

# Taoglas TLS.01 Shockwave Wideband 4G-5G Stud Antenna

SKU: ANT-TG-00007  
MPN: TLS.01.305111

## Description

The Taoglas Shockwave TLS.01.305111 is a permanent mount, waterproof, external 4G 5G wideband antenna operating across the full 600 to 6000 MHz range. The antenna has a 3 metre cable with an SMA male connector making it ideal for monitoring, outdoor media, and other IoT applications. It has been designed to be used on a Ground Plane.

This antenna has superior performance over wide-bands compared to traditional whip antennas. Up to 77% efficiency and with a minimum 2.2 dBi peak gain over all cellular bands result when mounted on a 300 x 300 mm ground plane. Stable radiation patterns over low angles provides consistent gain in the horizontal plane, making it especially suitable for cellular applications.

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The TLS.01 antenna is IP67 waterproof and IP69K resistant against high pressure water jets in commercial cleaning environments, which makes the antenna ideal for 4G applications either in indoor or in harsh outdoor environments.

While the antenna states operation up to 6000 MHz, it should be clarified that radiated efficiency drops to below 9% above 5150 MHz. 5G 3.5 GHz performance is marginally impacted by the use of a 3 metre cable when contrasted to the N Bulkhead TLS.01



## Taoglas



## RF Specification

Taoglas provides a comprehensive range of external, embedded and base station antenna solutions for M2M applications such as Telematics / Automotive, Smart-Grid, Metering / Telemetry, Home Automation, Remote Monitoring and Medical applications.

Taoglas' cross-cultural business-solutions approach means research, design, production and customer support services are based at our world-class technology ...

|                  |         |               |              |
|------------------|---------|---------------|--------------|
| Start Frequency: | 600 MHz | Polarisation: | Vertical (V) |
|------------------|---------|---------------|--------------|

|                 |          |                  |    |
|-----------------|----------|------------------|----|
| Stop Frequency: | 6000 MHz | Input Impedance: | 50 |
|-----------------|----------|------------------|----|

|                   |       |
|-------------------|-------|
| Max. Input Power: | 100 W |
|-------------------|-------|

#### RF Connectors

| Ports | RF Interface | Body Shape | Cable Series | Length  |
|-------|--------------|------------|--------------|---------|
| 1     | SMA Male     | Straight   | L-200        | 3000 mm |

#### Frequency Test Data

| Start Freq. | Stop Freq. | Peak Gain | VSWR    | Avg. Gain | Efficiency |
|-------------|------------|-----------|---------|-----------|------------|
| 617 MHz     | 698 MHz    | -1 dBi    | < 3.5:1 | -3.2 dBi  | 43%        |
| 698 MHz     | 806 MHz    | 3.1 dBi   | < 1.5:1 | -0.2 dBi  | 58%        |
| 824 MHz     | 960 MHz    | 3.2 dBi   | < 2:1   | -0.7 dBi  | 71%        |
| 1427 MHz    | 1518 MHz   | 2.9 dBi   | < 2:1   | -1.4 dBi  | 57%        |
| 1710 MHz    | 2200 MHz   | 2.7 dBi   | < 2:1   | -1.8 dBi  | 46%        |
| 2300 MHz    | 2690 MHz   | 3.4 dBi   | < 2:1   | -2 dBi    | 43%        |
| 3300 MHz    | 3800 MHz   | 2.5 dBi   | < 2.5:1 | -4.1 dBi  | 27%        |
| 5150 MHz    | 5925 MHz   | 5.3 dBi   | < 3:1   | -3.4 dBi  | 9%         |

# Physical Specification

|                             |                    |                            |                             |
|-----------------------------|--------------------|----------------------------|-----------------------------|
| Subtype:                    | Fin / Stud / Combo | Dimensions:                | 79.4 x 42 (H x Dia)         |
| Input Ports:                | 1                  | Ingress Protection:        | IP69K                       |
| MIMO:                       | 1x1 SISO           | Materials:                 | ABS Plastic, Zinc Alloy     |
| Min. Operating Temperature: | -40 °C             | Mounting:                  | M14 Stud                    |
| Max. Operating Temperature: | 85 °C              | Weight:                    | 0.27 kg                     |
|                             |                    | Compliance/Certifications: | ISO 9001 Quality Management |

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