

WS-MGBR-LWG

5G/LTE + Wi-Fi + GPS 5-in-1 MIMO Antenna



Applications

- Buses, Vans, Trucks
- Police / Fire / Ambulance Vehicles
- General Transportation
- Utility
- In vehicle routers



Product Features

- Combines 2 x 5G/LTE + 2 x Wi-Fi + 1 GPS antennas into a single rugged enclosure
- Low Profile Design
- 2x2 MIMO on 5G(sub 6)/LTE and 2.4/5.8 GHz Wi-Fi
- Weatherproof & Impact Resistant
- Single Hole Installation
- Omni-Directional and Ground Plane Independent
- 5m or 2m Coax Leads with connectors

Ordering Information

Part No.	Description
WS-MGBR-LWG-5SP	5 in 1 Screw Mount Low Profile MiMo 5G/LTE antenna Includes GPS and MiMo WiFi 5m length cables
WS-MGBR-LWG-2SP	5 in 1 Screw Mount Low Profile MiMo 5G/LTE antenna. Includes GPS and MiMo WiFi 2m length cables

General Description

The WS-MGBR-LWG antenna is a rugged low-profile, multi-element design for use in fleet management, mobile video and remote monitoring applications that cost effectively combines high efficiency and peak gain in a compact to install form factor.

The antenna enclosure contains five isolated high performance antenna elements; two ultra-wideband elements covering 698-3800MHz supporting MiMo/diversity at cellular/5G-sub 6 / LTE frequencies and two dual band elements covering 2.3-2.7 & 4.9-6GHz supporting MIMO/diversity operation for WiFi . It also contains a high performance GPS antenna with an integrated 26dB gain LNA and high quality filtering to combat noise.

The durable ABS polymer radome is impact resistant and is waterproof. The antenna does not require a metallic ground plane, and maintains a high level of performance even when mounted on a non-metallic surface.

Each antenna element includes a 5 metre (or a 2m option) low-loss pre-terminated 195 coax cable.

NOTE: versions of this antenna without Wi-Fi or without WiFi and GPS support, are also available.

See part numbers:

WS-MGBR-LW (with 5G and WiFi only / 4 in 1)

WS-MGBR-LG (with 5G and GPS only / 3 in 1)

WS-MGBR-L (5G only / 2 in1)

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Part No.		
		WS-MGBR-LWG-5SP
Electrical Data		
Frequency Range (MHz)	Elements 1 & 2	698-960 / 1700-3800
	Elements 3 & 4	2.3-2.7 / 4.9-6GHz
Operational Bands	Elements 1 & 2	5G sub6 -LTE / Cellular
	Elements 3 & 4	WIFI / WIMAX
Peak Gain: Isotropic	Elements 1 & 2 -698-960	3dBi
	Elements 1 & 2 -1700-3800	5dBi
	Elements 3 & 4	3dBi
VSWR	Elements 1 & 2	< 1.5:1
	Elements 3 & 4	< 1.5:1
Isolation (in free space)	Elements 1 & 2	> 15dB
	Elements 3 & 4	> 20dB
Polarisation		Vertical
Impedance		50Ω
Max Input Power (W)		50
GPS Data		
Frequency Range (MHz)		1575 - 1612
VSWR		<2.0:1 ± 4MHz
Gain: LNA		26dB
Polarisation		Right Hand Circular
Operating Voltage		3 - 7V DC (fed via coax)
Current		Typical 14mA
Mechanical Data		
Dimensions	Height	84mm
	Diameter	140mm
Operating Temp		-22° / 176°F (-30° / +80°C)
Material		A.B.S
Colour		Black
Mounting Data		
Mounting type		Screw mount
Max panel thickness		0.236"(6mm)
Mounting hole		7/8" (22mm)
Cable Data		
GPS Cable	Type	RG174
	Diameter	2.8mm
	Length	5m
	Termination	SMA (male)
Cell / LTE Cables x2	Type	CFD195 (double shielded RG58)
	Diameter	5mm
	Length	5m
	Termination	SMA (male)
WIFI / WIMAX Cables x2	Type	CFD195 (double shielded RG58)
	Diameter	5mm
	Length	5m
	Termination	SMA RP (m)

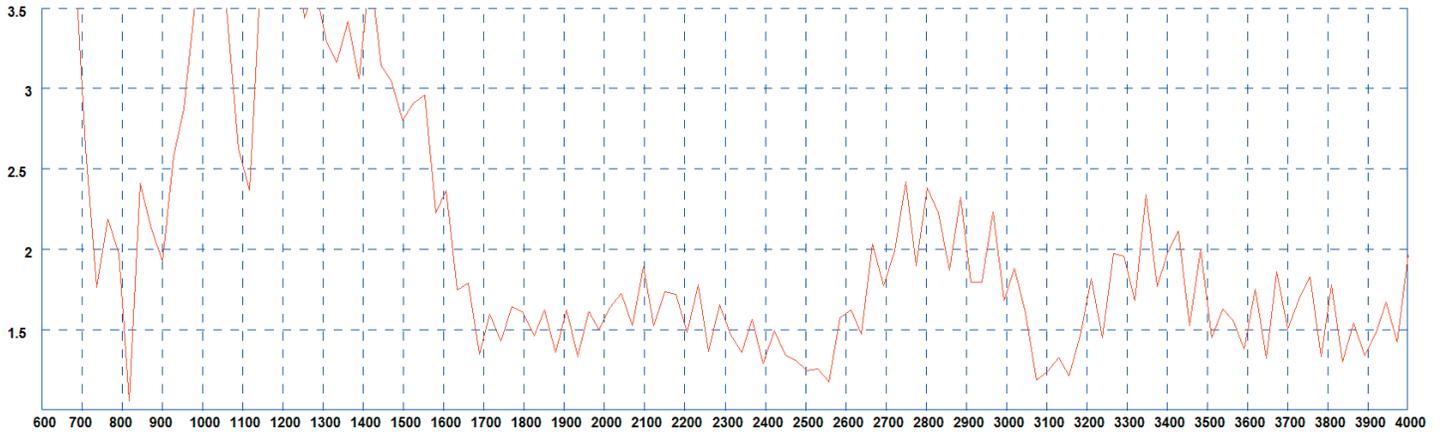
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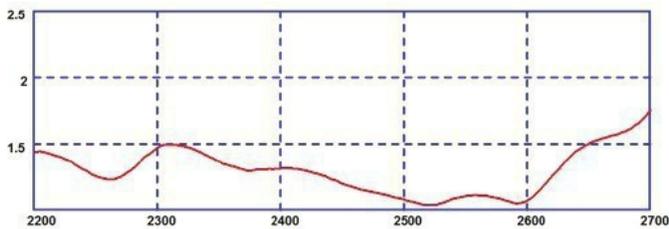


Patterns

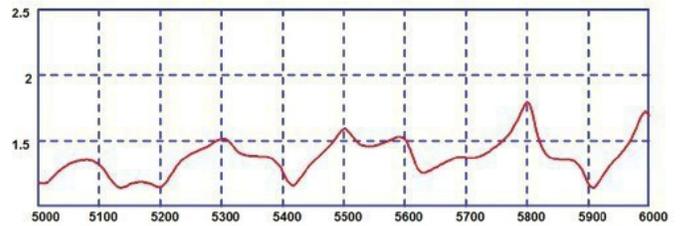
Typical VSWR - Element 1 and 2



Typical VSWR WIFI elements 2.4GHz*

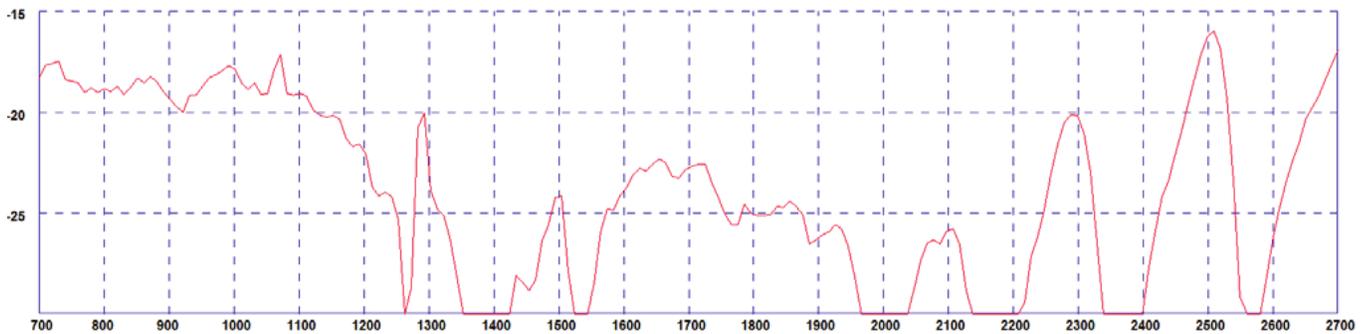


Typical VSWR WIFI elements 5GHz*



* VSWR measured with 5m (17') of cable.

Typical Isolation cellular / LTE elements*



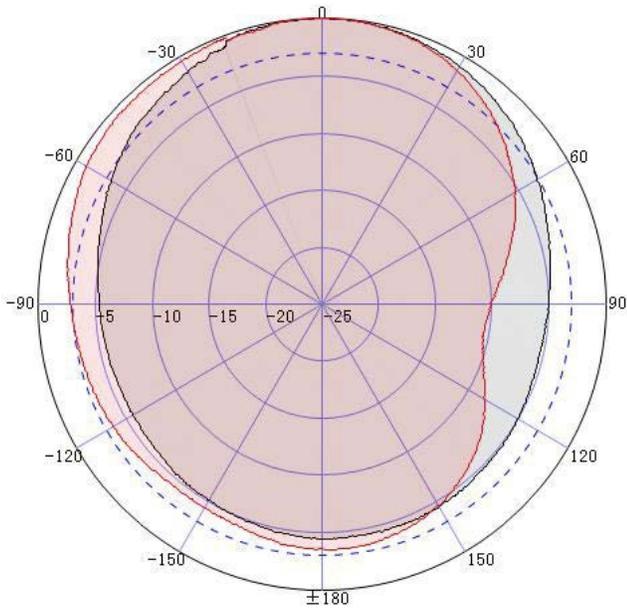
* Isolation measured in free space with 300mm (1') of cable.

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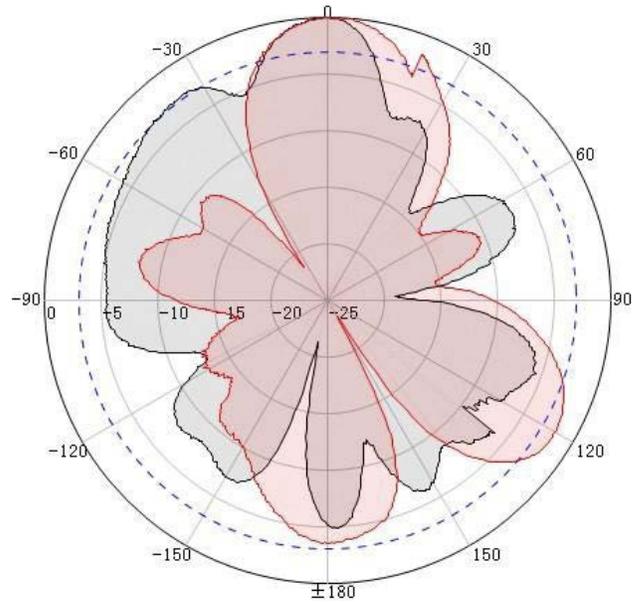
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698 MHz



2450 MHz



Mechanical Dimensions

