We are 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**, which are 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, Times-7 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**.
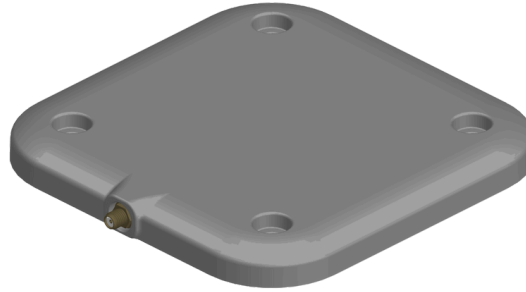
In addition to our world-class RAIN RFID antennas, customers appreciate Times-7's customer service and **in-depth technical support**.

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

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

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

The A5020CX combines the high-performance circularly polarized RFID capabilities of the A5020CP with the ultra-rugged durability of the A5020LX.

With its compact square footprint measuring 150x150mm, and superior radiation pattern, it provides reliable multi-purpose RFID performance with a typical read range of 4 meters.

Designed for harsh environments, the A5020CX boasts an IP69K rating, making it resistant to high-pressure water cleaning and suitable for extreme conditions such as outdoor installations, food processing, and industrial asset tracking. Its robust construction ensures longevity and reliability, while its sleek design seamlessly integrates into both industrial and customer-facing environments.

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

ORDERING INFORMATION

Antenna	Frequency	Part Number
		Grey
A5020CX	FCC 902-928 MHz	75493
A5020CX	ETSI 865-868 MHz	75494

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 / CX	72394

PHYSICAL / ENVIRONMENTAL SPECIFICATIONS

Unboxed Dimensions: *Length (x) x Width (y) x Depth (z)	150 x 150 x 14mm 5.93 x 5.88 x 0.57"
Dimensions Boxed Unit: (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 and Color:	Flame retardant and UV-resistant grey ABS
Environmental Rating:	IP69K
Operating and Storage Temperature:	-30° to +65°C / -22° to +149°F
Mounting:	Flush or 100 x 100mm VESA mount using the four mounting holes
Connector Type:	SMA female (Jack) side connector

ELECTRICAL / ENVIRONMENTAL SPECIFICATIONS

Frequency Range:	865-868 MHz (ETSI) / 902-928MHz (FCC)
Polarization:	RHCP (Right hand circular polarized)
Far-Field Gain:	5.5 dBiC typical
*Far-Field 3dB Beamwidth:	105° in both planes, typical
VSWR:	1.4 typical
Front-To-Back Ratio:	-10dB typical
Axial Ratio:	2dB typical
Nominal Impedance:	50Ω
Anti-Static Protection:	Yes, DC Grounded
Antenna Detection:	10KΩ resistance
Maximum Input Power:	3W

RADIATING PATTERNS

A5020CX XZ Plane	A5020CX YZ Plane
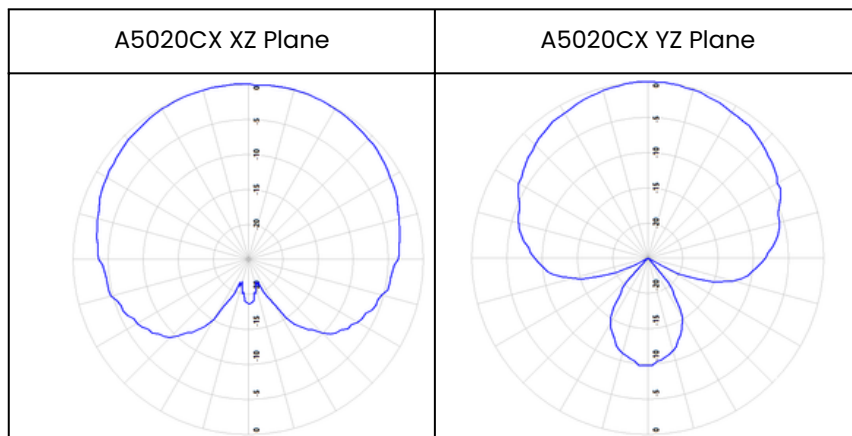
AZIMUTH PLANES
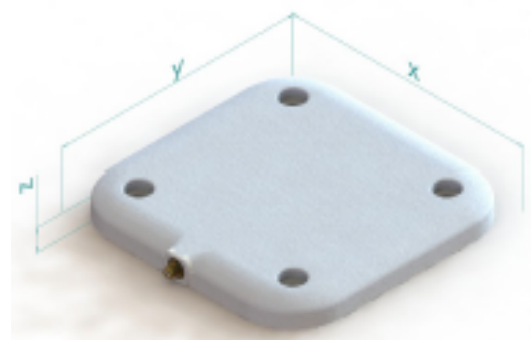
MOUNTING INSTRUCTIONS

The A5020CX features recessed corner mounting holes compatible with 100 x 100mm VESA spaced mounting brackets, as illustrated in the accompanying image.

The A5020CX'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.

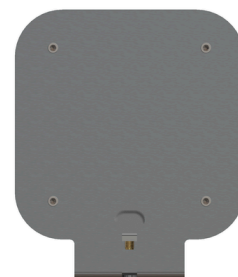For further information, please refer to the drawings below.

A5020 with on mounting bracket
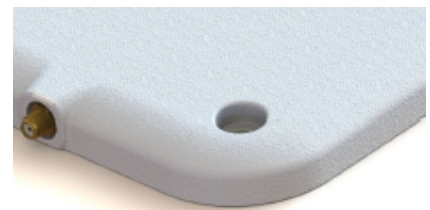
A5020 with Connector Protector Backplate

Front view

Back view

APPLICATIONS

FOOD PROCESSING PLANTS

The Times-7 A5020CX antenna is perfectly suited for food processing facilities, offering unmatched durability and performance in harsh, hygienic environments. Its IP69K-rated design resists high-pressure water, extreme cleaning agents, and rigorous sanitation protocols.

As the antenna is circularly polarized, it also allows more freedom on tag orientation, making it suitable for food production or assembly lines where tag orientation cannot be controlled.

CLEAN ROOMS

The Times-7 A5020CX antenna is ideal for cleanroom environments, combining compact design, durability, and high-performance RFID capabilities. Its IP69K rating ensures resistance to high-pressure cleaning, meeting stringent hygiene standards. With a 150 x 150mm footprint, circularly polarized radiation, and a 4-meter read range, it delivers reliable RFID performance for cleanroom asset tracking and inventory management.
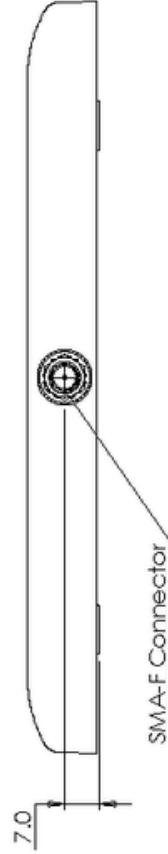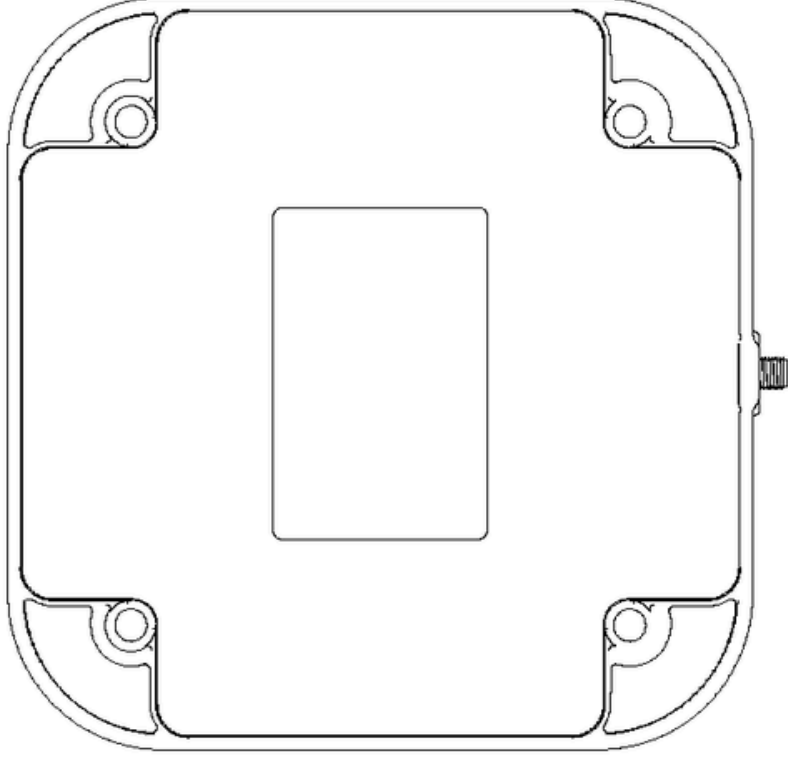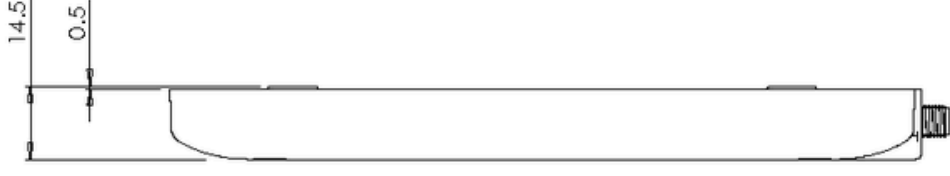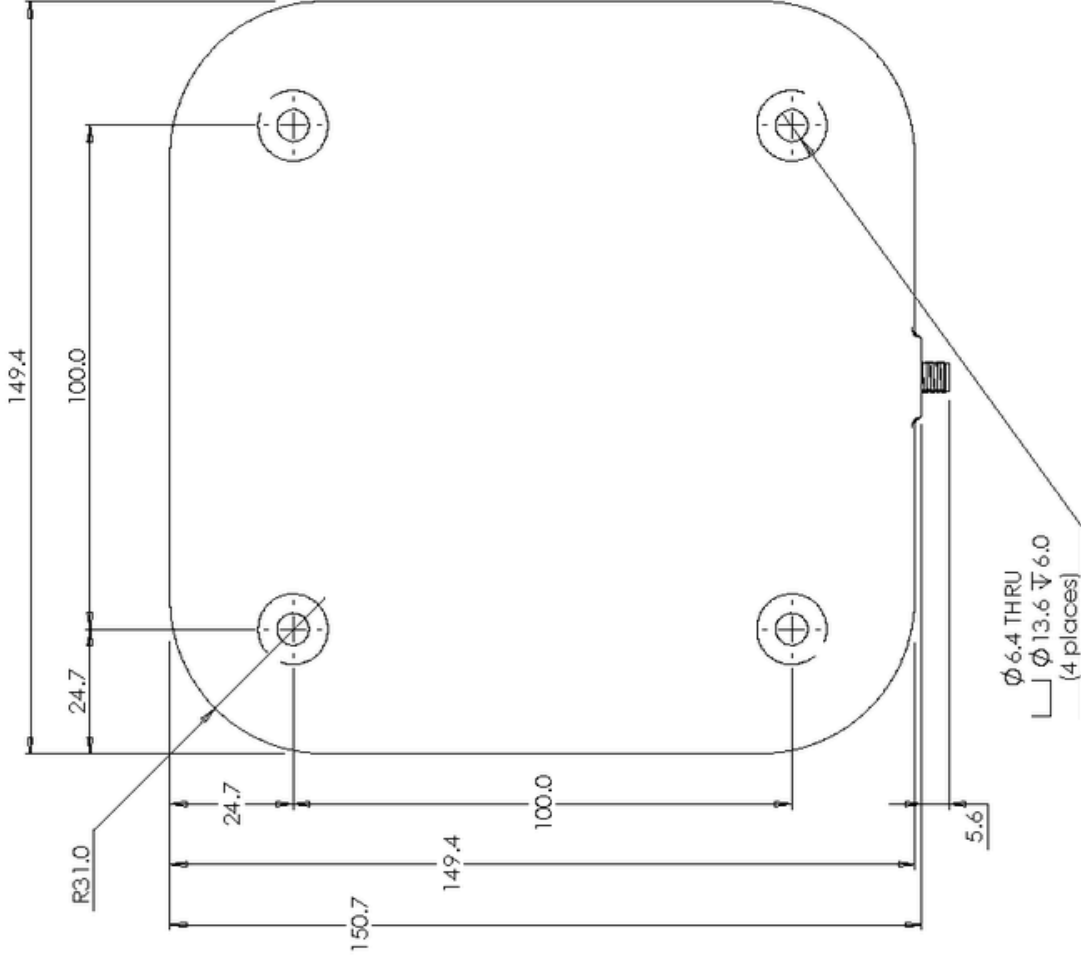

WASTE MANAGEMENT

The A5020CX is IP69K rated, meaning it is suitable for permanent outdoor installations, which may require cleaning through pressure washing. The ABS plastic housing prevents the antenna from corroding. The antenna can also be cleaned with cleaning agents. The ~100° beamwidth of the antenna makes applications reading tagged assets being put into RFID enable wastebins easy. The physical size of the antenna is small, and thus installation in waste management trucks is hassle-free.

14.5
0.5

149.4
100.0
24.7
R31.0
24.7
149.4
150.7
100.0
5.6

Ø6.4 THRU
Ø13.6 ↧6.0
(4 places)

SMA-F Connector

7.0

DESCRIPTION
A5020 CX Circular Extreme Antenna

SIZE | PART NO. | REV
A3 | 75493 (FCC), 75494 (ETSI) | A

DO NOT SCALE DRAWING

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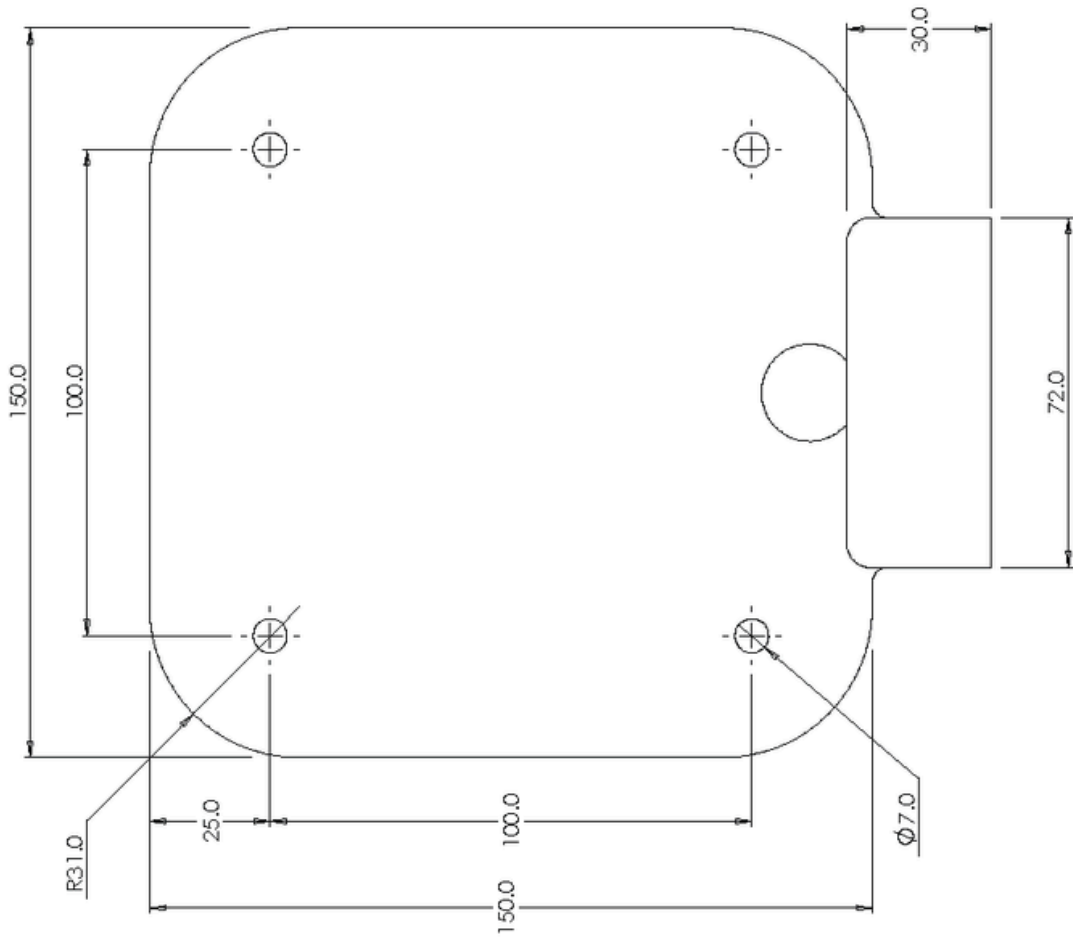TOLERANCES:
NO DECIMAL PLACES ± 1
ONE PLACE DECIMAL ± 0.5

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.

DRAWN BY: M. Price   DATE: 12-12-24
APPROVED BY: P. Wilcock   DATE: 16-12-24

V1-12/24 5020CX

DIMENSIONS ARE IN mm

UNLESS OTHERWISE SPECIFIED
TOLERANCES:
NO DECIMAL PLACES ± 1
ONE DECIMAL PLACE ± 0.5

DRAWN BY: M.Price   DATE: 12-12-24

APPROVED BY: P. Wilcock   DATE: 16-12-24

DESCRIPTION
A5020 Connector Protection Backplate

SIZE **A3**   PART NO. 72394

REV **A**

DO NOT SCALE DRAWING

Ø 5.0
(4 places)

150.0
100.0
R31.0
25.0
100.0
150.0
Ø 7.0

30.0
72.0

1.5
19.0