

#### 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.

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#### A5020CP Circularly Polarized Antenna

The A5020CP Circularly Polarized Antenna is integral to our versatile and high-performing A5020 antenna family. These antennas have earned a reputation for their robustness and compact design, establishing them as top sellers across various applications.

With our industry-leading Times-7 ultra-low profile, the A5020CP showcases a remarkably compact footprint, measuring just 150.7mm / 5.93" square. Our sleek design adds a touch of sophistication. Compared to most antennas of similar size on the market, the A5020CP offers a significantly enhanced radiation pattern, setting a new standard for multi-purpose UHF RFID antennas.

The A5020 Antenna Family adheres to our rigorous quality and ruggedness standards, boasting an IP68 rating suitable for permanent outdoor installations. Its aesthetically pleasing and timeless design seamlessly complements most indoor environments, making the A5020CP the ideal antenna for customer-facing environments.

## Ordering Informationa

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

Antenna Product Code	Band	Part Number
A5020CP	902-928 MHz / FCC	60010
A5020CP	865-868 MHz / ETSI	60011
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 LX / CP / MR / NF	72394

For additional information such as RoHS, CE, REACH, please contact us at [sales@times-7.com](mailto:sales@times-7.com).

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

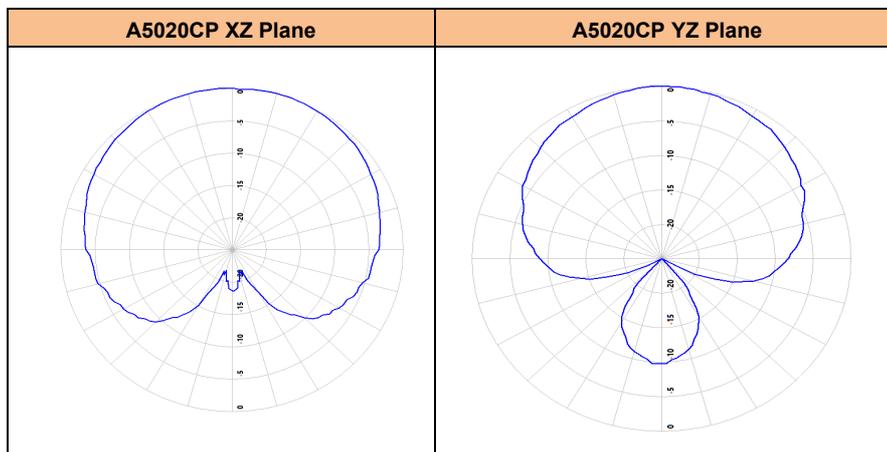
## Physical / Environmental Specifications

<b>Unboxed Dimensions:</b> *Length (x) x Width (y) x Depth (z)	150.7 x 149.4 x 14.5mm 5.93 x 5.88 x 0.57"
<b>Dimensions Boxed Unit: (L x W x D):</b>	180 x 155 x 25mm 7.09 x 6.10 x 0.98"
<b>Weight:</b>	Net: 0.23kg / 0.51lb. Gross: 0.28kg / 0.62lb.
<b>Radome Material and Color:</b>	Flame retardant and UV-resistant white ABS
<b>Environmental Rating:</b>	IP68
<b>Operating and Storage Temperature:</b>	-30° to +65°C / -22° to +149°F
<b>Mounting:</b>	Flush or 100 x 100mm VESA mount using the four mounting holes
<b>Connector Type:</b>	SMA female (Jack) side connector
<b>A5020 Flush Screws:</b>	30mm 8g Phillips, white wood screws

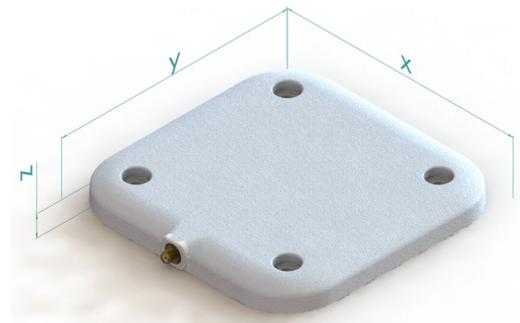
## Electrical Specifications

<b>Frequency Range:</b>	865-868 MHz (ETSI) / 902-928 MHz (FCC)
<b>Polarization:</b>	RHCP (Right hand circular polarized)
<b>Far-Field Gain:</b>	5dBiC typical
<b>*Far-Field 3dB Beamwidth:</b>	105° in both planes, typical
<b>VSWR:</b>	1.4 typical
<b>Front-To-Back Ratio:</b>	-10dB typical
<b>Axial Ratio:</b>	2dB typical
<b>Nominal Impedance:</b>	50Ω
<b>Anti-Static Protection:</b>	Yes, DC Grounded
<b>Antenna Detection:</b>	10KΩ resistance
<b>Maximum Input Power:</b>	3W

## Radiating Patterns



## \*Azimuth Planes



## Applications

### Multi-Purpose

The A5020CP stands out as a resilient RFID antenna, perfectly suited for the demanding needs of asset tracking and tag encoding. With its remarkable 4-meter typical read range, this technology proves invaluable to manufacturers, wholesalers, and retailers by facilitating effortless inventory tracking throughout the entire supply chain, from meticulously organized warehouse shelves to the bustling sales floor.



### Waste Management

The A5020CP proudly carries an IP68 rating, guaranteeing its reliability in permanent outdoor installations. Its 'all-plastic' housing not only resists corrosion but also makes it a breeze to clean with standard cleaning agents. With its broad ~100° beamwidth, the A5020CP streamlines tasks like wheelie bin detection, and its compact design ensures a trouble-free installation process in waste management trucks.



### Retail

The A5020CP excels in environments where space is at a premium, particularly in the dynamic world of retail. Its exceptional aesthetics and compact design enable the A5020CP to effortlessly harmonize with the retail environment, positioning it as the ultimate choice for streamlined and efficient RFID deployments within retail settings.



## Mounting Information

The A5020CP features recessed corner mounting holes compatible with 100 x 100mm VESA spaced mounting brackets, as illustrated in the accompanying image.

The A5020CP'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 connector 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.

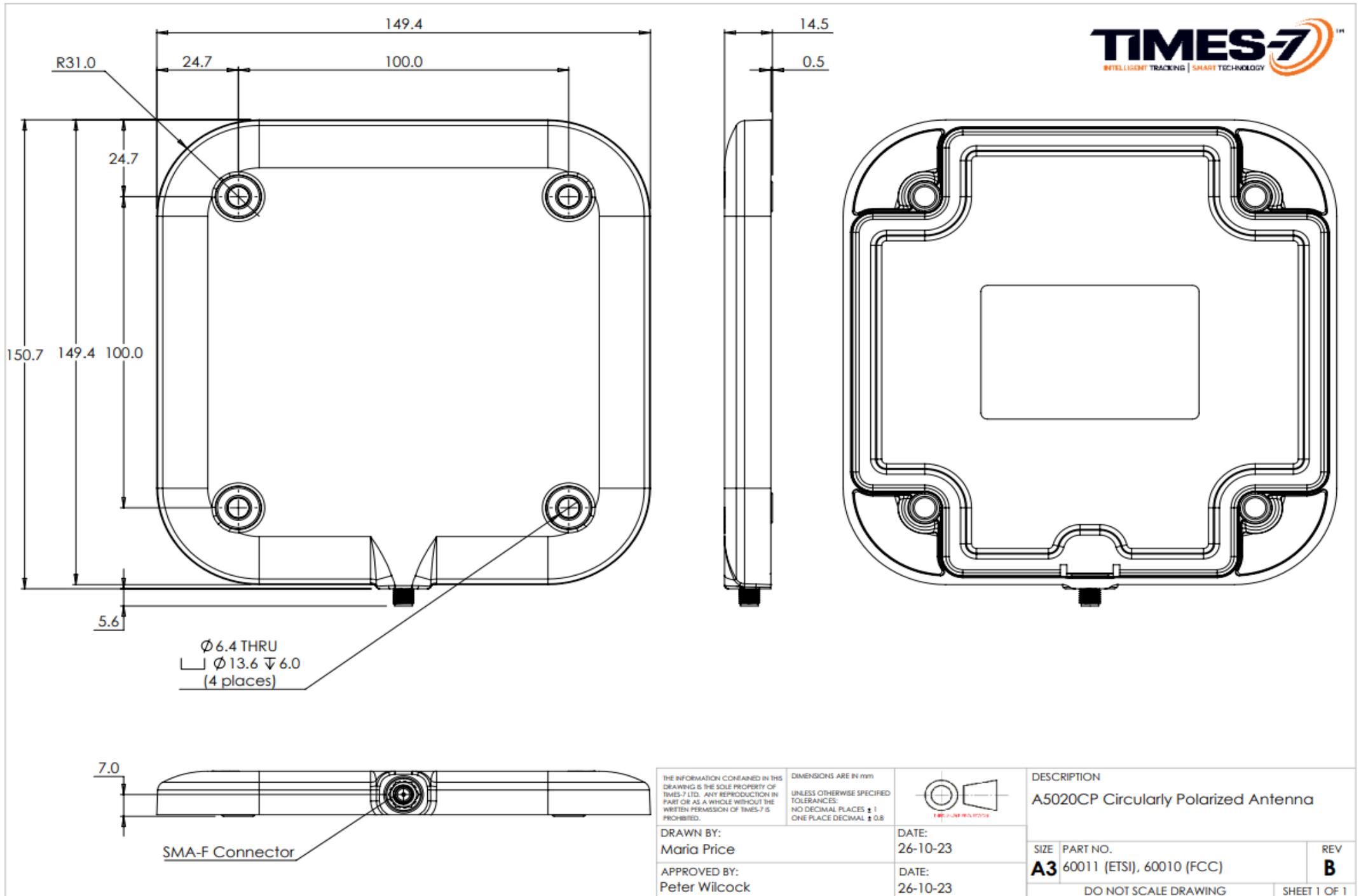


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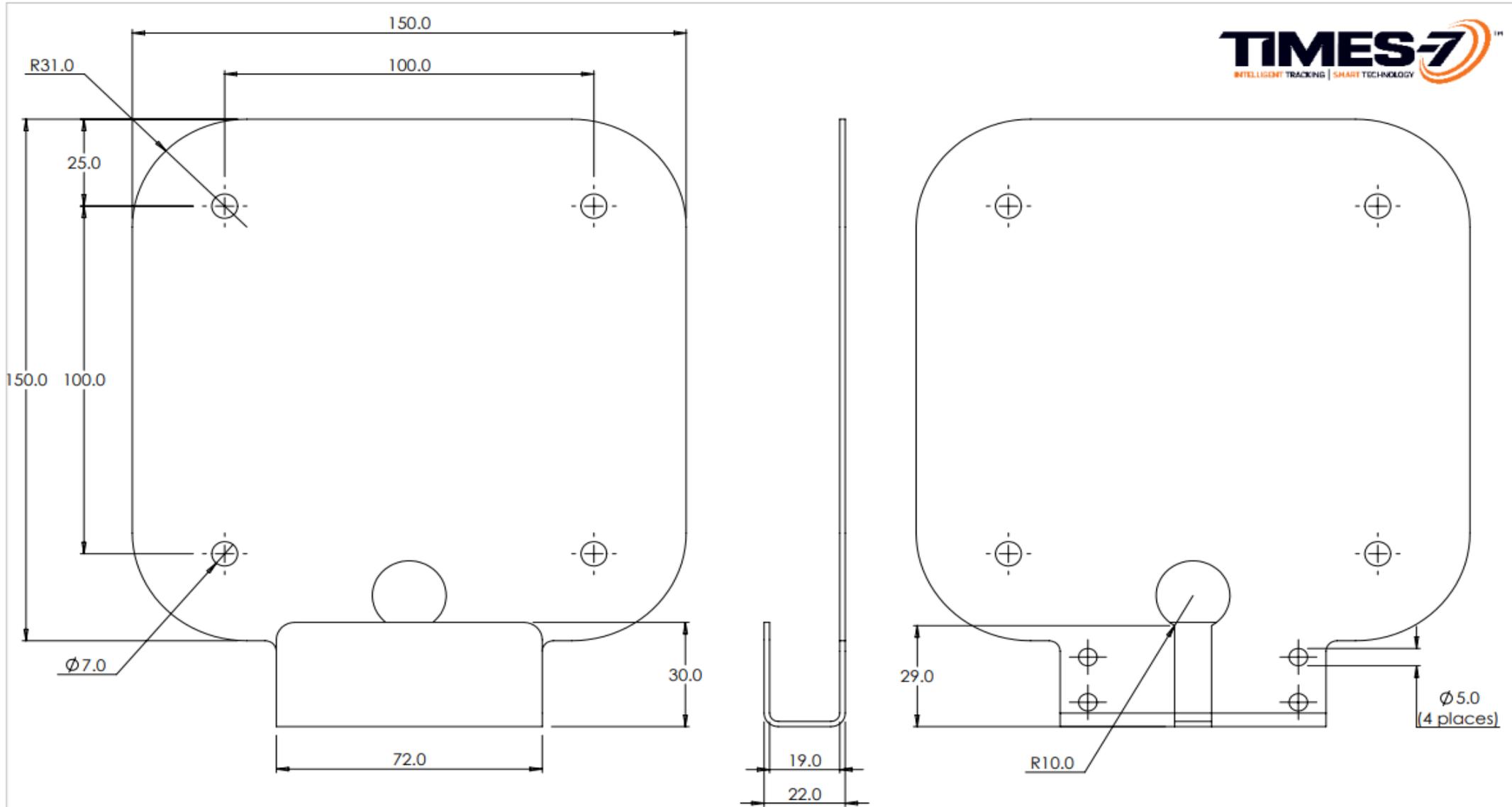
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# Mechanical Drawing for the A5020CP Circularly Polarized Antenna



# Mechanical Drawing for the Connector Protection Backplate



<p>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.</p>	<p>DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED TOLERANCES: NO DECIMAL PLACES ± 1 ONE PLACE DECIMAL ± 0.8</p>		DESCRIPTION	
			A5020 Connector Protection Backplate	
<p>DRAWN BY: Maria Price</p>	<p>DATE: 26-10-23</p>	<p>SIZE PART NO. A3 72308</p>		<p>REV B</p>
<p>APPROVED BY: Peter Wilcock</p>	<p>DATE: 26-10-23</p>	DO NOT SCALE DRAWING		SHEET 1 OF 1