

#### 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.



Flush and stud mounting available

The Times-7 industry leading ultra-low-profile A5010 Circularly Polarized (CP) Antenna is in a compact 250mm (approx. 10") square footprint. IP67 rated for permanent outdoor use and built to Times-7's high standard for quality and robustness, the A5010 antenna creates a new benchmark for multi-purpose UHF RFID antennas.

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

NEW ZEALAND  
P: +64 4 974 6566

E: [sales@times-7.com](mailto:sales@times-7.com)

W: [www.times-7.com](http://www.times-7.com)



## Order Information

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

*Antenna Product Code	Band	Part Number
A5010 (Flush Mounted)	FCC 902-928 MHz	60001
A5010 (Flush Mounted)	ETSI 865-868 MHz	60002
A5010 (Stud Mounted)	FCC 902-928 MHz	60003
A5010 (Stud Mounted)	ETSI 865-868 MHz	60004
*Cable Accessories	Cable Type	Part Number
Cable 2m, SMA to RPTNC	T7195 / 240	71436 / 71782
Cable 4m, SMA to RPTNC	T7 195 / 240	71437 / 71784
Cable 6m, SMA to RPTNC	T7 240	71904
Cable 8m, SMA to RPTNC	T7 195 / 240	71438 / 71788
Mounting Accessories		
A5010 Connector Protector Backplate		72039

\*ROHS & CE compliant.

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

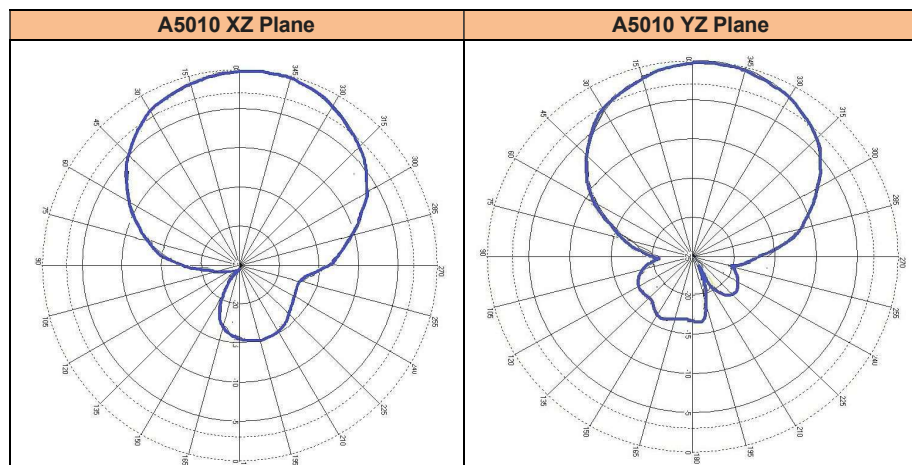
## Physical / Environmental Specifications

<b>*Unboxed Dimensions:</b>	250 x 250 x 14mm
<b>Length (x) x Width (y) x Depth (z)</b>	9.85 x 9.85 x 0.55"
<b>Boxed Unit Dimensions:</b>	Flush: 280 x 255 x 20mm
<b>(L x W x D)</b>	11.02 x 10.03 x 0.78"
	Stud: 310 x 280 x 40mm
	14.96 x 11.02 x 1.57"
<b>Weight:</b>	Net: 0.575kg / 1.26lbs. Gross Flush: 0.728kg / 1.60lbs. Gross Stud: 0.695kg / 1.53lbs.
<b>Radome Material:</b>	Flame retardant and UV resistant ABS
<b>Environmental Rating:</b>	IP67
<b>Operating Temperature:</b>	0°C to +65°C 32°F to +149°F
<b>Mounting:</b>	Flush or stud (VESA) mounted (mounting info on page 4)
<b>Connector Type:</b>	SMA female connector
<b>A5010 Flush Screw:</b>	Screw #8x1" s/s phillips white pan head (x4)
<b>A5010 Stud Screws:</b>	M4 ZP nut (x4), M4 ZP spring washer (x4), M4 ZP flat washer (x4)

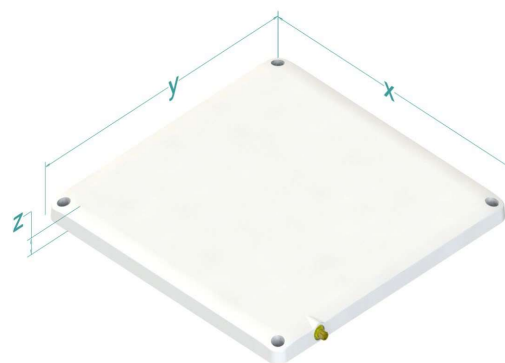
## Electrical Specifications

<b>Frequency Range:</b>	865-868 MHz / 902-928 MHz
<b>Polarization:</b>	Right hand circular polarized (RHCP)
<b>Far-Field Gain:</b>	8.5dBiC typical
<b>*Far-Field 3dB beamwidth:</b>	68° in both planes
<b>VSWR:</b>	1.3 typical
<b>Front-To-Back Ratio:</b>	-20dB
<b>Axial Ratio:</b>	1dB 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 Pattern



## \*Azimuth Planes



## Applications

### Medical & Pharmaceutical

The A5010 can operate at temperatures as low as 0° Celsius (32° Fahrenheit). High-value pharmaceutical assets can be tracked in fridges and freezers using the A5010 antenna. The slim design maximizes the usable space inside a refrigerator. The antenna can handle general-purpose cleaning agents and is water-resistant. The white-colored A5010 antenna is suitable for hospitals, medical laboratories, research industries, and pharmaceutical labs.



### Retail

The A5010 can easily be deployed in space constrained environments such as retail. With its superb aesthetics and compact design, the A5010 antenna blends well into the retail back drop.



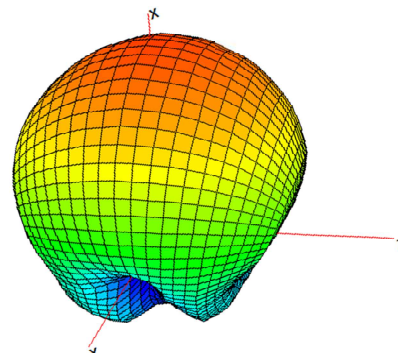
### Warehousing

The A5010 can be deployed on different warehouse shelves and environments. With its superb aesthetics and compact design, the A5010 antenna integrates into a wide range of warehouse setups across diverse industries.



## 3D E-Field Radiation

All reliability and performance measurements have been performed by certified, independent laboratories. Full reports are available on request.



## Environmental Tests

Test	Standard	Duration	Temperature	Notes
Thermal Shock (non op)		1 hour	-45 / 70°C	3 cycles
Humidity		72 hours	85°C RH	
Dust Resistance	IEC 60529	8 hours		With vacuum
Solar Radiation		4 days		340nm
Impact Resistance				1lb. ball drop at 24" x 6 (top / bottom / sides)
Salt Fog	Mil-Std-810G	24 hours in / 24 hours out		2 cycles
Vibration Vehicle	Mil-Std-810G	1 hour x 3 axis		10-500Hz, 1.04GRMS
Shock-Half Sine	Mil-Std-810G			10G / 11ms, 5 shocks x 6 directions
Shock-Drop	Mil-Std-810G			26 drops @ 48"
High-Temp Storage		24 hours each temp		60°C, 65°C, 70°C, 80°C, 85°C, 90°C & 95°C

## Mounting Options

The A5010 is designed to support either flush or VESA mounting. To accommodate both, it offers compatibility with either flush or studed backplates.

With part numbers 60001 and 60002, flush mounting can be achieved by securing screws or bolts through the corner holes in the housing or alternatively, using double-sided industrial tape on the backplate.

On part numbers 60003 and 60004, the studs are spaced at 100 x 100mm (3.94"), making them compatible with standard VESA brackets offered by various suppliers. This product includes a screw pack (more information is found in the physical / environmental specifications table).



A5010 Stud Antenna on a [VESA bracket](#) available from a wide range of suppliers

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.



A5010

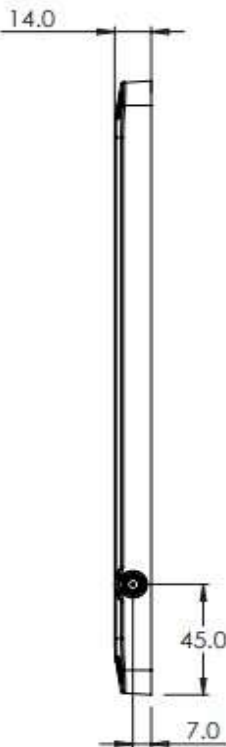
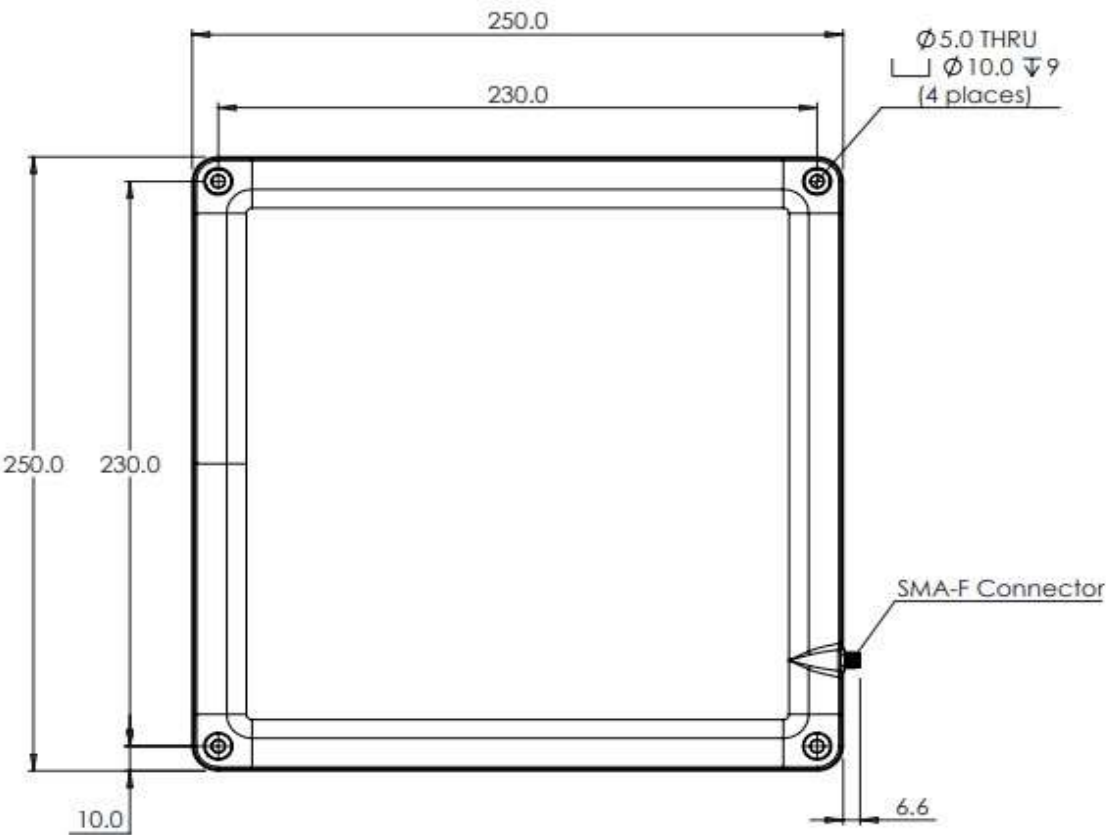


The technical data contained in this publication is not a guarantee for which Times-7 Research Ltd assumes legal accountability. It is indicative of typical performance and, if required, should be relied on for specific applications only after due verification.

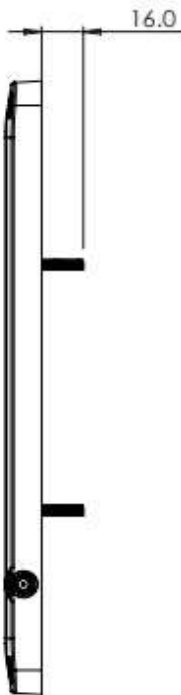
All technical data, specifications, and other information contained herein are deemed to be the proprietary intellectual property of Times-7 Research Ltd. No reproduction, copy, or use thereof may be made without the express written consent of Times-7 Research Ltd.

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 A5010 Circularly Polarized Flush and Stud Antenna



A5010  
Flush Antenna



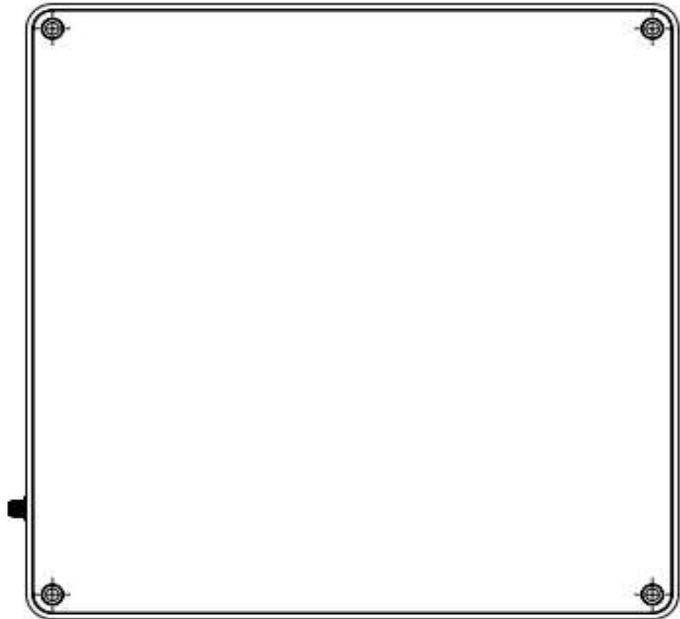
A5010  
Stud Antenna

Part No.	Description
60001	A5010 Circularly Polarized Flush Antenna (FCC)
60002	A5010 Circularly Polarized Flush Antenna (ETSI)
60003	A5010 Circularly Polarized Stud Antenna (FCC)
60004	A5010 Circularly Polarized Stud Antenna (ETSI)

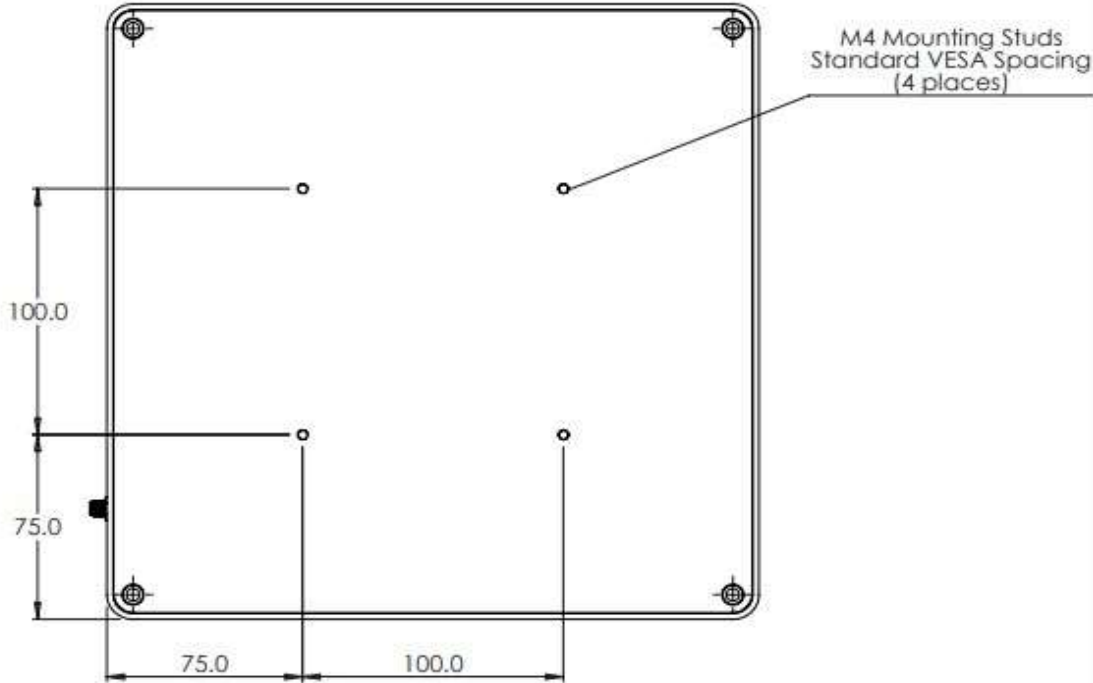
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF TIMES-7 LTD. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF TIMES-7 IS PROHIBITED.		DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED TOLERANCES: NO DECIMAL PLACES ± 1 ONE PLACE DECIMAL ± 0.8				DESCRIPTION A5010 Circularly Polarized Antenna			
DRAWN BY: Maria Price		DATE: 26-10-23		SIZE <b>A3</b>		PART NO. Refer to table		REV <b>B</b>	
APPROVED BY: Peter Wilcock		DATE: 26-10-23		DO NOT SCALE DRAWING					
						SHEET 1 OF 2			



A5010  
Flush Antenna



A5010  
Stud Antenna



Part No.	Description
60001	A5010 Circularly Polarized Flush Antenna (FCC)
60002	A5010 Circularly Polarized Flush Antenna (ETSI)
60003	A5010 Circularly Polarized Stud Antenna (FCC)
60004	A5010 Circularly Polarized Stud Antenna (ETSI)

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 ± 0.2				DESCRIPTION A5010 Circularly Polarized Antenna	
DRAWN BY: Maria Price		DATE: 26-10-23		SIZE PART NO. <b>A3</b> Refer to table		REV <b>B</b>	
APPROVED BY: Peter Wilcock		DATE: 26-10-23		DO NOT SCALE DRAWING			
				SHEET 2 OF 2			