Product Datasheet

A5060 Circularly Polarised High Gain Antenna

Times-7 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, we can design and manufacture customised antennas to meet your needs.

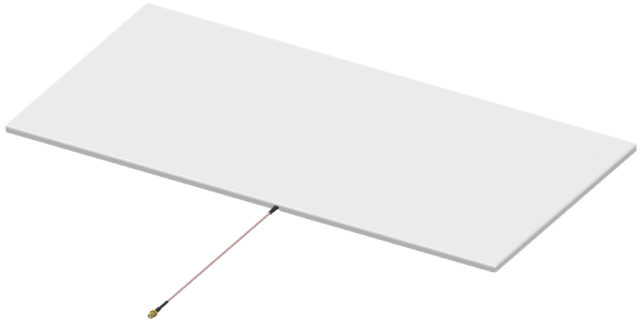
We are based in Lower Hutt, New Zealand, with a global reach as we export our products through our extensive authorised partner network.

In addition to our 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 information:
www.times-7.com/patents

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



Formed and flat radome available (pictured: formed radome)

The A5060 Circularly Polarised High Gain Antenna combines an ultra-low profile with a read range of up to 10m (33'), delivering exceptional performance in the most demanding industrial environments.

Its multi-element array design minimises signal distortion to ensure maximum readability, even in highly reflective, densely populated tag environments, making it ideal for industrial portal applications.

With its thin, SlimLine form factor, the A5060 offers installation versatility. Mount it discreetly behind ceiling tiles, inside cabinets, or use it to cover large benchtops. Integrated mounting holes support flush mounting, while VESA compatibility via the Times-7 Mounting Plate adds even more flexibility to your setup.

ORDERING INFORMATION

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

Antenna	Frequency Range	Part Number*	
		Black	White
A5060 Formed Radome (standard size)	ETSI 865-868 MHz	75236	75237
A5060 Formed Radome (standard size)	FCC 902-928 MHz	75238	75239
A5060 Flat Radome	ETSI 865-868 MHz	71876	
A5060 Flat Radome	FCC 902-928 MHz	71875	

**These are RHCP SKUs. LHCP available for selected SKUs on request*

Mounting Accessories	Part number
Mounting Plate (A5060)	72095

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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A5060 Circularly Polarised High Gain Antenna

PHYSICAL / ENVIRONMENTAL SPECIFICATIONS

	Formed Radome	Flat Radome
Dimensions: (L x W x D)	608 x 308 x 9.7mm 23.93 x 12.12 x 0.38"	600 x 300 x 8mm 23.62 x 11.81 x 0.31"
Boxed Unit Dimensions: (L x W x D)	623 x 335 x 30mm 24.53 x 13.18 x 1.18”	623 x 335 x 30mm 24.52 x 13.18 x 1.18”
Weight	Net: 1.75kg / 3.86lbs. Gross: 2.05kg / 4.52lbs.	Net: 1.45kg / 3.20lbs. Gross: 1.8kg / 3.97lbs.
Radome Material	Flame-retardant ABS	
Environmental Rating	IP54	
Operating and Storage Temperature	-20° to +55°C / -30° to +60°C -4° to +131°F / -22° to +140°F	
Mounting	Integrated flush mounting holes or VESA mount	
Connector Type	SMA jack, fly lead, side exit	
Cable Type / Length	RG316 / 270mm / 10.6"	
RoHs & REACH Compliant	Yes	

ELECTRICAL SPECIFICATIONS

Frequency Range	865-868 MHz (ETSI) / 902-928 MHz (FCC)
Polarisation	Right hand circularly polarized (RHCP) Note: Left-hand circularly polarised available for selected SKUs on request
Far-Field Gain	10.5dBiC typical
Far-Field 3dB Beamwidth	25° in XZ-plane, 60° in YZ-plane
VSWR	1.4 typical
Front-To-Back Ratio	-25dB
Axial Ratio	2dB typical
Nominal Impedance	50Ω
Anti-Static Protection	Yes, DC grounded
Antenna Detection	10KΩ resistance
Maximum Input Power	3W

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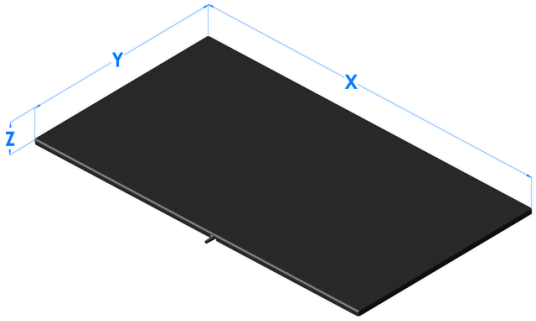
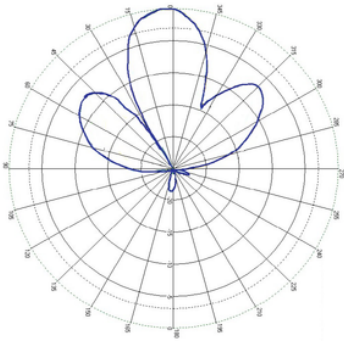
A5060 Circularly Polarised High Gain Antenna

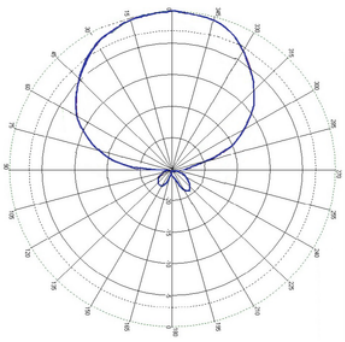
AZIMUTH PLANES



RADIATING PATTERNS



A5060 XZ Plane



A5060 YZ Plane

APPLICATIONS

Industrial Portals

The high gain of 10.5dBiC gain makes this antenna highly suitable for industrial applications. Densely packed assets with numerous tags can be identified accurately and efficiently.

A stand-alone portal can be realised with four A5060 antennas (pictured above). All possible tag orientations will be captured due to its circular polarisation and positions. The antennas on the sides are offset so that they do not face each other and induce maximum coverage within the portal.

Commercial Laundries

With its high gain, the A5060 antenna has the potential to read through densely packed laundry items. The antennas can either be configured as a standalone industrial portal to track trolleys full of laundry goods, or they can be used in a conveyor to track movement.

The antenna's confined RF emission eliminates stray tag reads. The antennas can also be used over bench tops in packing/folding stations.

Tunnels

The A5060's multi-element array provides strong and evenly distributed near-field and far-field energy, while circular polarisation captures tags in any orientation as they pass through.

A narrow 25° beamwidth and high 10.5 dBiC gain create a tightly controlled read zone that suppresses stray reads, and the slim, low-profile form integrates easily into tunnel walls and panels, delivering the dense, accurate read performance that high-throughput tunnels demand.

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

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

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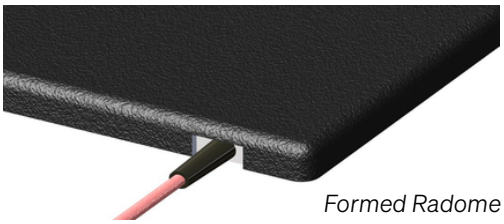
FLAT VS FORMED RADOME

Formed Radome

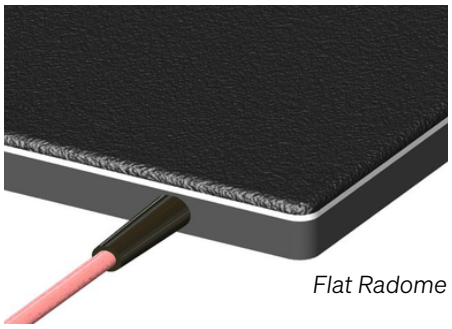
The A5060's new formed radome is an injection moulded radome that enhances both durability and finish. The more robust enclosure better protects the antenna corners from impact damage, sits flatter against the antenna panel, features moulded-in cable cut-outs for greater consistency, and has a more aesthetic surface finish.



Formed Radome

Flat Radome

The flat radome is recognised by its sleek and contemporary flat form, showcasing attention to detail in the way it is skillfully finished, resulting in a refined and modest appearance.



Flat Radome

MOUNTING INFORMATION

Flush Mount

The A5060 antenna has 6 pre-drilled mounting holes on the rear side, which can be drilled completely through without damaging the antenna.

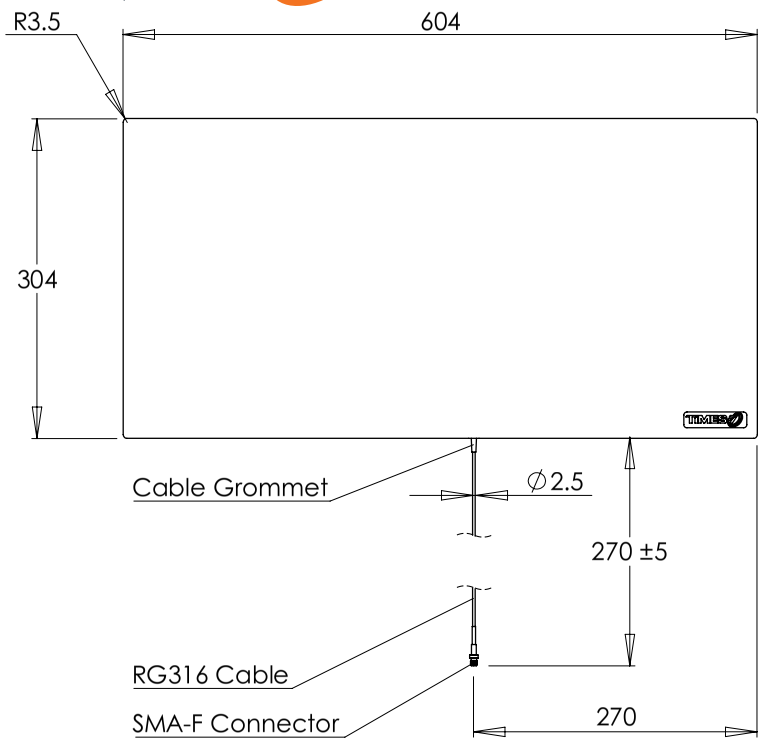
Mounting Plate

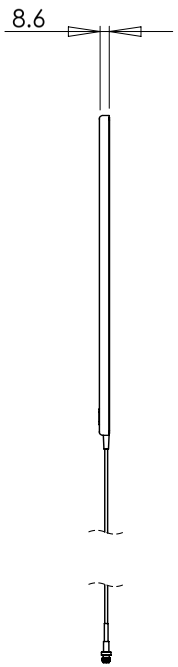
The Times-7 Mounting Plate for the A5060 is designed to support a VESA plate. Each Mounting Plate comes with a screw kit.

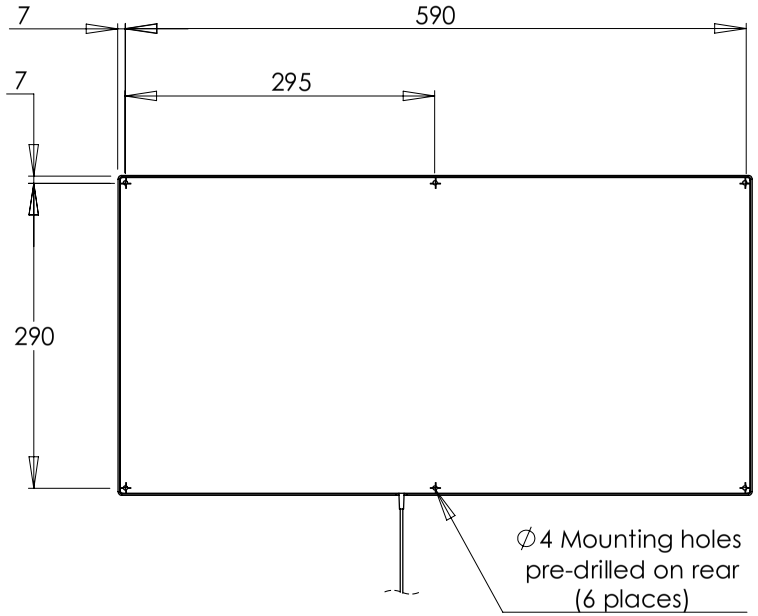
INSTALLATION INSTRUCTIONS

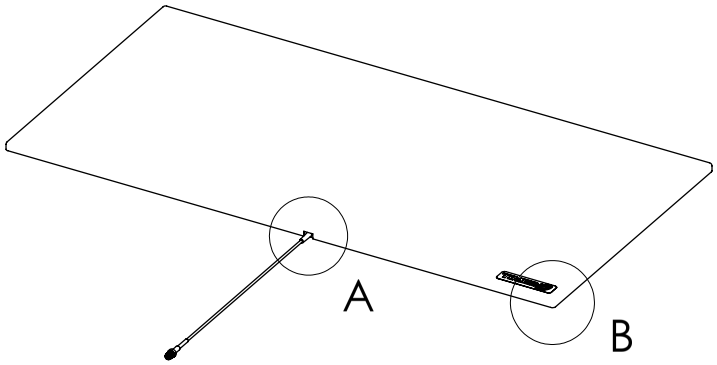
- Ensure that only finger tightness is used for the SMA connector. Use of tools to tighten the connector will apply excessive force and will damage the connector.
- Avoid any excessive pulling force on the cable and be mindful of its bend radius to prevent damage and ensure proper functioning.

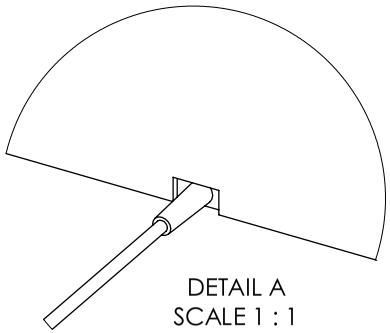
MECHANICAL DRAWING FOR A5060 - FORMED RADOME



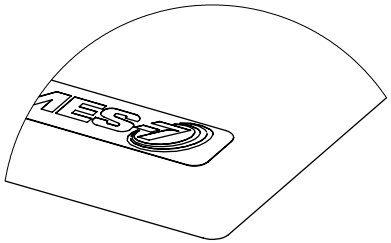








DETAIL A
SCALE 1 : 1



DETAIL B
SCALE 1 : 1

DIMENSIONS ARE IN mm

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

DRAWN BY:	M. Price	DATE:	26-10-23
APPROVED BY:	P. Wilcock	DATE:	26-10-23

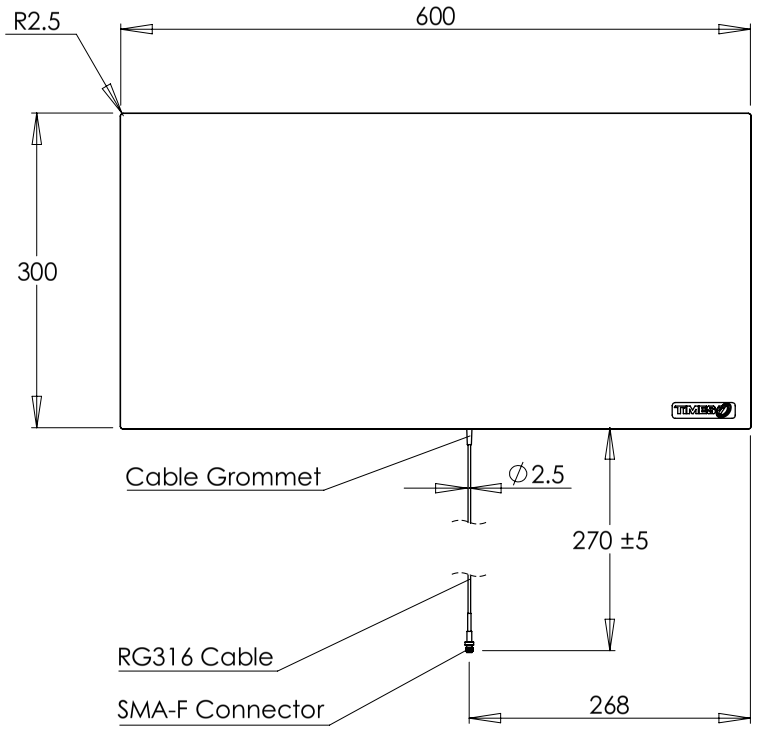
DESCRIPTION

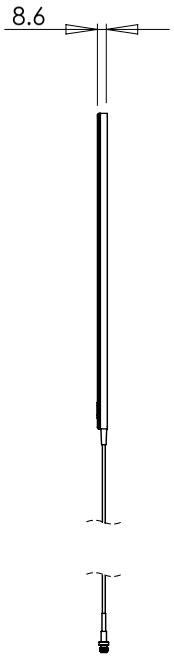
A5060 Circularly Polarized
High Gain Antenna (Formed Radome)

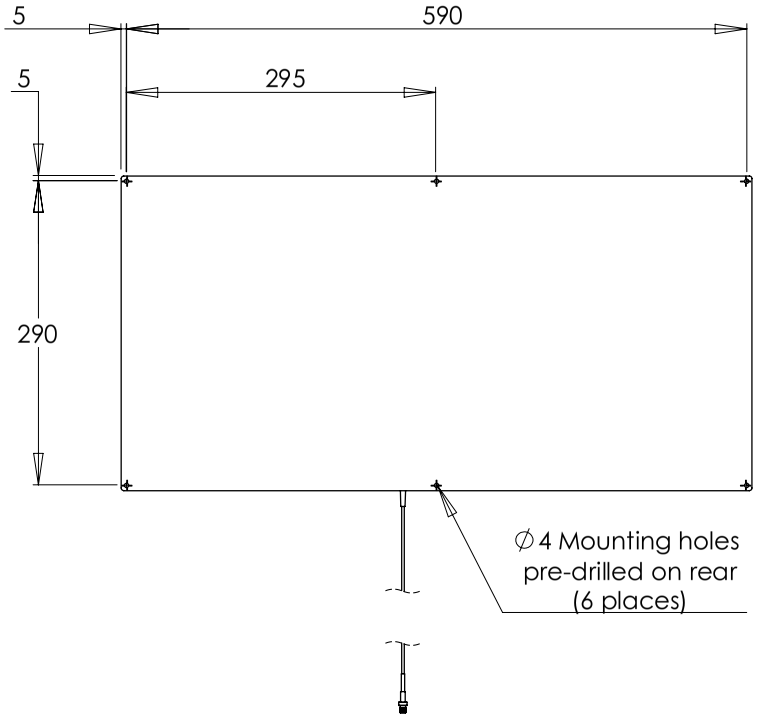
SIZE	PART NO.	REV
A3	75236 (ETSI - Black), 75238 (FCC - Black) 75237 (ETSI - White), 75239 (FCC - White)	B

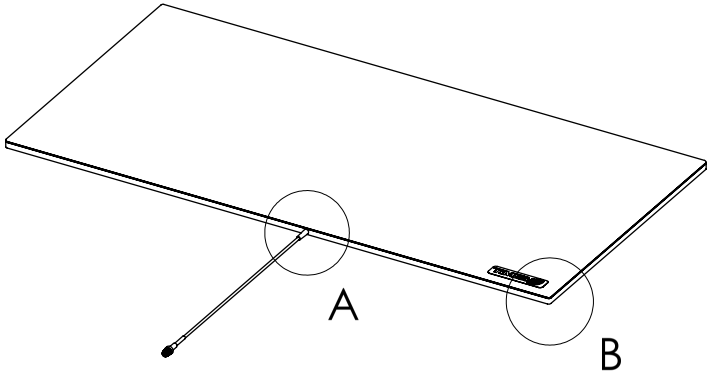
DO NOT SCALE DRAWING

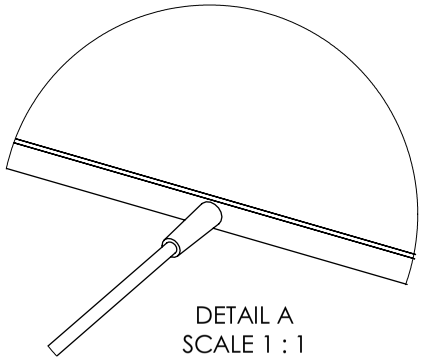
MECHANICAL DRAWING FOR A5060 - FLAT RADOME



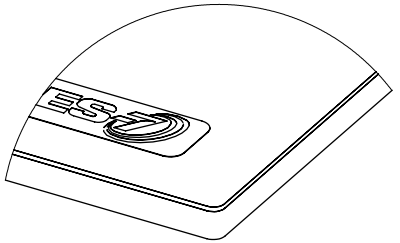








DETAIL A
SCALE 1 : 1



DETAIL B
SCALE 1 : 1

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

DRAWN BY: M. Price
DATE: 26-10-23

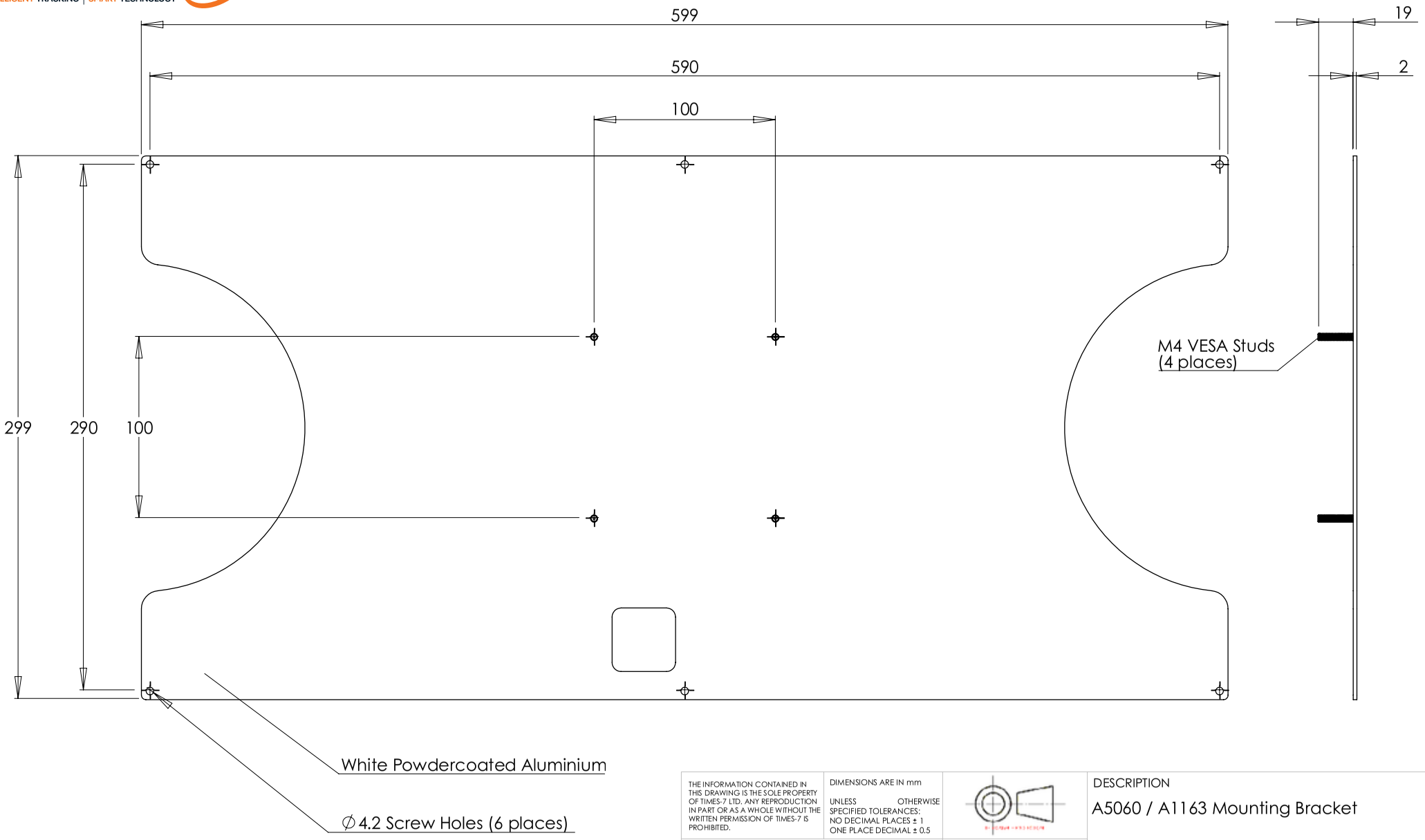
APPROVED BY: P. Wilcock
DATE: 26-10-23

DESCRIPTION
A5060 Circularly Polarized
High Gain Antenna (Flat Radome)

SIZE A3
PART NO. 71875 (FCC), 71876 (ETSI)
REV B

DO NOT SCALE DRAWING

MECHANICAL DRAWING FOR A5060 - MOUNTING BRACKET



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 A5060 / A1163 Mounting Bracket
DRAWN BY: M. Price		DATE: 26-10-23	
APPROVED BY: P. Wilcock		DATE: 26-10-23	
			SIZE A3 · PART NO. 72095 · REV A
			DO NOT SCALE DRAWING