

CYL2Q24GR-1xyz

NWAV™ Cylinder Antenna

24-port cylinder antenna 698-4200 MHz:




4 ports 698-960, 12 ports 1695-2690 MHz, and 8 ports 3400-4200 MHz

- Small Cell Omni antenna with integrated GPS unit
- 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
- Future-proof design to support up to 4200 MHz for LS6 spectrum
- Optimal 3400-4200 MHz gain to realize EIRP limit



NWAV™

	GPS band	Low band	Mid band						CBRS/LS6			
Frequency bands, MHz	1575.42	(2x) 696-960	(6x) 1695-2700						(4x) 3400-4200			
Array	--	■ R1 ■ R2	■ Y1	■ Y2	■ Y3	■ Y4	■ Y5	■ Y6	■ P1	■ P2	■ P3	■ P4
Connector	1 PORT	4 PORTS	12 PORTS						8 PORTS			
Polarization	RH CIR.	XPOL	XPOL						XPOL			
Horizontal beam-width (HBW), degrees¹	--	360	360						360			
Electrical downtilt (EDT), degrees¹	--	0	2, 4, 6						0			
Configuration	Omni antenna with integrated GPS unit											
Connector type	(24x) 4.3-10 female and (1x) N-type female for GPS											
Dimensions, in. (mm)	24.0/ 14.6 (609.6/ 370.8)											
Maximum composite power, watts (all ports)	1000											

	Gray (Pantone 420C)	Brown (Pantone 476C)	Black (RAL 9011)
Radome color			

Electrical specifications Low Band ■ R1 ■ R2	
Frequency range, MHz	(2x) 698-960
Polarization	(2x) ± 45°
Gain, BASTA, dBi	2.5 ± 0.5
Gain, MAX, dBi	3.1
Horizontal beamwidth (HBW), 3 dB, degrees ¹	360
Vertical beamwidth (VBW), 3dB, degrees ¹	74.5
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) 1695-2700			
Frequency sub-range, MHz	1695-1880	1850-1990	1920-2200	2300-2700
Polarization	(6x) ± 45°			
Gain, BASTA, dBi	5.8 ± 0.5	6.0 ± 0.4	6.2 ± 0.6	7.0 ± 0.4
Gain, MAX, dBi	6.7	6.8	7.2	8.2
Horizontal beamwidth (HBW), 3 dB, degrees ¹	360	360	360	360
Vertical beamwidth (VBW), 3dB, degrees ¹	39	37	36	31
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 P3 P4

Frequency range, MHz	(4x) 3400-4200
Polarization	(4x) $\pm 45^\circ$
Gain, BASTA, dBi	7.7 ± 0.5
Gain, MAX, dBi	8.6
Horizontal beamwidth (HBW), 3 dB, degrees ¹	360
Vertical beamwidth (VBW), 3dB, degrees ¹	22 ± 2
Electrical downtilt (EDT), degrees	0
Impedance, ohms	50
VSWR	$\leq 1.5:1$
Isolation, intra-band, dB	>25
Isolation, inter-band, dB	>28
Input power per port, watts	100

¹ Typical value over frequency and tilt.

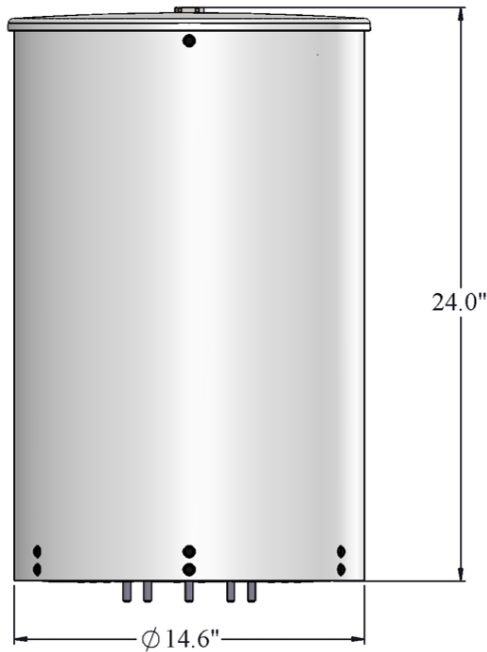
Integrated GPS unit

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)	24.0/ 14.6 (609.6/ 370.8)
Antenna volume (cubic feet)	2.32
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)	36 (16.32)
Rated wind survival speed, mph (km/h)	150 (241)
Frontal wind loading @ 160 km/h, lbf (N)	30 (133)
Equivalent flat plate @ 100 mph and Cd=2, sq ft	1.17/0.69

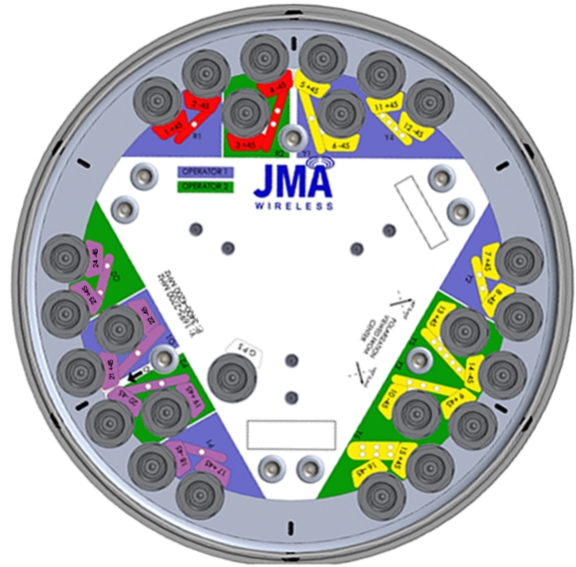
Array topology																												
12 sets of radiating arrays R1: 698-960 MHz R2: 698-960 MHz Y1: 1695-2700 MHz Y2: 1695-2700 MHz Y3: 1695-2700 MHz Y4: 1695-2700 MHz Y5: 1695-2700 MHz Y6: 1695-2700 MHz P1: 3400-4200 MHz P2: 3400-4200 MHz P3: 3400-4200 MHz P4: 3400-4200 MHz	<table border="1"> <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>1695-2700</td><td>5-6</td></tr> <tr><td>1695-2700</td><td>7-8</td></tr> <tr><td>1695-2700</td><td>9-10</td></tr> <tr><td>1695-2700</td><td>11-12</td></tr> <tr><td>1695-2700</td><td>13-14</td></tr> <tr><td>1695-2700</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>3400-4200</td><td>21-22</td></tr> <tr><td>3400-4200</td><td>23-24</td></tr> </tbody> </table>	Band	RF port	698-960	1-2	698-960	3-4	1695-2700	5-6	1695-2700	7-8	1695-2700	9-10	1695-2700	11-12	1695-2700	13-14	1695-2700	15-16	3400-4200	17-18	3400-4200	19-20	3400-4200	21-22	3400-4200	23-24	
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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).

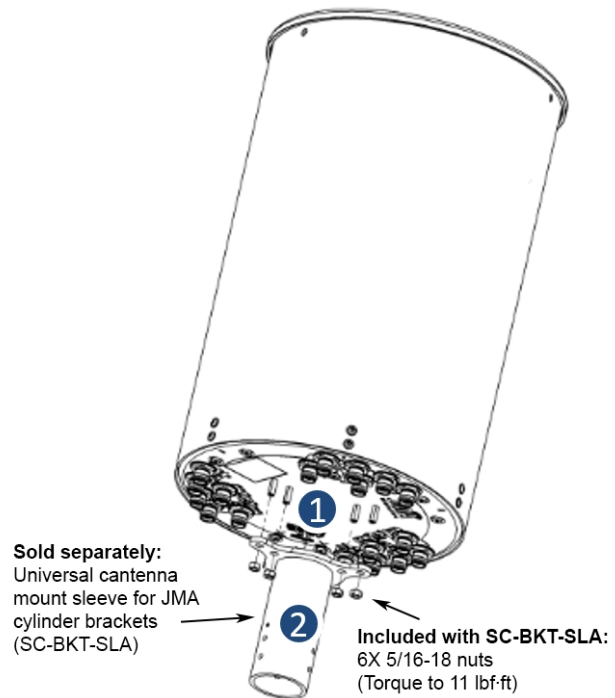


End view details: 6 stud bolts for direct mount to the Universal Sleeve (SC-BKT-SLA)

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 antenna 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



Ordering information

Antenna model		Description			
CYL2Q24GR-1xyz R represents the selected Radome color of GRAY (G), BROWN (W), or BLACK (B) xy= fixed electrical tilt for 1695-2690 MHz in degrees x= arrays Y1 & Y2 y= arrays Y3 & Y4 z= arrays Y5 & Y6		2ft 24 Port OMNI antenna 4LB 12MB 8CBRS with GPS			
Model	Radome color (R)	Tilt configuration			Radome color and tilt configuration description
		R1 R2	Y1-Y6 (x,y)	P1-P4	
CYL2Q24GG-1222	GRAY (G)	0	2°	0	2ft 24 Port antenna with GRAY Radome and 2°, 2°, & 2° tilt settings
CYL2Q24GG-1224		0	Y1&Y2=2°,Y3&Y4=2°,Y5&Y6=4°	0	2ft 24 Port antenna with GRAY Radome and 2°, 2°, & 4° tilt settings
CYL2Q24GG-1226		0	Y1&Y2=2°,Y3&Y4=2°,Y5&Y6=6°	0	2ft 24 Port antenna with GRAY Radome and 2°, 2°, & 6° tilt settings
CYL2Q24GG-1244		0	Y1&Y2=2°,Y3&Y4=4°,Y5&Y6=4°	0	2ft 24 Port antenna with GRAY Radome and 2°, 4°, & 4° tilt settings
CYL2Q24GG-1246		0	Y1&Y2=2°,Y3&Y4=4°,Y5&Y6=6°	0	2ft 24 Port antenna with GRAY Radome and 2°, 4°, & 6° tilt settings
CYL2Q24GG-1266		0	Y1&Y2=2°,Y3&Y4=6°,Y5&Y6=6°	0	2ft 24 Port antenna with GRAY Radome and 2°, 6°, & 6° tilt settings
CYL2Q24GG-1444		0	4°	0	2ft 24 Port antenna with GRAY Radome and 4°, 4°, & 4° tilt settings
CYL2Q24GG-1446		0	Y1&Y2=4°,Y3&Y4=4°,Y5&Y6=6°	0	2ft 24 Port antenna with GRAY Radome and 4°, 4°, & 6° tilt settings
CYL2Q24GG-1466		0	Y1&Y2=4°,Y3&Y4=6°,Y5&Y6=6°	0	2ft 24 Port antenna with GRAY Radome and 4°, 6°, & 6° tilt settings
CYL2Q24GG-1666		0	6°	0	2ft 24 Port antenna with GRAY Radome and 6°, 6°, & 6° tilt settings
CYL2Q24GW-1222		BROWN (W)	0	2°	0
CYL2Q24GW-1224	0		Y1&Y2=2°,Y3&Y4=2°,Y5&Y6=4°	0	2ft 24 Port antenna with BROWN Radome and 2°, 2°, & 4° tilt settings
CYL2Q24GW-1226	0		Y1&Y2=2°,Y3&Y4=2°,Y5&Y6=6°	0	2ft 24 Port antenna with BROWN Radome and 2°, 2°, & 6° tilt settings
CYL2Q24GW-1244	0		Y1&Y2=2°,Y3&Y4=4°,Y5&Y6=4°	0	2ft 24 Port antenna with BROWN Radome and 2°, 4°, & 4° tilt settings
CYL2Q24GW-1246	0		Y1&Y2=2°,Y3&Y4=4°,Y5&Y6=6°	0	2ft 24 Port antenna with BROWN Radome and 2°, 4°, & 6° tilt settings
CYL2Q24GW-1266	0		Y1&Y2=2°,Y3&Y4=6°,Y5&Y6=6°	0	2ft 24 Port antenna with BROWN Radome and 2°, 6°, & 6° tilt settings
CYL2Q24GW-1444	0		4°	0	2ft 24 Port antenna with BROWN Radome and 4°, 4°, & 4° tilt settings
CYL2Q24GW-1446	0		Y1&Y2=4°,Y3&Y4=4°,Y5&Y6=6°	0	2ft 24 Port antenna with BROWN Radome and 4°, 4°, & 6° tilt settings
CYL2Q24GW-1466	0		Y1&Y2=4°,Y3&Y4=6°,Y5&Y6=6°	0	2ft 24 Port antenna with BROWN Radome and 4°, 6°, & 6° tilt settings
CYL2Q24GW-1666	0		6°	0	2ft 24 Port antenna with BROWN Radome and 6°, 6°, & 6° tilt settings

Ordering information					
CYL2Q24GB-1222	BLACK (B)	0	2°	0	2ft 24 Port antenna with BLACK Radome and 2°, 2°, & 2° tilt settings
CYL2Q24GB-1224		0	Y1&Y2=2°,Y3&Y4=2°,Y5&Y6=4°	0	2ft 24 Port antenna with BLACK Radome and 2°, 2°, & 2° tilt settings
CYL2Q24GB-1226		0	Y1&Y2=2°,Y3&Y4=2°,Y5&Y6=6°	0	2ft 24 Port antenna with BLACK Radome and 2°, 2°, & 6° tilt settings
CYL2Q24GB-1244		0	Y1&Y2=2°,Y3&Y4=4°,Y5&Y6=4°	0	2ft 24 Port antenna with BLACK Radome and 2°, 4°, & 4° tilt settings
CYL2Q24GB-1246		0	Y1&Y2=2°,Y3&Y4=4°,Y5&Y6=6°	0	2ft 24 Port antenna with BLACK Radome and 2°, 4°, & 6° tilt settings
CYL2Q24GB-1266		0	Y1&Y2=2°,Y3&Y4=6°,Y5&Y6=6°	0	2ft 24 Port antenna with BLACK Radome and 2°, 6°, & 6° tilt settings
CYL2Q24GB-1444		0	4°	0	2ft 24 Port antenna with BLACK Radome and 4°, 4°, & 4° tilt settings
CYL2Q24GB-1446		0	Y1&Y2=4°,Y3&Y4=4°,Y5&Y6=6°	0	2ft 24 Port antenna with BLACK Radome and 4°, 4°, & 6° tilt settings
CYL2Q24GB-1466		0	Y1&Y2=4°,Y3&Y4=6°,Y5&Y6=6°	0	2ft 24 Port antenna with BLACK Radome and 4°, 6°, & 6° tilt settings
CYL2Q24GB-1666		0	6°	0	2ft 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)				