



CYL4Q24GR-1xyz

NWAV™ Cylinder Antenna

24-port cylinder antenna 698-5925 MHz:

4 ports 698-960, 12 ports 1695-2690 MHz, 4 ports 3400-4200 MHz, and 4 ports 5150-5925 MHz

- Small Cell Omni antenna with integrated GPS unit
- Future-proof design to support up to 4200 MHz for LS6 spectrum
- Optimal 3400-4200 MHz gain to realize EIRP limit
- Supports multi-carrier deployments with 4x4 MIMO capability with all bands
- Excellent cross-polar discrimination for enhanced MIMO performance
- Center-mounted lift ring for easy installations



	GPS band	Low band		Mid band						CBRS/LS6		LAA band		
Frequency bands, MHz	1575.42	(2x) 696-960		(6x) 1695-2690						(2x) 3400-4200		(2x) 5150-5925		
Array	--	■ R1	■ R2	■ Y1	■ Y2	■ Y3	■ Y4	■ Y5	■ Y6	■ P1	■ P2	■ O1	■ O2	
Connector	1 PORT	4 PORTS		12 PORTS						4 PORTS		4 PORTS		
Polarization	RH CIR.	XPOL		XPOL						XPOL		XPOL		
Horizontal beamwidth (HBW), degrees ¹	--	360		360						360		360		
Electrical downtilt (EDT), degrees ¹	--	0		2, 4, 6						0		10		
Configuration	Omni antenna with integrated GPS unit													
Connector type	(24x) 4.3-10 female and (1x) N-type female for GPS													
Dimensions, in. (mm)	48.0/ 14.6 (1219.2/ 370.8)													
Maximum composite power, watts (all ports)	1000													
Radome color	Gray (Pantone 420C)			Brown (Pantone 476C)						Black (RAL 9011)				



Electrical specifications Low Band ■ R1 ■ R2

Frequency range, MHz	(2x) 698-960
Polarization	(2x) ± 45°
Gain, BASTA, dBi	2.6 ± 0.5
Gain, MAX, dBi	3.2
Horizontal beamwidth (HBW), 3 dB, degrees ¹	360
Vertical beamwidth (VBW), 3dB, degrees ¹	76.5
Electrical downtilt (EDT), degrees	0
Impedance, ohms	50
VSWR	≤ 1.5:1
PIM, 2x20W carrier, dBc	< -153
Isolation, intra-band, dB	>25
Isolation, inter-band, dB	>28
Input power per port, watts	150

Electrical specifications Mid Band ■ Y1 ■ Y2 ■ Y3 ■ Y4 ■ Y5 ■ Y6

Frequency range, MHz	(6x) 1695-2690			
Frequency sub-range, MHz	1695-1880	1850-1990	1920-2200	2300-2690
Polarization	(6x) ± 45°			
Gain, BASTA, dBi	7.2 ± 0.4	7.6 ± 0.6	8.1 ± 0.5	8.9 ± 0.3
Gain, MAX, dBi	7.6	8.2	8.6	9.2
Horizontal beamwidth (HBW), 3 dB, degrees ¹	360	360	360	360
Vertical beamwidth (VBW), 3dB, degrees ¹	21.5	20	18.5	15.7
Electrical downtilt (EDT), degrees	2 or 4 or 6			
Impedance, ohms	50			
VSWR	≤ 1.5:1			
PIM, 2x20W carrier, dBc	< -153			
Isolation, intra-band, dB	>25			
Isolation, inter-band, dB	>28			
Input power per port, watts	125			



Electrical specification CBRS/LS6 P1 P2

Frequency range, MHz	(2x) 3400-4200
Polarization	(2x) ± 45°
Gain, BASTA, dBi	10.9 ± 0.5
Gain, MAX, dBi	11.5
Horizontal beamwidth (HBW), 3 dB, degrees ¹	360
Vertical beamwidth (VBW), 3dB, degrees ¹	10
Electrical downtilt (EDT), degrees	0
Impedance, ohms	50
VSWR	≤ 1.5:1
Isolation, intra-band, dB	>25
Isolation, inter-band, dB	>28
Input power per port, watts	100

Electrical specification LAA Band O1 O2

Frequency range, MHz	(2x) 5150-5925
Polarization	(2x) ± 45°
Gain, BASTA, dBi	5 ± 0.6
Gain, MAX, dBi	5.6
Horizontal beamwidth (HBW), 3 dB, degrees ¹	360
Vertical beamwidth (VBW), 3dB, degrees ¹	21.8
Electrical downtilt (EDT), degrees	10
Impedance, ohms	50
VSWR	≤ 1.5:1
Upper side lobe suppression, dB	Complies with FCC (UNI-I) specifications
Isolation, intra-band, dB	>25
Isolation, inter-band, dB	>28
Input power per port, watts	50

¹ Typical value over frequency and tilt.

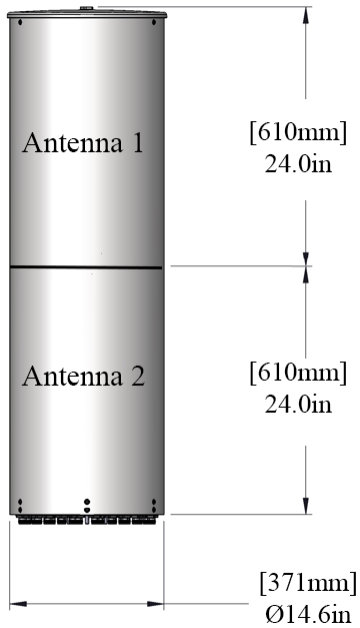
Integrated GPS unit	
Frequency range, MHz	1575.42 ± 10
Polarization	Right hand circular
Nominal gain, dBic	3 at 90°; -2 at 20°
Current draw, mA	22 @ 5V
Out-of-band rejection, dB	> 55 at 1559 MHz; > 60 at 1625 MHz
Amplifier gain, dB	28 ± 3
Nominal impedance, ohms	50
Noise figure, dB	3.9
DC voltage, dB	3.9
VSWR	< 2.0:1
Connector	N-type female

Mechanical specifications	
Dimensions height/diameter, inches (mm)	48.0/ 14.6 (1219.2/ 370.8)
Antenna volume (cubic feet)	4.65
No. of RF input ports, connector type, and location	24 x 4.3-10 RF, 1 x N-type GPS female, bottom
RF connector torque	96 lbf-in (10.85 N·m or 8 lbf-ft)
Net antenna weight, lb (kg)	60 (27.2)
Rated wind survival speed, mph (km/h)	150 (241)
Frontal wind loading @ 160 km/h, lbf (N)	85 (378)
Equivalent flat plate @ 100 mph and Cd=2, sq ft	3.8/0.35

Array topology

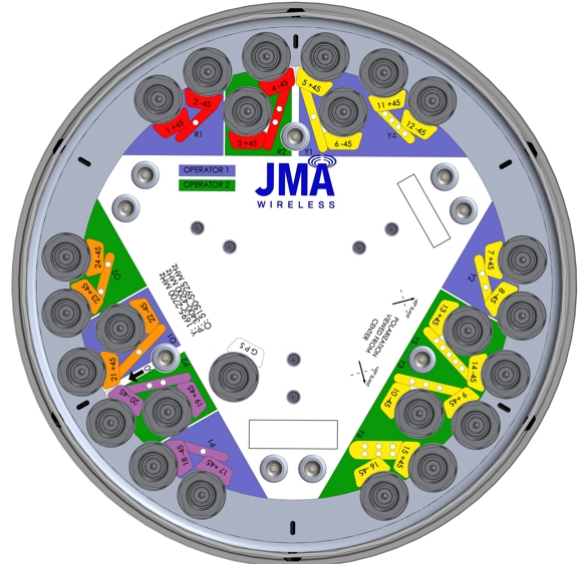
<p>12 sets of radiating arrays</p> <p>R1: 698-960 MHz R2: 698-960 MHz Y1: 1695-2690 MHz Y2: 1695-2690 MHz Y3: 1695-2690 MHz Y4: 1695-2690 MHz Y5: 1695-2690 MHz Y6: 1695-2690 MHz P1: 3400-4200 MHz P2: 3400-4200 MHz O1: 5150-5925 MHz O2: 5150-5925 MHz</p>	<table border="1"> <thead> <tr> <th>Band</th> <th>RF port</th> </tr> </thead> <tbody> <tr><td>698-960</td><td>1-2</td></tr> <tr><td>698-960</td><td>3-4</td></tr> <tr><td>1695-2690</td><td>5-6</td></tr> <tr><td>1695-2690</td><td>7-8</td></tr> <tr><td>1695-2690</td><td>9-10</td></tr> <tr><td>1695-2690</td><td>11-12</td></tr> <tr><td>1695-2690</td><td>13-14</td></tr> <tr><td>1695-2690</td><td>15-16</td></tr> <tr><td>3400-4200</td><td>17-18</td></tr> <tr><td>3400-4200</td><td>19-20</td></tr> <tr><td>5150-5925</td><td>21-22</td></tr> <tr><td>5150-5925</td><td>23-24</td></tr> </tbody> </table>	Band	RF port	698-960	1-2	698-960	3-4	1695-2690	5-6	1695-2690	7-8	1695-2690	9-10	1695-2690	11-12	1695-2690	13-14	1695-2690	15-16	3400-4200	17-18	3400-4200	19-20	5150-5925	21-22	5150-5925	23-24	<p>The diagram illustrates the physical layout of the antenna arrays. ANTENNA 1 (top) features two LAA ports (O1, O2) at the top, followed by three MID ports (Y2, Y4, Y6) in the middle, and two LOW ports (R1, R2) at the bottom. ANTENNA 2 (bottom) features two CBRS ports (P1, P2) in the middle, and three MID ports (Y1, Y3, Y5) in the middle, and two LOW ports (R1, R2) at the bottom. A dashed horizontal line separates the two antenna sections.</p>
	Band	RF port																										
	698-960	1-2																										
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	3400-4200	19-20																										
	5150-5925	21-22																										
	5150-5925	23-24																										

Front view



End view

The 0 degree reference arrow corresponds to the 0 degree position in the antenna pattern file. Each antenna pattern file uses a top down orientation view (the patterns are viewed from the top of the antenna looking down).

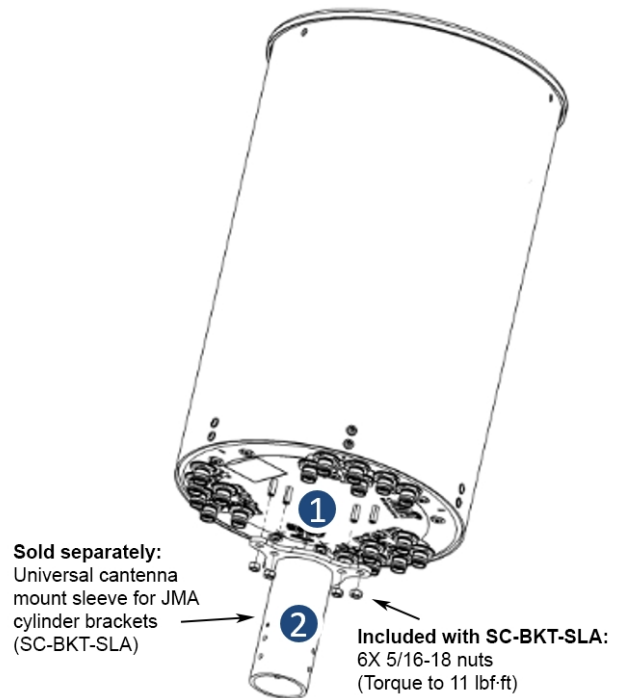


End view details: 6 stud bolts for direct mount to the Universal Sleeve (SC-BKT-SLA)

Notes on mounting brackets

- The antenna comes with the bottom mount studs (marked as **1**) factory-installed.
- JMA cylinder brackets are compatible with bottom mount via universal cantenna mount sleeve (marked as **2**) (SC-BKT-SLA), sold separately with JMA cylinder mounting systems.
- To mitigate potential risk of PIM issues, the recommended torque values need to be applied.

Example bracket configuration





CYL4Q24GR-1xyz

NWAV™ Cylinder Antenna

Ordering information

Antenna model						Description
CYL4Q24GR-1xyz						4ft 24 Port OMNI antenna 4LB 12MB 4 3.5GHz 4LAA with GPS
R represents the selected Radome color of GRAY (G), BROWN (W), or BLACK (B)						
xyz= fixed electrical tilt for 1695-2690 MHz in degrees						
x= arrays Y1 & Y2 y= arrays Y3 & Y4 z= arrays Y5 & Y6						
Model	Radome color (R)	Tilt configuration				Radome color and tilt configuration description
		R1 R2	Y1-Y6 (x,y,z)	P1 P2	O1 O2	
CYL4Q24GG-1222	GRAY (G)	0	2°	0	10	4ft 24 Port antenna with GRAY Radome and 2°, 2°, & 2° tilt settings
CYL4Q24GG-1224		0	Y1&Y2=2°,Y3&Y4=2°,Y5&Y6=4°	0	10	4ft 24 Port antenna with GRAY Radome and 2°, 2°, & 4° tilt settings
CYL4Q24GG-1226		0	Y1&Y2=2°,Y3&Y4=2°,Y5&Y6=6°	0	10	4ft 24 Port antenna with GRAY Radome and 2°, 2°, & 6° tilt settings
CYL4Q24GG-1244		0	Y1&Y2=2°,Y3&Y4=4°,Y5&Y6=4°	0	10	4ft 24 Port antenna with GRAY Radome and 2°, 4°, & 4° tilt settings
CYL4Q24GG-1246		0	Y1&Y2=2°,Y3&Y4=4°,Y5&Y6=6°	0	10	4ft 24 Port antenna with GRAY Radome and 2°, 4°, & 6° tilt settings
CYL4Q24GG-1266		0	Y1&Y2=2°,Y3&Y4=6°,Y5&Y6=6°	0	10	4ft 24 Port antenna with GRAY Radome and 2°, 6°, & 6° tilt settings
CYL4Q24GG-1444		0	4°	0	10	4ft 24 Port antenna with GRAY Radome and 4°, 4°, & 4° tilt settings
CYL4Q24GG-1446		0	Y1&Y2=4°,Y3&Y4=4°,Y5&Y6=6°	0	10	4ft 24 Port antenna with GRAY Radome and 4°, 4°, & 6° tilt settings
CYL4Q24GG-1466		0	Y1&Y2=4°,Y3&Y4=6°,Y5&Y6=6°	0	10	4ft 24 Port antenna with GRAY Radome and 4°, 6°, & 6° tilt settings
CYL4Q24GG-1666		0	6°	0	10	4ft 24 Port antenna with GRAY Radome and 6°, 6°, & 6° tilt settings
CYL4Q24GW-1222	BROWN (W)	0	2°	0	10	4ft 24 Port antenna with BROWN Radome and 2°, 2°, & 2° tilt settings
CYL4Q24GW-1224		0	Y1&Y2=2°,Y3&Y4=2°,Y5&Y6=4°	0	10	4ft 24 Port antenna with BROWN Radome and 2°, 2°, & 4° tilt settings
CYL4Q24GW-1226		0	Y1&Y2=2°,Y3&Y4=2°,Y5&Y6=6°	0	10	4ft 24 Port antenna with BROWN Radome and 2°, 2°, & 6° tilt settings
CYL4Q24GW-1244		0	Y1&Y2=2°,Y3&Y4=4°,Y5&Y6=4°	0	10	4ft 24 Port antenna with BROWN Radome and 2°, 4°, & 4° tilt settings
CYL4Q24GW-1246		0	Y1&Y2=2°,Y3&Y4=4°,Y5&Y6=6°	0	10	4ft 24 Port antenna with BROWN Radome and 2°, 4°, & 6° tilt settings
CYL4Q24GW-1266		0	Y1&Y2=2°,Y3&Y4=6°,Y5&Y6=6°	0	10	4ft 24 Port antenna with BROWN Radome and 2°, 6°, & 6° tilt settings
CYL4Q24GW-1444		0	4°	0	10	4ft 24 Port antenna with BROWN Radome and 4°, 4°, & 4° tilt settings
CYL4Q24GW-1446		0	Y1&Y2=4°,Y3&Y4=4°,Y5&Y6=6°	0	10	4ft 24 Port antenna with BROWN Radome and 4°, 4°, & 6° tilt settings
CYL4Q24GW-1466		0	Y1&Y2=4°,Y3&Y4=6°,Y5&Y6=6°	0	10	4ft 24 Port antenna with BROWN Radome and 4°, 6°, & 6° tilt settings
CYL4Q24GW-1666		0	6°	0	10	4ft 24 Port antenna with BROWN Radome and 6°, 6°, & 6° tilt settings



CYL4Q24GR-1xyz

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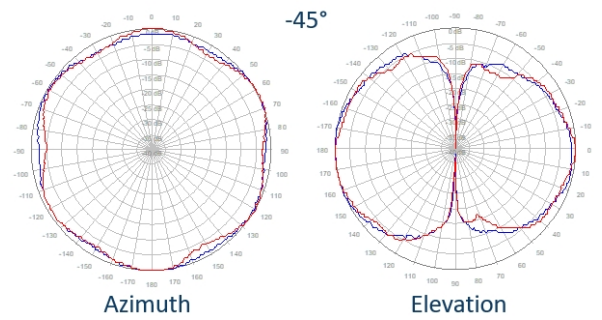
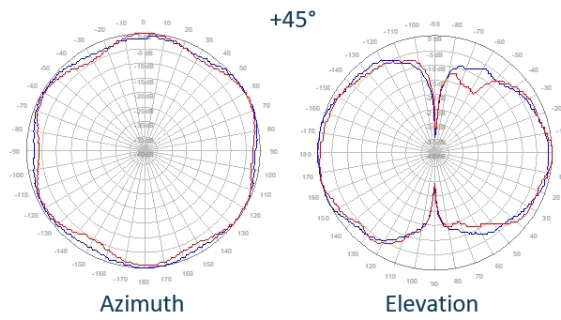
Ordering information						
CYL4Q24GB-1222	BLACK (B)	0	2°	0	10	4ft 24 Port antenna with BLACK Radome and 2°, 2°, & 2° tilt settings
CYL4Q24GB-1224		0	Y1&Y2=2°,Y3&Y4=2°,Y5&Y6=4°	0	10	4ft 24 Port antenna with BLACK Radome and 2°, 2°, & 2° tilt settings
CYL4Q24GB-1226		0	Y1&Y2=2°,Y3&Y4=2°,Y5&Y6=6°	0	10	4ft 24 Port antenna with BLACK Radome and 2°, 2°, & 6° tilt settings
CYL4Q24GB-1244		0	Y1&Y2=2°,Y3&Y4=4°,Y5&Y6=4°	0	10	4ft 24 Port antenna with BLACK Radome and 2°, 4°, & 4° tilt settings
CYL4Q24GB-1246		0	Y1&Y2=2°,Y3&Y4=4°,Y5&Y6=6°	0	10	4ft 24 Port antenna with BLACK Radome and 2°, 4°, & 6° tilt settings
CYL4Q24GB-1266		0	Y1&Y2=2°,Y3&Y4=6°,Y5&Y6=6°	0	10	4ft 24 Port antenna with BLACK Radome and 2°, 6°, & 6° tilt settings
CYL4Q24GB-1444		0	4°	0	10	4ft 24 Port antenna with BLACK Radome and 4°, 4°, & 4° tilt settings
CYL4Q24GB-1446		0	Y1&Y2=4°,Y3&Y4=4°,Y5&Y6=6°	0	10	4ft 24 Port antenna with BLACK Radome and 4°, 4°, & 6° tilt settings
CYL4Q24GB-1466		0	Y1&Y2=4°,Y3&Y4=6°,Y5&Y6=6°	0	10	4ft 24 Port antenna with BLACK Radome and 4°, 6°, & 6° tilt settings
CYL4Q24GB-1666			6°	0	10	4ft 24 Port antenna with BLACK Radome and 6°, 6°, & 6° tilt settings

Small Cell solutions and mounting systems (sold separately)			
Side Arm Mounting System	SC-BKT-SA-(color)	Wide Diameter Pole	SC-BKT-WTPE-(color)
Steel Pole Mounting System	SC-BKT-SLA (color)		

Polar patterns

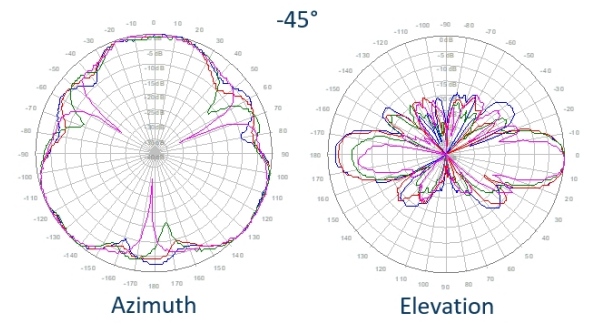
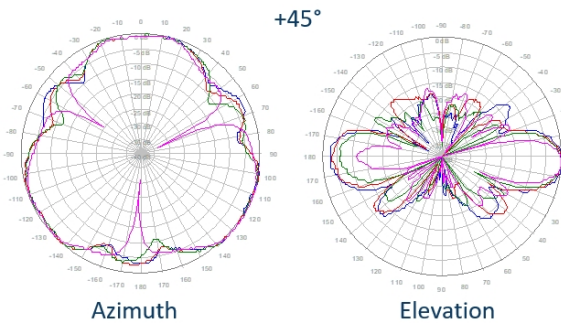
R1-R2, 0° Tilt

750 ———
 850 ———

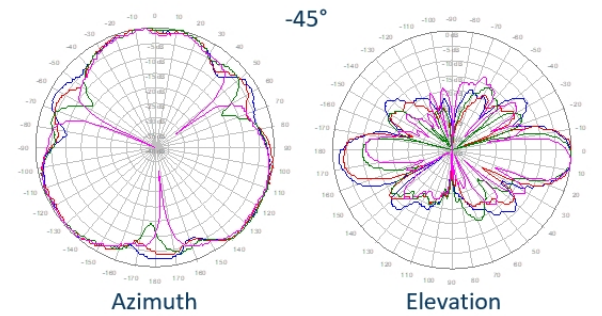
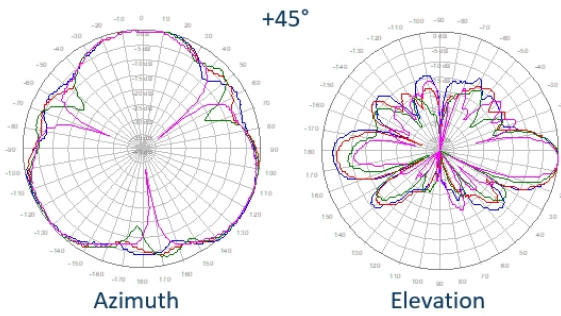


Y1-Y4, 2° Tilt

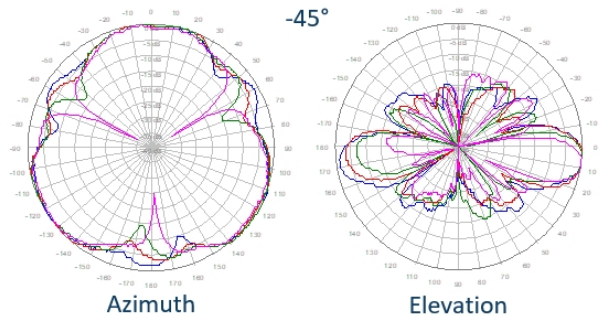
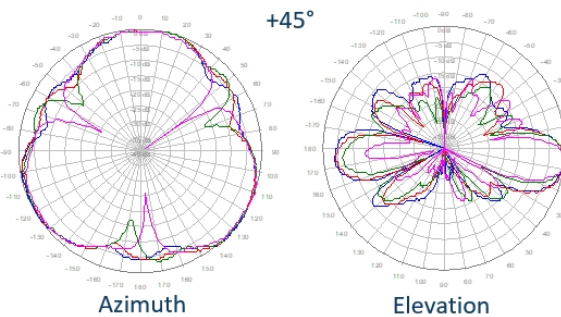
1800 ———
 1900 ———
 2100 ———
 2600 ———



Y1-Y4, 4° Tilt



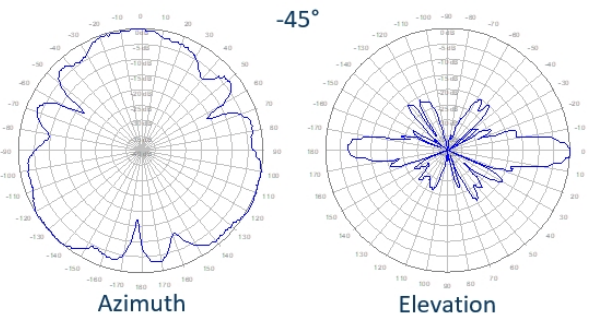
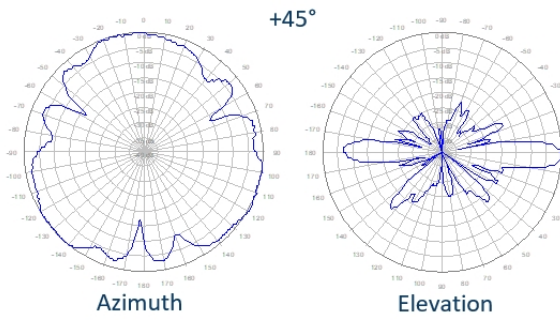
Y1-Y4, 6° Tilt



Polar patterns

P1-P2, 0° Tilt

3600



O1, 10° Tilt

5600

