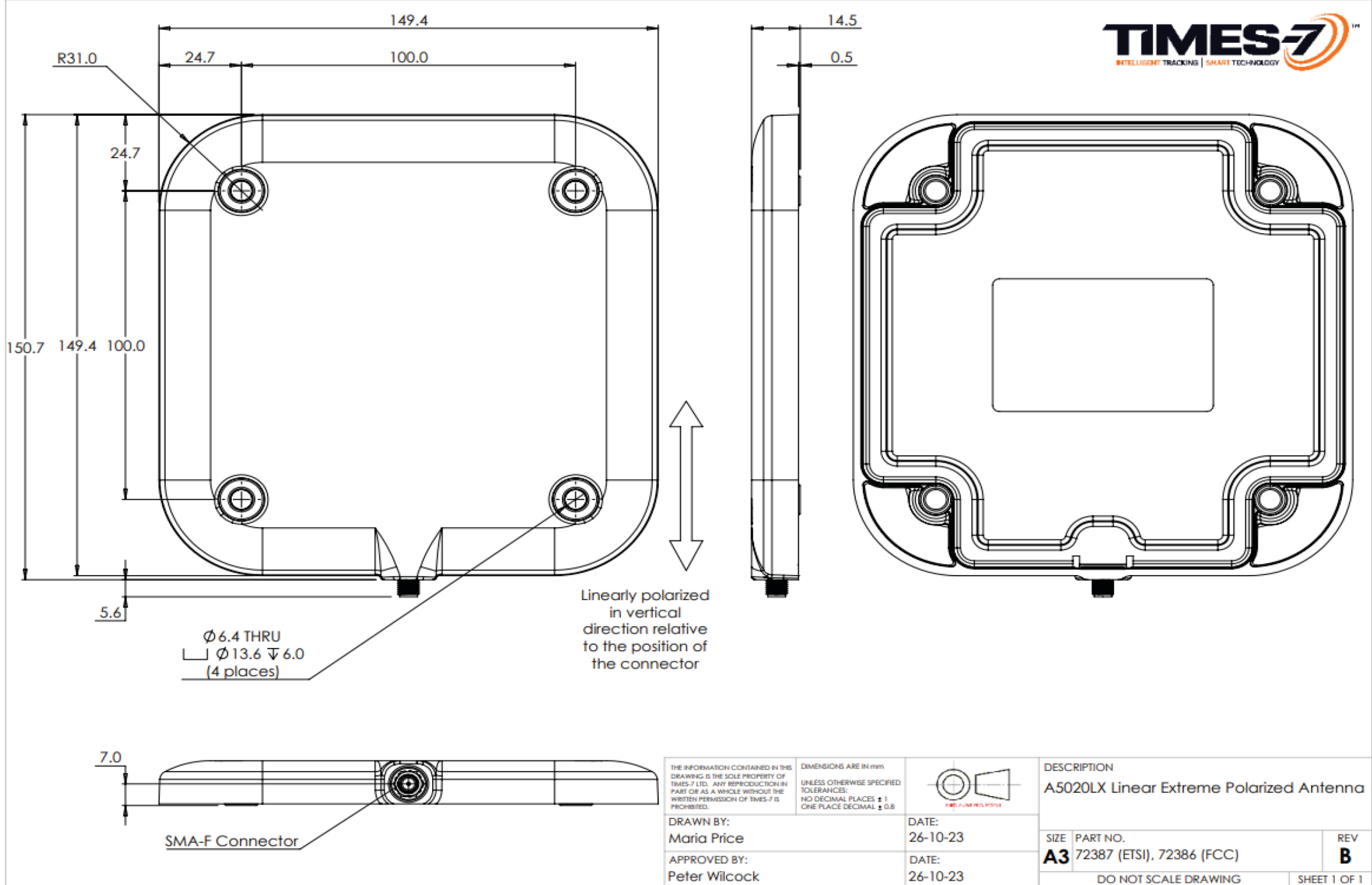


The technical data contained in this publication is not a guarantee for which Times-7 Research Ltd assumes legal accountability. It is indicative of typical performance, and if required should be relied on for specific applications only after due verification.

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.

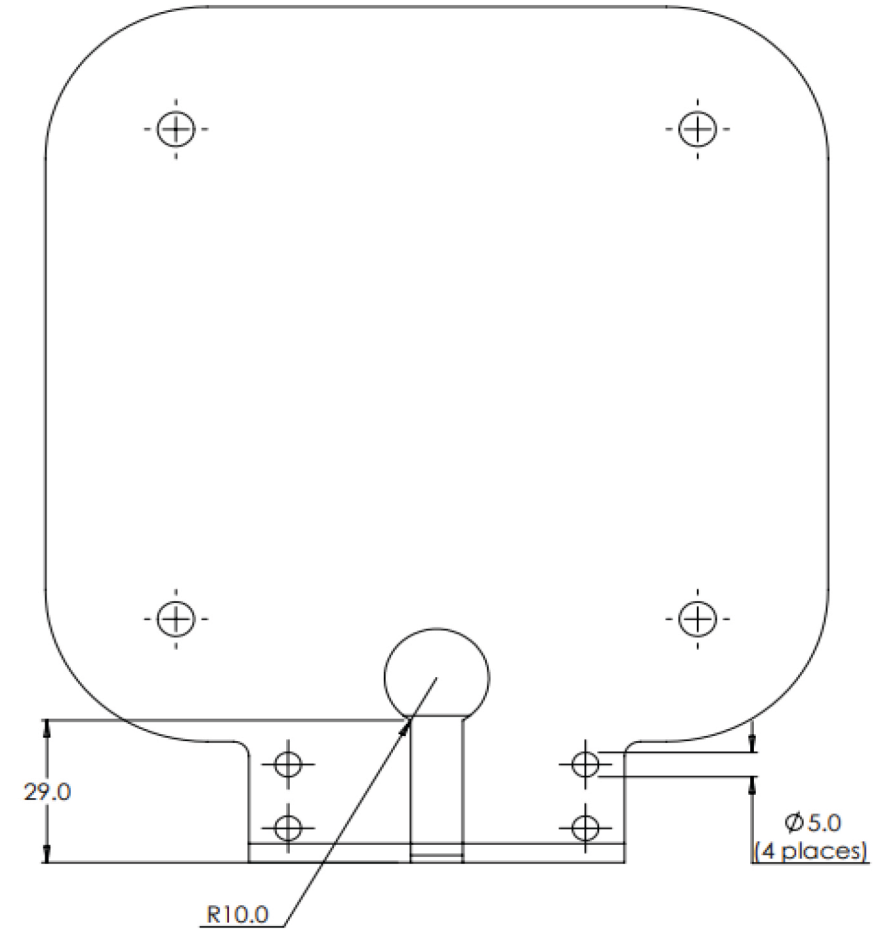
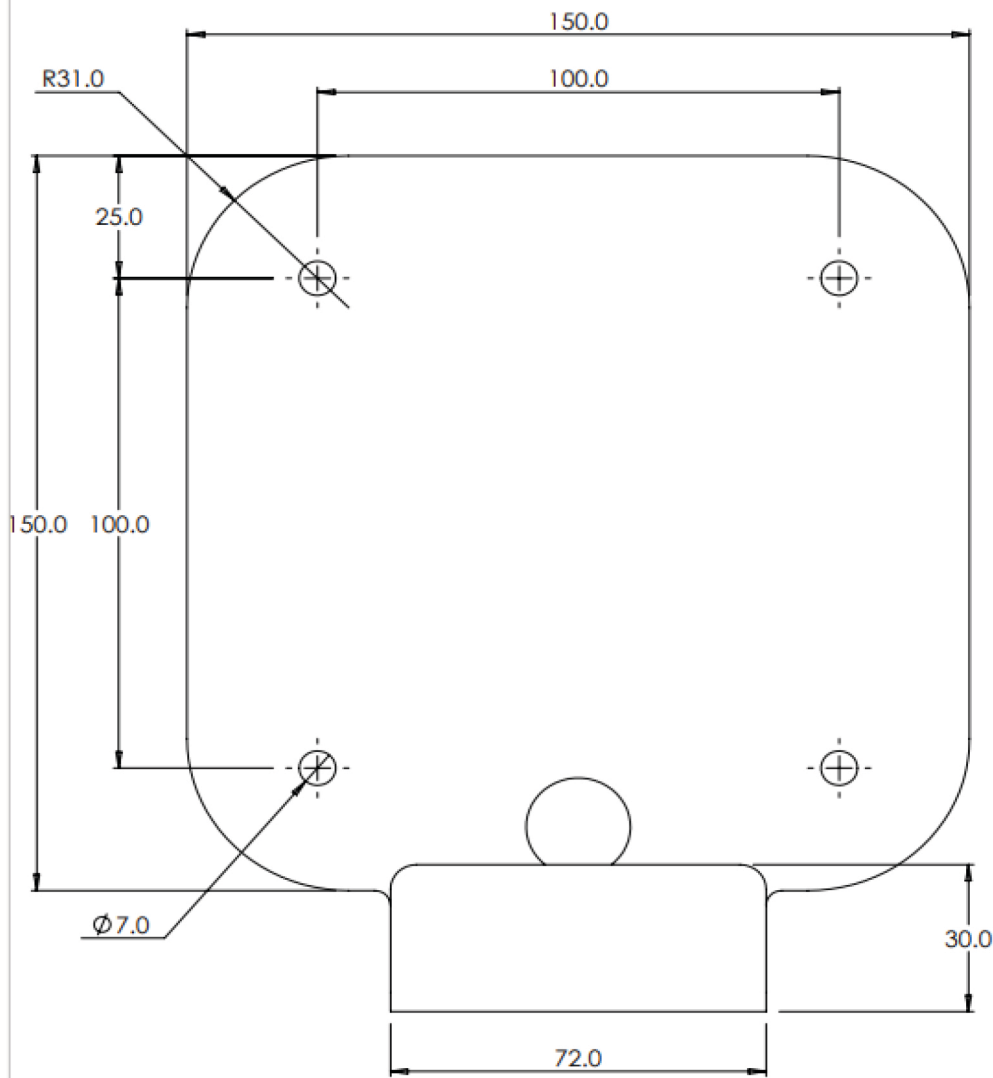
Times-7, and the stylized T-7 Antennas logo are trademarks or registered trademarks of Times-7 Research Ltd. All other trademarks are the property of their respective owners.

Mechanical Drawing for the A5020LX Linear Extreme Antenna



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 ± 0.8		DESCRIPTION A5020LX Linear Extreme Polarized Antenna
DRAWN BY: Maria Price	DATE: 26-10-23	SIZE PART NO. REV A3 72387 (ETSI), 72386 (FCC) B		
APPROVED BY: Peter Wilcock	DATE: 26-10-23	DO NOT SCALE DRAWING SHEET 1 OF 1		

Mechanical Drawing for the Connector Protection Backplate



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 ± 0.8		DESCRIPTION	
			A5020 Connector Protection Backplate	
DRAWN BY: Maria Price	DATE: 26-10-23	SIZE A3	PART NO. 72308	REV B
APPROVED BY: Peter Wilcock	DATE: 26-10-23	DO NOT SCALE DRAWING		SHEET 1 OF 1