

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

W: 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](#)

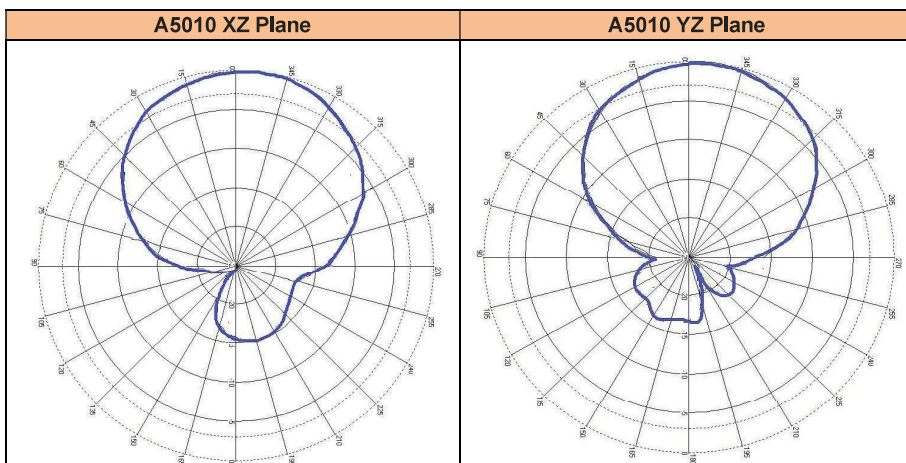
Physical / Environmental Specifications

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

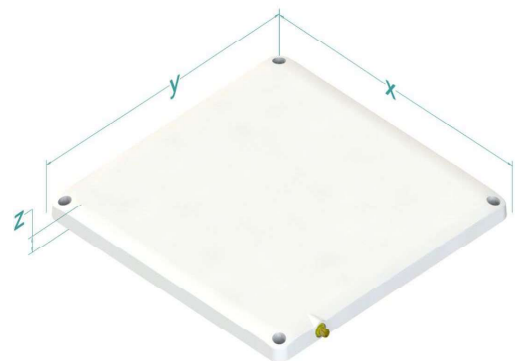
Electrical Specifications

| | |
|----------------------------------|--------------------------------------|
| Frequency Range: | 865-868 MHz / 902-928 MHz |
| Polarization: | Right hand circular polarized (RHCP) |
| Far-Field Gain: | 8.5dBiC typical |
| *Far-Field 3dB beamwidth: | 68° in both planes |
| VSWR: | 1.3 typical |
| Front-To-Back Ratio: | -20dB |
| Axial Ratio: | 1dB typical |
| Nominal Impedance: | 50Ω |
| Anti-Static Protection: | Yes, DC grounded |
| Antenna Detection: | 10KΩ resistance |
| Maximum Input Power: | 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.



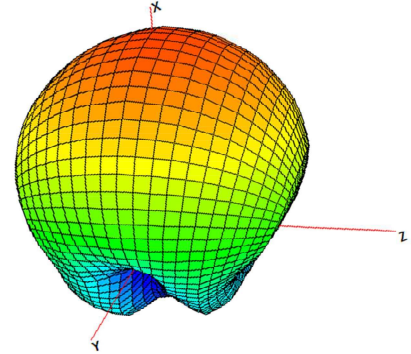
Warehousing

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).



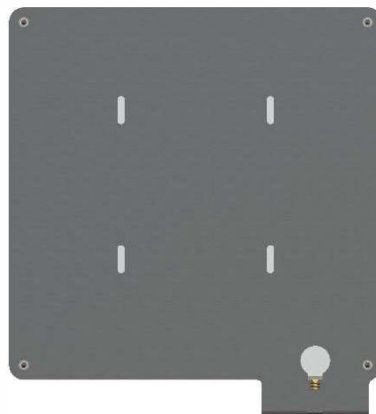
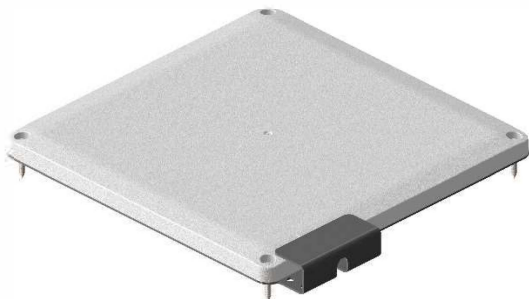
A5010 Stud Antenna on a [VESA bracket](#) available from a wide range of suppliers

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.

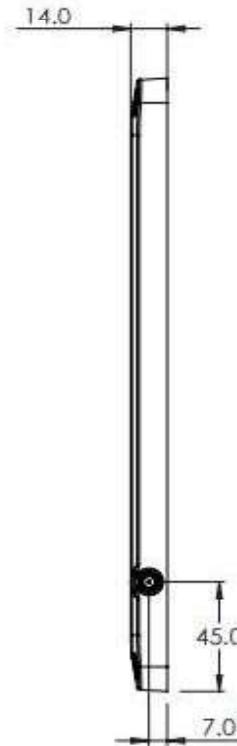
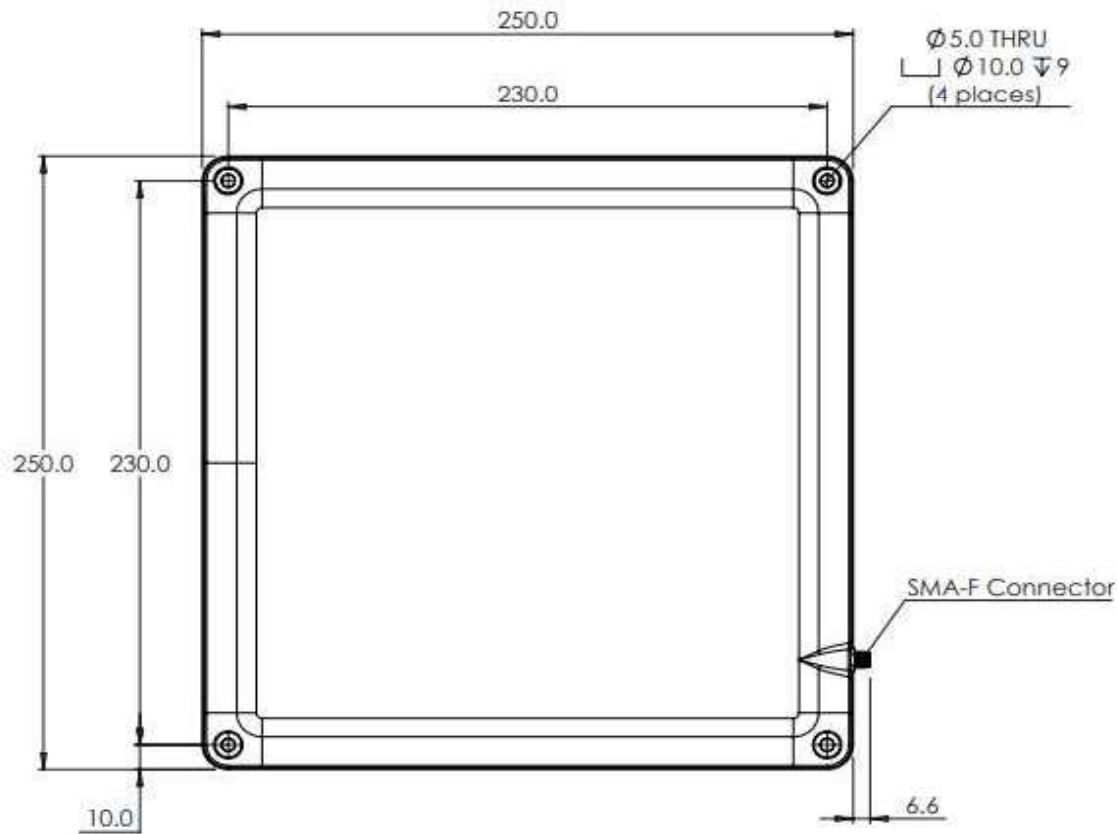
For further information, please refer to the drawings below.



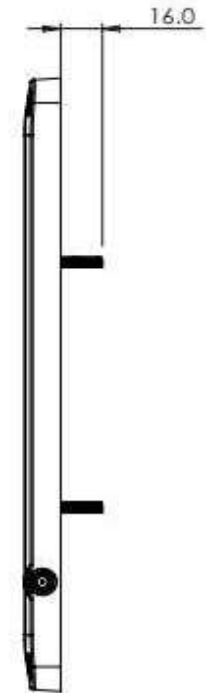
A5010 Antenna and Connector Protection Backplate

株式会社サイレンスネット www.silencenet.com
〒222-0033 横浜市港北区新横浜2-5-9 新横浜フジカビル
tel. 045-475-1555 fax. 045-475-3275

Mechanical Drawing for the A5010 Circularly Polarized Flush and Stud Antenna



**A5010
Flush Antenna**



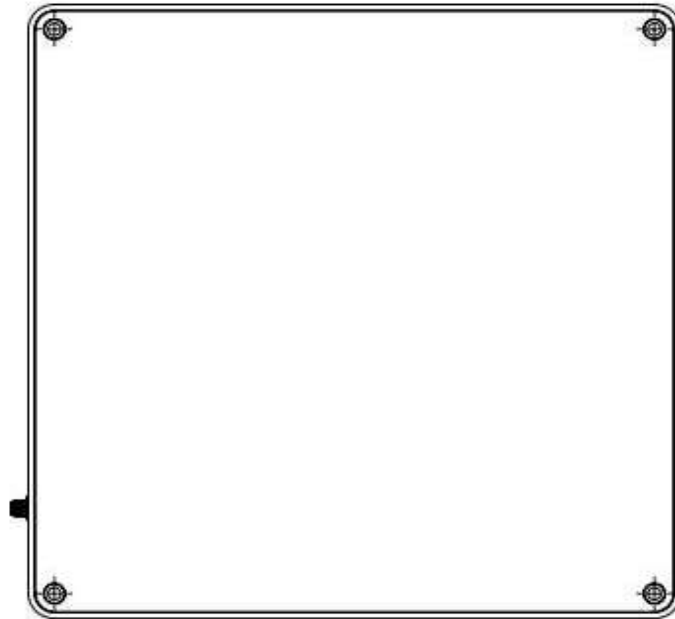
**A5010
Stud Antenna**

| 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) |

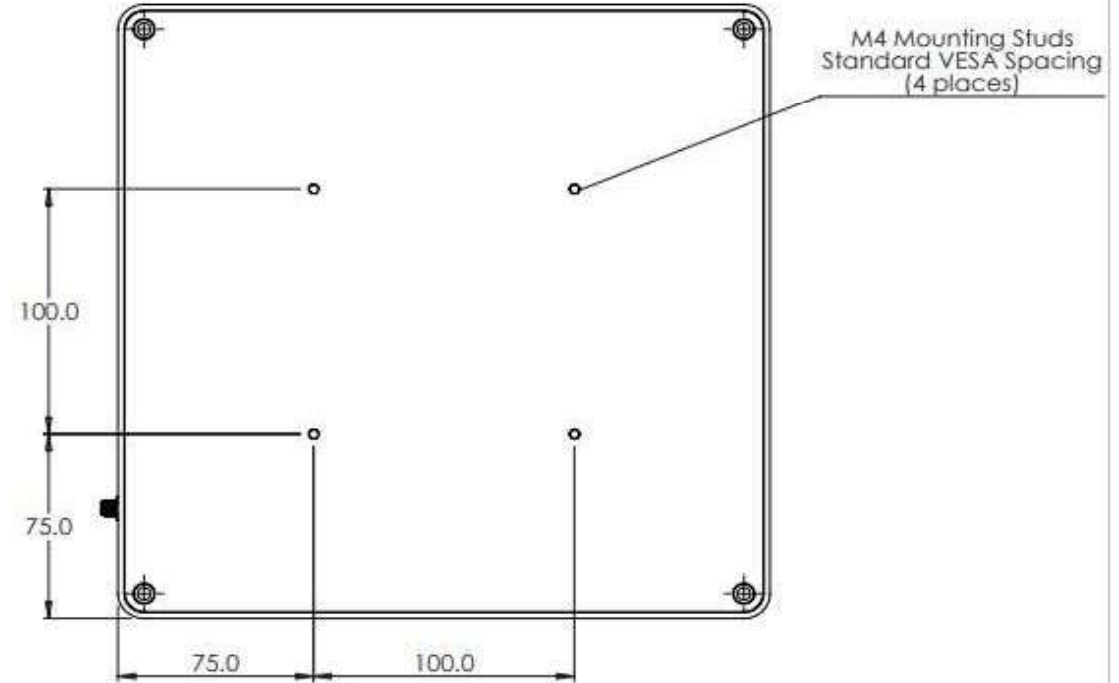
| | | | | |
|--|-------------------|---|--|---|
| THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF TIMES-7 LTD. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF TIMES-7 IS PROHIBITED. | | DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED TOLERANCES: NO DECIMAL PLACES ± 1 ONE PLACE DECIMAL ± 0.2 | | DESCRIPTION A5010 Circularly Polarized Antenna |
| DRAWN BY: Maria Price | DATE: 26-10-23 | SIZE PART NO. A3 Refer to table | | REV. B |
| APPROVED BY: Peter Wilcock | DATE: 26-10-23 | DO NOT SCALE DRAWING | | SHEET 1 OF 2 |

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) |

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|---|--|--|--|----------------------------------|--|--|--|
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