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Taoglas MA9909 Guardian 8x8 MIMO + GNSS Adhesive Antenna

SKU: ANT-TG-00001

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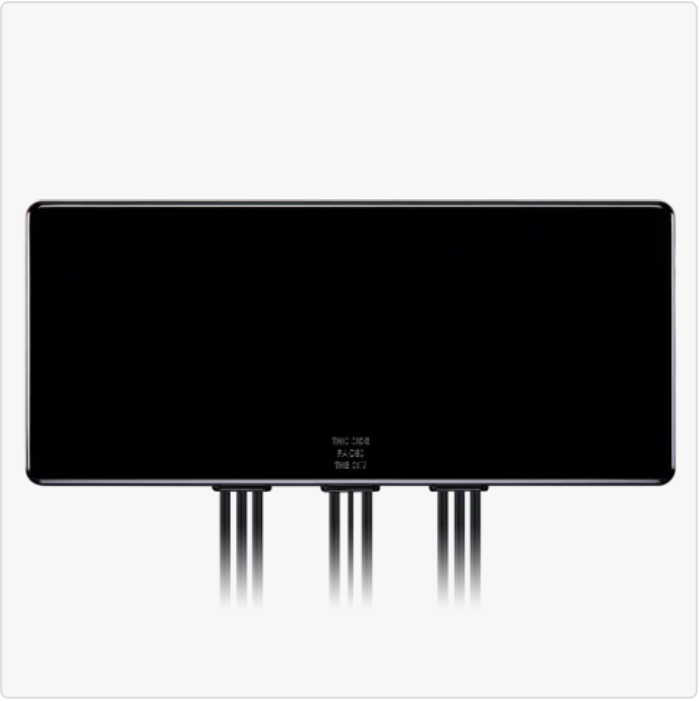

Description

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 dBic	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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