#### External Mount 4G/5G MiMo Antenna + GNSS WMMGG-7-38

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- Provides 2x2 MiMo antenna system for 4G/5G
- Two wideband elements with medium gain
- Durable housing for external or internal use
- Suitable for mast, wall and desk mounting
- Integral GPS/GNSS antenna

The WMMGG antenna provides an innovative and future proof solution for 3G/4G and 3.4-3.8GHz 5G networks. Incorporating two separately fed, ultra wideband elements in a single housing, it provides a client side 2x2 MiMo antenna system for the networks of today and tomorrow. With between 2-5dBi gain in the range 698-3800MHz, the WMMGG gives great performance, whilst maintaining a wide beam pattern which is ideal for metro and urban areas. A GNSS antenna with 26dB gain LNA is integrated and is compatible with GPS/GLONASS/Galileo and BeiDou systems.

The rugged, weatherproof housing is designed for wall or mast mounting and hardware is provided. A desk stand is also included to enable the antenna to be positioned on a window sill if preferred.

The antenna is supplied with integral "twinned" CS29 coaxial cable. WMMGG-7-38-5SP version has 5m length, fitted with sma plug connectors for a simple 'plug & play' installation. WMMGG-7-38-03NJ version has 30cm length, fitted with N socket connectors, which enables use of lower loss cable types for longer runs.

The WMMGG is a cost effective value added product for network operators and service providers ensuring a stable network connection with improved data rates for subscribers, improving satisfaction and retention.

#### **Technical Drawing** WMMGG-7-38-5SP Shown 155 15 ISO VIEWS SCALE 1:5 ANTENNA HOUSING WHITE LURAN S 777K (A.S.A) DESK STAND SUPPLIED LOOSE 155 P = 70 = ø 2 x M6 FIXINGS VIA 2 x ∅7 HOLES WALL MOUNT BRACKET SUPPLIED LOOSE Ġ 36 GPS/GNSS CABLE 5.5m LONG WITH SMA PLUG 5 Ē Ц 븁 TWIN CS29 LOW LOSS CABLE 5m LONG WITH SMA PLUG CONNECTORS = 70 = = 92 Ø 50 NOMINAL CLAMPING 80 75 000 = 70 = MAST MOUNT BRACKET SUPPLIED LOOSE

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### External Mount 4G/5G MiMo Antenna + GNSS WMMGG-7-38

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Product Data

VSWR (excluding cable       < 2:1         Peak Gain excluding cable       698-960 MHz       2dBi         Peak Gain excluding cable       1710-2700 MHz       5dBi         3400-3800 MHz       4dBi       4dBi         Correlation Co-efficient ( all bands)       < 0.2          Correlation Co-efficient ( all bands)       < 20dB          Typical Element Isolations       > 20dB          Max Input Power       20 W          mpedance       20 W          Vechanical Data           Ohmensions       Height       155mm (6.1°)         Vidth       155mm (6.1°)          Operating Temp.       - 30° / +80°C (-22° / 176°F)         Vaterial       SA          Colour       White          Veght (including cibic)       950g       430g	Part No.		WMMGG-	7-38-5SP	WMMGG-7-38-03NJ	
TeamT	Frequency Dervi	Element 1	698-960 / 1710-2700 / 3400-3800 MHz			
Wite recording call       < < 2:1	Frequency Range	Element 2	698-960 / 1710-2700 / 3400-3800 MHz			
Pak Gai excluding cable excluding cable 4400-3800MHz  4408i 3400-3800MHz  4408i 3400-3800MHz  4408i 3400-3800MHz  4408i 3400-3800MHz  2400 System 1 set 2000 - 2000 System 1 set 2000 - 2000 Mark Input Power  2000 - 2000 - 2000 Mechanical Data Mechanical Data Methanical Data Methanical Data Methanical Data Methanical Data Methanical Data Methanical Data Methanical Data Methanical Data Methanical Data System 1 set 2000 - 2000 - 2000 - 2000 Methanical Data System 1 set 2000 - 2000 - 2000 - 2000 - 2000 Methanical Data System 1 set 2000 - 2000	Operational bands		3G/4G/5G			
versit can all services         5dB           3400-3800 MHz         5dB           3400-3800 MHz         4dB           Carrelation Co-efficit ( all bands)         < 0.2	VSWR (excluding cable)		< 2:1			
<table-container>axeduding add 400-300MHz5dBiGarden Core Hit (attance)&lt; 4.0.2</table-container>	Peak Gain	698-960 MHz	2dBi			
Correlation Co-efficient (all bands)     < 0.2		1710-2700 MHz	5dBi			
Nyclai Element Isolation> 20dBMax Input Power20 Wmedance500Mechanical DataImage: State Stat	loss)	3400-3800MHz	4dBi			
A ka kn μot Power 20 W mpedance 500 Mechanical Data Methanical Data Methy 155mm (6.1°) Operating Temp	Correlation Co-efficient ( all bands)		< 0.2			
Mechanical Data         155mm (6.1°)           Vechanical Data         155mm (6.1°)           Vidith         155mm (6.1°)           Operating Temp.         -30° / 480 °C (-22° / 176° F)           Vidith         -530° / 480 °C (-22° / 176° F)           Vidith         -530° / 480 °C (-22° / 176° F)           Vidith         -530° / 480 °C (-22° / 176° F)           Vidith         -530° / 480 °C (-22° / 176° F)           Vidith         -530° / 480 °C (-22° / 176° F)           Vidith         -530° / 480 °C (-22° / 176° F)           Vidith         -530° / 480 °C (-22° / 176° F)           Vidith         -530° / 480 °C (-22° / 176° F)           Vidith         -530° / 580 °C (-22° / 176° F)           Vidith         -540 °C (-22° / 176° F)           Vidith         Stainless steel / Aluminium           Vidith         Stainless steel / Aluminium           Vidith         Stainless steel / Aluminium           Vidith         -560 °C (-22° / 12° M)           Vidith         -560 °C (-22° / 12° M)           Vidith         -560 °C (-22° / 12° M)           Visith	Typical Element Isolation		> 20dB			
Acknanical Data           Dimensions         Height         155mm (6.1°)           Vidth         155mm (6.1°)           Operating Temp.         -30° / +80 °C (-22° / 176 °F)           Ataterial         ASA           Colour         White           Colour         White           Vidth         155mm (6.1°)           Material         ASA           Colour         White           Vidth         1562           Material         ASA           Colour         White           Weight (including cable)         950g         430g           ongress Protection         IP65         430g           Adurting Data         IP65         430g           Adurting Bracket Material         Stainless steel / Aluminium           Yole Colonameter         20-50mm / (0.78 - 1.96")           SPS/GNS Data	Max Input Power		20 W			
Height         155mm (6.1°)           Operating Temp.         -30° / +80° C (-22° / 176° F)           Vaterial         -30° / +80° C (-22° / 176° F)           Vaterial         ASA           Colour         White           Colour         White           Colour         White           Verget (including cable)         950g           Meght (including cable)         950g           Verget (including cable)         950g           Munting Dracket Material         1965           Verget (including racket Material)         Stainless stel / Aluminium           Pole Diameter         20-50mm / 0.78 - 1.96°           Stainless Stel / Aluminium         Stainless stel / Aluminium           Pole Diameter         20-50mm / 0.78 - 1.96°           Stainless Stel / Aluminium         Stainless stel / Aluminium           Stainless Ste	Impedance		50Ω			
With         155mm (6.1')           Operating Temp.         -30° / +80°C (-22' / 176°F)           Vaterial         ASA           Colour         White           Colour         White           Veght (including cable)         950g         430g           Neight (including cable)         950g         430g           Notating Bracket Material         IP62         500g           Voluting Bracket Material         Stainless steel / Aluminum           Pole Diameter         20-50mm / (0.78 - 1.96°)           Stainless Staata         <21:1 ± 4MHz	Mechanical Data					
Width         155mm (6.1°)           Operating Temp.         -30° / +80°C (-22° / 176° F)           Waterial         ASA           Colour         White           Colour         White           Weight (including cable)         950g         430g           ngress Protection         IP65         IP65           Mounting Data         IP65         IP65           Fixing         Wall mount / Mast mount / Desk mount         IP65           Nounting Bracket Material         Stainless steel / Aluminium           Pole Diameter         20-50mm / 0.78 - 1.96°         IP65           Pole Diameter         20-50mm / 0.78 - 1.96°         IP65           Stainless steel / Aluminium         IP62-1612         IP66           SPS/CNSS Data         <215 ± 4MHz		Height	155mm (6.1")			
Akaderial       ASA         Colour       White         Weight (including cable)       950g       430g         Ingress Protection       IP65         Mounting Data       IP65         Fixing       Wall mount / Desk mount         Pole Diameter       20-50mm / (0.78 - 1.96")         SPS/GNSS Data       20-50mm / (0.78 - 1.96")         SPS/GNSS Data       260B         Frequency Range (MHz)       1562-1612         VSWR       <221 ± 4MHz	Dimensions	Width	155mm (6.1")			
Colour       White         Weight (including cable)       950       430 -         Ingress Protection       IP65       1         Auunting Data       IP65       IP65         Stainless steal / Aluminum       Stainless steal / Aluminum       IP66         Pole Diameter       20-50mm / (0.78 + 1.96")       IP65         PSGNSS Data       20-50mm / (0.78 + 1.96")       IP65         Stainless steal / Aluminum       IP662-1612       IP66         Stainless Steal       1562-1612       IP66         Stainless Steal       Stainless steal / Aluminum       IP66         Stainless Steal<	Operating Temp.		-30° / +80°C(-22° / 176°F)			
Weight (including cable)         950g         430g           Ingress Protection         IP65         IP68           Advanting Data         Wall mount / Mast mount / Desk mount         IP68           King         Wall mount / Desk mount         IP68           Advanting Bracket Material         Stainless steel / Aluminium         IP68           Pole Diameter         20-50mm / (0.78 - 1.96")         IP68           BPS/GNSS Data         IP62-1612         IP68           Frequency Range (MHz)         1562-1612         IP68           Sain: LNA         26dB         IP68           Polarisation         Right Hand Circular         IP68           Operating Voltage         3-5V DC (fed via coax)         IP68           Caurent         <200HA	Material		ASA			
IP65           Mounting Data           King         Wall mount / Mast mount / Desk mount           Mounting Bracket Material         Stainless steel / Aluminium           Pole Diameter         20-50mm / (0.78 - 1.96")           SPS/GNSS Data         Topology           SPS/GNSS Data         1562-1612           SPS/GNSS Data         Stainless steel / Aluminium           Pole Diameter         20-50mm / (0.78 - 1.96")           SPS/GNSS Data         Statistics           SPS/GNSS Data         Statistics           SPS/GNSS Data         Statistics           Sele Data         26/30 Statistics           Polarisation         Right Hand Circular           Operating Voltage         3-5V DC (fed via coax)           Current         <20mA           Stabe Data         VMMGG-7-38-SSP         VMMGG-7-38-OSINJ           Type         2 x CS29 (4G/5G)         1 x RG174 (GNSS)         2 x CS29 (4G/5G)         1 x RG174 (GNSS)           Operating Voltage         Statistics         Statistics         Statistics         Statistics           Statistics         Statistics         Statistics         Statistics         Statistics           Operating Voltage         Stac SS29 (4G/5G)         1 x RG174 (GNSS)         2 x CS29 (4G/5G) </td <td colspan="2">Colour</td> <td colspan="4">White</td>	Colour		White			
ngress Protection IP65 Mounting Data Fixing Wall mount / Mast mount / Desk mount Mounting Bracket Material Stainless steel / Aluminium Pole Diameter 20-50mm / (0.78 - 1.96") SPS/GNSS Data Frequency Range (MHz) 1562-1612 SVR 262B Frequency Range (MHz) 260B Polarisation Right Hand Circular Polerating Voltage 3-5V DC (fed via coax) Current - 200mA Current - 200mA Cur	Weight (including cable)		950g		430g	
Mounting Data           Fixing         Wall mount / Mast mount / Desk mount           Mounting Bracket Material         Stainless steel / Aluminium           Pole Diameter         20-50mm / (0.78 - 1.96")           GPS/GNSS Data         -           Frequency Range (MHz)         1662-1612           VSWR         <2:1 ± 4 MHz	Ingress Protection					
Fixing       Wall mount / Mast mount / Desk mount         Mounting Bracket Material       Stainless steel / Aluminium         Pole Diameter       20-50mm / (0.78 - 1.96")         GPS/GNSS Data       20-50mm / (0.78 - 1.96")         Frequency Range (MHz)       1562-1612         Frequency Range (MHz)       1562-1612         /SWR       <2:1 ± 4MHz	Vounting Data					
Advanting Bracket Material         Stainless steel / Aluminium           Pole Diameter         20-50mm / (0.78 - 1.96")           SPS/GNSS Data         20-50mm / (0.78 - 1.96")           SPS/GNSS Data         1562-1612           Frequency Range (MHz)         1562-1612           /SWR         <2:1 ± 4 MHz				Wall mount / Mast r	nount / Desk mount	
Pole Diameter         20-50mm / 0.78 - 1.96")           SPS/GNSS Data         1562-1612           Frequency Range (MHz)         1562-1612           /SWR         <2:1 ± 4/HHz           /SWR         26/ds1           Operating Voltage         3-5V DC (fed via coax)           Operating Voltage         3-5V DC (fed via coax)           Current         <2000 (fed via coax)           Current         <2000 (fed via coax)           Sple         2 x CS29 (4G/SG)         1 x RG174 (GNSS)           Operating Voltage         2 x CS29 (4G/SG)         1 x RG174 (GNSS)           Sple         2 x CS29 (4G/SG)         1 x RG174 (GNSS)         2 x CS29 (4G/SG)         1 x RG174 (GNSS)           Operating Voltage         5 mm (0.2")         2 mm (0.12")         5 mm (0.2")         2 mm (0.12")						
GPS/GNSS Data         Frequency Range (MHz)       1562-1612         /SWR       <2:1 ± 4MHz						
Frequency Range (MHz)       1562-1612         /SWR       <2:1 ± 4MHz				20 0011117 (		
/SWR       <2:1 ± 4MHz		MHz)		1562	1612	
Gain: LNA       26dB         Polarisation       Right Hand Circular         Operating Voltage       3-5V DC (fed via coax)         Current       <20mA						
Polarisation         Right Hand Circular           Operating Voltage         3-5V DC (fed via coax)           Current         <20mA						
Operating Voltage         3-5V DC (fed via coax)           Current         <20mA           Cable Data         WMMGG-7-38-5SP         WMMGG-7-38-03NJ           Type         2 x CS29 (4G/5G)         1 x RG174 (GNSS)         2 x CS29 (4G/5G)         1 x RG174 (GNSS)           Diameter         5mm (0.2")         2.8mm (0.12")         5mm (0.2")         2.8mm (0.12")						
Current         <20mA           Cable Data         WMMGG-7-38-5SP         WMMGG-7-38-03NJ           Fype         2 x CS29 (4G/5G)         1 x RG174 (GNSS)         2 x CS29 (4G/5G)         1 x RG174 (GNSS)           Diameter         5mm (0.2")         2.8mm (0.12")         5mm (0.2")         2.8mm (0.12")           Length         5m (16')         0.3m (1')         0.3m (1')						
Cable Data         WMMGG-7-38-5SP         WMMGG-7-38-03NJ           Type         2 x CS29 (4G/5G)         1 x RG174 (GNSS)         2 x CS29 (4G/5G)         1 x RG174 (GNSS)           Diameter         5mm (0.2")         2.8mm (0.12")         5mm (0.2")         2.8mm (0.12")           Length         5m (16')         0.3m (1')         0.3m (1')						
Type         2 x CS29 (4G/5G)         1 x RG174 (GNSS)         2 x CS29 (4G/5G)         1 x RG174 (GNSS)           Diameter         5mm (0.2")         2.8mm (0.12")         5mm (0.2")         2.8mm (0.12")           Length         5m (16')         0.3m (1')         0.3m (1')			WMMGG			
Diameter         5mm (0.2")         2.8mm (0.12")         5mm (0.2")         2.8mm (0.12")           Length         5m (16')         0.3m (1')         0.3m (1')         0.3m (1')						ISS)
Length 5m (16') 0.3m (1')			× ,			
			( )			
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# External Mount 4G/5G MiMo Antenna + GNSS

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3D Patterns - Cell

