DENGYO

In-Building Antennas

Product Catalog
North America, 2023

Message from our President

We at Nihon Dengyo Kosaku, Co., Ltd. (DENGYO) have strongly supported remarkable development of Japanese telecommunication and broadcast services in the course of their infrastructure constructions and have greatly contributed to the growth and development of these industries and the realization of rich social life, since the company was founded in 1947, for nearly 70 years, by inheriting the spirit of "Contributing to society through our unique radio-related technologies."

Nowadays, radio utilization is expected to provide an important basis for the creation of innovation, the growth of economy, and the realization of safe, reliable and sustainable society. Our country is headed to "the world's most advanced wireless technology nation".

Under such a business environment, based on our advanced technical know-how and proven track record accumulated in the development of state-of-the-art wireless equipment, we will pursue further sophistication and diversification of antennas and filters which are our core products, will extend our target market from domestic to global, and will positively accelerate the development and commercialization of new solutions for radio utilization fields which could help construct future infrastructures.

We will continue to meet customer expectation by developing creative technologies, evolve into a "wireless solution company" contributing to the infrastructure creation, and try to gain stakeholder satisfaction by ensuring risk management, environment management, and compliance.

Tsutomu Taguchi

President, Representative

Nihon Dengyo Kosaku Co, Ltd.

Table of Contents

Indoor Base Station Antennas

Our antennas are versatile and easy to deploy when providing wireless coverage throughout buildings and venues:

- Popular frequency bands supported
- SISO and MIMO applications
- Omnidirectional
- Various connector options
- Includes mounting hardware

Indoor Base Station Antenna Portfolio

Part number	Ports	Frequency MHz	Gain dBi	HPBW H	HPBW V
SIN1-1AE-0R65	1	380-960 | 1427-2700 | 3300-4200 | 4800-6000	9	360°	2-6°
SIN1-1AE-0R360	1	380-960 | 1710-2700 | 3300-3800 | 4800-6000	1-6	360°	
SIN1-1AF-0R65	1	698-960 | 1710-2700 | 3300-3800	7	65°	55°
SIN1-1AG-0R65	1	617-960 | 1710-2700 | 3300-3800 | 4800-6000	7	65°	60°
SIN1-1AG-0R360	1	617-960 | 1400-2700 | 3300-4200 | 4800-6000	5	360°	
SIN1-1AG-0R360-S	1	617-960 | 1400-2700 | 3100-4200 | 4900-6000	6	360°	
SIN1-1AG-0R360-S1	1	617-960 | 1400-2700 | 3100-4200 | 4900-6000	6	360°	
SIN1-1AH-0R65	1	698-960 | 1710-2700	7	65°	65°
SIN1-1AH-0R360	1	698-960 | 1710-2700	5	360°	
SIN1-1AJ-0R360	1	698-960 | 1710-2700 | 3300-3800	6	360°	
SIN1-1Ak-0R65	1	698-960 | 1427-2700 | 3400-4000	7	65°	
SIN1-1AK-0R65	1	698-960 | 1350-2700 | 3400-4000	6.5	65°	
SIN1-1AL-0R360	1	698-960 | 1695-2700 | 3100-4200	6	360°	
SIN1-1AM-0R360	1	698-960 | 1710-2700 | 3300-3800	5.5	360°	
DUA1-2AN-0R360	2	1710-2700 | 3300-3800 | 4900-5925	5	360°	
DUA1-1AH-0R65	2	698-960 | 1710-2700	8	65°	65°
DUA1-2AJ-0R65	2	698-960 | 1427-2700 | 3400-3800	8.5	65°	
DUA1-1AK-0R65	2	698-960 | 1710-2700 | 3300-4000	8	65°	65°
DUA1-2AG-0R360	2	617-960 | 1710-2700 | 3300-4000 | 4800-6000	6	360°	
DUA1-2AG-0R360-S	2	617-960 | 1427-2700 | 3100-4200 | 4900-6000	6.5	360°	
DUA2-2AH-0R360	2	698-960 | 1710-2700	4	360°	
DUA1-2AK-0R360	2	698-960 | 1427-2700 | 3400-4000	6	360°	
DUA1-2AM-0R65	2	1695-2700 | 3300-4200 | 4800-6000	5.5	360°	
QUA1-1AP1Y-0R65	4	617-960 | 1710-2700 | 3300-4000 | 4800-6000	9	65°	65°
QUA1-2J-0R65	4	1695-2700	11	65°	38°
QUA1-2R-0R65	4	3300-4200	10.5	65°	30°
QUA1-4AK-0R360	4	698-960 | 1695-2700 | 3300-4000	8	360°	
QUA1-4AM-0R360	4	1695-2700 | 3300-4200 | 4800-6000	6	360°	
HEX1-2Q1V-0R65	6	3300-3800 | 5150-5925	11.5	65°	26°

Frequency Range	380-6000
Polarization	Linear. H
Half-Power BeamWidth	65°
Electrical Downtilt	0°

Type SIN1-1AE-0R65

Indoor Base Station Antenna

1-port 380–6000 MHz ,65°, 9 dBi, 0°Tilt Antenna.

Electrical Specifications

Frequency Range(MHz)	380-520	617-960	1427-1710	1710-2700	3100-4200	4800-6000
Horizontal Beamwidth(°)	360	360	360	360	360	360
Vertical Beamwidth(°)	2.2	3.5	3.5	4.0	5.0	6.5
Gain(dBi)	380-520	617-960	1427-1710	1710-2700	3100-4200	4800-6000
Polarization	Linear . H					
VSWR	2.0	1.8				
Intermodulation IM3 @ 2×43dBm	-153 dBc					
Impedance	50 ohm					

Mechanical Specifications

Application	Indoor
Mount Type	Thru-hole ceiling mount
Number of Ports, all types	1 * 4.3-10 Female with 300mm pigtail
Radome Color	White
Radome material	ABS
Dimensions,mm	259*259*18
Operating Temperature	-40 °C to +60 °C
Relative Humidity	Up to 100%
RoHS	Compliant

*This antenna is not suitable for installing on metal ceiling.

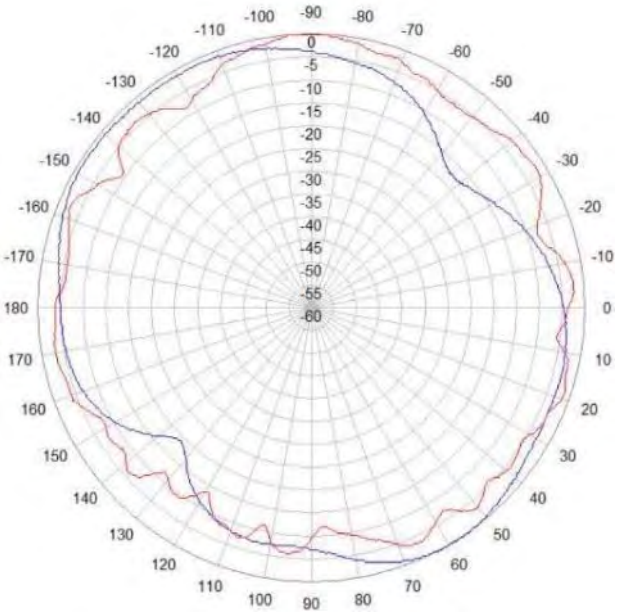
Frequency Range	380-6000
Polarization	Linear. H
Half-Power BeamWidth	65°
Electrical Downtilt	0°

Type SIN1-1AE-0R65

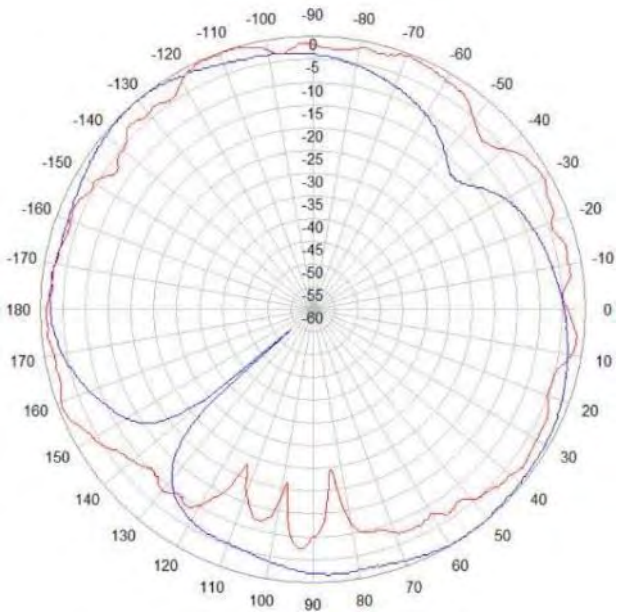
Patterns

Horizontal Patterns

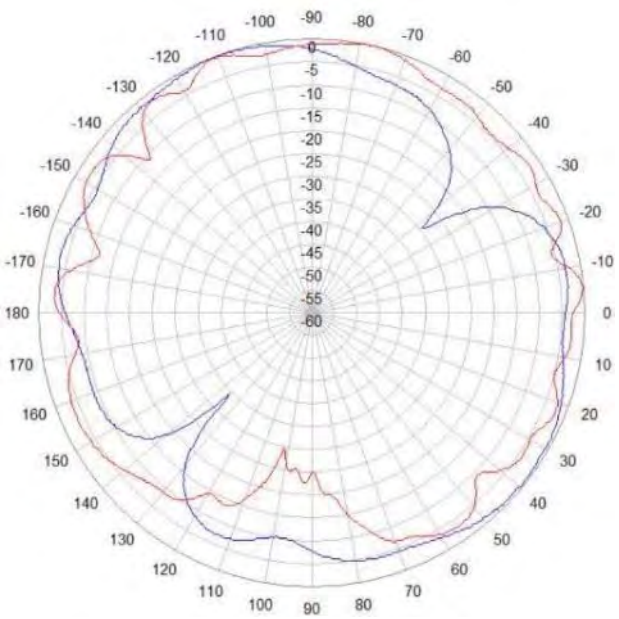
Vertical Patterns



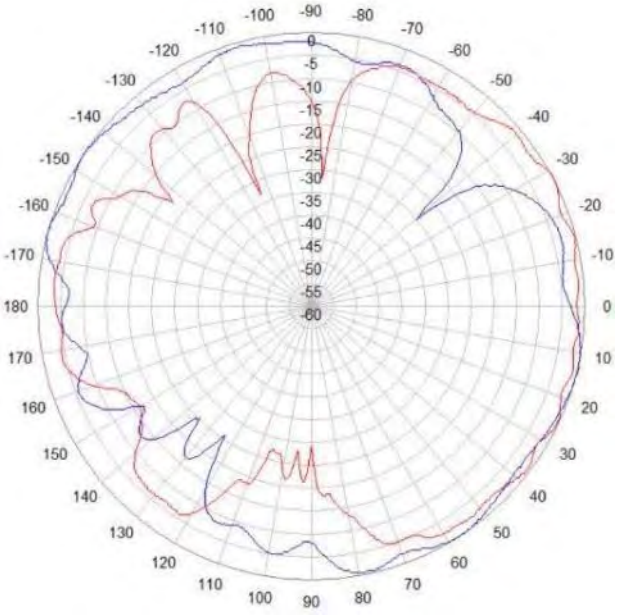
800MHz



2100MHz



3500MHz



5500MHz

Frequency Range	380-6000
Polarization	Vertical
Half-Power BeamWidth	360°
Electrical Downtilt	0°

Type SIN1-1AE-0R360

Indoor Base Station Antenna

1-port 380–6000 MHz ,360°, 6 dBi, 0°Tilt Antenna.

Electrical Specifications

Frequency Range(MHz)	380-520	700-960	1710-2700	3300-3800	4800-6000
Horizontal Beamwidth(°)	360	360	360	360	360
Gain(dBi)	1	2	3	3	6
Polarization	Vertical				
VSWR	1.9	1.9	1.8	1.8	1.8
Intermodulation IM3 @ 2×43dBm	--150 dBc				
Impedance	50 ohm				

Mechanical Specifications

Application	Indoor
Mount Type	Thru-hole ceiling mount
Number of Ports, all types	1
Radome Color	White
Radome material	ABS
Dimensions	Diameter 298mm * Height 163mm
Operating Temperature	-40 °C to +60 °C
Relative Humidity	Up to 100%
RoHS	Compliant

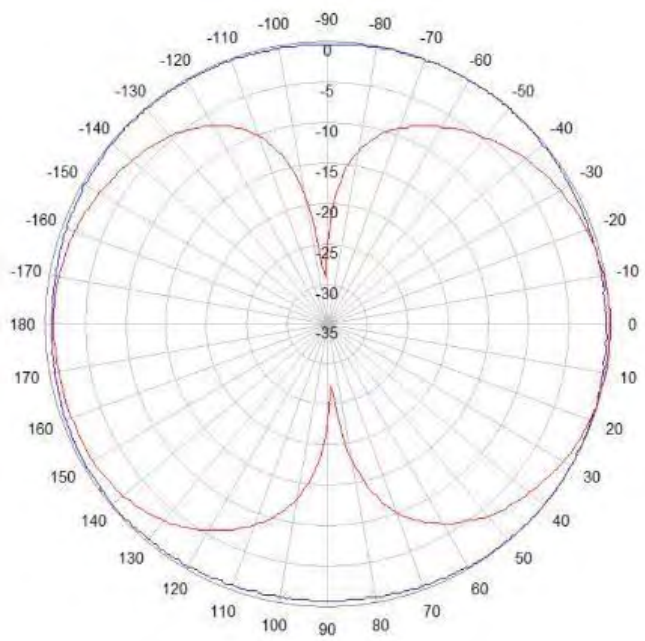
Frequency Range	380-6000
Polarization	Vertical
Half-Power BeamWidth	360°
Electrical Downtilt	0°

Type SIN1-1AE-0R360

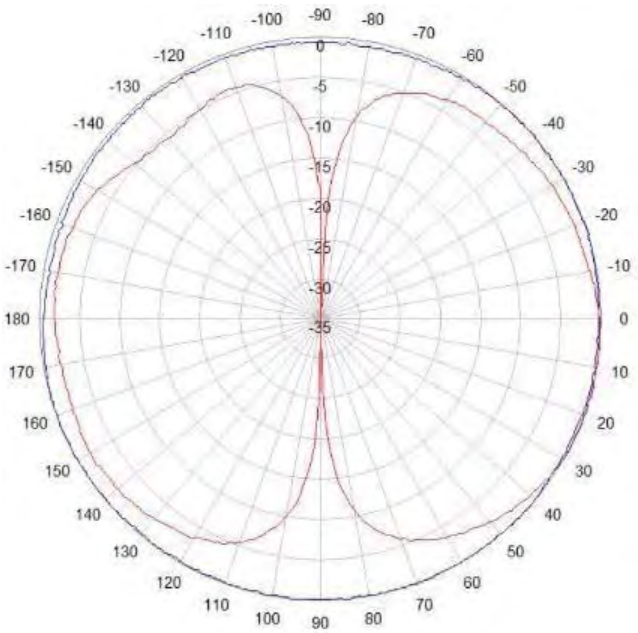
Patterns

Horizontal Patterns

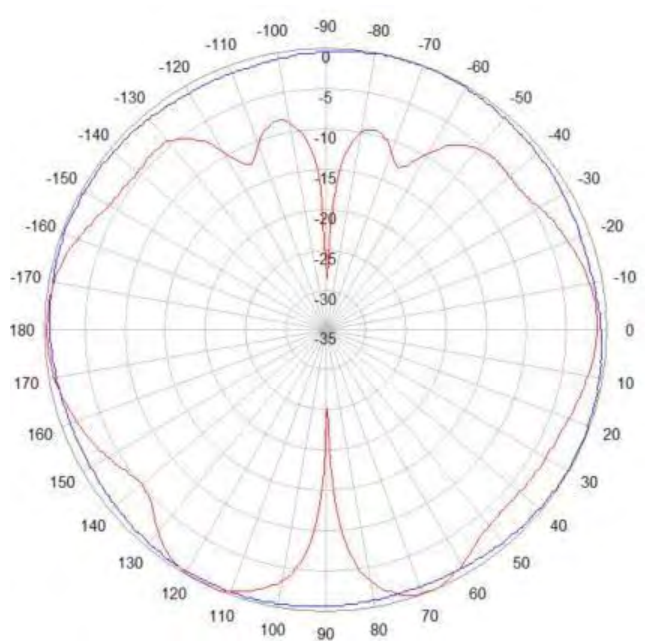
Vertical Patterns



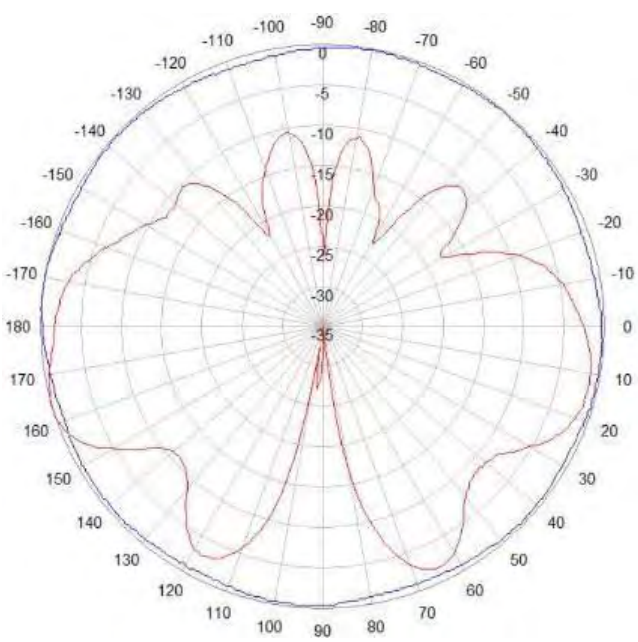
800MHz



2100MHz



3500MHz



5500MHz

Frequency Range	350-2700
Polarization	Vertical
Half-Power BeamWidth	65°
Electrical Downtilt	0°

Type SIN1-1AF-0R65

Indoor Base Station Antenna

1-port 350–2700 MHz ,65°, 9 dBi, 0°Tilt Antenna.

Electrical Specifications

Frequency Range(MHz)	698–960	1710–2700	3300–3800
Horizontal Beamwidth(°)	95	72	50
Vertical Beamwidth(°)	60	45	55
Gain(dBi)	5.0	7.0	9
Polarization	Vertical		
VSWR	1.8		
Intermodulation IM3 @ 2×43dBm	-153 dBc		
Impedance	50 ohm		

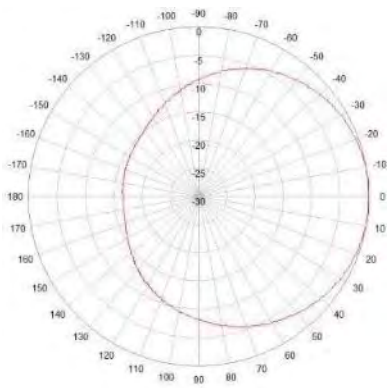
Mechanical Specifications

Application	Indoor
Mount Type	Wall mount
Number of Ports, all types	1
Radome Color	Grey
Radome material	Fiberglass
Dimensions	330*330*90
Operating Temperature	-40 °C to +60 °C
Relative Humidity	Up to 100%
RoHS	Compliant

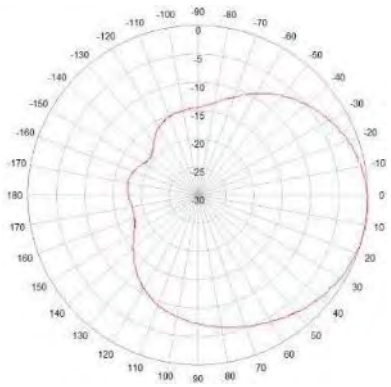
Frequency Range	350-2700
Polarization	Vertical
Half-Power BeamWidth	65°
Electrical Downtilt	0°

Type SIN1-1AF-0R65

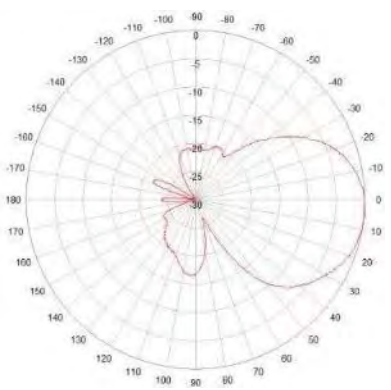
Patterns



350M

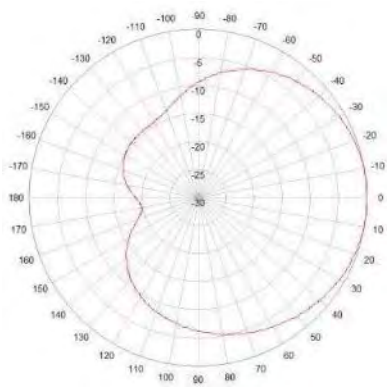


900M

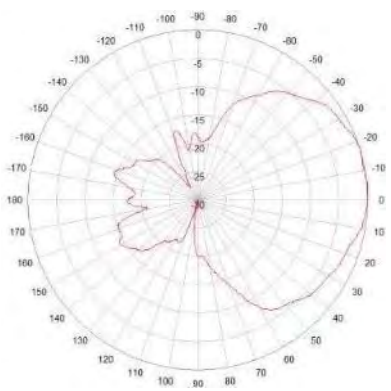


2500M

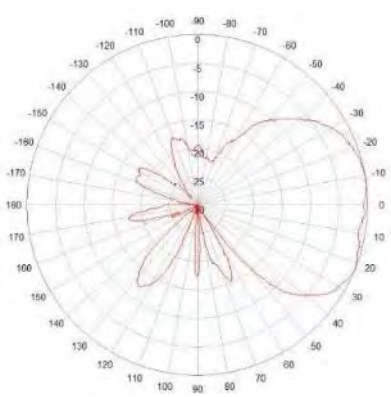
Horizontal



350M



900M



2500M

Vertical

Frequency Range	617-6000
Polarization	Vertical
Half-Power BeamWidth	65°
Electrical Downtilt	0°

Type SIN1-1AG-0R65

Indoor Base Station Antenna

1-port 617–6000 MHz ,65°, 7 dBi, 0°Tilt Antenna.

Electrical Specifications

Frequency Range(MHz)	617–800	800–960	1710–2700	3300-3800	4800-6000
Horizontal Beamwidth(°)	89	83	59	59	69
Vertical Beamwidth(°)	84	70	61	59	51
Gain(dBi)	5.4	6.1	7.3	6.5	4.9
Polarization	Vertical				
VSWR	1.8				
Intermodulation IM3 @ 2×43dBm	-153 dBc			NA	
Impedance	50 ohm				

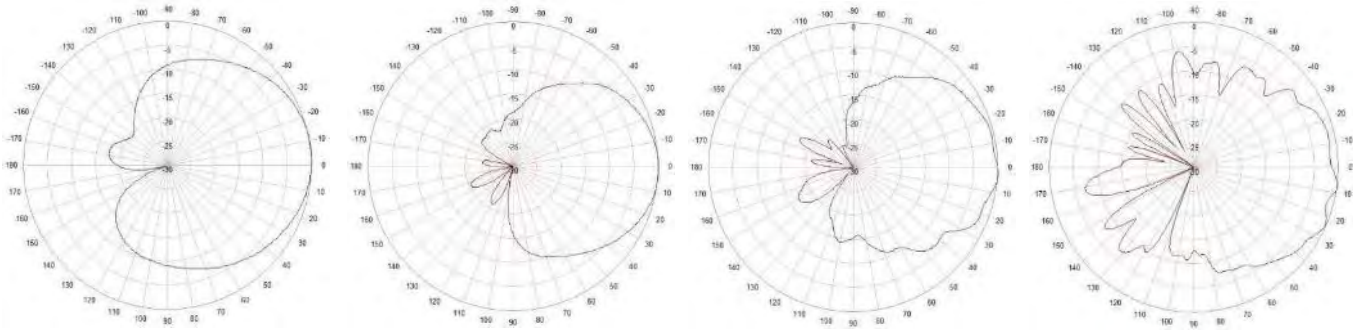
Mechanical Specifications

Application	Indoor & Outdoor
Mount Type	Wall mount
Number of Ports, all types	1
Radome Color	Grey
Radome material	PVC
Dimensions, L x W x D, mm	309 * 295 * 125
Operating Temperature	-40 ° C to +60 ° C
Relative Humidity	Up to 100%
RoHS	Compliant

Frequency Range	617-6000
Polarization	Vertical
Half-Power BeamWidth	65°
Electrical Downtilt	0°

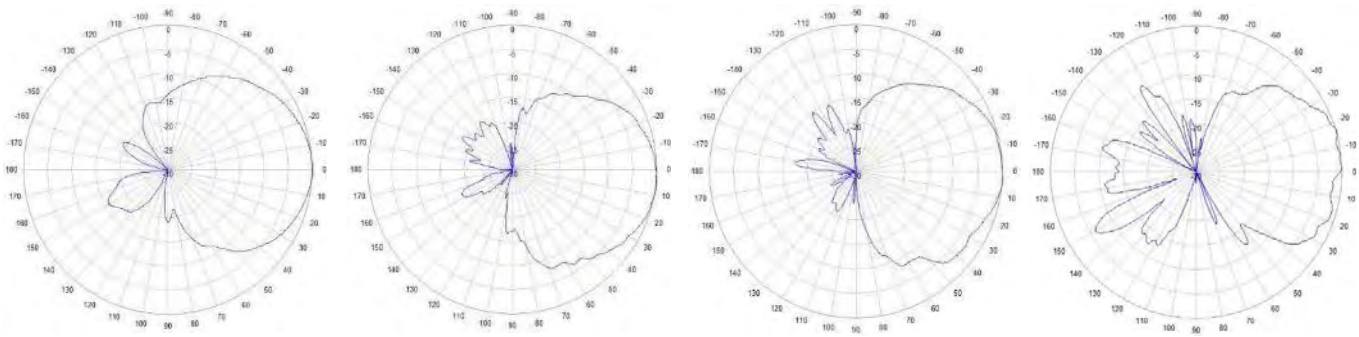
Type SIN1-1AG-0R65

Patterns



900MHz 2100MHz 3500MHz 5500MHz

Horizontal



900MHz 2100MHz 3500MHz 5500MHz

Vertical

Frequency Range	617-6000
Polarization	Vertical
Half-Power BeamWidth	360°
Electrical Downtilt	0°

Type SIN1-1AG-0R360

Indoor Base Station Antenna

1-port 617–6000 MHz ,360°, 5 dBi, 0°Tilt Antenna.

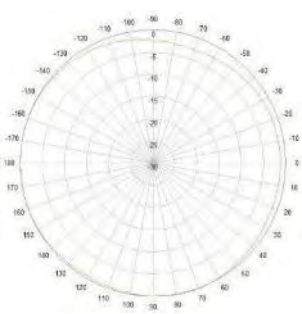
Electrical Specifications

Frequency Range(MHz)	617-960	1400-1600	1695-2700	3300-4200	4800-6000
Horizontal Beamwidth(°)	360	360	360	360	360
Gain(dBi)	1	2	3	3	5
Polarization	Vertical				
VSWR	1.9	1.9	1.8	1.8	1.8
Intermodulation IM3 @ 2×43dBm	-153 dBc				
Impedance	50 ohm				

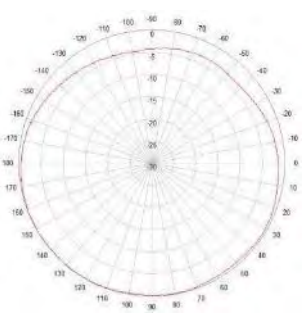
Mechanical Specifications

Application	Indoor
Mount Type	Thru-hole ceiling mount
Number of Ports, all types	1
Radome Color	White
Radome material	ABS
Dimensions	Diameter 206 * Height 89mm
Operating Temperature	-40 °C to +60 °C
Relative Humidity	Up to 100%
RoHS	Compliant

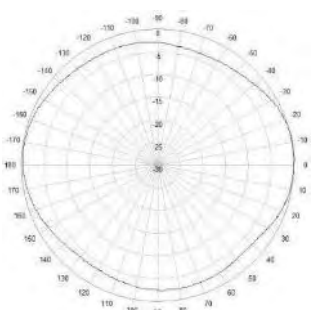
Patterns



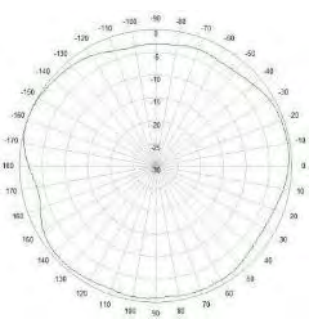
617-960MHz



1400-2700MHz



3300-4200MHz



4800-6000MHz

Frequency Range	617-6000
Polarization	Horizontal
Half-Power BeamWidth	360°
Electrical Downtilt	0°

Type SIN1-1AG-0R360-S

Indoor Base Station Antenna

1-port 617–6000 MHz ,360°, 6 dBi, 0°Tilt Antenna.

Electrical Specifications

Frequency Range(MHz)	617-698	698-960	1400-1600	1695-2700	3100-4200	4900-6000
Horizontal Beamwidth(°)	360	360	360	360	360	360
Gain(dBi)	4.0	4.5	4.5	4.5	5.0	5.5
Polarization	Horizontal					
VSWR	1.7					
Intermodulation IM3 @ 2×43dBm	-153, tested @ 900MHz/ 1800MHz/ 3500MHz					
Impedance	50 ohm					
Maximum input power, Watts	50					

Mechanical Specifications

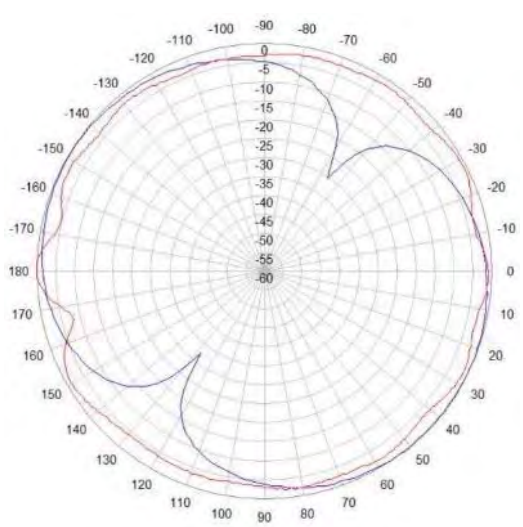
Application	Thru-hole ceiling mount
Mount Type	1 x 4.3-10 Female
Number of Ports, all types	White
Radome Color	ABS
Radome material	175*150*15
Dimensions	0.26
Operating Temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Relative Humidity	0 to 100%
RoHS	Thru-hole ceiling mount

Frequency Range	617-6000
Polarization	Horizontal
Half-Power BeamWidth	360°
Electrical Downtilt	0°

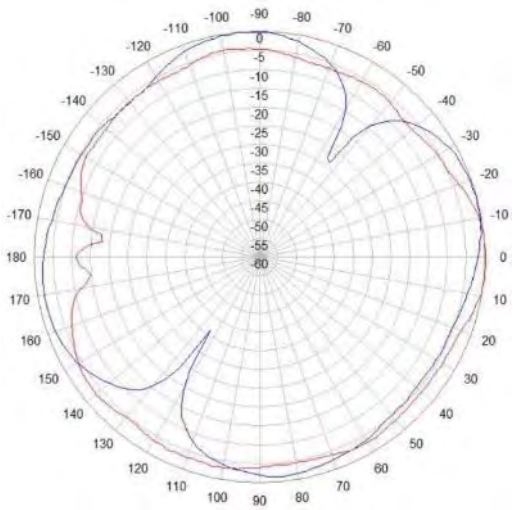
Type SIN1-1AG-0R360-S

Patterns

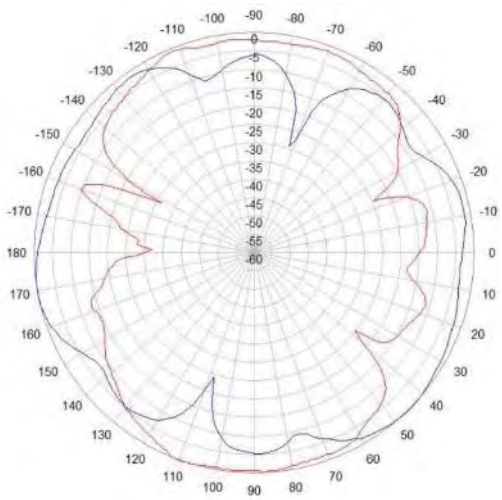
Horizontal
Vertical



800MHz



1800MHz



3500MHz

Frequency Range	617-6000
Polarization	Horizontal
Half-Power BeamWidth	360°
Electrical Downtilt	0°

Type SIN1-1AG-0R360-S1

Indoor Base Station Antenna

1-port 617–6000 MHz ,360°, 6 dBi, 0°Tilt Antenna.

Electrical Specifications

Frequency Range(MHz)	617-698	698-960	1400-1600	1695-2700	3100-4200	4900-6000
Horizontal Beamwidth(°)	360	360	360	360	360	360
Gain(dBi)	4.0	4.5	4.5	4.5	5.0	6.5
Polarization	Horizontal					
VSWR	1.7					
Intermodulation IM3 @ 2×43dBm	-153, tested @ 900MHz/ 1800MHz/ 3500MHz					
Impedance	50 ohm					
Maximum input power, Watts	50					

Mechanical Specifications

Application	Indoor
Mount Type	Thru-hole Ceiling mount
Number of Ports, all types	1 x 4.3-10 Female
Radome Color	White
Radome material	ABS
Dimensions	195 x 18 mm
Operating Temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Relative Humidity	0 to 100%
RoHS	Thru-hole ceiling mount

*This antenna is not suitable for installing on metal ceiling.

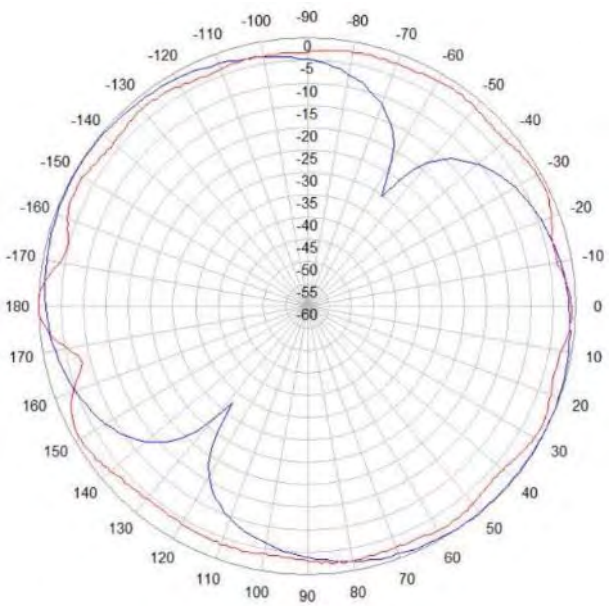
Frequency Range	617-6000
Polarization	Horizontal
Half-Power BeamWidth	360°
Electrical Downtilt	0°

Type SIN1-1AG-0R360-S1

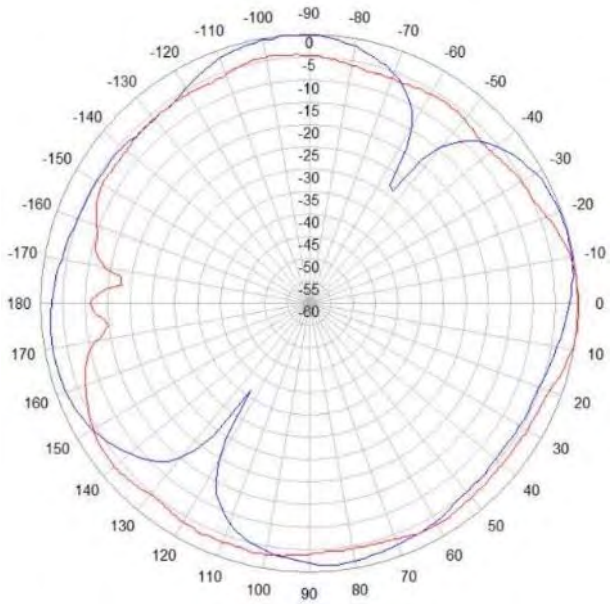
Patterns

Horizontal

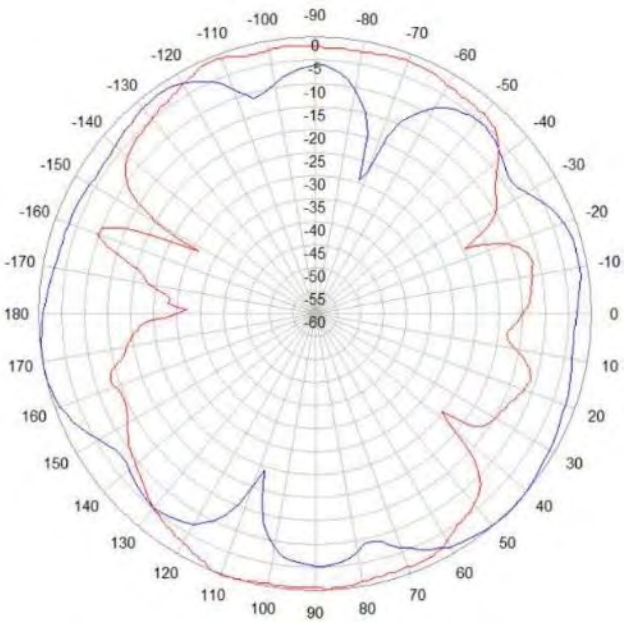
Vertical



800MHz



1800MHz



3500MHz

Frequency Range	698-2700
Polarization	Vertical
Half-Power BeamWidth	65°
Electrical Downtilt	0°

Type SIN1-1AH-0R65

Indoor Base Station Antenna

1-port 698–2700 MHz ,65°, 7 dBi, 0°Tilt Antenna.

Electrical Specifications

Frequency Range(MHz)	698–800	800–960	1710–2200	2200–2700
Horizontal Beamwidth(°)	90	83	70	88
Vertical Beamwidth(°)	72	53	50	50
Gain(dBi)	6	6	7	7
Polarization	Vertical			
VSWR	1.5			
Intermodulation IM3 @ 2×43dBm	-150 dBc			
Impedance	50 ohm			

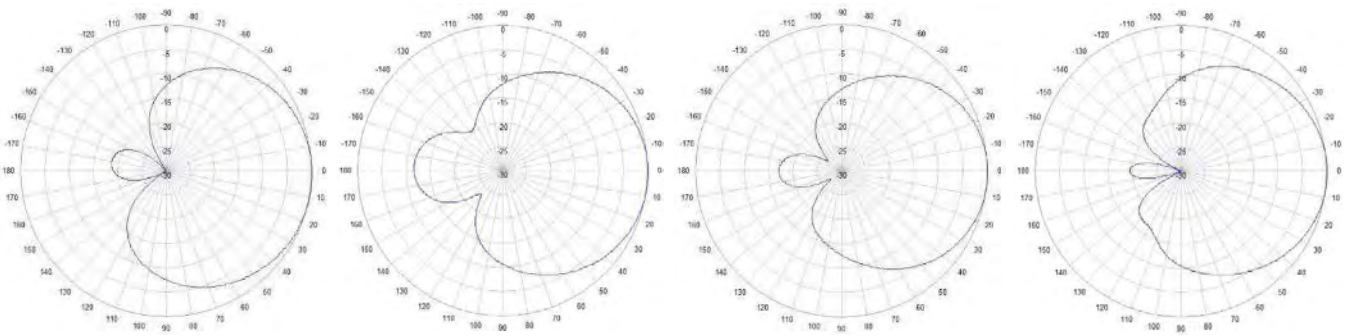
Mechanical Specifications

Application	Indoor
Mount Type	Wall mount
Number of Ports, all types	1
Radome Color	White
Radome material	ABS
Dimensions, L x W x D, mm	262*180*66
Operating Temperature	-40 °C to +60 °C
Relative Humidity	Up to 100%
RoHS	Compliant

Frequency Range	698-2700
Polarization	Vertical
Half-Power BeamWidth	65°
Electrical Downtilt	0°

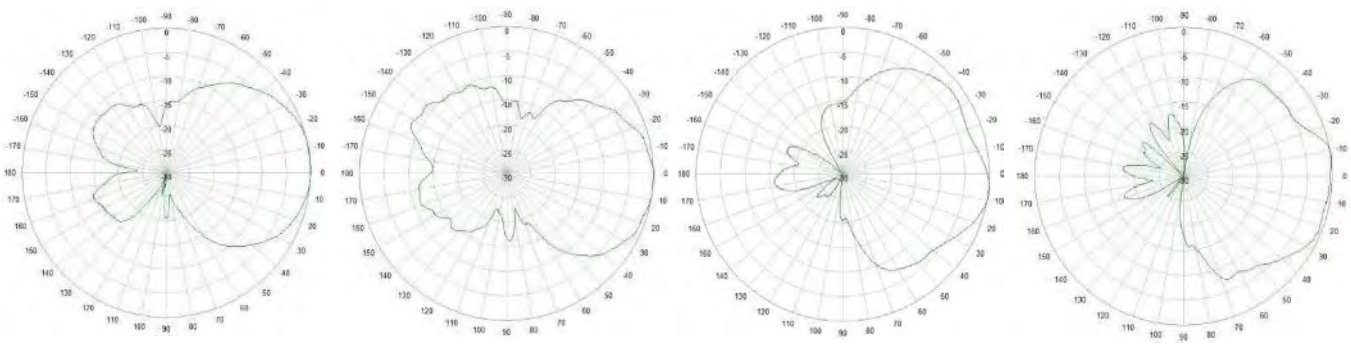
Type SIN1-1AH-0R65

Patterns



800MHz 960MHz 1710MHz 2600MHz

Azimuth



800MHz 960MHz 1710MHz 2600MHz

Elevation

Frequency Range	617-2700
Polarization	Vertical
Half-Power BeamWidth	360°
Electrical Downtilt	0°

Type SIN1-1AH-0R360

Indoor Base Station Antenna

1-port 698–2700 MHz ,360°, 5 dBi, 0°Tilt Antenna.

Electrical Specifications

Frequency Range(MHz)	698–800	800–960	1710–2700
Horizontal Beamwidth(°)	360	360	360
Gain(dBi)	2	2	5
Polarization	Vertical		
VSWR	1.7	1.5	
Intermodulation IM3 @ 2×43dBm	-140 dBc		
Impedance	50 ohm		

Mechanical Specifications

Application	Indoor
Mount Type	Thru-hole ceiling mount
Number of Ports, all types	1
Radome Color	White
Radome material	ABS
Dimensions	Diameter 185 * Height 85mm
Operating Temperature	-40 °C to +60 °C
Relative Humidity	Up to 100%
RoHS	Compliant

Frequency Range	698-3800
Polarization	Horizontal
Half-Power BeamWidth	360°
Electrical Downtilt	0°

Type SIN1-1AJ-0R360

Indoor Base Station Antenna

1-port 698–3800 MHz ,360°, 6 dBi, 0°Tilt Ultra-slim, True-omnidirectional Antenna.

Electrical Specifications

Frequency Range(MHz)	698–960	1710–2700	3300–3800
Horizontal Beamwidth(°)	360	360	360
Gain(dBi)	1.8	3.5	4
Polarization	Horizontal		
VSWR	1.8		
Intermodulation IM3 @ 2×43dBm	-153 dBc		
Impedance	50 ohm		

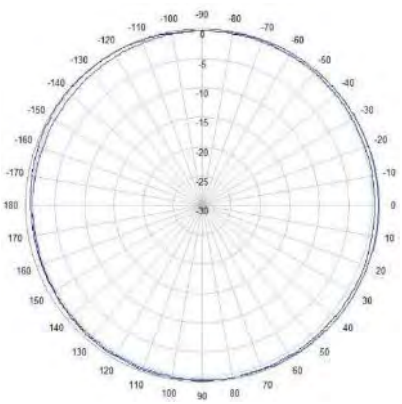
Mechanical Specifications

Application	Indoor
Mount Type	Thru-hole ceiling mount
Number of Ports, all types	1
Radome Color	White
Radome material	ABS
Dimensions	Diameter 307 * Height 18mm
Operating Temperature	-40 °C to +60 °C
Relative Humidity	Up to 100%
RoHS	Compliant

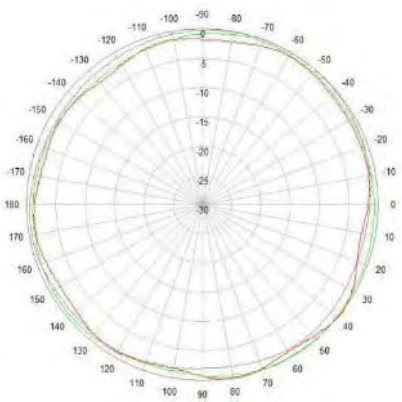
Frequency Range	698-3800
Polarization	Horizontal
Half-Power BeamWidth	360°
Electrical Downtilt	0°

Type SIN1-1AJ-0R360

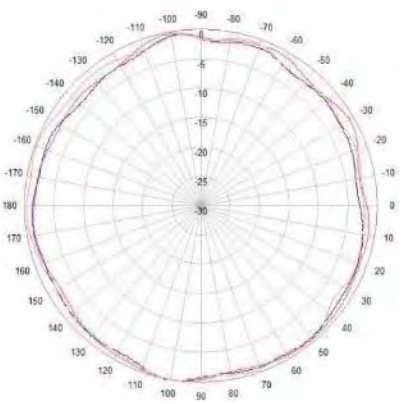
Patterns



698-960MHz

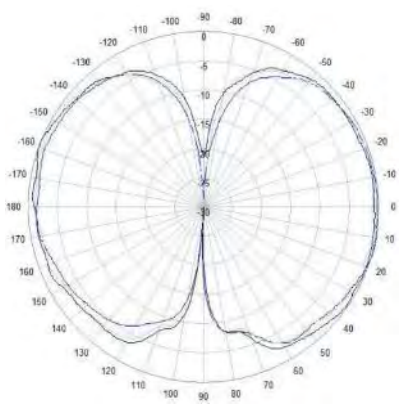


1710-2700MHz

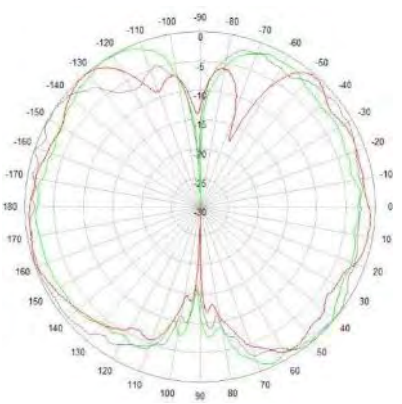


3300-3800MHz

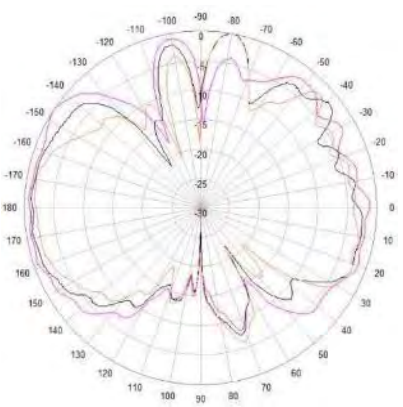
Horizontal patterns



698-960MHz



1710-2700MHz



3300-3800MHz

Vertical patterns

Frequency Range	698-4000
Polarization	Vertical
Half-Power BeamWidth	65°
Electrical Downtilt	0°

Type SIN1-1Ak-0R65

Indoor Base Station Antenna

1-port 698–4000 MHz ,65°, 7 dBi, 0°Tilt Antenna.

Electrical Specifications

Frequency Range(MHz)	698-806	806-960	1427-1710	1710-2700	3400-4000
Horizontal Beamwidth(°)	97	95	71	68	51
Vertical Beamwidth(°)	79	75	65	53	16
Gain(dBi)	6.5	6.5	6.0	7.1	7.0
Polarization	Vertical				
VSWR	1.8				
Intermodulation IM3 @ 2×43dBm	-153 dBc				
Impedance	50 ohm				
Front to Back Ratio(dB)	10	15	10	12	8
Maximum input power(w)	50				

Mechanical Specifications

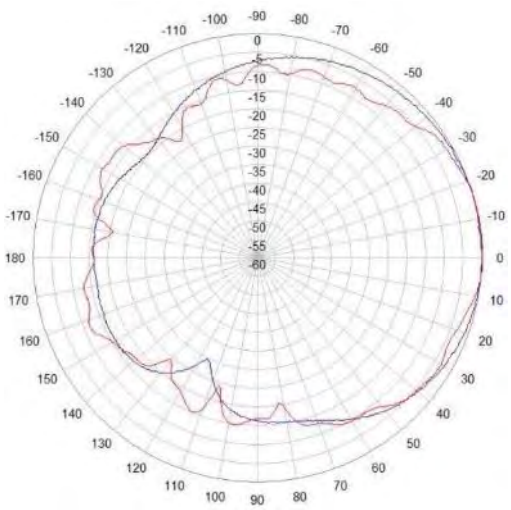
Mounting Type	Mounting Bracket
Number of Ports, all types	1 * 4.3-10 Female with 300mm pigtail
Radome Color	White
Radome Material	ABS
Net size, Length*Width*Height	175*175*60 mm
Net weight, kg	0.3
Operating Temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Relative Humility	0 to 100%

Frequency Range	698-4000
Polarization	Vertical
Half-Power BeamWidth	65°
Electrical Downtilt	0°

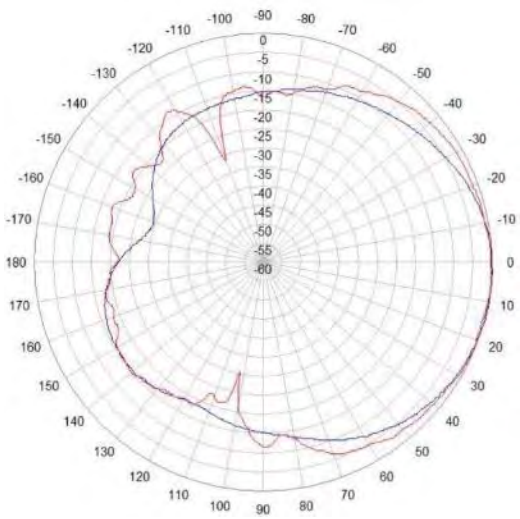
Type SIN1-1Ak-0R65

Patterns

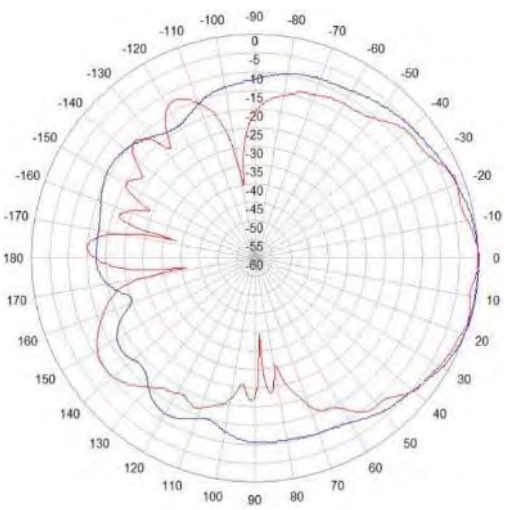
Horizontal
Vertical



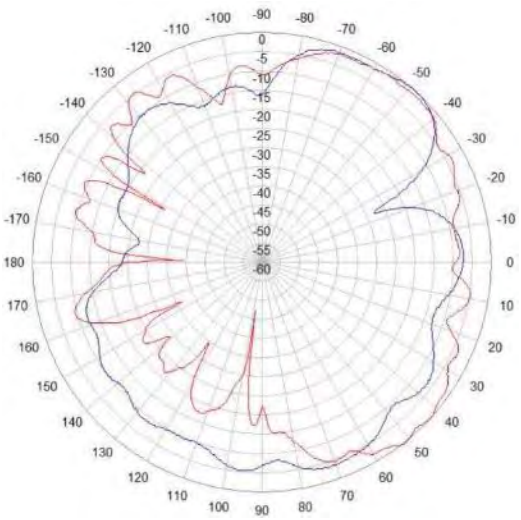
900MHz



1800MHz



2300MHz



3500MHz

Frequency Range	698-4000
Polarization	V
Half-Power BeamWidth	360°
Electrical Downtilt	0°

Type SIN1-1AK-0R65

Indoor Base Station Antenna

1-port 698–4000 MHz ,65°, 6.5 dBi, 0°Tilt Antenna.

Electrical Specifications

Frequency Range(MHz)	698-806	806-960	1350-1710	1710-2700	3400-4000
Horizontal Beamwidth(°)	360	360	360	360	360
Gain, Avg.(dBi)	4.3	4.7	6.5	5.2	4.7
Polarization	V				
VSWR	1.5				
Intermodulation IM3 @ 2×43dBm	-153 dBc				
Impedance	50 ohm				
Maximum input power,watts	50				

Mechanical Specifications

Mounting Type	Thru-hole ceiling mount
Number of Ports, all types	1 * 4.3-10 Female with 300mm pigtail
Radome Color	White
Radome Material	ABS
Net size, Length*Width*Height	175*150*15 mm
Net weight, kg	0.2
Operating Temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Relative Humility	0 to 100%

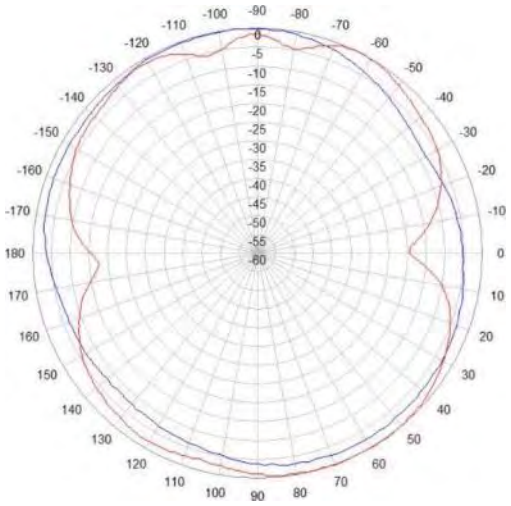
*This antenna is not suitable for installing on metal ceiling.

Frequency Range	698-4000
Polarization	V
Half-Power BeamWidth	360°
Electrical Downtilt	0°

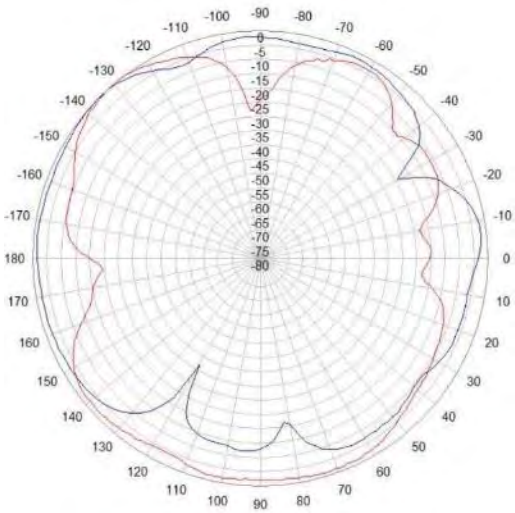
Type SIN1-1AK-0R65

Patterns

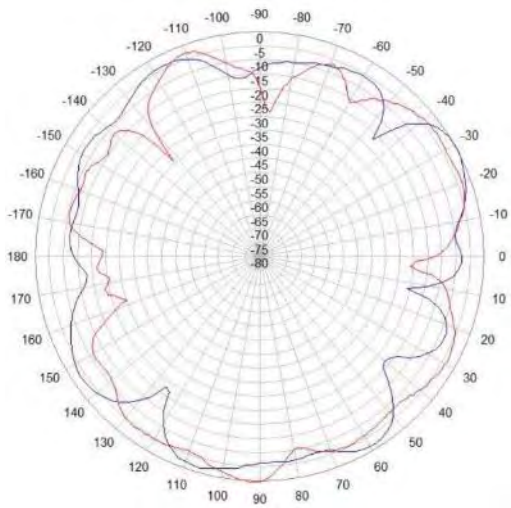
Horizontal
Vertical



800MHz



2200MHz



3500MHz

Frequency Range	698-4200
Polarization	V
Half-Power BeamWidth	360°
Electrical Downtilt	0°

Type SIN1-1AL-0R360

Indoor Base Station Antenna

1-port 698–4200 MHz ,360°, 6 dBi, 0°Tilt Antenna.

Electrical Specifications

Frequency Range(MHz)	698–960	1695–2700	3100–4200
Horizontal Beamwidth(°)	360	360	360
Gain, Avg.(dBi)	2.5	5.5	6
Polarization	V		
VSWR	1.7	1.5	
Intermodulation IM3 @ 2×43dBm	-140 dBc		
Impedance	50 ohm		
Maximum input power,watts	50		

Mechanical Specifications

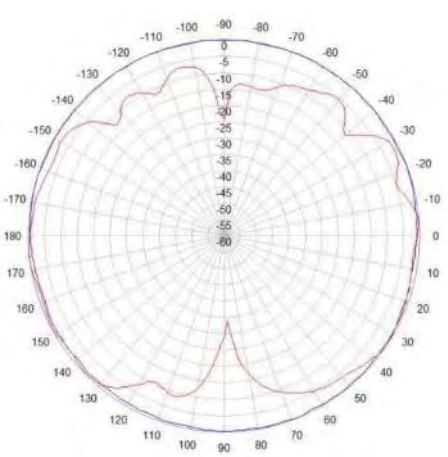
Mounting Type	Thru-hole ceiling mount
Number of Ports, all types	1 x 4.3-10 Female
Radome Color	White
Radome Material	ABS
Net size, Diameter*Height	186mm * 85mm
Operating Temperature	-40 °C to +60 °C
Relative Humility	0 to 100%
Mounting Type	Thru-hole ceiling mount

Frequency Range	698-4200
Polarization	V
Half-Power BeamWidth	360°
Electrical Downtilt	0°

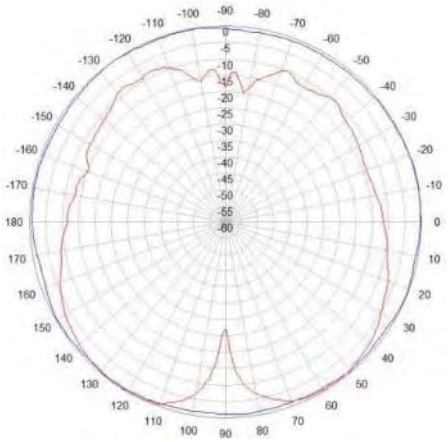
Type SIN1-1AL-0R360

Patterns

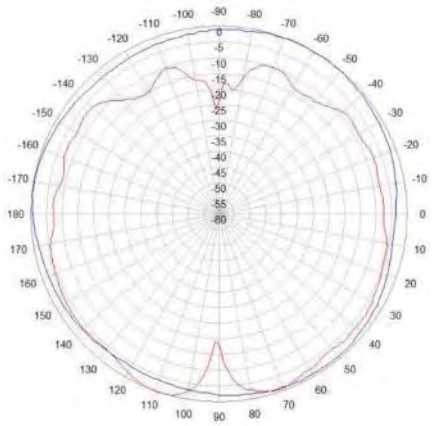
Horizontal
Vertical



900MHz



2100MHz



3500MHz

Frequency Range	1695-6000
Polarization	Horizontal
Half-Power BeamWidth	360°
Electrical Downtilt	0°

Type SIN1-1AM-0R360

Indoor Base Station Antenna

1-port 1695–6000 MHz ,360°, 5.5 dBi, 0°Tilt Ultra-slim, True-omnidirectional Antenna.

Electrical Specifications

Frequency Range(MHz)	698–960	1710–2700	3300–3800
Horizontal Beamwidth(°)	360	360	360
Gain(dBi)	3	4	5.5
Polarization	Horizontal		
VSWR	1.8		
Intermodulation IM3 @ 2×43dBm	-153 dBc		N/A
Impedance	50 ohm		

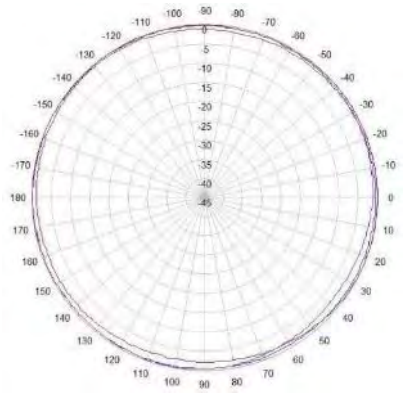
Mechanical Specifications

Application	Indoor
Mount Type	Thru-hole ceiling mount
Number of Ports, all types	1
Radome Color	White
Radome material	ABS
Dimensions	Diameter 170 * Height 18mm
Operating Temperature	-40 °C to +60 °C
Relative Humidity	Up to 100%
RoHS	Compliant

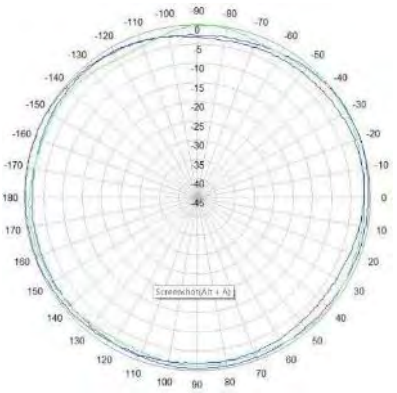
Frequency Range	1695-6000
Polarization	Horizontal
Half-Power BeamWidth	360°
Electrical Downtilt	0°

Type SIN1-1AM-0R360

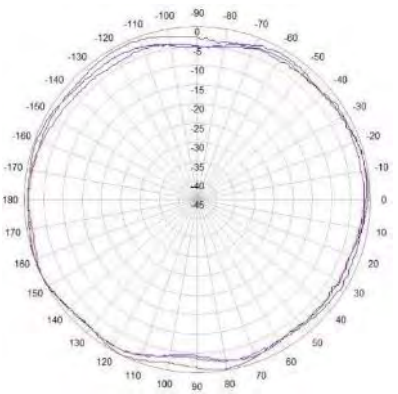
Patterns



1695-2700MHz

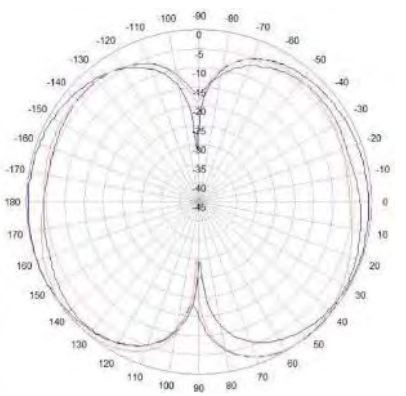


3300-3800MHz

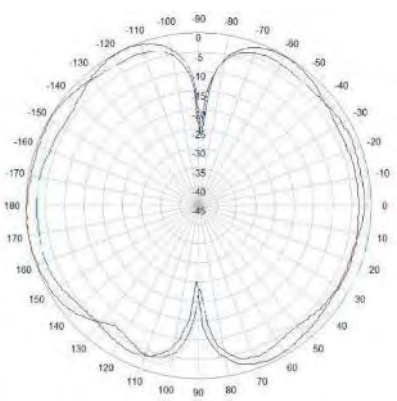


4900-6000MHz

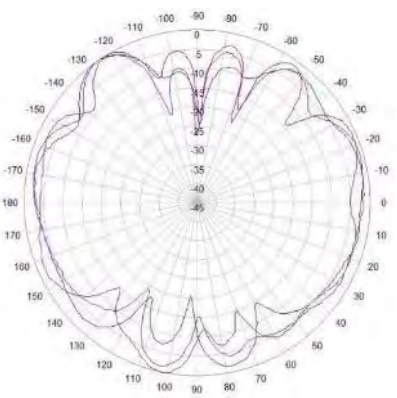
Horizontal



1695-2700MHz



3300-3800MHz



4900-6000MHz

Vertical

Frequency Range	1710-6000
Polarization	Horizontal & Vertical
Half-Power BeamWidth	360°
Electrical Downtilt	0°

Type DUA1-2AN-0R360

Indoor Base Station Antenna

2-port 1710–6000 MHz ,360°, 5 dBi, 0°Tilt Antenna.

Electrical Specifications

Frequency Range(MHz)	1710-2700	3300-3800	4900-5925
Horizontal Beamwidth(°)	360	360	360
Gain(dBi)	3	3	5
Polarization	Horizontal & Vertical		
VSWR	1.8		
Intermodulation IM3 @ 2×43dBm	-150 dBc		
Impedance	50 ohm		

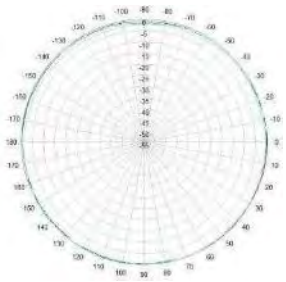
Mechanical Specifications

Application	Indoor
Mount Type	Thru-hole ceiling mount
Number of Ports, all types	2
Radome Color	White
Radome material	ABS
Dimensions	Diameter 176 * Height 108mm
Operating Temperature	-40 ° C to +60 ° C
Relative Humidity	Up to 100%
RoHS	Compliant

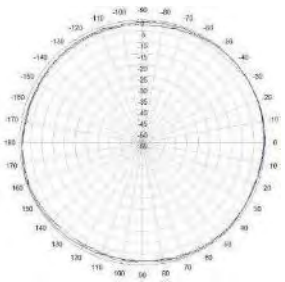
Frequency Range	1710-6000
Polarization	Horizontal & Vertical
Half-Power BeamWidth	360°
Electrical Downtilt	0°

Type DUA1-2AN-0R360

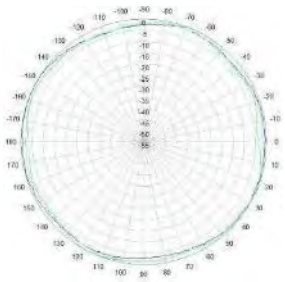
Patterns



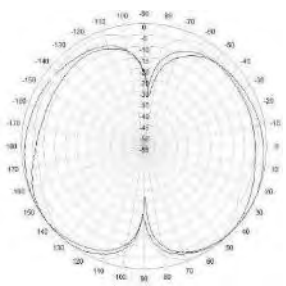
H-POL,1695-2700MHz



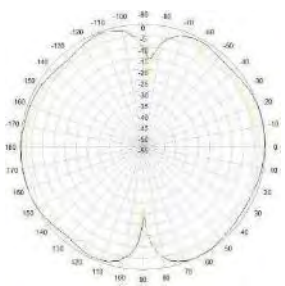
H-POL,3300-4200MHz Horizontal



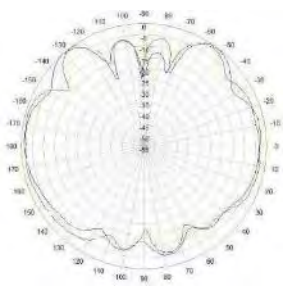
H-POL,4900-6000MHz



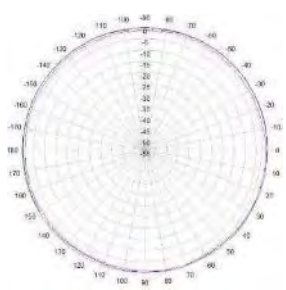
H-POL,1695-2700MHz



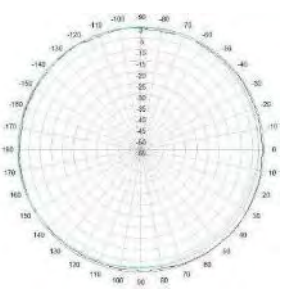
H-POL,3300-4200MHz Vertical



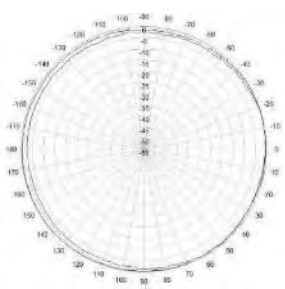
H-POL,4900-6000MHz



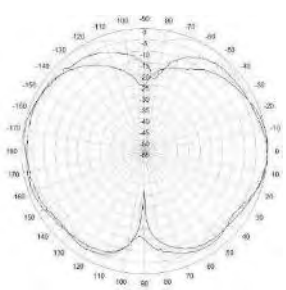
V-POL,1695-2700MHz



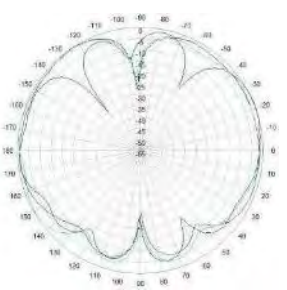
V-POL,3300-4200MHz Horizontal



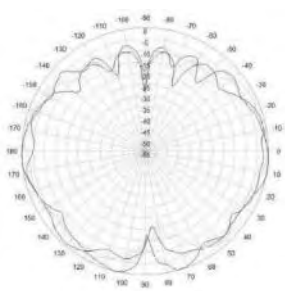
V-POL,4900-6000MHz



V-POL,1695-2700MHz



V-POL,3300-4200MHz Vertical



V-POL,4900-6000MHz

Frequency Range	698-2700
Polarization	±45°
Half-Power BeamWidth	65°
Electrical Downtilt	0°

Type DUA1-1AH-0R65

Indoor Base Station Antenna

2-ports 698–2700 MHz ,65°, 8 dBi, 0°Tilt Antenna.

Electrical Specifications

Frequency Range(MHz)	698–800	800–960	1710–2200	2200–2700
Horizontal Beamwidth(°)	73	73	70	65
Vertical Beamwidth(°)	70	65	60	70
Gain(dBi)	7	7	8	8
Isolation(dB)	20	20	22	22
Polarization	±45°			
VSWR	1.5			
Intermodulation IM3 @ 2×43dBm	-150 dBc			
Impedance	50 ohm			

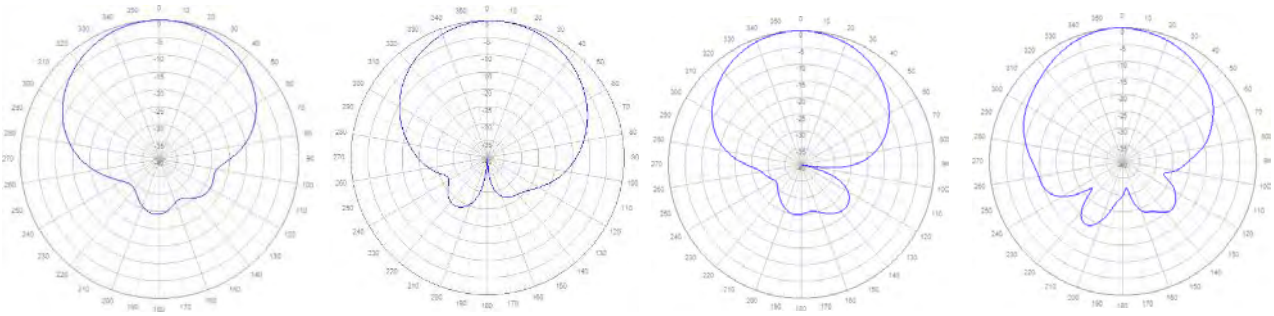
Mechanical Specifications

Application	Indoor
Mount Type	Wall mount
Number of Ports, all types	2
Radome Color	White
Radome material	ABS
Dimensions, L x W x D, mm	318*210*73
Operating Temperature	-40 °C to +60 °C
Relative Humidity	Up to 100%
RoHS	Compliant

Frequency Range	698-2700
Polarization	±45°
Half-Power BeamWidth	65°
Electrical Downtilt	0°

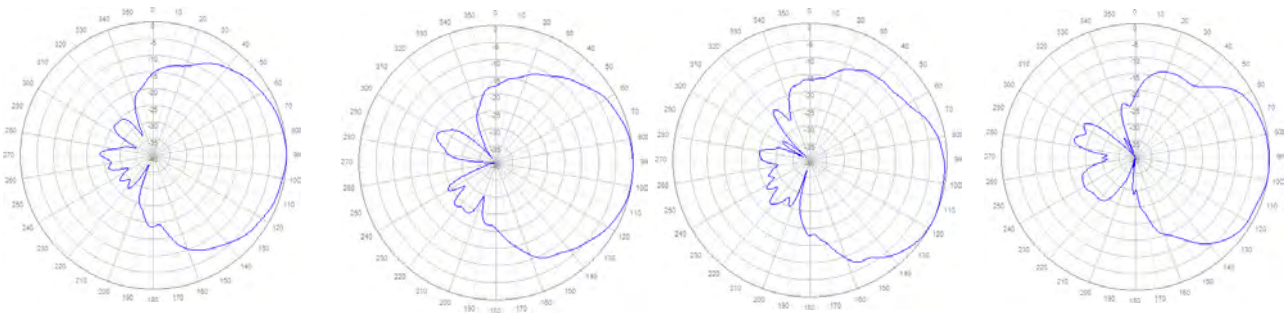
Type DUA1-1AH-0R65

Patterns



698MHz 960MHz 1710MHz 2600MHz

Horizontal



698MHz 960MHz 1710MHz 2600MHz

Vertical

Frequency Range	698-3800
Polarization	±45°
Half-Power BeamWidth	65°
Electrical Downtilt	0°

Type DUA1-2AJ-0R65

Indoor Base Station Antenna

2-ports 698–3800 MHz ,65°, 8.5 dBi, 0°Tilt Antenna.

Electrical Specifications

Frequency Range(MHz)	698-806	806-960	1427-1710	1710-2700	3400-3800
Horizontal Beamwidth(°)	80	80	65	55	40
Vertical Beamwidth(°)	70	62	55	55	30
Gain(dBi)	6.5	7.5	7.5	8.5	6.5
Polarization	±45°				
VSWR/Return Loss(dB)	2/9.5	2/9.5	2/9.5	2/9.5	2/9.5
Intermodulation IM3 @ 2×43dBm	-153 dBc				
Impedance	50 ohm				

Mechanical Specifications

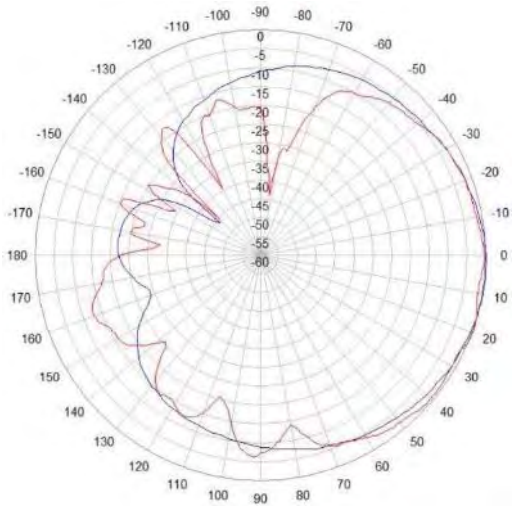
Mounting Type	Mounting Bracket
Number of Ports, all types	2 * 4.3-10 Female with 300mm pigtails
Radome Color	White
Radome Material	UPVC
Dimensions, mm	399*280*80 mm
Net weight, kg	2.5
Operating Temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Relative Humility	0 to 100%

Frequency Range	698-3800
Polarization	±45°
Half-Power BeamWidth	65°
Electrical Downtilt	0°

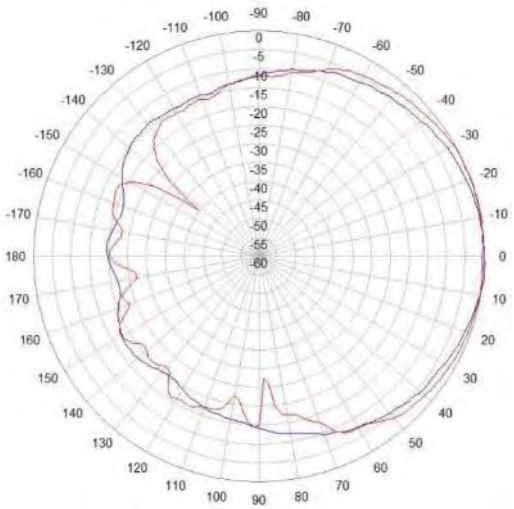
Type DUA1-2AJ-0R65

Patterns

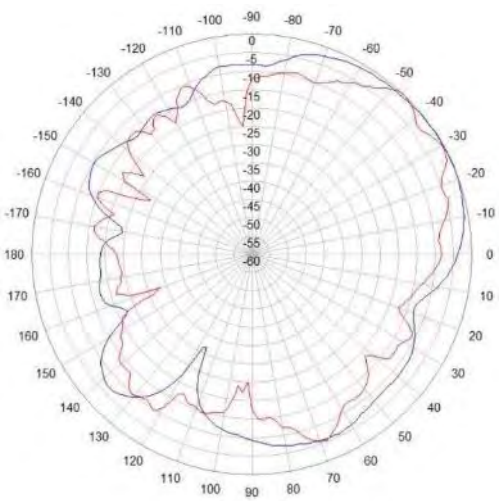
Horizontal
Vertical



800MHz



1800MHz



3400MHz

Frequency Range	698-4000
Polarization	±45°
Half-Power BeamWidth	65°
Electrical Downtilt	0°

Type DUA1-1AK-0R65

Indoor Base Station Antenna

2-ports 698–4000 MHz ,65°, 8 dBi, 0°Tilt Antenna.

Electrical Specifications

Frequency Range(MHz)	698–800	800–960	1710–2200	2200–2700	3300-4000
Horizontal Beamwidth(°)	77	73	65	60	60
Vertical Beamwidth(°)	71	65	60	58	60
Gain(dBi)	7	7	8	8	7.5
Polarization	±45°				
Isolation, dB	20	20	22	22	22
VSWR	1.8				
Intermodulation IM3 @ 2×43dBm	-153 dBc			NA	
Impedance	50 ohm				

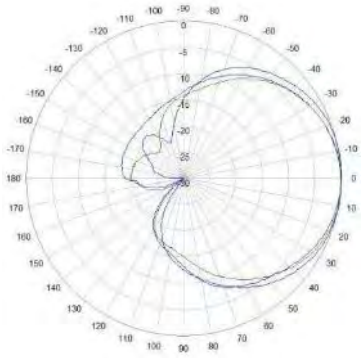
Mechanical Specifications

Application	Indoor
Mount Type	Wall mount
Number of Ports, all types	2
Radome Color	Off-white
Radome material	ABS
Dimensions, L x W x D, mm	305*199*80
Operating Temperature	-40 °C to +60 °C
Relative Humidity	Up to 100%
RoHS	Compliant

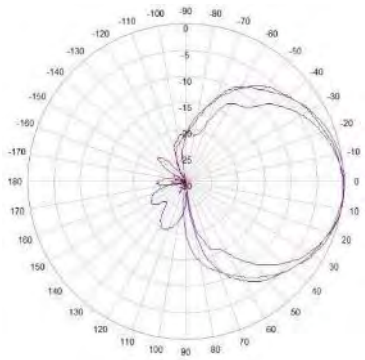
Frequency Range	698-4000
Polarization	±45°
Half-Power BeamWidth	65°
Electrical Downtilt	0°

Type DUA1-1AK-0R65

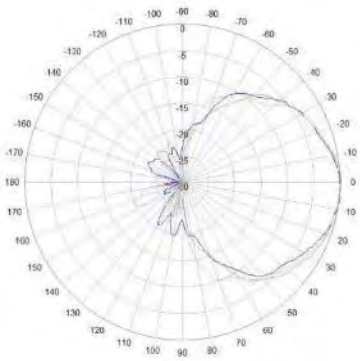
Patterns



698-960MHz

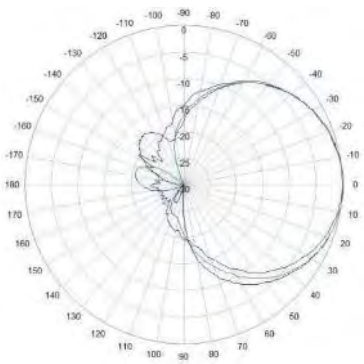


1710-2700MHz

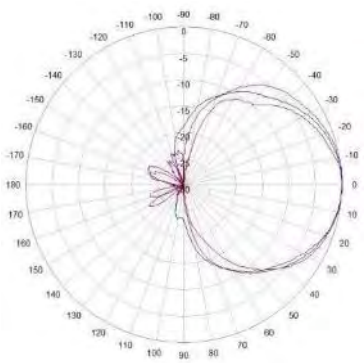


3300-4000MHz

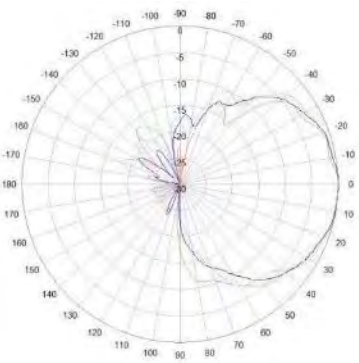
Horizontal



698-960MHz



1710-2700MHz



3300-4000MHz

Vertical

Frequency Range	617-6000
Polarization	Linear
Half-Power BeamWidth	360°
Electrical Downtilt	0°

Type DUA1-2AG-0R360

Indoor Base Station Antenna

2-ports 617–6000 MHz ,360°, 6 dBi, 0°Tilt Antenna.

Electrical Specifications

Frequency Range(MHz)	617–800	800–960	1710–2700	3300–4000	4800-6000
Horizontal Beamwidth(°)	360	360	360	360	360
Gain(dBi)	3.5	4.5	5.5	5.5	5.9
Polarization	Linear				
Isolation, dB	15	17		19	
VSWR	1.8				
Intermodulation IM3 @ 2×43dBm	-153 dBc				
Impedance	50 ohm				

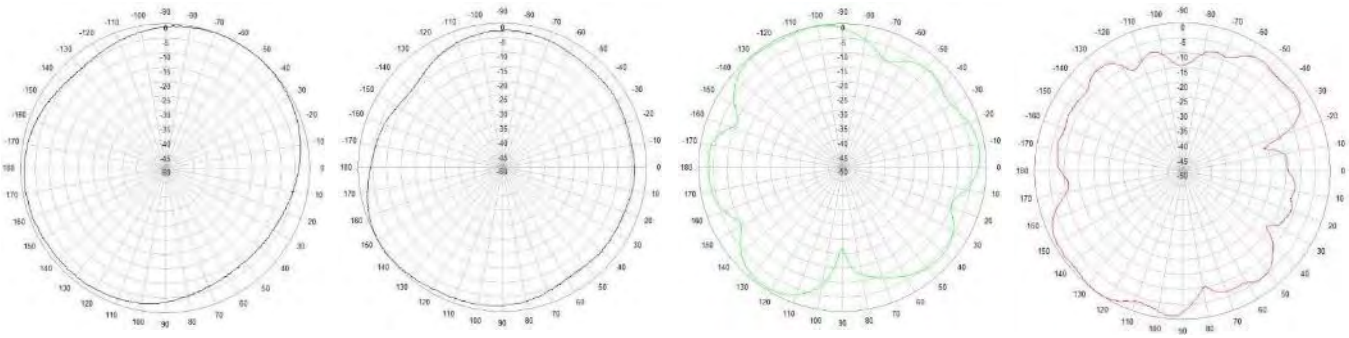
Mechanical Specifications

Application	Indoor
Mount Type	Thru-hole ceiling mount
Number of Ports, all types	2
Radome Color	White
Radome material	ABS
Dimensions	Diameter 207 * Height 59mm
Operating Temperature	-40 °C to +60 °C
Relative Humidity	Up to 100%
RoHS	Compliant

Frequency Range	617-6000
Polarization	Linear
Half-Power BeamWidth	360°
Electrical Downtilt	0°

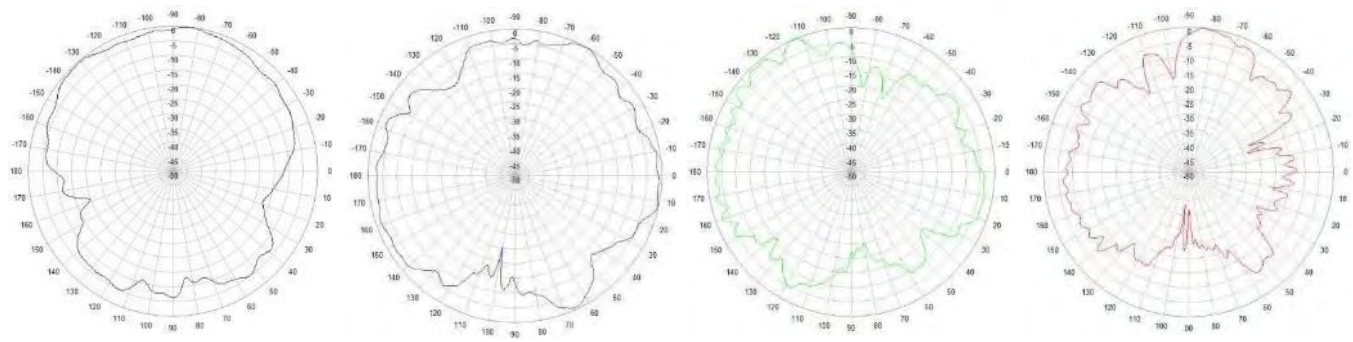
Type DUA1-2AG-0R360

Patterns



800MHz 2300MHz 3500MHz 5500MHz

Horizontal



800MHz 2300MHz 3500MHz 5500MHz

Vertical

Frequency Range	617-6000
Polarization	Horizontal
Half-Power BeamWidth	360°
Electrical Downtilt	0°

Type DUA1-2AG-0R360-S

Indoor Base Station Antenna

2-ports 617–6000 MHz ,360°, 6.5 dBi, 0°Tilt Antenna.

Electrical Specifications

Frequency Range(MHz)	617-698	698-960	1427-1710	1710-2700	3100-4200	4900-6000
Horizontal Beamwidth(°)	360	360	360	360	360	360
Gain(dBi)	3.0	4.0	4.0	4.5	6.5	5.5
Polarization	Horizontal					
Isolation(dB)	16	16	18	20	30	
VSWR	1.8/10.9					
Intermodulation IM3 @ 2×43dBm	-153, tested @ 900MHz/ 1800MHz/ 3500MHz					
Impedance	50 ohm					
Maximum input power, Watts	50					

Mechanical Specifications

Mounting Type	Thru-hole ceiling mount
Number of Ports, all types	2 * 4.3-10 Female
Radome Color	White
Radome Material	ABS
Net size, Diameter*Height, mm	252*189*15
Net weight, kg	0.48
Operating Temperature	-40 °C to +60 °C
Relative Humility	0 to 100%

*This antenna is not suitable for installing on metal ceiling.

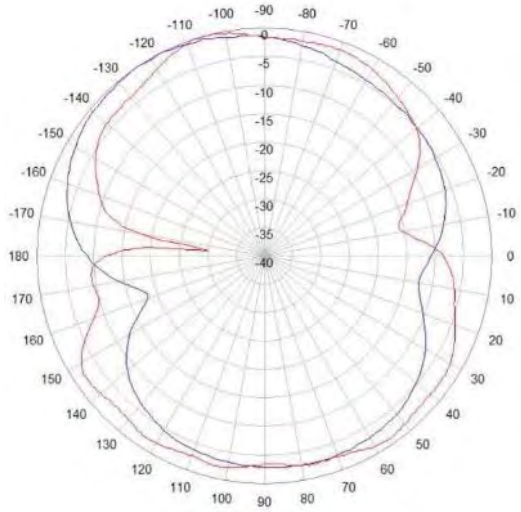
Frequency Range	617-6000
Polarization	Horizontal
Half-Power BeamWidth	360°
Electrical Downtilt	0°

Type DUA1-2AG-0R360-S

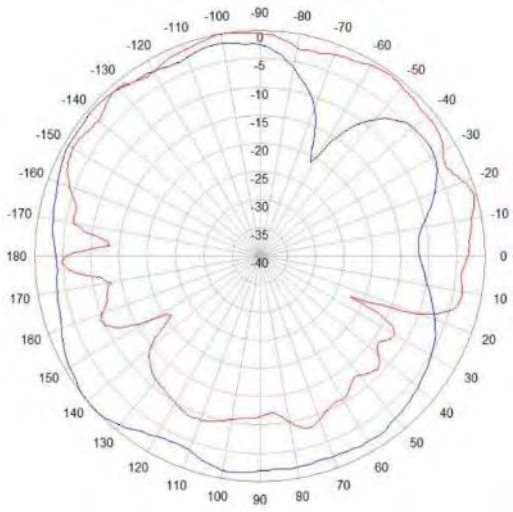
Patterns

Horizontal

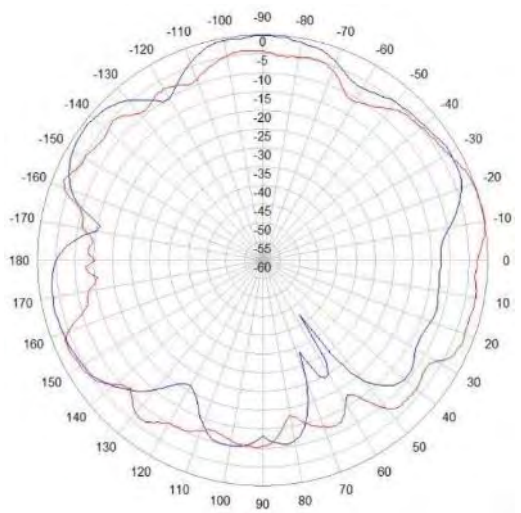
Vertical



800MHz



1800MHz



3500MHz

Frequency Range	698-2700
Polarization	Horizontal & Vertical
Half-Power BeamWidth	360°
Electrical Downtilt	0°

Type DUA2-2AH-0R360

Indoor Base Station Antenna

2-port 698–2700 MHz ,360°, 4 dBi, 0°Tilt Antenna.

Electrical Specifications

Frequency Range(MHz)	698–800	800–960	1710–2200	2200-2700
Horizontal Beamwidth(°)	360	360	360	360
Isolation	21	21	23	23
Gain(dBi)	2	2	4	4
Polarization	Horizontal & Vertical			
VSWR	1.8			
Intermodulation IM3 @ 2×43dBm	-150 dBc			
Impedance	50 ohm			

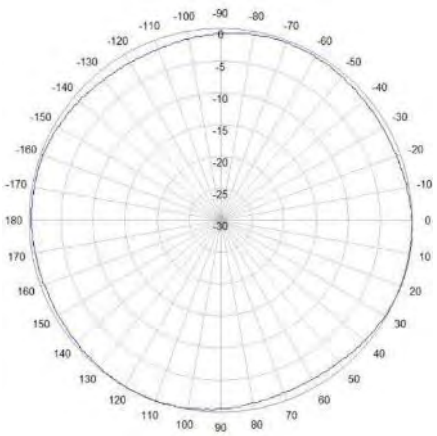
Mechanical Specifications

Application	Indoor
Mount Type	Thru-hole ceiling mount
Number of Ports, all types	2
Radome Color	White
Radome material	ABS
Dimensions	Diameter 256 * Height 125mm
Operating Temperature	-40 ° C to +60 ° C
Relative Humidity	Up to 100%
RoHS	Compliant

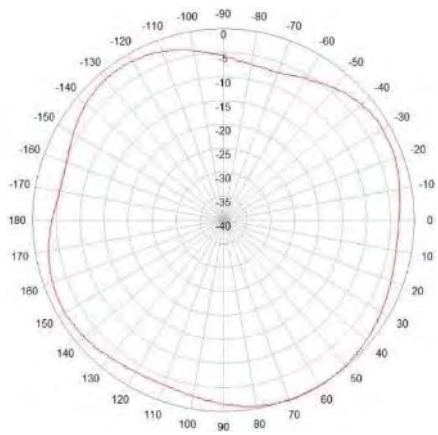
Frequency Range	698-2700
Polarization	Horizontal & Vertical
Half-Power BeamWidth	360°
Electrical Downtilt	0°

Type DUA2-2AH-0R360

Patterns

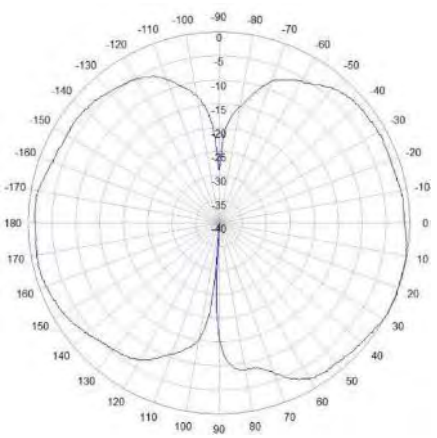


800MHz

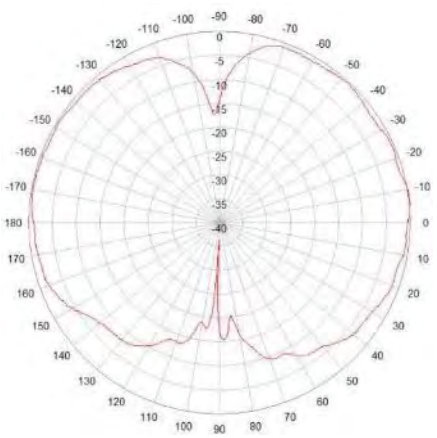


2300MHz

Horizontal



800MHz



2300MHz

Vertical

Frequency Range	698-4000
Polarization	V/H
Half-Power BeamWidth	360°
Electrical Downtilt	0°

Type DUA1-2AK-0R360

Indoor Base Station Antenna

2-ports 698–4000 MHz ,65°, 6 dBi, 0°Tilt Antenna.

Electrical Specifications

Frequency Range(MHz)	698-960	1427-1710	1710-2700	3400-4000
Horizontal Beamwidth(°)	360	360	360	360
Gain, Avg.(dBi)	4.0	4.1	4.8	5.8
Polarization	V/H			
Isolation, dB	16	18	20	30
VSWR	1.8			
Intermodulation IM3 @ 2×43dBm	-153 dBc			
Impedance	50 ohm			
Maximum input power,watts	100			

Mechanical Specifications

Mounting Type	Thru-hole ceiling mount
Number of Ports, all types	2 * 4.3-10 Female with 300mm pigtails
Radome Color	White
Radome Material	ABS
Net size, Diameter*Height	252*189*15 mm
Net weight, kg	0.43
Operating Temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Relative Humility	0 to 100%

*This antenna is not suitable for installing on metal ceiling.

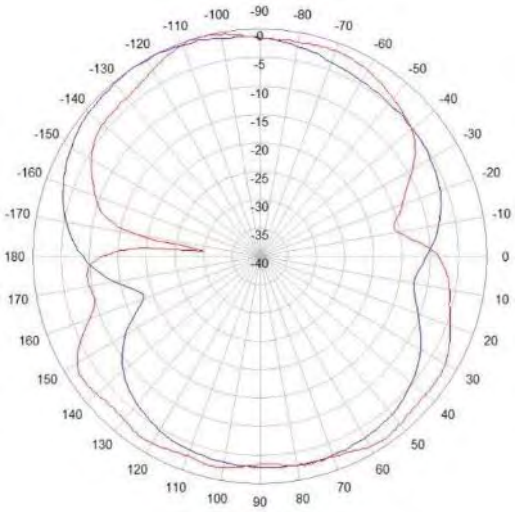
Frequency Range	698-4000
Polarization	V/H
Half-Power BeamWidth	360°
Electrical Downtilt	0°

Type DUA1-2AK-0R360

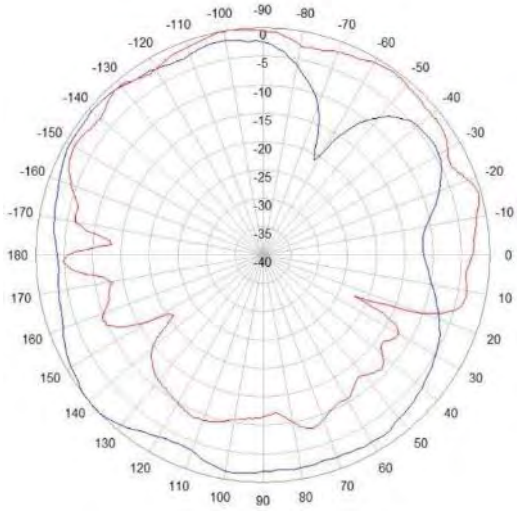
Patterns

Horizontal

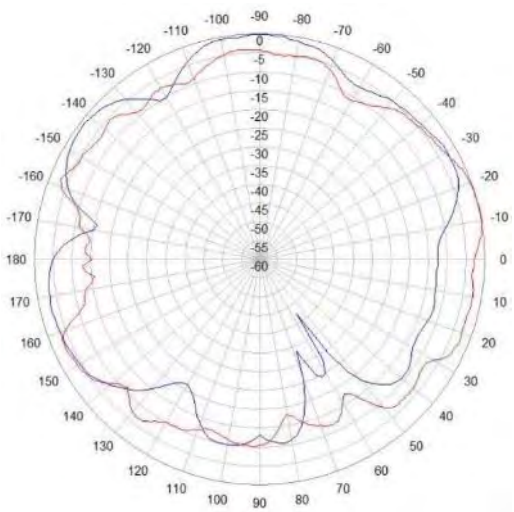
Vertical



800MHz



1800MHz



3500MHz

Frequency Range	617-2700 3300-6000
Polarization	±45°
Half-Power BeamWidth	65°
Electrical Downtilt	0°

Type DUA1-2AM-0R65

Indoor Base Station Antenna

2-ports 1695–6000 MHz ,360°, 5.5 dBi, 0°Tilt Antenna.

Electrical Specifications

Frequency Range(MHz)	1695–2700	3300–4200	4800–6000
Horizontal Beamwidth(°)	360	360	360
Gain(dBi)	4.5	6	5.5
Polarization	Linear		
Isolation, dB	17	24	
VSWR	1.8		
Intermodulation IM3 @ 2×43dBm	-153 dBc		N/A
Impedance	50 ohm		

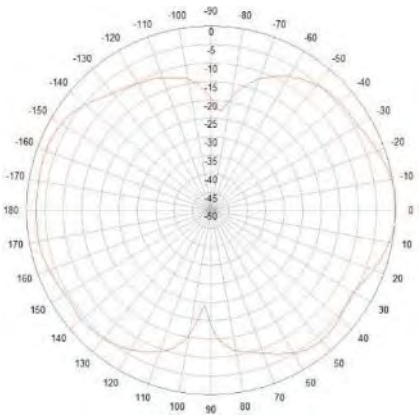
Mechanical Specifications

Application	Indoor
Mount Type	Thru-hole ceiling mount
Number of Ports, all types	2
Radome Color	White
Radome material	ABS
Dimensions	Diameter 210 * Height 14mm
Operating Temperature	-40 °C to +60 °C
Relative Humidity	Up to 100%
RoHS	Compliant

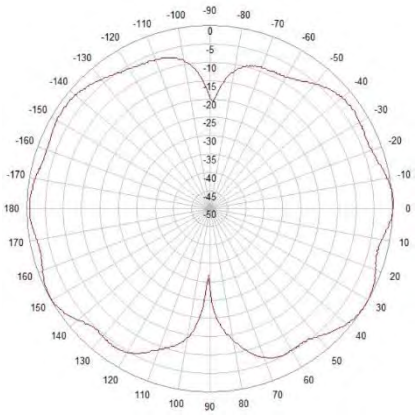
Type DUA1-2AM-0R65

Frequency Range	617-2700 3300-6000
Polarization	±45°
Half-Power BeamWidth	65°
Electrical Downtilt	0°

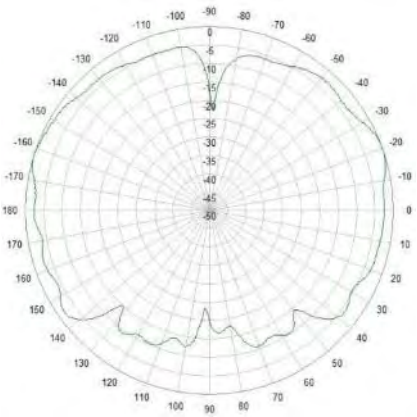
Patterns



1695-2700MHz

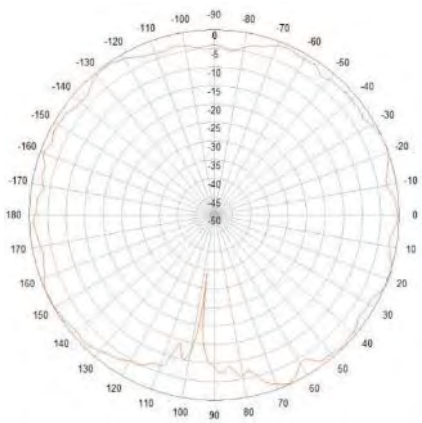


3300-3800MHz

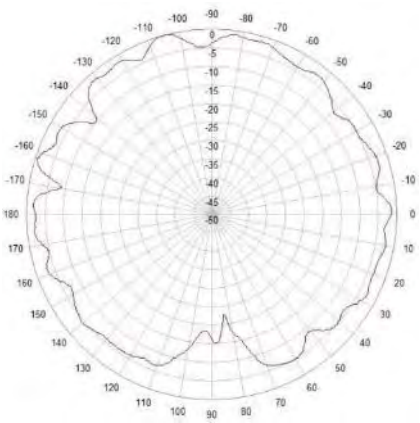


4900-6000MHz

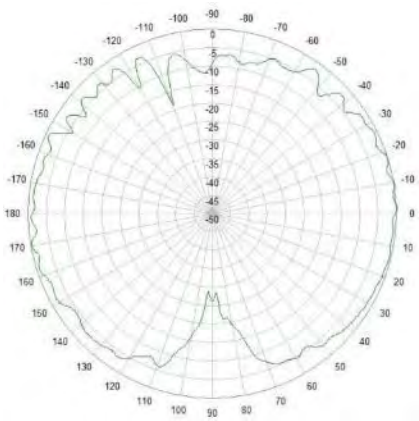
Horizontal



1695-2700MHz



3300-3800MHz



4900-6000MHz

Vertical

Frequency Range	617-2700 3300-6000
Polarization	±45°
Half-Power BeamWidth	65°
Electrical Downtilt	0°

Type QUA1-1AP1Y-0R65

Indoor Base Station Antenna

4-ports 617–2700/3300-6000 MHz ,65°, 9 dBi, 0°Tilt Antenna.

Electrical Specifications

Frequency Range(MHz)	617–800	800–960	1710–2200	2200–2700	3300-4000	4800-6000
Horizontal Beamwidth(°)	77	71	60.8	63	62	62.3
Vertical Beamwidth(°)	73	69	56.5	62.6	67.4	58.8
Gain(dBi)	7.7	7.8	8.5	8.9	7.9	8.1
Polarization	±45°					
Isolation, dB	20					
VSWR	1.8					
Intermodulation IM3 @ 2×43dBm	-153 dBc			NA		
Impedance	50 ohm					

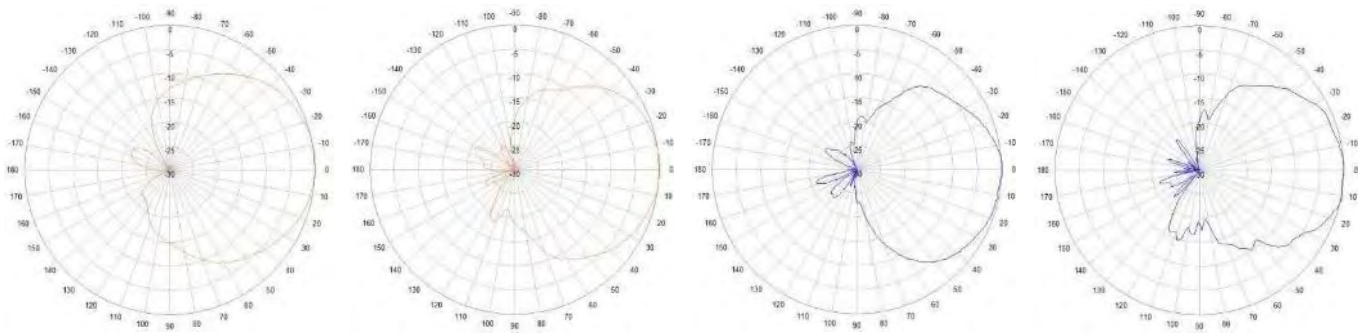
Mechanical Specifications

Application	Indoor
Mount Type	Wall mount / Pole mount
Number of Ports, all types	4 ports: 2 for 617-2700MHz, 2 for 3300-6000MHz
Radome Color	Off-white
Radome material	ABS
Dimensions, L x W x D, mm	455 * 315 * 121
Operating Temperature	-40 °C to +60 °C
Relative Humidity	Up to 100%
RoHS	Compliant

Type QUA1-1AP1Y-0R65

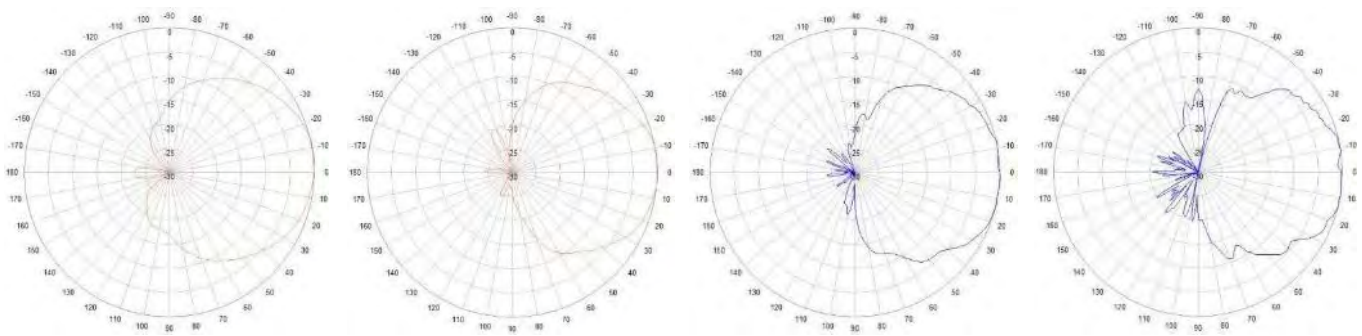
Frequency Range	617-2700 3300-6000
Polarization	±45°
Half-Power BeamWidth	65°
Electrical Downtilt	0°

Patterns



900MHz 2100MHz 3500MHz 5500MHz

Horizontal



900MHz 2100MHz 3500MHz 5500MHz

Vertical

Frequency Range	1695-2700
Polarization	±45°
Half-Power BeamWidth	65°
Electrical Downtilt	6°

Type QUA1-2J-0R65

Indoor Base Station Antenna

4-ports 1695–2700 MHz ,65°, 11 dBi, 6°Tilt Antenna.

Electrical Specifications

Frequency Range(MHz)	1695 - 1920	1921-2200	2201 - 2700
Horizontal Beamwidth(°)	80	70	66
Vertical Beamwidth(°)	43	38	33
Gain(dBi)	9.5	10.5	11
Fix down-tilt(°)	6		
F/B ratio(dB)	20		
Isolation(dB)	21		
Polarization	±45°		
VSWR	1.5		
Intermodulation IM3 @ 2×43dBm	-150 dBc		
Impedance	50 ohm		

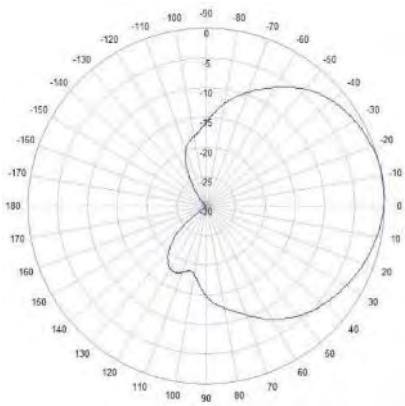
Mechanical Specifications

Application	Indoor & Outdoor
Mount Type	Wall mount / Pole mount
Number of Ports, all types	4
Radome Color	Grey
Radome material	PC
Dimensions, L x W x D, mm	200 * 200 * 45
Operating Temperature	-40 °C to +60 °C
Relative Humidity	Up to 100%
RoHS	Compliant

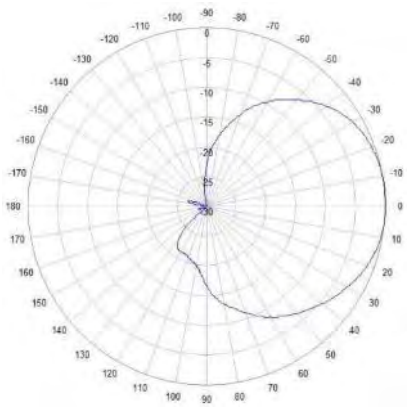
Frequency Range	1695-2700
Polarization	±45°
Half-Power BeamWidth	65°
Electrical Downtilt	6°

Type QUA1-2J-0R65

Patterns

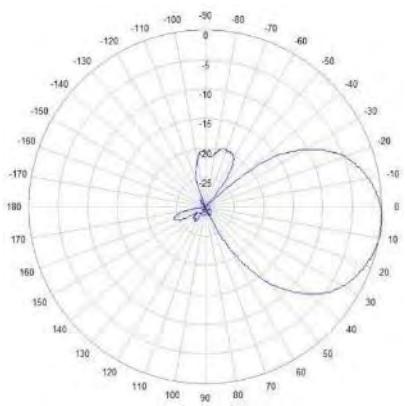


1900MHz

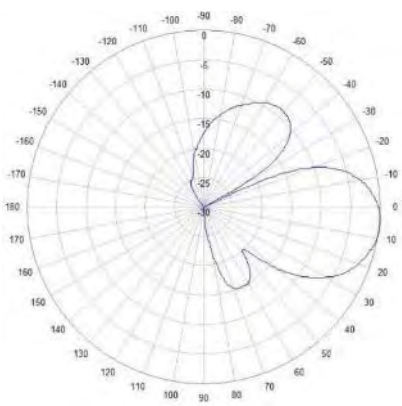


2500MHz

Azimuth



1900MHz



2600MHz

Elevation

Frequency Range	3300-4200
Polarization	±45°
Half-Power BeamWidth	65°
Electrical Downtilt	N/A

Type QUA1-2R-0R65

Indoor Base Station Antenna

4-ports 3300–4200 MHz ,65°, 1.5 dBi Antenna.

Electrical Specifications

Frequency Range(MHz)	3300 - 4200
Horizontal Beamwidth(°)	65
Vertical Beamwidth(°)	30
Gain(dBi)	10.5
Fix down-tilt(°)	N/A
F/B ratio(dB)	25
Isolation(dB)	25
Polarization	±45°
VSWR	1.5
Intermodulation IM3 @ 2×43dBm	N/A
Impedance	50 ohm

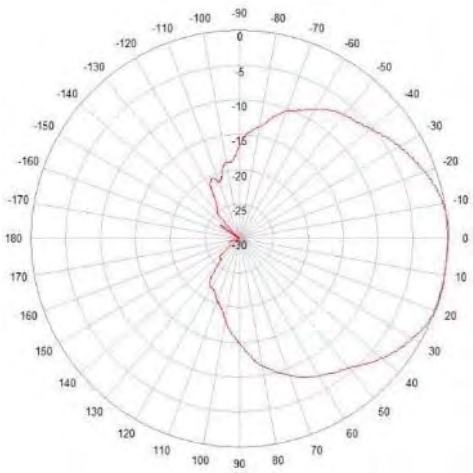
Mechanical Specifications

Application	Indoor
Mount Type	Wall mount / Pole mount
Number of Ports, all types	4
Radome Color	White
Radome material	ABS
Dimensions, L x W x D, mm	200 * 200 * 48
Operating Temperature	-40 ° C to +60 ° C
Relative Humidity	Up to 100%
RoHS	Compliant

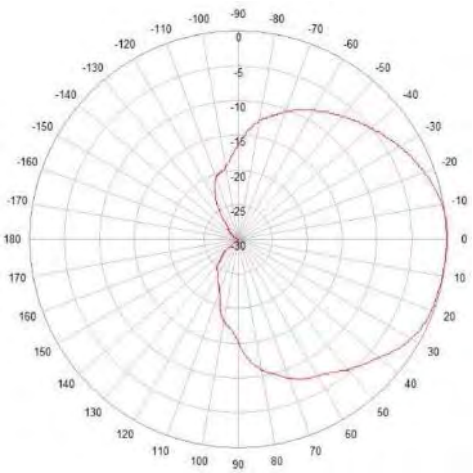
Frequency Range	3300-4200
Polarization	±45°
Half-Power BeamWidth	65°
Electrical Downtilt	N/A

Type QUA1-2R-0R65

Patterns

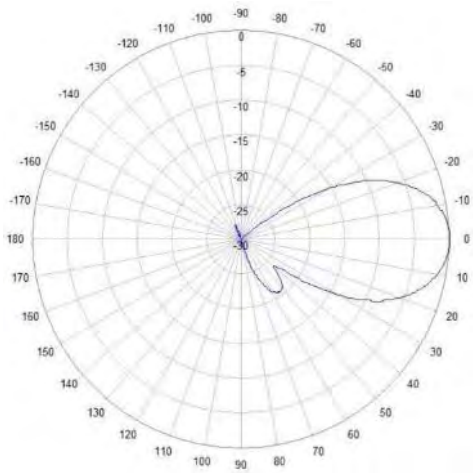


3400MHz

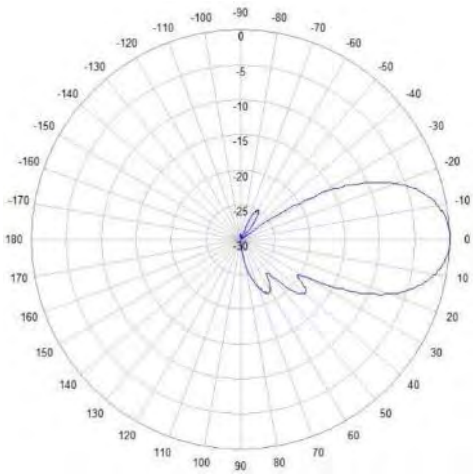


3600MHz

Horizontal



3400MHz



3600MHz

Vertical

Frequency Range	698-4000
Polarization	Linear, Horizontal
Half-Power BeamWidth	360°
Electrical Downtilt	0°

Type QUA1-4AK-0R360

Indoor Base Station Antenna

4-ports 698–4000 MHz ,65°, 8 dBi, 0°Tilt Antenna.

Electrical Specifications

Frequency Range(MHz)	698-960	1695-2700	3300-4000
Horizontal Beamwidth(°)	360	360	360
Gain, Avg.(dBi)	4.5	4.5	6.0
Polarization	Linear, Horizontal		
Isolation, dB	16	20	30
VSWR	1.8		
Intermodulation IM3 @ 2×43dBm	-153 dBc		
Impedance	50 ohm		

Mechanical Specifications

Mounting Type	Thru-hole ceiling mount
Number of Ports, all types	4 x 4.3-10 Female
Radome Color	White
Radome Material	ABS
Net size, Diameter*Height	359mm *23mm
Operating Temperature	-40 °C to +60 °C
Relative Humility	0 to 100%

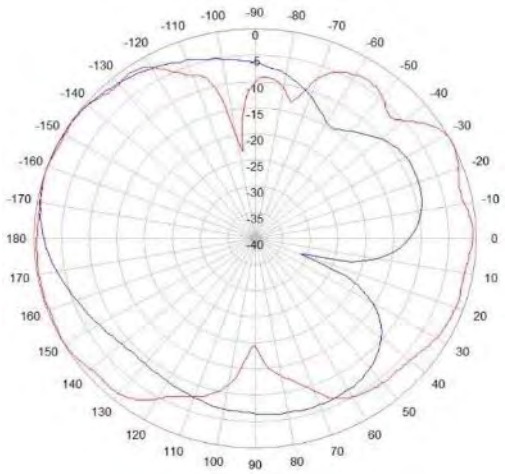
*This antenna is not suitable for installing on metal ceiling.

Frequency Range	698-4000
Polarization	Linear, Horizontal
Half-Power BeamWidth	360°
Electrical Downtilt	0°

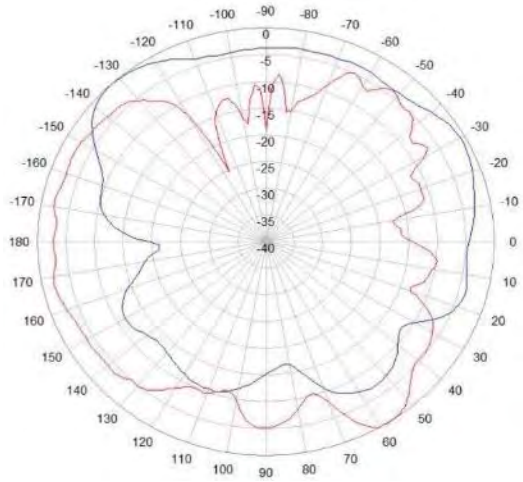
Type QUA1-4AK-0R360

Patterns

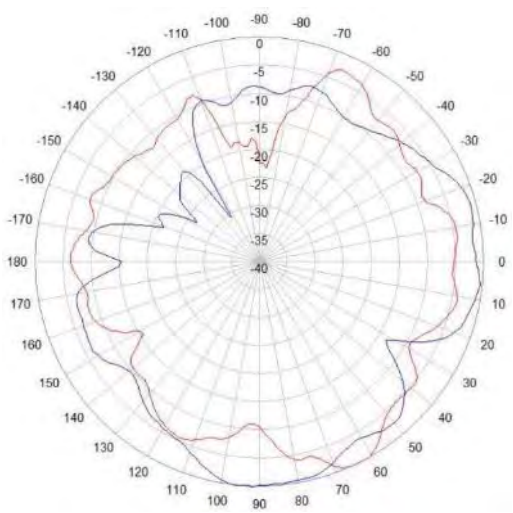
Horizontal
Vertical



900MHz



2000MHz



3500MHz

Frequency Range	1695-6000
Polarization	Linear
Half-Power BeamWidth	360°
Electrical Downtilt	0°

Type QUA1-4AM-0R360

Indoor Base Station Antenna

4-ports 1695–6000 MHz ,360°, 6.0 dBi, 0°Tilt Antenna.

Electrical Specifications

Frequency Range(MHz)	1695–2700	3300–4200	4800–6000
Horizontal Beamwidth(°)	360	360	360
Gain(dBi)	4.4	5.9	5.3
Polarization	Linear		
Isolation, dB	17	24	
VSWR	1.8		
Intermodulation IM3 @ 2×43dBm	-153 dBc		N/A
Impedance	50 ohm		

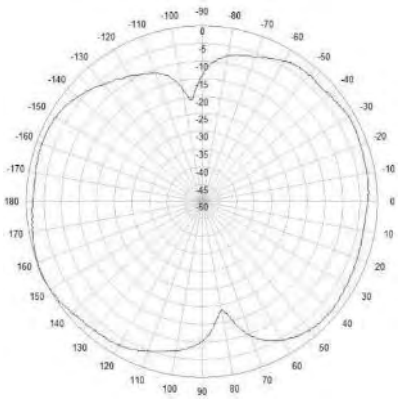
Mechanical Specifications

Application	Indoor
Mount Type	Thru-hole ceiling mount
Number of Ports, all types	4
Radome Color	White
Radome material	ABS
Dimensions	Diameter 210 * Height 14mm
Operating Temperature	-40 °C to +60 °C
Relative Humidity	Up to 100%
RoHS	Compliant

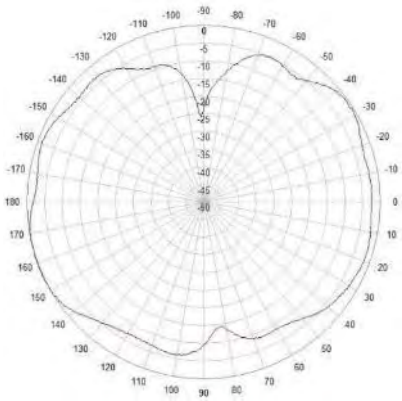
Frequency Range	1695-6000
Polarization	Linear
Half-Power BeamWidth	360°
Electrical Downtilt	0°

Type QUA1-4AM-0R360

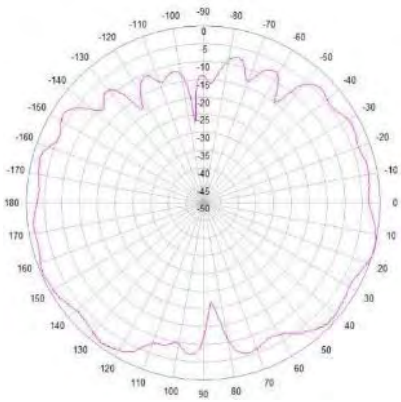
Patterns



1695-2700MHz

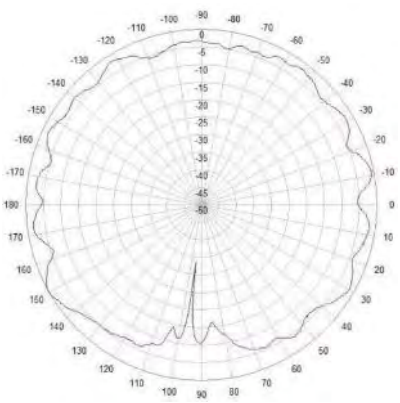


3300-3800MHz

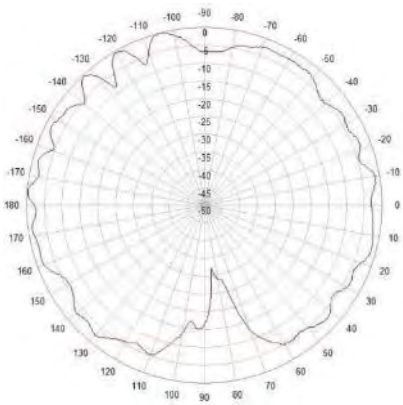


4900-6000MHz

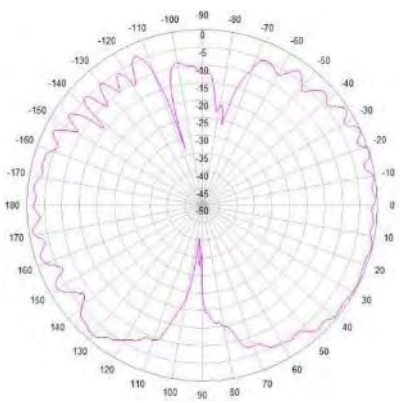
Horizontal



1695-2700MHz



3300-3800MHz



4900-6000MHz

Vertical

Frequency Range	1695-6000
Polarization	Linear
Half-Power BeamWidth	360°
Electrical Downtilt	0°

Type HEX1-2Q1V-0R65

Indoor Base Station Antenna

6-ports 2x3300-3800/5150-5925 MHz ,65°, 11.5/Meets UNII, 6°Tilt Antenna.

Electrical Specifications

Frequency Range(MHz)	3300-3800	5150-5925
Horizontal Beamwidth(°)	68	65
Vertical Beamwidth(°)	26	Meets the UNII
Gain(dBi)	11.5	Meets the UNII
Fix down-tilt(°)	6	
F/B ratio(dB)	23	20
Isolation(dB)	25	
Polarization	±45°	
VSWR	1.5	
Intermodulation IM3 @ 2×43dBm	N/A	
Impedance	50 ohm	

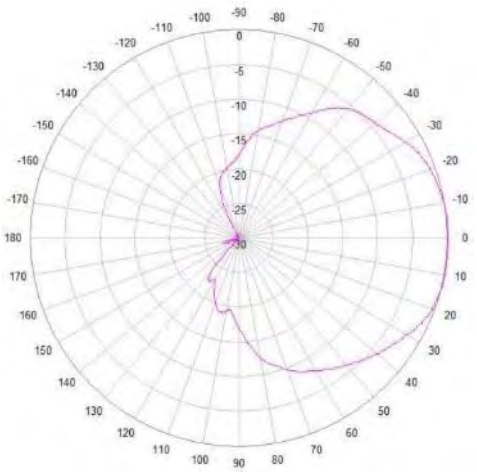
Mechanical Specifications

Application	Indoor & Outdoor
Mount Type	Wall mount / Pole mount
Number of Ports, all types	6 ports: 4 for 3300-3800MHz, 2 for 5150-5925MHz
Radome Color	Grey
Radome material	PC
Dimensions, L x W x D, mm	200 * 200 * 45
Operating Temperature	-40 °C to +60 °C
Relative Humidity	Up to 100%
RoHS	Compliant

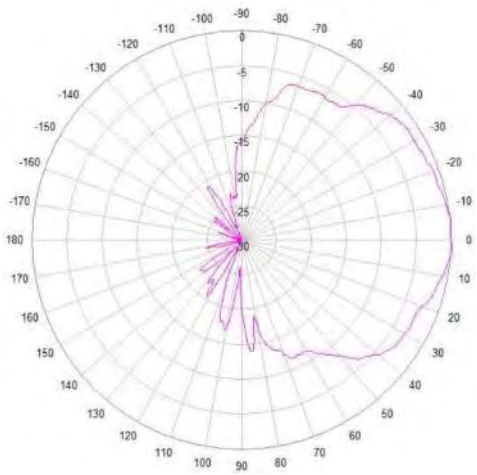
Frequency Range	1695-6000
Polarization	Linear
Half-Power BeamWidth	360°
Electrical Downtilt	0°

Type HEX1-2Q1V-0R65

Patterns

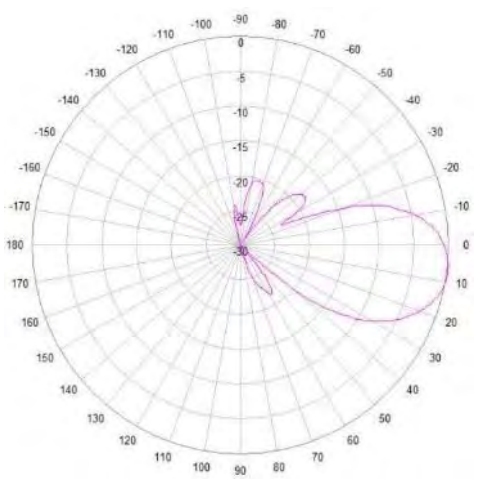


3500MHz

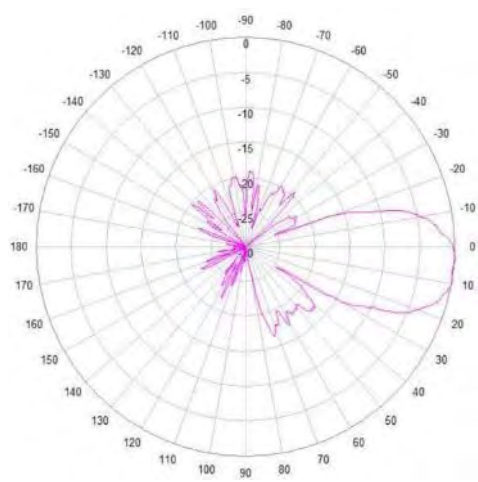


5500MHz

Horizontal



3500MHz

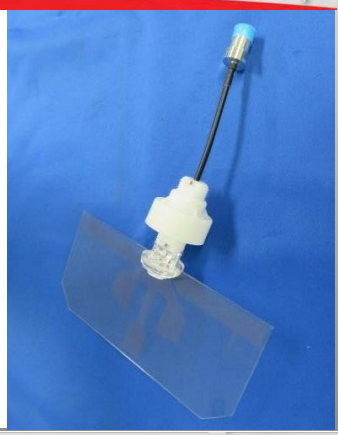


5500MHz

Vertical

Film Wrap Antennas

Transparent Antennas



When concealment and aesthetics matter.

Transparent antennas provide clear, unobstructive views, while film wrap antennas can be color/pattern matched to the room décor.

Transparent antennas feature:

- Multiple frequency bands
- High power
- Excellent PIM performance

Film Wrap antennas feature:

- Similar technology to automobile wrap
- Colors and patterns can be matched via 3M Films
- Wood Grain, Marble Veins, Patterns, and Lettering
- Simple mounting with 3M adhesive material, no hardware required

DENGYO

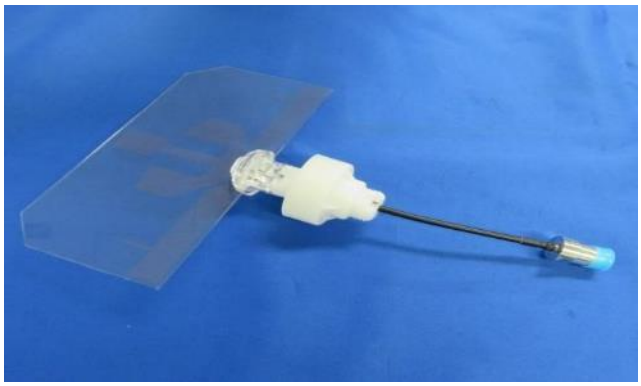
Specialty Antennas

Frequency Range	698-5850 MHz
Polarization	Vertical
Half-Power Beam Width	360°

Type GN00072

Wideband Visible Light Transmittance Antenna
Indoor Multi-band Omni Antenna Vertical Polarization

5G | LTE | Wi-Fi

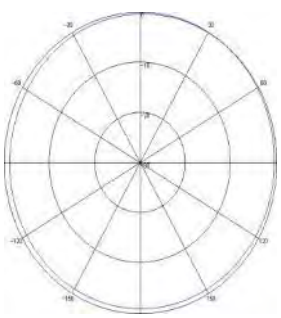


Electrical Specifications

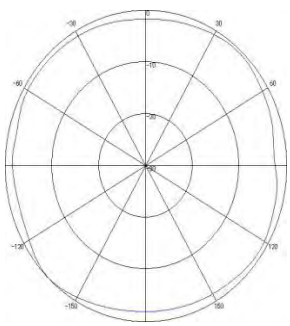
Frequency Range		698MHz ～ 5850MHz
Impedance		50Ω
Polarization		Vertical
V.S.W.R		≦ 2.0
Gain	698-960MHz	Approx. 0dBi
	1427-2170MHz	Approx. 1dBi
	2545-5850MHz	Approx. 2dBi
Max. Power per Input		2.5W
IM3		< -150dBc @1W × 2
Operating Temperature		-10 ～ +50℃
Operating Humidity		5 ～ 95%
Weight		Approx. 140g

Specifications are subject to change without notice

Horizontal Pattern

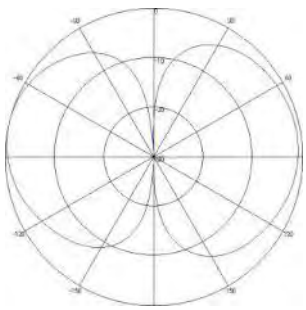


800MHz band

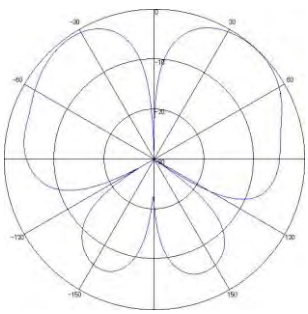


2.0GHz band

Vertical Pattern



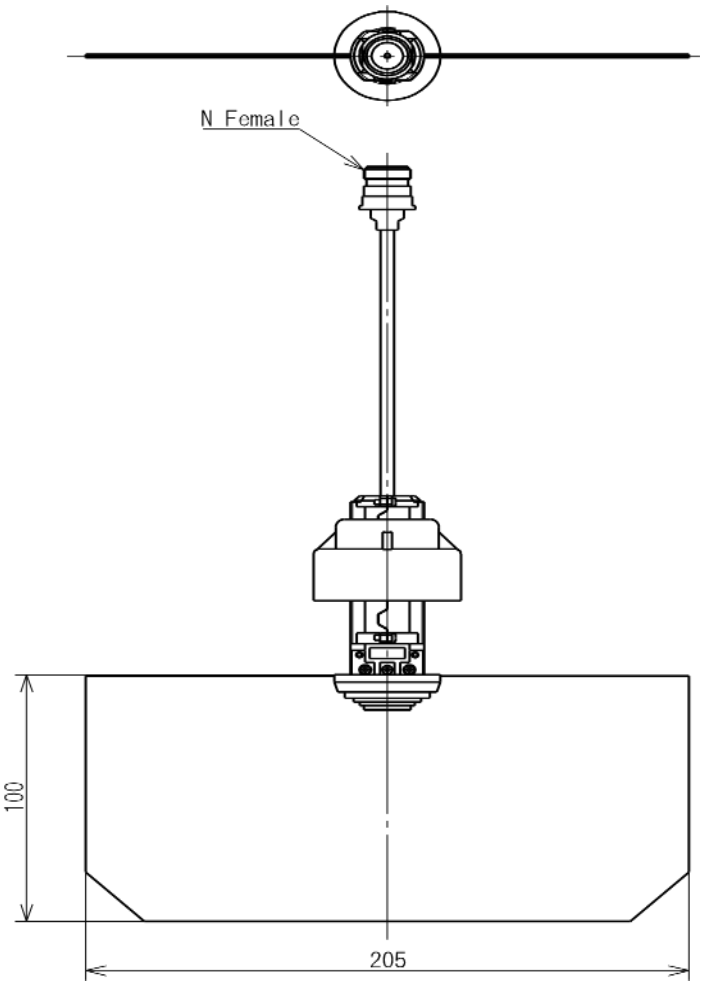
800MHz band



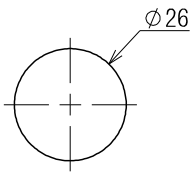
2.0GHz band

Type GN00072

Antenna Dimensions



Hole pattern in the ceiling



The design and sizes are subject to change without notice.

"Wi-Fi" is a registered trademark of Wi-Fi Alliance.

Type GN00072

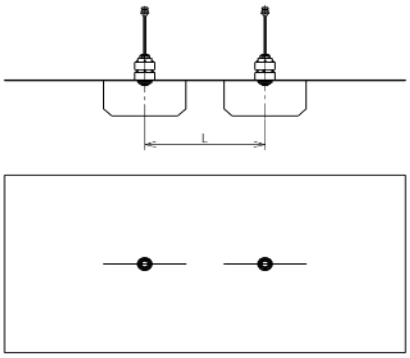
How to use as MIMO(Multiple Input Multiple Output)

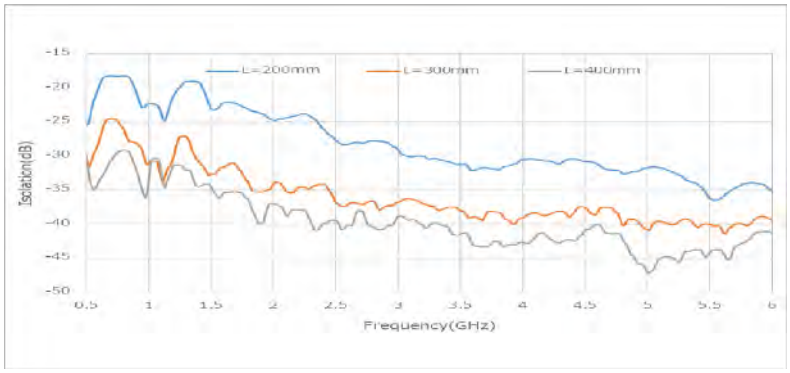
MIMO system is available by installing multiple antennas.
Isolation is related to the installation interval of antennas.
Coplanar arrangement is recommended in terms of isolation fluctuation.

Correlation between interval length and isolation

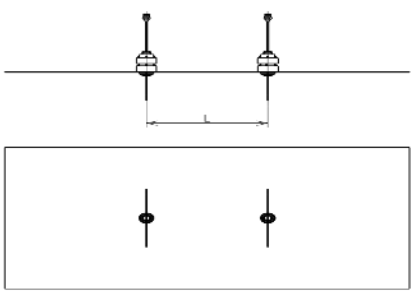
The charts below show the isolation (S21) of each frequency when the “L” (arrangement interval) is changed in Coplanar arrangement and Parallel arrangement.

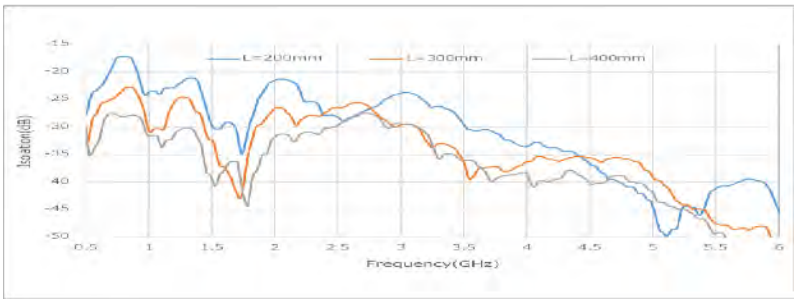
○Coplanar arrangement





○Parallel arrangement





Recommended interval (@Coplanar arrangement)

Frequency	Required interval		
	Isolation 15dB	Isolation 25dB	Isolation 30dB
1.5GHz or less	200mm	300mm	400mm
1.5GHz~2.5GHz	—	300mm	300mm
2.5GHz~3.5GHz	—	200mm	300mm
3.5GHz or higher	—	—	200mm

depending on the installation environment.

DENGYO

Specialty Antennas

Type GN00179

Frequency Range	1710-5000 MHz
Polarization	Vertical
Half-Power Beam Width	360°

Visible Light Transmittance Antenna (VLTA)
Indoor Multi-band Omni Antenna Vertical Polarization [V × 2]

GN00179 Duo without Spacer *GN00179 with Optional Spacer*

- Transparent
- Unobstructive ceiling mount
- Wide band 1710 MHz to 5Ghz
- Dual Antenna for MIMO configurations
- Excellent PIM <-153 dBc
- Suitable for 2G/3G4G/5G and WIFI applications

Electrical Specifications

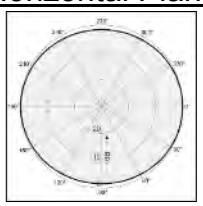
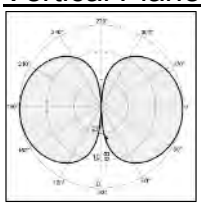
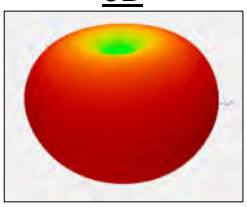
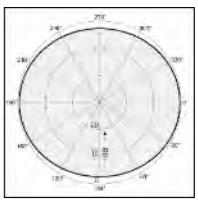
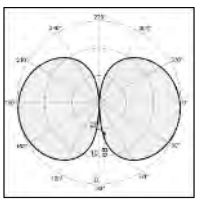
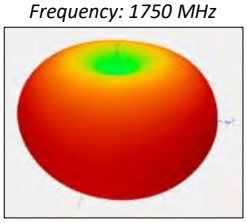
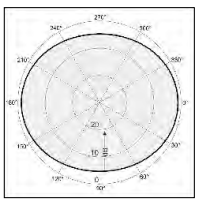
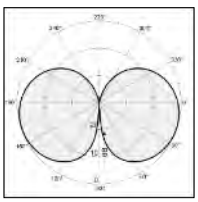
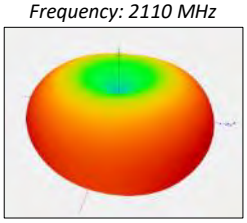
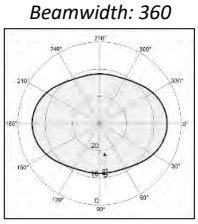
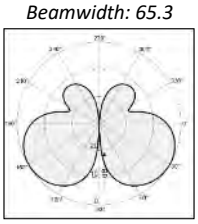
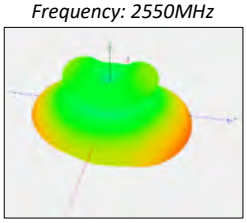
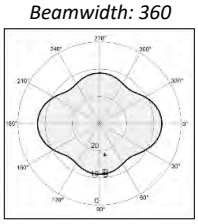
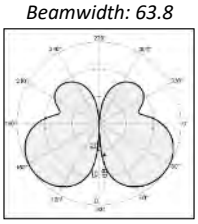
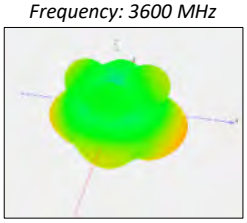
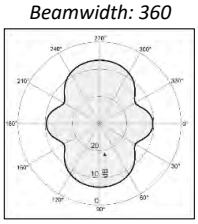
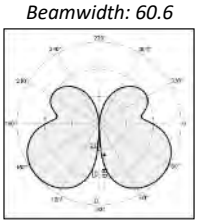
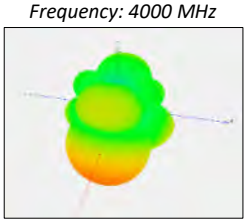
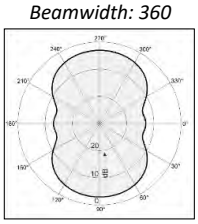
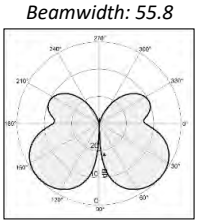
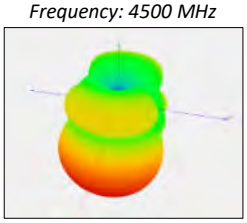
Frequency (GHz)	1.71-1.85	1.85-2.0	2.0-2.2	2.2-2.4	2.4-2.7	3.3-4.2	4.2-5.0	5.0- 6.0 (Note 1)
Impedance	50Ω							
Polarization	Vertical ×2							
V.S.W.R	≦ 1.5							2.4
Gain (max.)	3.7	5.4	4.3	5	5.8	6.8	6.5	6.0
Gain (avg.)	3	4.4	3.7	4.1	4.4	6.1	5.4	5.0
Horizontal 3dB Beamwidth	360 degree - Omni							
Vertical 3dB Bandwidth	See Plots Below							
Isolation	>25dB							
Max. Power	50 Watts @ each port							
IM3	< -153dBc (2x 43 dBm)							

(Note 1: Specifications in this band provided as reference only.)

Mechanical Specifications

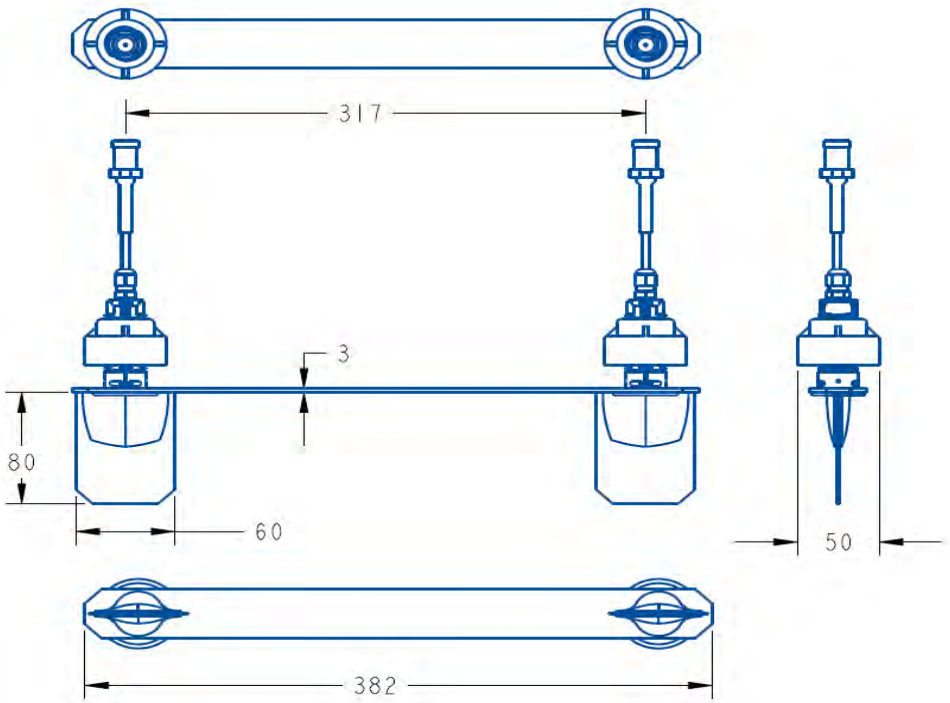
Operating Temp	-30℃ ～ +70℃
Operating Humidity	5% ～ 95%
Weight	Approx. 250 grams
Dimensions: -Antenna -length -Thickness	 -60x80 mm -387 mm -38 mm
Environment	Indoor
RoHS	Compliant
Materials: -Antenna -Nut /threaded post	 Polycarbonate Polyoxymethylene
Color	Transparent
Connector	4.3-10 Female

Type GN00179

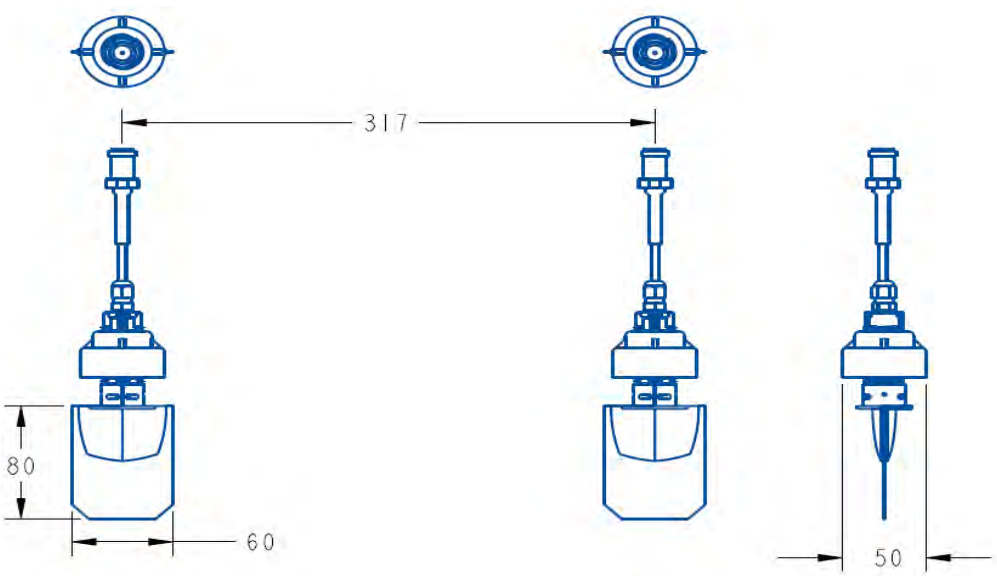
Horizontal Plane	Vertical Plane	3D
		
Beamwidth: 360	*Beamwidth: 79.5*	*Frequency: 1750 MHz*
		
Beamwidth: 360	*Beamwidth: 73.7*	*Frequency: 2110 MHz*
		
Beamwidth: 360	*Beamwidth: 65.3*	*Frequency: 2550MHz*
		
Beamwidth: 360	*Beamwidth: 63.8*	*Frequency: 3600 MHz*
		
Beamwidth: 360	*Beamwidth: 60.6*	*Frequency: 4000 MHz*
		
Beamwidth: 360	*Beamwidth: 55.8*	*Frequency: 4500 MHz*
		
Beamwidth: 360	*Beamwidth: 52.1*	*Frequency: 5000 MHz*

Type GN00179

Antenna Dimensions GN00179 With Spacer



Antenna Dimensions GN00179 Without Spacer



The design and sizes are subject to change without notice.

Type GN00179

Installation Instruction

Note Before Installation

Read this Installation Instruction carefully in advance, and then install the equipment correctly.
Professional knowledge and experiences are necessary to assemble and install the equipment. In case the equipment is handled by an unprofessional or unexperienced person and consequently the person is injured or damages the equipment, our company will not take any responsibility.

For Safety Usage

This instruction shows items, which must be observed, to protect you and other people from harming or damaging assets before they happen and to use the equipment safely. Please read this instruction carefully and use the equipment safely.

⚠ Warning

If mishandling the equipment by disregarding the warnings, there is possibility of death or are severe injury.

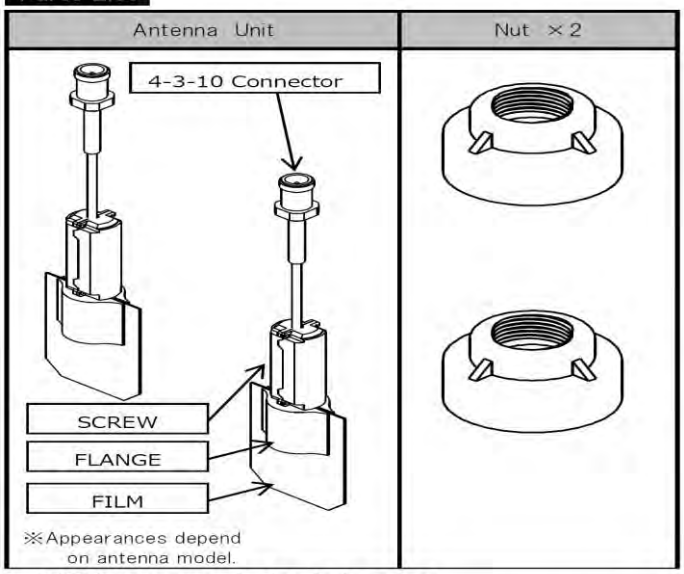
- Do not handle the equipment if not experienced and trained as special knowledge is required.
- Do not use the equipment beyond the specified range in the specification sheet as there is risk of overheat or fire.
- Do not install the antenna on a place where there is much vibration or shock as there is risk of falling or trouble of the antenna.
- Do not put anything on the equipment or add on it as there is fear of falling or problems with the antenna due to being transformed or damaged.
- Inspect the installed equipment's condition after having a gale, an earthquake, or a thunder. In case the installation is imperfect, it could cause dropping or problems with the equipment.

⚠ Caution

If mishandling the equipment by disregarding the caution, there is possibility or injury to persons or that materials are damaged.

- Do not disassemble the equipment.
- Do not approach the vicinity of an antenna that is radiating a radio wave as there is fear of harmful influence upon human health.

Parts List



※This antenna is for indoor use.
※Nuts are attached to the antenna at the time of shipment.

Before Installation

◆Cut two holes as shown in Fig.1 at the appropriate place to mount the antenna.
※Note that the distance between two holes depends on the antenna model.
◆Remove the nut from the base.

⚠ Precise hole drilling is required to avoid the antenna distortion.

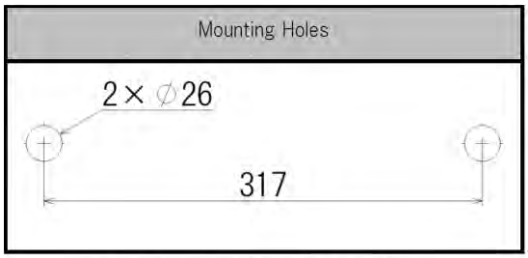


Fig.1 Mounting Holes :Size and Pitch

Installing the Antenna

Install the antenna in accordance with the following instructions (see Fig.2).

1. Lift the antenna with holding the flange or the screw in your hand. If the film is held, the antenna might be damaged.

2.Feed the coax leads through holes in the ceiling board and attach the antenna under the ceiling.

3. Feed the coax leads through the nut and place the nuts above the ceiling to secure the antenna.

4. Remove the masking film from the antenna

⚠ Tighten the nut securely by hand in step 3 above. If the tightening is too loose, the antenna might fall. Hold the external thread with hand to prevent antenna rotation. If you hold the antenna body (beneath the ceiling) directly with hand, the antenna might be damaged.

[Reference] Early on in step 3, after the seat face of the nut touches the upper surface of the ceiling and friction happens, additional tightening by more than 45 degree (1/8 turn)is recommended.
The additional tightening should be carefully done in order not to damage the ceiling.

⚠ Do not feed more power than specified value to avoid damaging the antenna.

⚠ If connectors are tightened too much or not enough, the equipment may not function as desired.
[Reference] Tightening Torque of 4.3-10 connector: 5.0 -7.0 Nm

⚠ If the antenna cable is subjected to an excessive load, the damage may occur. An appropriate way to lessen the load, such as the cable bundling, is recommended.

⚠ If the greasy dirt gets attached to the antenna, wipe it off with a soft cloth soaked with isopropyl alcohol or ethanol. If the other type of dirt is attached heavily, wipe it off with a sponge soaked with neutral detergent. If the dirt is wiped off where the dust remains on the antenna surface, the antenna tends to scar.

Maintenance & Inspection

◆Inspection interval:
Usually once a year.
Immediately after the emergency (e.g. a huge earthquake).
◆Inspection items:
①Antenna
Check the antenna appearance.
Check the tightening status of nut, and retorque it as needed.

②Cable & Connector
Check whether the cable has scratches or other physical damage.
Check whether the connectors are loosely fastened, and retorque them as needed

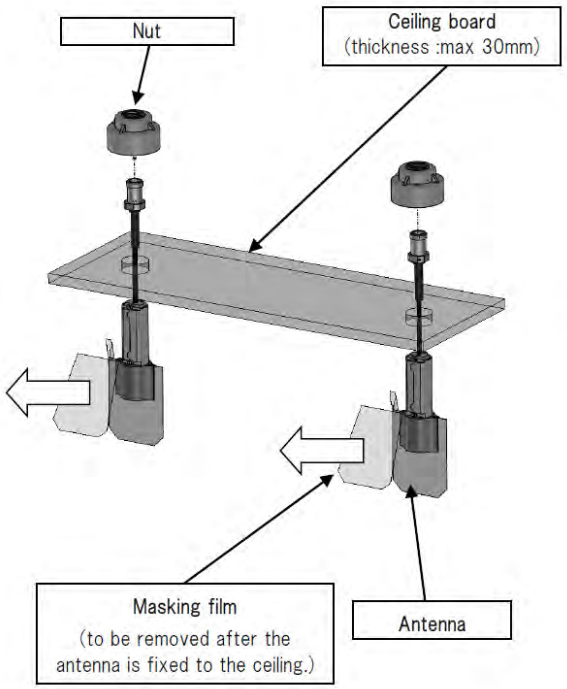


Fig.2 Installation Procedures

Product Warranty Period: 1 year after delivery
There are no guarantee entitlements in the following cases even if the equipment is within the warranty period.

- -If the customer has handled the equipment in any other way than described in this manual, with his carelessness, or with his fault,
- -If the problem has been caused by something other than our product,
- -If it is determined that the problem occurrence could be avoided in the case that the inspection, specified in this manual is properly conducted,
- -If the problem cause is due to force majeure like a fire,
- -If the problem is the antenna tarnish due to ultraviolet rays,
- -If the trouble is due to corrosion of equipment under the environments of corrosive gas, organic solvent, or chemical solution,

Frequency Range	617-7200
Polarization	Horizontal
Half-Power Beam Width	360°

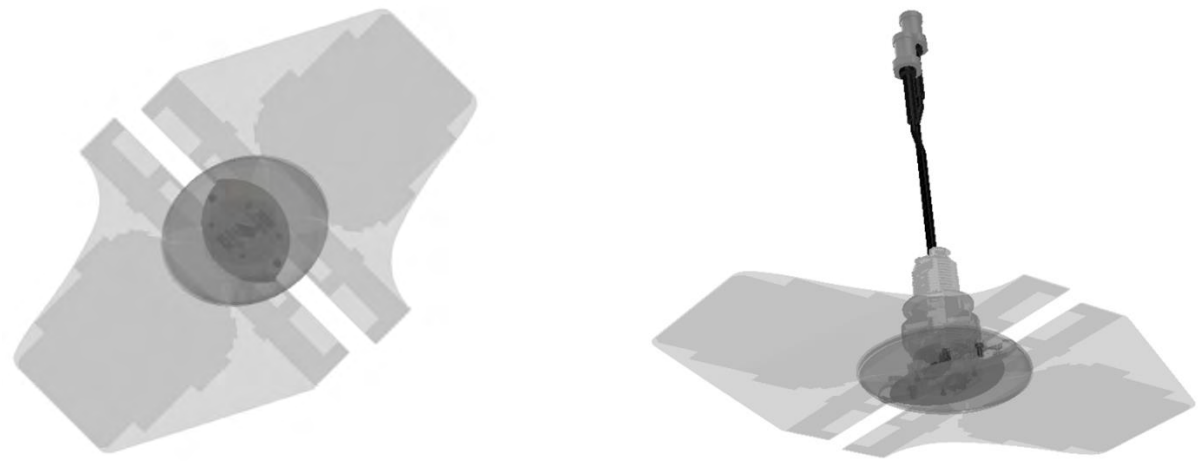
Type VT-M0672-002

NINJA ANTENNA™

-Seamless Integration with the Environment and High-Speed Communication-

Transparent Antenna

Indoor Multi-band Omni Antenna Horizontal Polarization [H*2]



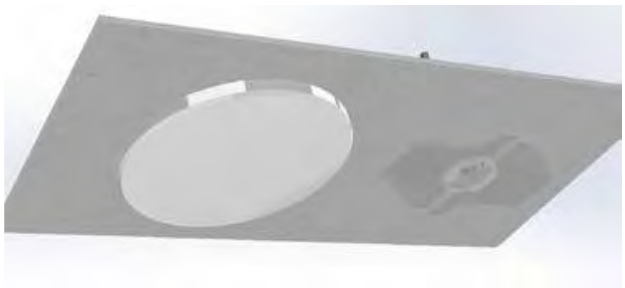
Specifications

Frequency Band [MHz]	617-960	1427-2170	2545-5850	5850-7200
Impedance	50Ω			
Polarization	Horizontal			
VSWR	≦ 2.0			
Gain	2 dBi	3 dBi	4 dBi	5 dBi
Isolation	> 15dB	> 17dB	> 20dB	
Max. Power per Input	50W			
IM3	< -150dBc @20W×2			
Operating Temperature	-30 ~ +70℃			
Operating Humidity	5 ~ 95%			
Weight	400g			
Dimensions	355mm x 240mm			

Frequency Range	617-7200
Polarization	Horizontal
Half-Power Beam Width	360°

Type VT-M0672-002

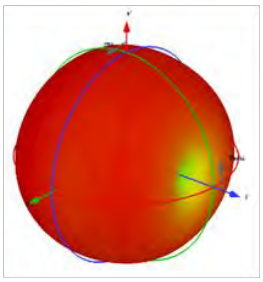
Installation Picture



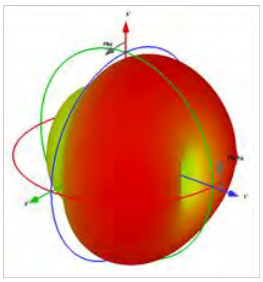
Ordinary Antenna vs Transparent Antenna

Radiation Patterns

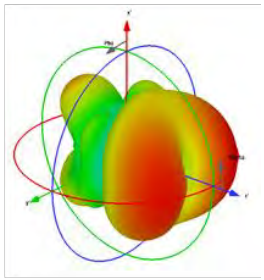
0.617GHz



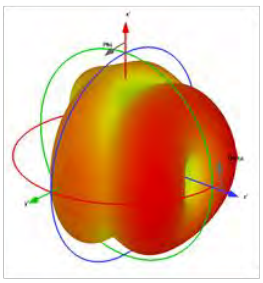
0.96GHz



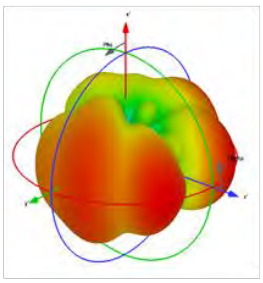
1.5GHz



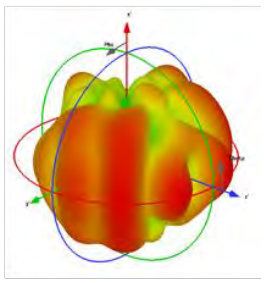
2.11GHz



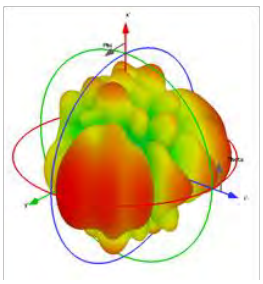
2.55GHz



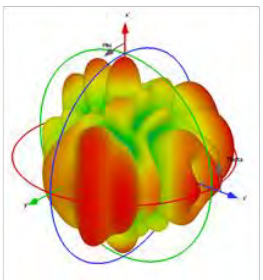
3.6GHz



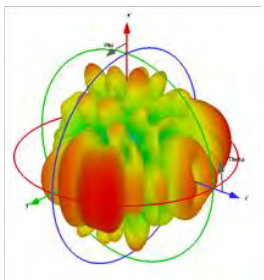
5GHz



6GHz



7.2GHz



Frequency Range	1710-7200
Polarization	Horizontal
Half-Power Beam Width	360°

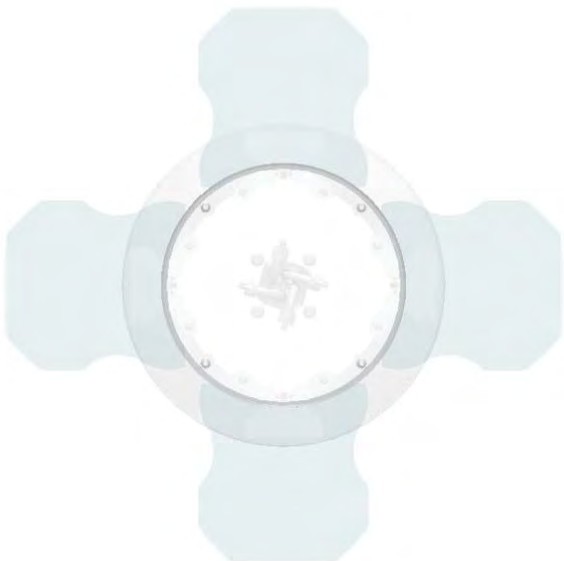
Type VT-M1772-002

NINJA ANTENNA™

-Seamless Integration with the Environment and High-Speed Communication-

Transparent Antenna

Indoor Multi-band Omni Antenna Horizontal Polarization [H*4]



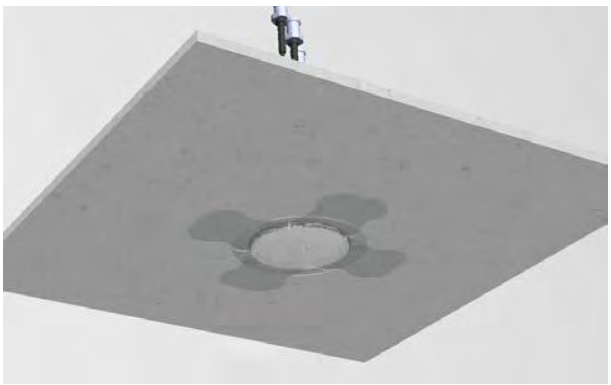
Specifications

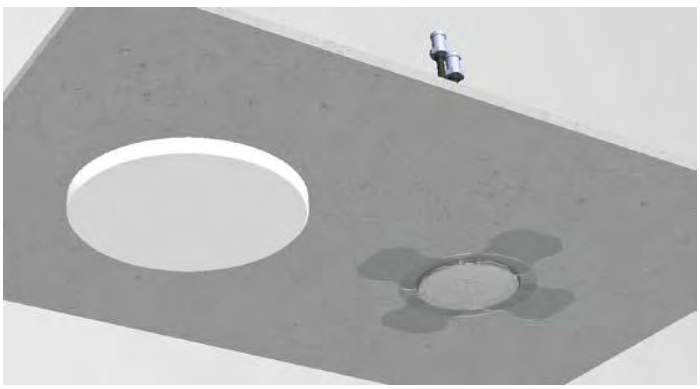
Frequency Band [MHz]	1710-1850	1850-2700	2700-5000	5000-7200
Impedance	50Ω			
Polarization	Horizontal			
VSWR	≦ 2.0			
Gain	3 dBi	4 dBi	5 dBi	
Isolation	> 15dB		> 17dB	> 18dB
Max. Power per Input	50W			
IM3	< -150dBc @20W×2			
Operating Temperature	-30 ~ +70℃			
Operating Humidity	5 ~ 95%			
Weight	400g			
Dimensions	230mm x 230mm			

Frequency Range	1710-7200
Polarization	Horizontal
Half-Power Beam Width	360°

Type VT-M1772-002

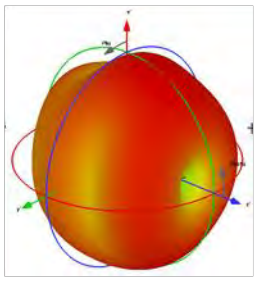
Installation Picture



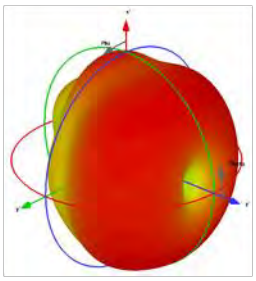


Radiation Patterns

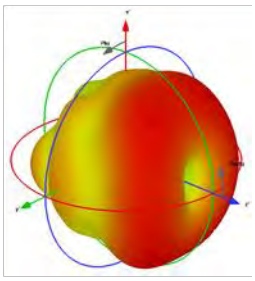
1.75GHz



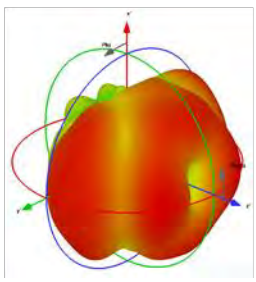
2.55GHz



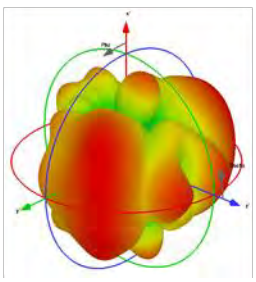
3.6GHz



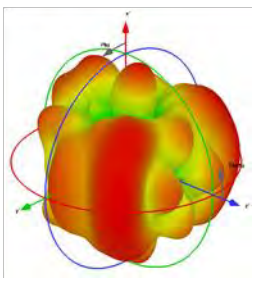
5GHz



6.5GHz



7.2GHz



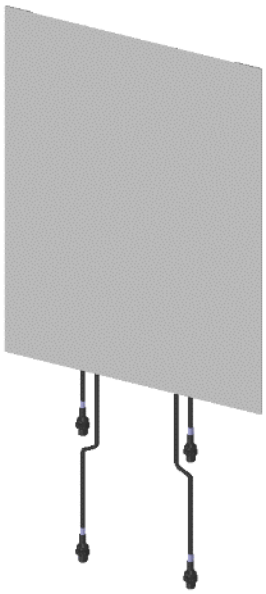
DENGYO

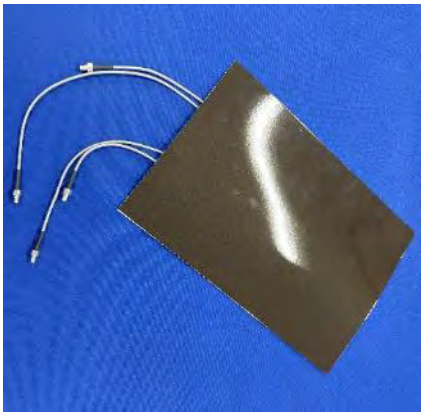
Specialty Antennas

Frequency Range	3400-4100
Polarization	±45°
Half-Power Beam Width	70°

Type GS00190

3.5GHz 4MIMOFilm Wrap Sector Antenna
Single -band 3400-4100 MHz , 70° , 9dBi, 0° Tilt
Flexible / Adhesive / Easily Concealed / Invisible

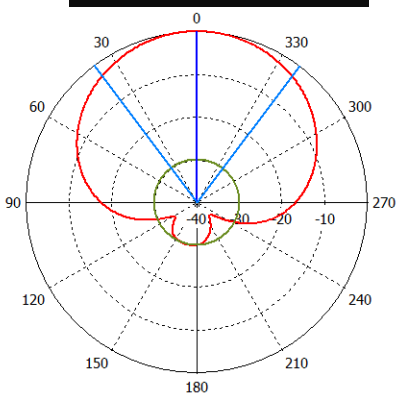




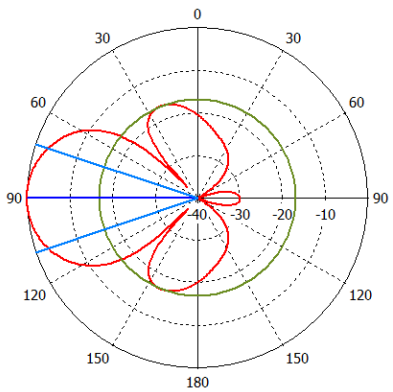
Electrical Specifications

Frequency Range	3400MHz ～ 4100MHz
Half-Power Beam Width	Horizontal:70° Vertical:35°
Impedance	50Ω
Polarization	±45°
V.S.W.R	≦ 2.0
Gain	Approx. 9dBi
Electrical Down tilt	0°
Max. Power per Input	20W
Operating temperature limit	-30~60 deg C
Dust / Water resistance	IEC 60529 IPX5
Weight	Approx. 200g

Horizontal Pattern



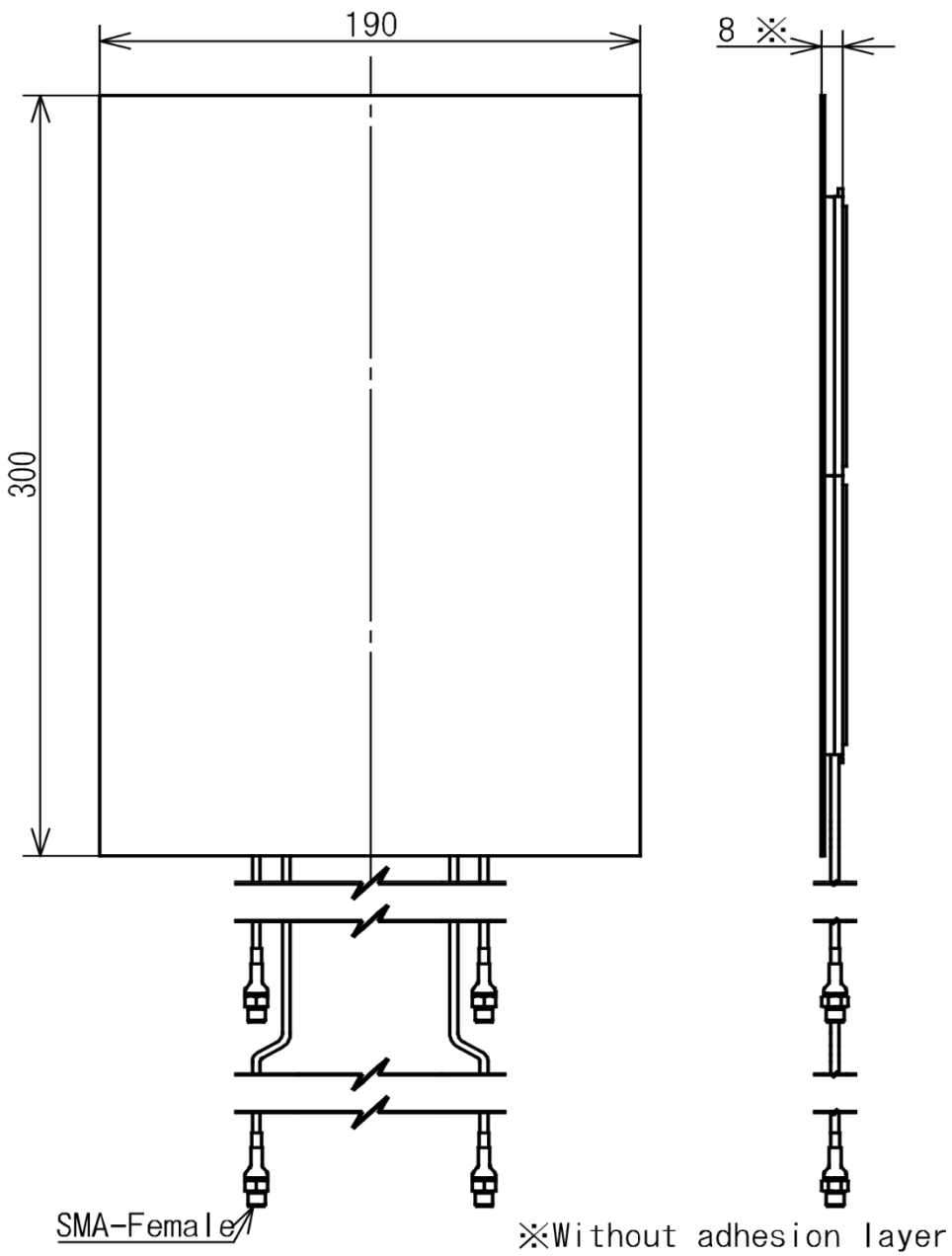
Vertical Pattern



Specifications are subject to change without notice

Type GS00190

Antenna Dimensions



The design and sizes are subject to change without notice.

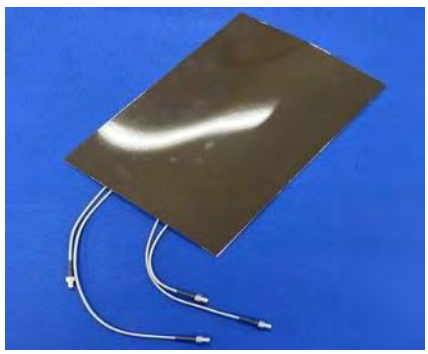
Specialty Antennas

Frequency Range	4400-4900
Polarization	±45°
Half-Power Beam Width	70°

Type GS00191

4.7GHz 4MIMO Film Wrap Sector Antenna
Single -band 4400-4900 MHz , 70° , 9dBi, 0° Tilt
Flexible / Adhesive / Easily Concealed / Invisible

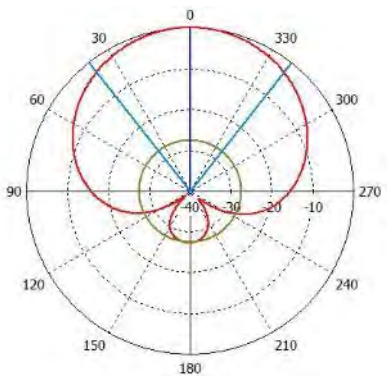
Under Development



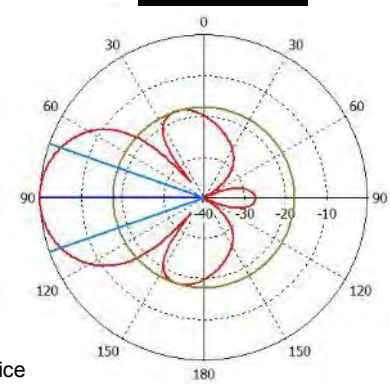
Electrical specifications

Frequency Range	4400MHz ～ 4900MHz
Half-Power Beam Width	Horizontal:70° Vertical:30°
Impedance	50Ω
Polarization	±45°
V.S.W.R	≦ 2.0
Gain	Approx. 9dBi
Electrical Down tilt	0°
Max. Power per Input	20W
Operating temperature limit	-30~60 deg C
Dust / Water resistance	IEC 60529 IPX5
Weight	Approx. 200g

Horizontal Pattern



Vertical Pattern

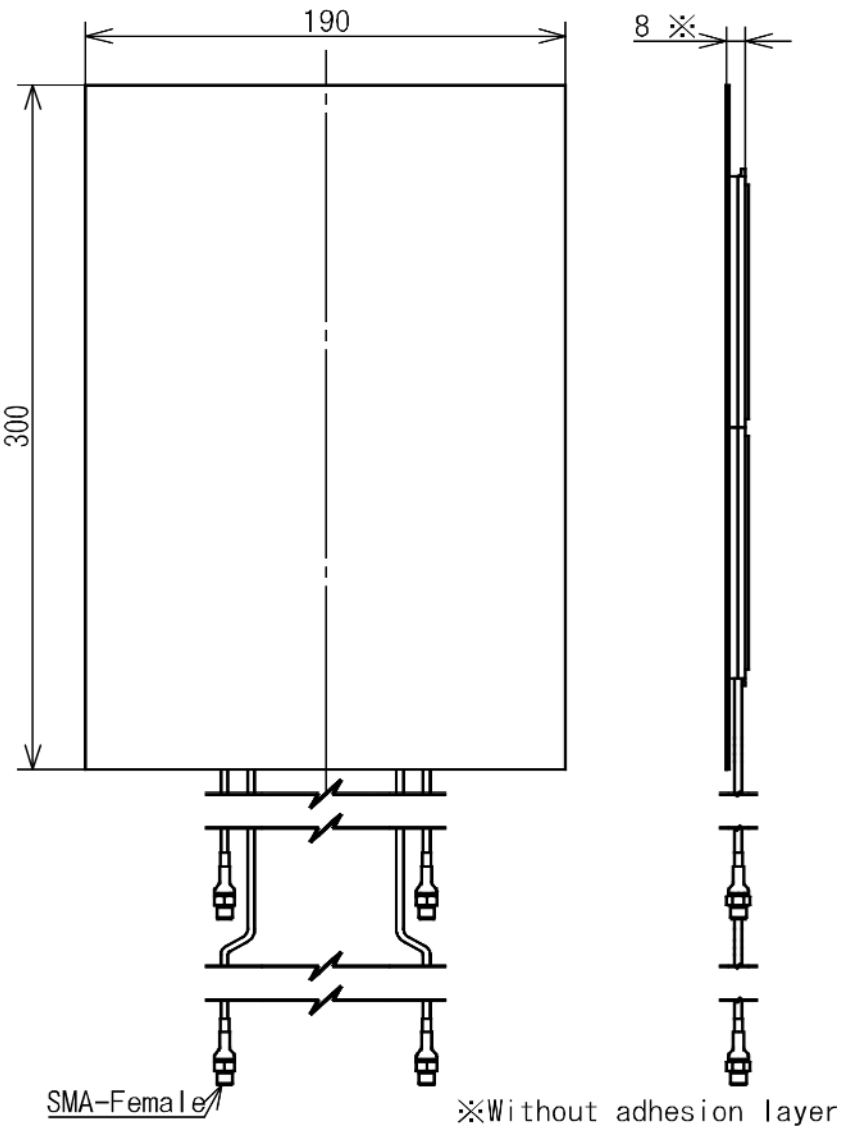


Specifications are subject to change without notice

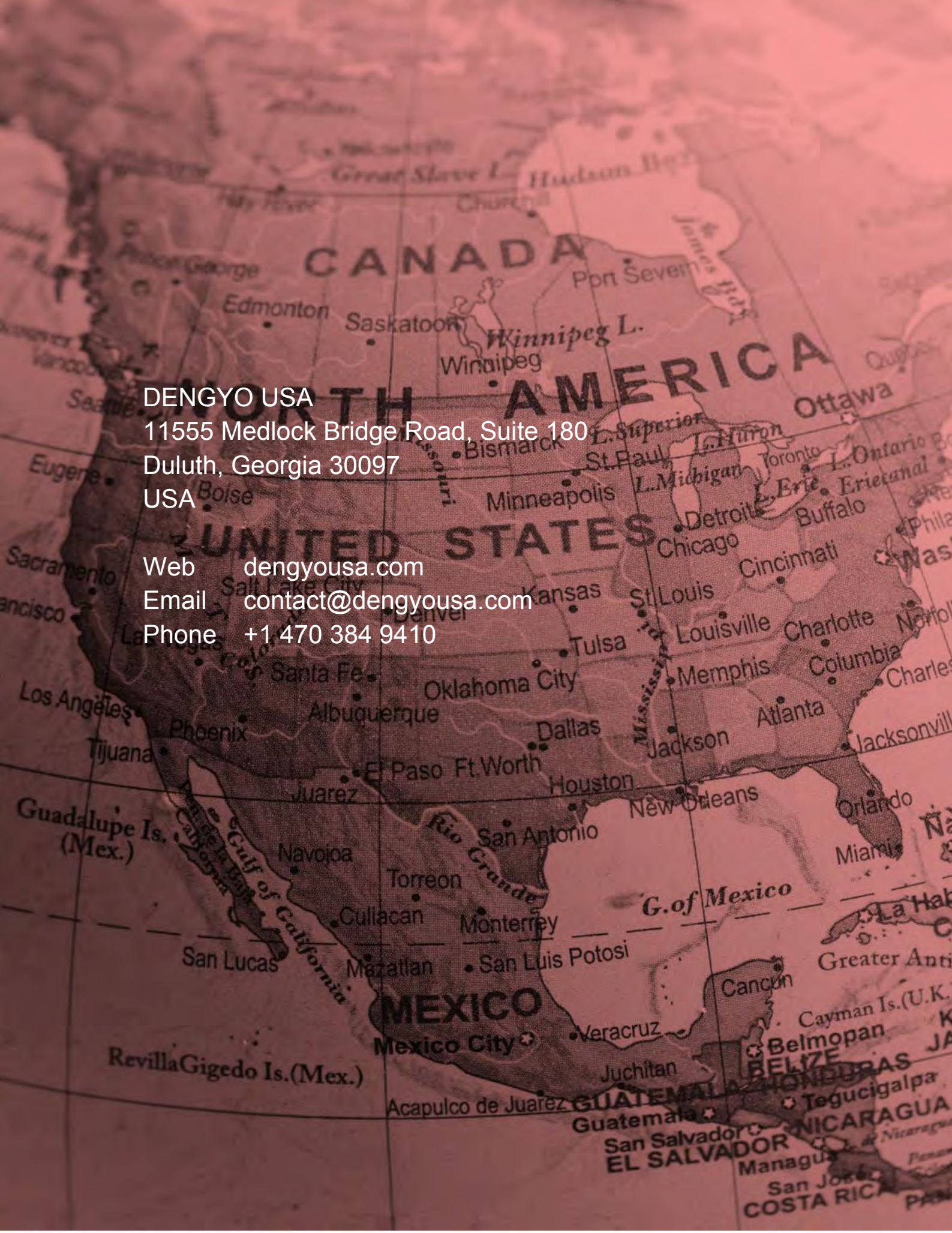
Type GS00191

Antenna Dimensions

Under Development



The design and sizes are subject to change without notice.



DENGYO USA
11555 Medlock Bridge Road, Suite 180
Duluth, Georgia 30097
USA

Web dengyousa.com
Email contact@dengyousa.com
Phone +1 470 384 9410