



Lighthouse™ SU-LSL

5G Outdoor Antenna

The Airgain 5G Outdoor Antenna will boost your 5G device and extend the range of communication using its directional antenna. This antenna provides dual $\pm 45^\circ$ slant polarization supporting the 3300 – 4000 MHz frequency ranges, covering 5G NR bands n48, n78, and the majority of n77 (up to 4000 MHz). The design with low side lobes in both elevation and azimuth planes to facilitate the co-location with other antennas. With its preinstalled customizable cables, this IP67 outdoor antenna can be easily installed on a wall or a pole and integrated into your 5G repeater, booster, CPE, FWA, or small cell.

FEATURES

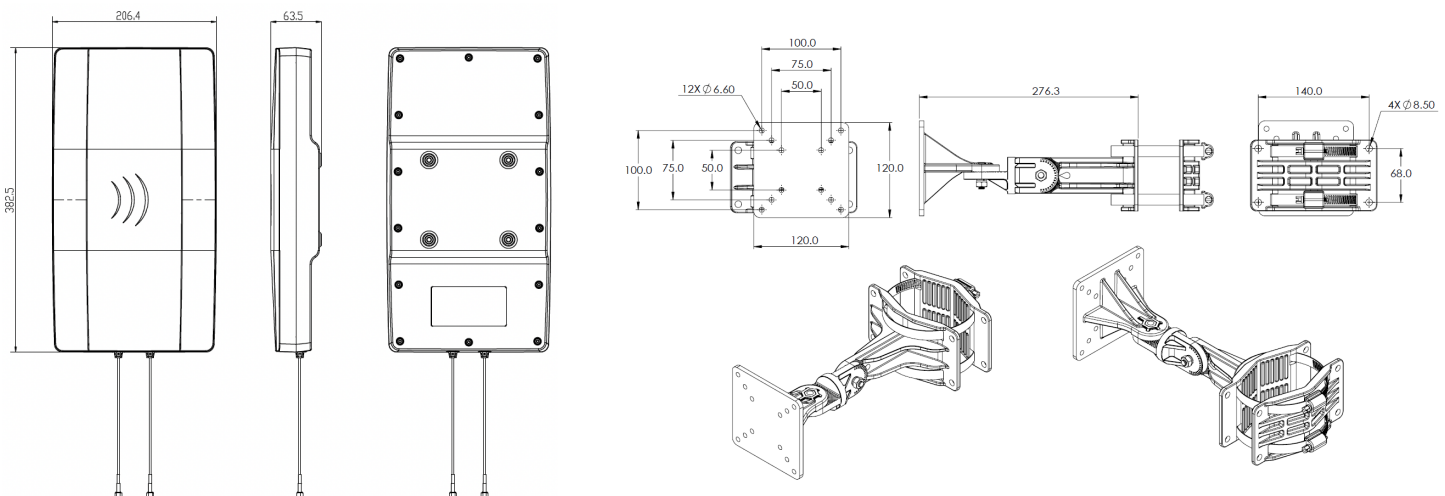
- High gain (>13 dBi)
- Dual polarized 2x2 MIMO
- Low-side lobes RF performance
- IP67 ingress protection
- Pre-attached 1' cables

ADVANTAGES

- High efficiency and gain provides better performance
- Low-side Lobes means easier co-location with other antennas
- EZConnect™ cable harness allows for quick and easy cable customizations
- Multi-function mounting bracket for pole and wall mounting
- 5-year limited warranty included¹

¹See terms and conditions at <https://airgain.com/antenna-plus-support/>

DIMENSIONS



COMMON PART NUMBERS (inquire to Airgain for other configurations)

CONFIGURATION	CELLULAR ELEMENTS	PART NUMBER *Requires EZConnect Cable Harness	DESCRIPTION
2-in-1	2	*AP-LTSU-LSL	EZConnect Antenna with MIMO LTE/5G x 2, White, 1 foot coax
		[z]-C2-1-14	EZConnect Cable Harness with Cell x 2, SMA on Cell, 14 feet length
EZConnect CABLE HARNESS [z]		DESCRIPTION	
CH		Inquire to distributor for select SKUs	
CCH		Custom Cable Harness with cable lengths up to 34 feet, and other variations	

TECHNICAL SPECIFICATIONS

ELECTRICAL	MIN	TYPICAL	MAX
Operational Frequency	3300-4000 MHz		
Impedance (ohm)	50		
VSWR	<2.0:1		
Return Loss (dB)	>9.5		
Isolation (dB)	>20		
Peak Gain (dBi, realized)	13.0	14.8	15.9
Polarization	Dual Polarization ±45° slant		
MIMO	2x2		
Correlation Coefficient	ECC≤0.2 (isotropic propagation model, XPR=0dB)		
Beamwidth	20°±5° (Elevation plane) 35°±5° (Azimuth plane)		
F/B Ratio	>25dB		
Sidelobes	<(Gmax - 20dB) at angles >60° from boresight <(Gmax - 25dB) in mounting pole direction (towards ground and zenith)		
Max Power Handling	40dBm (CW, at each port)		
MECHANICAL			
Size (HxWxD)	382.5 x 206.5 x 63.5 (mm) 15.06 x 8.13 x 2.5 (in)		
Weight	1.5 (kg) 3.3 (Lbs.) (excluding mounting bracket)		
Number of Cables	2		
Cable Length	305mm (1ft)		
Cable Type	LMR-195		
Connector Type	SMA Male		
Mounting Interface	VESA 100 x 100mm M6 x 18mm screws (x4) Pole diameter 40-130 mm (1.57-5.1in)		
Color	White		

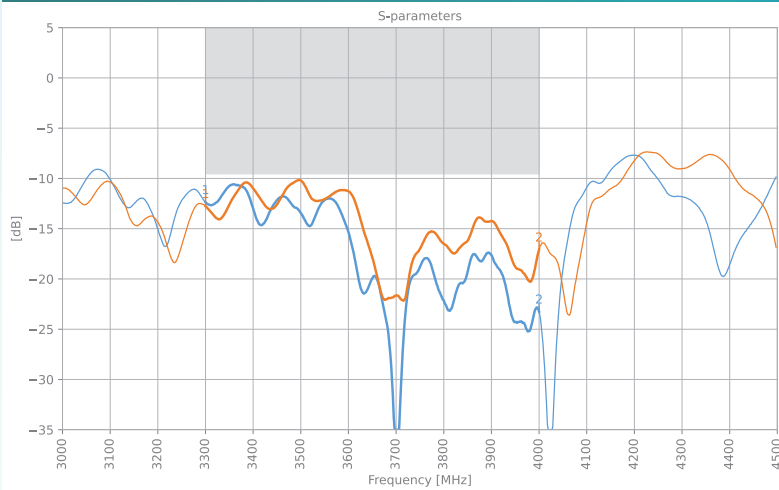
RELIABILITY & ENVIRONMENTAL

Temperature Range	-40°C to +85°C (Operating) -40°C to +85°C (Storage)
Humidity (Non-Condensing)	5% to 96% Operating and Storage conformance to IEC 60068
Ingress Protection	IP67
Salt Spray	NEMA 250-2008 (600 hours corrosion test)
Wind Operational	160km/h (100mi/h) sustained
Wind Survival	225km/h (140mi/h), 15sec gusts
Icing	MIL-STD-810F, Method 521.1 (13 mm).
Hail Impact	IEC 61215: 25mm diameter, 23.7m/s
UV Stability	ASTM G-155 (120 Hours test time)
ESD Protection	not ESD sensitive
Hazardous Substances	RoHS Compliant

MOUNTING BRACKET

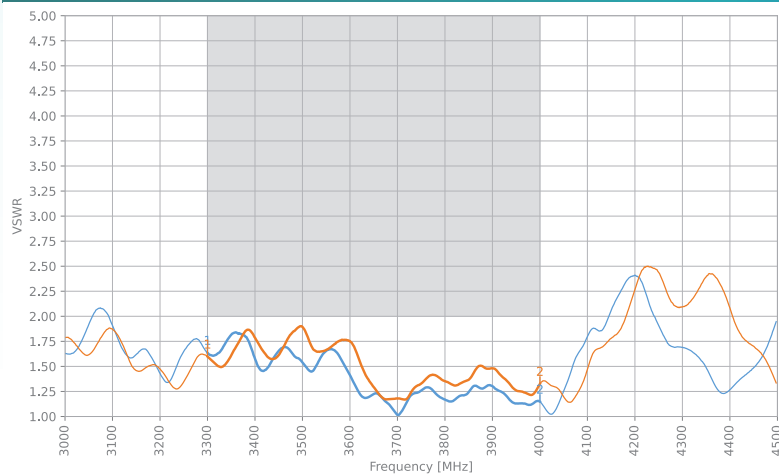
Size (HxWxD)	276.4 x 159.0 x 120.0 (mm) 10.9 x 6.3 x 4.7 (in)
Weight	1.8 (kg) 4.0 (Lbs.)
Adjustment Range	Azimuth: ±40 degrees Elevation: ±40 degrees
Adjustment Increment	Azimuth: 5 degrees Elevation: 5 degrees
Wall Mount Interface	4 x 8mm (5/16in) screws
Mast Mount Interface	Mast diameter range: 40-130mm (1.57-5.1in) M8 hardware included Band clamps included

S11 & S22 (dBi)



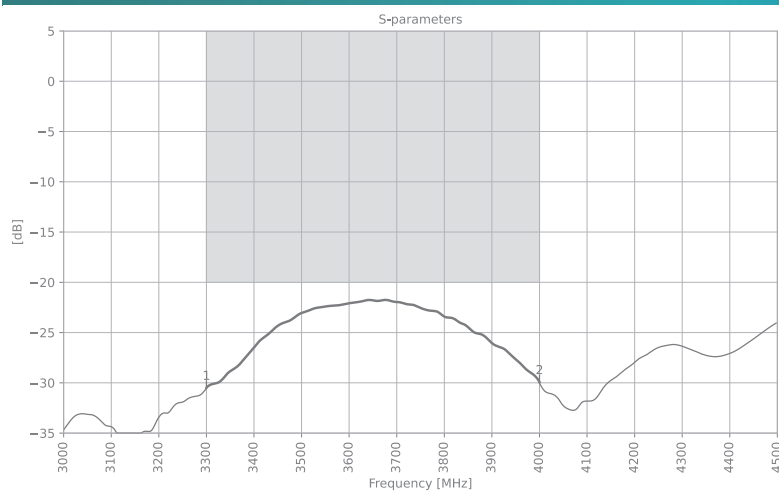
MHz	dB	MHz	dB	MHz	dB
P1					
1: 3300.00	-12.4				
2: 4000.00	-23.3				
max: 3359.38	-10.6				
P2					
1: 3300.00	-12.8				
2: 4000.00	-17.1				
max: 3496.25	-10.2				

VSWR



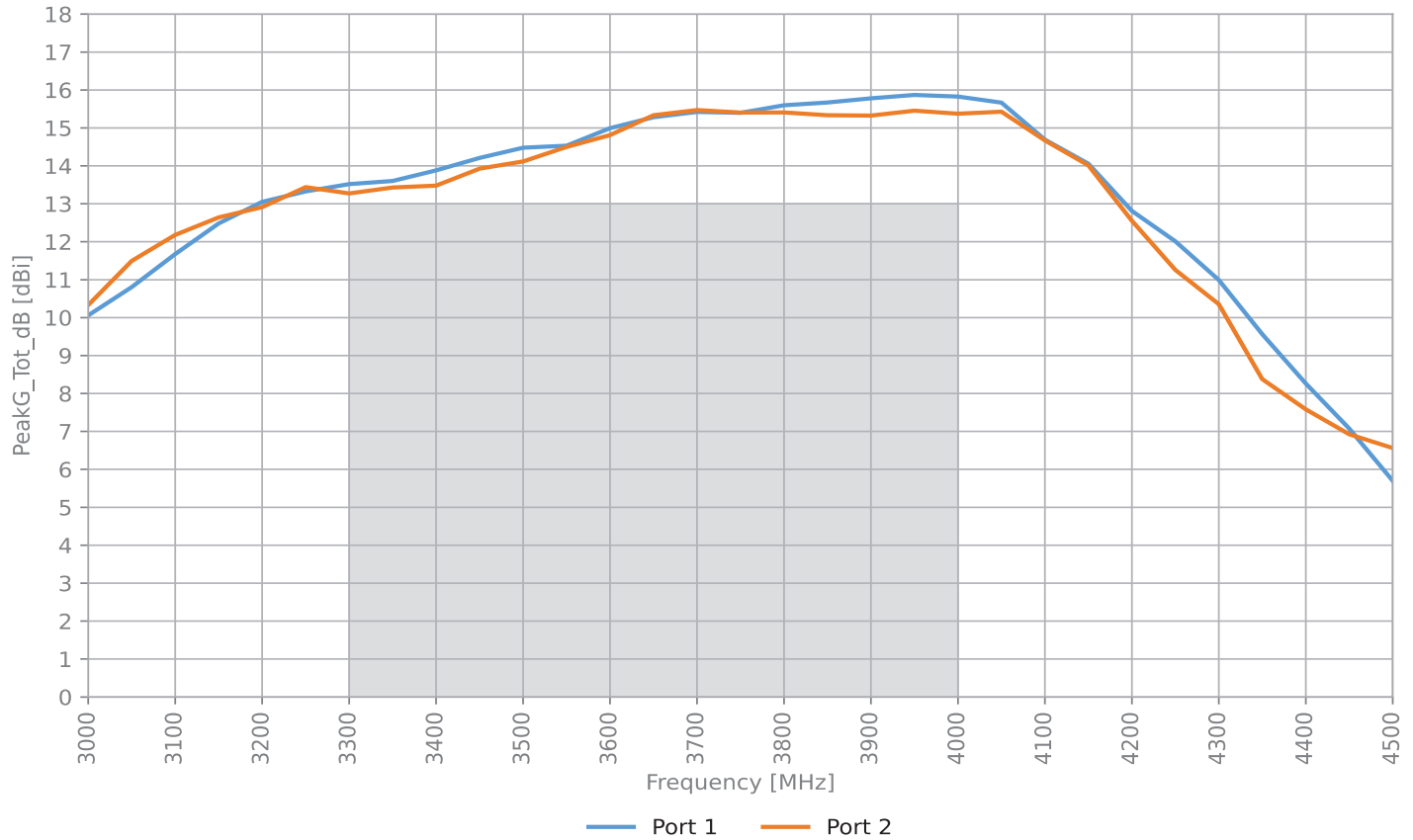
MHz	dB	MHz	dB	MHz	dB
P1					
1: 3300.00	1.6				
2: 4000.00	1.1				
max: 3359.38	1.8				
P2					
1: 3300.00	1.6				
2: 4000.00	1.3				
max: 3496.25	1.9				

COUPLING BETWEEN PORTS



MHz	dB	MHz	dB	MHz	dB
P2 ↔ P1					
1: 3300.00	-30.5				
2: 4000.00	-29.9				
max: 3676.25	-21.7				

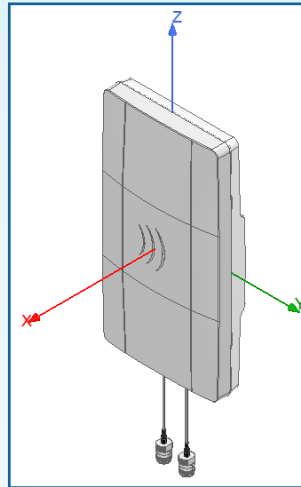
PEAK GAIN (dBi)



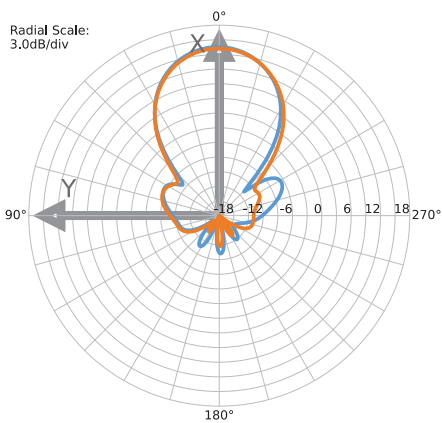
FREQUENCY (MHz)	Port 1 (dBi)	Port 2 (dBi)
3300	13.5	13.3
3350	13.6	13.4
3400	13.9	13.5
3450	14.2	13.9
3500	14.5	14.1
3550	14.5	14.5
3600	15.0	14.8
3650	15.3	15.3
3700	15.4	15.5
3750	15.4	15.4
3800	15.6	15.4
3850	15.7	15.3
3900	15.8	15.3
3950	15.9	15.5
4000	15.8	15.4
MIN	13.5	13.3
MAX	15.9	15.5
AVERAGE	14.9	14.7

RADIATION PATTERNS

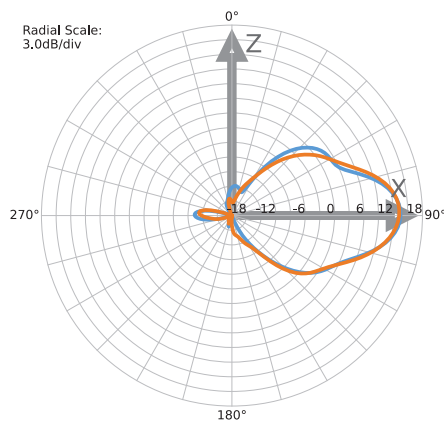
— Port 1 — Port 2



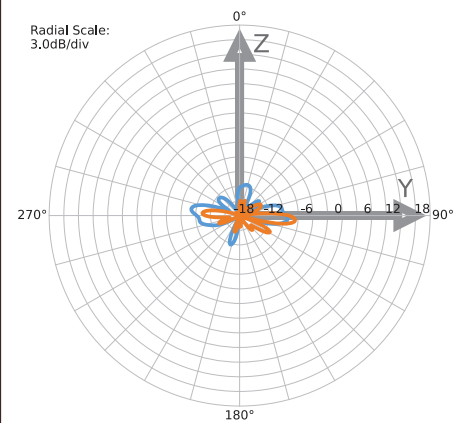
Azimuth (XY) at 3300 MHz



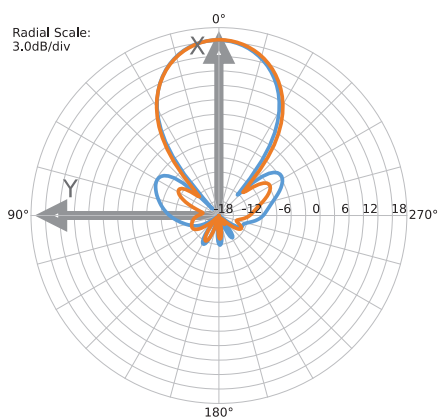
Elevation (XZ) at 3300 MHz



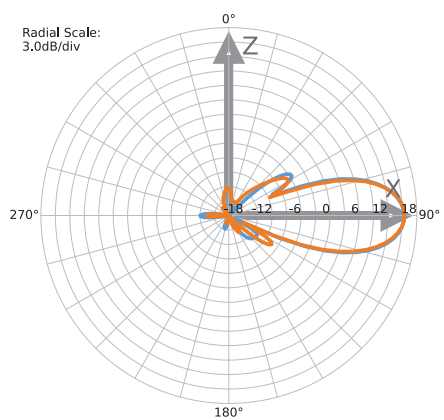
Side to Side (YZ) at 3300 MHz



Azimuth (XY) at 3700 MHz



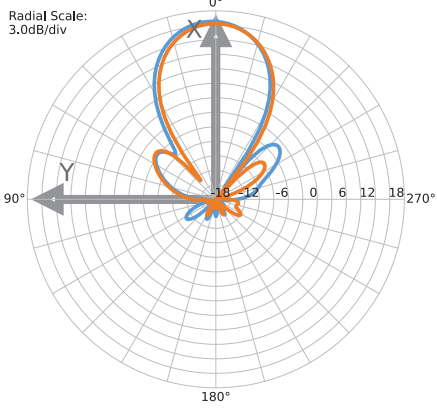
Elevation (XZ) at 3700 MHz



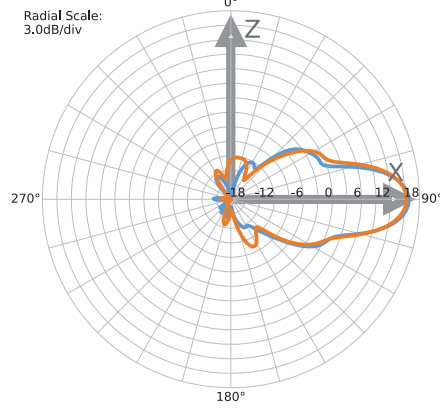
Side to Side (YZ) at 3700 MHz



Azimuth (XY) at 4000 MHz



Elevation (XZ) at 4000 MHz



Side to Side (YZ) at 4000 MHz

