
Taoglas MA9909 Guardian 8x8 MIMO + GNSS Adhesive Antenna

SKU: ANT-TG-00001

MPN: MA9909.A.002

Description

The Taoglas GuardianX MA9909 is a low profile heavy duty, fully IP67 rated waterproof, adhesive external combination antenna. It combines 9 antenna elements into one enclosure, 1 GPS/GLONASS/Galileo, eight 4G-5G MIMO (600 to 6000 MHz). The Taoglas GuardianX has been designed as a low profile solution for several IoT and Automotive applications where space is at a premium.

This unique product delivers powerful worldwide 5G FR1 MIMO antenna technology up to 8x8 along with GNSS for GPS applications. This is an ideal external combination antenna solution that is used where drilling a hole through the roof of a vehicle or a metal panel for an external antenna is not feasible. The GuardianX can operate at band 71 a newly established 5G band at 600 MHz.

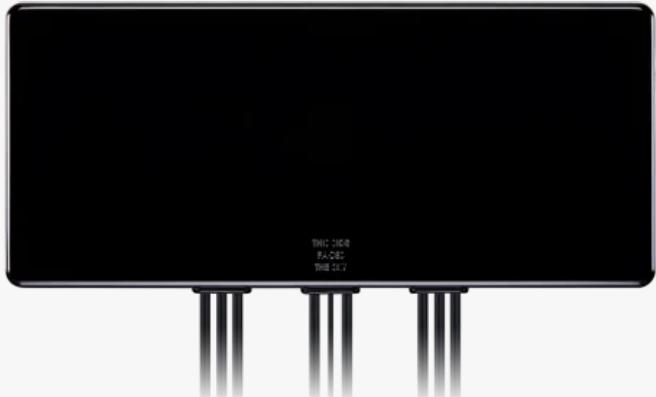
Taoglas takes care to have high isolation between the eight MIMO antennas to prevent self-interference. Low loss 6 GHz rated cables are used to keep efficiency high over long cable lengths.

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The Taoglas MA9909 Guardian 8x8 MIMO + GNSS Adhesive Antenna is a robust, low-profile solution designed for IoT and automotive applications where space is limited. It combines nine antenna elements into a single, fully waterproof IP67-rated enclosure, providing comprehensive connectivity with one GPS/GLONASS/Galileo and eight 4G-5G MIMO (600 to 6000 MHz) elements. This makes it ideal for environments where drilling through surfaces for antenna installation is not an option.

The antenna supports the new 5G band at 600 MHz, ensuring optimal performance across a wide frequency range. High isolation between the MIMO elements prevents self-interference, while low-loss 6 GHz rated cables maintain efficiency over extended lengths, making it a reliable choice for high-demand applications.

Constructed from durable polycarbonate, the GuardianX



Taoglas



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 ...

RF Specification

4G-5G 8x8 MIMO

| | | | |
|-------------------|----------|------------------|--------|
| Start Frequency: | 617 MHz | Polarisation: | Linear |
| Stop Frequency: | 6000 MHz | Input Impedance: | 50 |
| Max. Input Power: | 2 W | | |

RF Connectors

| Ports | RF Interface | Body Shape | Cable Series | Length |
|-------|--------------|------------|--------------|---------|
| 8 | SMA Male | Straight | L-200 | 1000 mm |

Frequency Test Data

| Start Freq. | Stop Freq. | Peak Gain | VSWR | Avg. Gain | Efficiency | Inter-Port Iso. |
|-------------|------------|-----------|---------|-----------|------------|-----------------|
| 617 MHz | 698 MHz | -0.3 dBi | < 3.5:1 | -4.54 dBi | 35% | > 8 dB |
| 698 MHz | 824 MHz | 0.4 dBi | < 3.5:1 | -3.76 dBi | 42% | > 8 dB |
| 824 MHz | 960 MHz | 1.4 dBi | < 4:1 | -3.55 dBi | 44% | > 10 dB |
| 1427 MHz | 1518 MHz | -3.1 dBi | < 3.5:1 | -7.25 dBi | 19% | > 20 dB |
| 1710 MHz | 1880 MHz | 2.6 dBi | < 3.5:1 | -2.77 dBi | 53% | > 12 dB |
| 1850 MHz | 1990 MHz | 2 dBi | < 3.5:1 | -3.18 dBi | 48% | > 12 dB |
| 1920 MHz | 2170 MHz | 1.5 dBi | < 3.5:1 | -3.21 dBi | 48% | > 12 dB |
| 2300 MHz | 2690 MHz | 1.3 dBi | < 2.5:1 | -3.66 dBi | 43% | > 15 dB |
| 3300 MHz | 3500 MHz | -5.7 dBi | < 4:1 | -9.76 dBi | 11% | > 20 dB |
| 5150 MHz | 5925 MHz | -1.9 dBi | < 4:1 | -8.12 dBi | 16% | > 30 dB |

GNSS Antenna

| | | | |
|------------------|-------------|------------------|----------------------------|
| Gain (Zenith): | 1.5 dBi | Input Impedance: | 50 |
| Start Frequency: | 1575.42 MHz | Polarisation: | Right Hand Circular (RHCP) |
| Stop Frequency: | 1602 MHz | | |

Low Noise Amplifier (LNA)

| | | | |
|--------------------|----------|-------------------------|-------|
| LNA Gain: | 30 dBic | Min. Operating Voltage: | 1.8 V |
| Noise Figure: | ≤ 3.3 dB | Max. Operating Voltage: | 5.5 V |
| Power Consumption: | < 10 mW | | |

RF Connectors

| Ports | RF Interface | Body Shape | Cable Series | Length |
|-------|--------------|------------|--------------|---------|
| 1 | SMA Male | Straight | RG-174 | 1000 mm |

Physical Specification

| | | | |
|-----------------------------|--------------------|---------------------|--------------------|
| Subtype: | Fin / Stud / Combo | Dimensions: | 360 x 160 x 16.5 |
| Input Ports: | 9 | Ingress Protection: | IP67 |
| MIMO: | 8x8 MIMO | Materials: | Polycarbonate (PC) |
| Min. Operating Temperature: | -40 °C | Mounting: | Adhesive |
| Max. Operating Temperature: | 85 °C | Weight: | 1.06 kg |

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