Product Datasheet

A2020 Circularly Polarised Antenna

Times-7 is a high-tech company specialising in the design and manufacture of fixed RAIN 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, known for their SlimLine™ design, quality, and performance.

Our antennas cover:

- A wide variety of RF characteristics
- A range of sizes
- Leading temperature performance
- Range of IP ratings

If your deployment requires a specialisation that is not met by our standard portfolio, we can design and manufacture customised antennas to meet your needs.

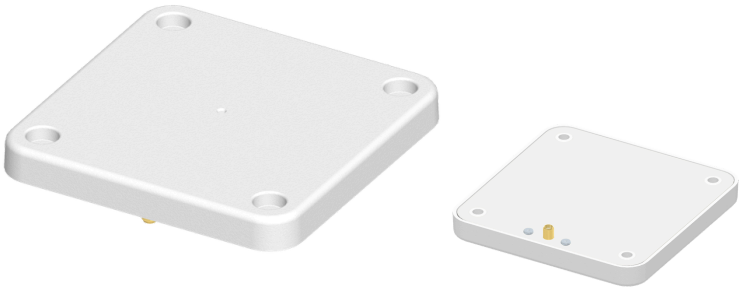
We are based in Lower Hutt, New Zealand, with a global reach as we export our products through our extensive authorised partner network.

In addition to our reliable, high quality RAIN RFID antennas, customers appreciate Times-7's customer service and in-depth technical support.

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

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

Times-7 Research Ltd
10 Te Puni Street
Lower Hutt 5012
New Zealand



A2020 rear view

The A2020 Circularly Polarised Antenna is a compact, general-purpose RAIN RFID antenna that suits a wide variety of close-range applications, with a short read zone that reads only the items in front of it.

We built it for high-volume rollouts in tight spaces: at 129 × 129 × 14.2 mm it fits inside shelves, cabinets, counters and lockers, and a wide 100° beamwidth in both planes covers a full shelf face or several adjacent bins from one mounting point. RF performance matches the popular A5020CP.

At 0.15 kg it suits mobile carts as readily as fixed fixtures, mounting flush or on 100 × 100 mm VESA brackets with a rear SMA jack. IP54, -20°C to +55°C (-4°F to +131°F). Ideal for smart shelving, medical supply cabinets, tool cribs and packing stations.

ORDERING INFORMATION

Note:
Please quote part number, frequency range, and cable type.

Antenna	Frequency Range	Part Number
A2020 (Single unit)	FCC 902-928 MHz	75664
A2020 (Single unit)	ETSI 865-868 MHz	75663
A2020 (Bulk pack- 50 units)	FCC 902-928 MHz	75786
A2020 (Bulk pack- 50 units)	ETSI 865-868 MHz	75785

Cable Accessories	Cable Type	Part number
Cable 2m, SMA to RP-TNC	T7 195 / T7 240 / T7 400	71436 / 71782 / 72042
Cable 4m, SMA to RP-TNC	T7 240 / T7 400	71784 / 72043
Cable 6m, SMA to RP-TNC	T7 240 / T7 400	71904 / 72044
Cable 8m, SMA to RP-TNC	T7 240 / T7 400	71788 / 72045

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PHYSICAL / ENVIRONMENTAL SPECIFICATIONS

Antenna Dimensions (L x W x D)	129 x 129 x 14.2 mm (21 mm incl. connector) 5.08" x 5.08" x 0.56" (0.83" incl. connector)	
Antenna Weight	0.2 kg / 0.3 lbs.	
Boxed Dimensions (L x W x D)	Single unit 170 x 135 mm x 25 mm 6.69 x 5.31 x 0.98"	Bulk pack- 50 units 780 x 205 x 205 mm 30.7" x 8.07" x 8.07"
Box Weight	0.2 kg / 0.4 lbs.	18.9 kg / 41.7 lbs.
Radome Material	Flame-retardant and UV-resistant ABS	
Environmental Rating	IP54	
Operating and Storage Temperature	-20°C to +55°C /-4°F to +131°F	
Mounting	Accommodates 100 x 100 mm VESA M6 or 1/4" fasteners	
Connector Type	Rear SMA Jack	
RoHs & REACH Compliant	Yes	

ELECTRICAL SPECIFICATIONS

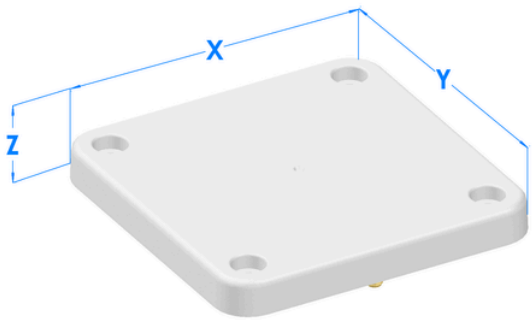
Frequency Range	865-868 MHz (ETSI) / 902-928 MHz (FCC)
Polarisation	Right hand circularly polarised
Far-Field Gain	5 dBiC typical
***Far-Field 3dB Beamwidth**	100° in both planes
VSWR	1.5 typical
Front-To-Back Ratio	-10 dB
Axial Ratio	2 dB typical
Nominal Impedance	50 Ω
Maximum Input Power	3 W

sales@times-7.com | +64 4 974 6566 | www.times-7.com
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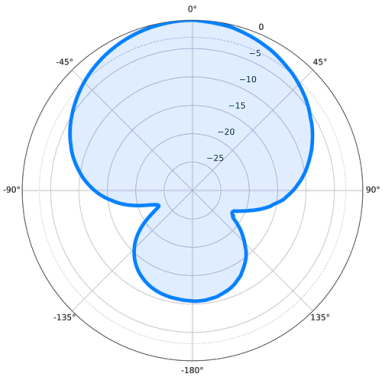
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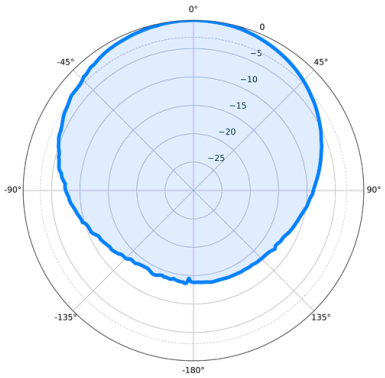
AZIMUTH PLANES



RADIATING PATTERNS



A2020 XZ Plane



A2020 YZ Plane

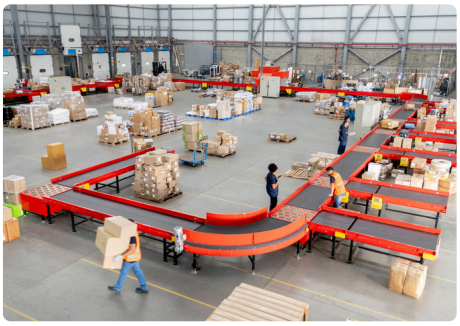
APPLICATIONS

Component storage and Kanban monitoring



Monitors tagged components and bin status to support timely replenishment and reduce the risk of parts shortages. The A2020's wide 100° beamwidth enables multiple adjacent bins to be monitored from a single mounting point.

Distribution, sorting and shipment verification



Tracks tagged cartons and pallets through key distribution and shipping stages, providing visibility as goods move through the supply chain. The A2020's mid-gain performance is well suited to readpoints at sorting areas, transition zones and other key chokepoints.

Point-of-sale and collection counters



Verifies tagged items at checkout or collection points without the need to scan each item individually. The A2020's controlled read zone helps isolate items at the counter readpoint while minimising unwanted reads from surrounding stock.

For more antenna recommendations by applications, **visit https://www.times-7.com/applications**

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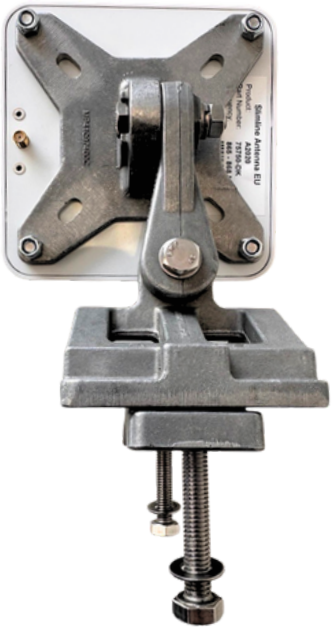
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MOUNTING AND INSTALLATION INSTRUCTIONS

The A2020 supports both flush mounting and VESA 100 mounting, providing flexibility across a range of installations.

- **VESA 100 mounting:** The recessed corner mounting holes are compatible with standard 100 × 100 mm VESA-spaced mounting brackets.
- **Flush mounting:** The A2020's slim profile and recessed corner holes allow it to be mounted directly to a suitable surface using screws or bolts.
- **Connector clearance:** Allow sufficient clearance behind the antenna for the rear SMA connector and cable attachment. The installation should provide enough space for easy onsite connection and finger tightening.
- **Connector tightening:** Tighten the SMA connector finger-tight only. Do not use tools, as excessive force may damage the connector.
- **Cable handling:** Avoid excessive pulling or strain on the cable and maintain an appropriate bend radius to prevent damage and ensure reliable operation.



A2020 Antenna
with VESA 100 bracket

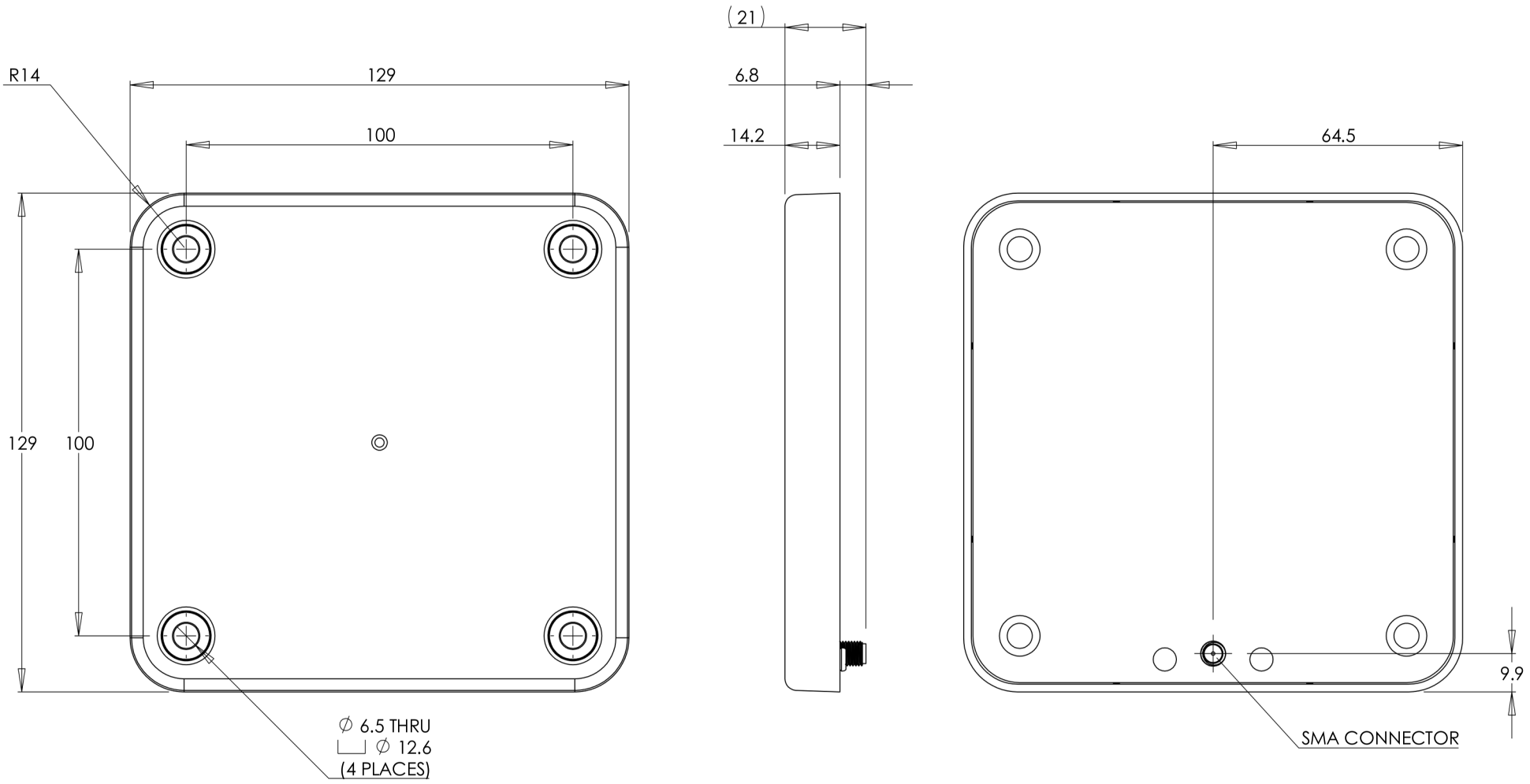
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MECHANICAL DRAWING FOR A2020 CIRCULARLY POLARISED FLUSH ANTENNA



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 ± 0.5		DESCRIPTION A2020 CIRCULARLY POLARISED ANTENNA
DRAWN BY: M. PRICE		DATE: 10-4-26	
APPROVED BY: P. WILCOCK		DATE: 4-5-26	SIZE A3 PART NO. 75663 ETSI, 75664 FCC REV A DO NOT SCALE DRAWING Sheet 1of 2

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