CYL2Q16R-2xy

NWAV™ Cylinder Antenna

16-port cylinder antenna 1695-4200 MHz:

8 ports 1695-2690 MHz and 8 ports 3400-4200 MHz

- Future-proof design to support up to 4200 MHz
- Increased 3.5 GHz gain
- Supports multi-carrier deployments with 4x4 MIMO capability with all bands
- Symmetrical omni-directional pattern performance across all 8 ports 1695-2690
- Excellent cross-polar discrimination for enhanced MIMO performance
- Center-mounted lift ring for easy installations

	Mid band				3.5 GHz			
Frequency bands, MHz	1695-2700				3400-4200			
Array	Y1	Y2	Y3	Y4	P1	P2	P3	P4
Connector	8 PORTS				8 PORTS			
Polarization	XPOL				XPOL			
Horizontal beamwidth (HBW), degrees[1]	360				360			
Electrical downtilt (EDT), degrees[1]	2, 4, 6				0			
Configuration	Omni antenna pattern							
Connector type	(16x) 4.3-10 female							
Dimensions, in. (mm)	24.0/ 14.6 (609.6/ 370.8)							
Maximum composite power, watts (all ports)	1750							

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

[1] Typical value over frequency and tilt.

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Electrical specifications Mid Band ■ Y1 ■ Y2 ■ Y3 ■ Y4				
Frequency range, MHz	1695-2700			
Frequency sub-range, MHz	1695-1880	1850-1990	1920-2200	2300-2700
Polarization	± 45°			
Gain, MAX, dBi	8.8	9.2	9.6	10.7
Gain, BASTA, dBi	8.5 ± 0.3	8.9 ± 0.3	9.1 ± 0.5	10.2 ± 0.5
Average gain across full 360°, dBi	7.5 ± 0.3	7.6 ± 0.3	8.3 ± 0.4	8.9 ± 0.3
Horizontal beamwidth (HBW), 3 dB, degrees[1]	360	360	360	360
Vertical beamwidth (VBW), 3dB, degrees[1]	21.5 ± 2.5	20 ± 0.5	18.5 ± 1.5	15.7 ± 1.1
Cross-polar discrimination over 360°[1]	>15	>16	>17	>18
Upper side lobe suppression	>14	>14	>15	>15
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			

For optimal 4x4 MIMO performance, we would recommend the following port combinations be used together: Y1-Y2 and Y3-Y4

Electrical specification 3400-4200 MHz ■ P1 ■ P2 ■ P3 ■ P4			
Frequency range, MHz	3400-3550	3550-3700	3700-4200
Polarization	± 45°		
Gain, MAX, dBi	9.1	9.4	9.8
Gain, BASTA, dBi	8.8 ± 0.3	9.1 ± 0.3	9.5 ± 0.3
Average gain across full 360°, dBi	8.0 ± 0.3	8.5 ± 0.3	8.9 ± 0.3
Horizontal beamwidth (HBW), 3 dB, degrees[1]	360		
Vertical beamwidth (VBW), 3dB, degrees[1]	23 ± 2.5	22 ± 1.5	21 ± 2.3
Cross-polar discrimination over 360°[1]	>15	>16	>15
Upper side lobe suppression	>14	>15	>13
Electrical downtilt (EDT), degrees	0		
Impedance, ohms	50		
VSWR	≤ 1.5:1		
PIM, 2x20W carrier, dBc	< -145		
Isolation, intra-band, dB	>25		
Isolation, inter-band, dB	>28		
Input power per port, watts	100		

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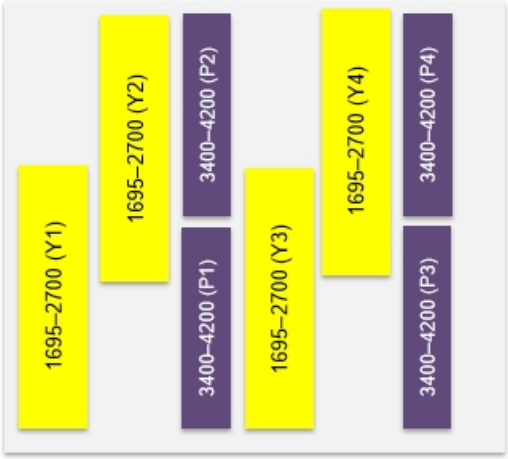
Mechanical specifications	
Dimensions height/diameter, inches (mm)	24.0/ 14.6 (609.6/ 370.8)
Antenna volume (cubic feet)	2.32
No. of RF input ports, connector type, and location	16 x 4.3-10 RF, bottom
RF connector torque	96 lbf·in (10.85 N·m or 8 lbf·ft)
Net antenna weight, lb (kg)	26 (11.8)
Rated wind 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	1.9/0.175

Array topology

8 sets of radiating arrays

Y1: 1695-2700 MHz
Y2: 1695-2700 MHz
Y3: 1695-2700 MHz
Y4: 1695-2700 MHz
P1: 3400-4200 MHz
P2: 3400-4200 MHz
P3: 3400-4200 MHz
P4: 3400-4200 MHz

Band	RF port
1695-2700	1-2
1695-2700	3-4
1695-2700	5-6
1695-2700	7-8
3400-4200	9-10
3400-4200	11-12
3400-4200	13-14
3400-4200	15-16



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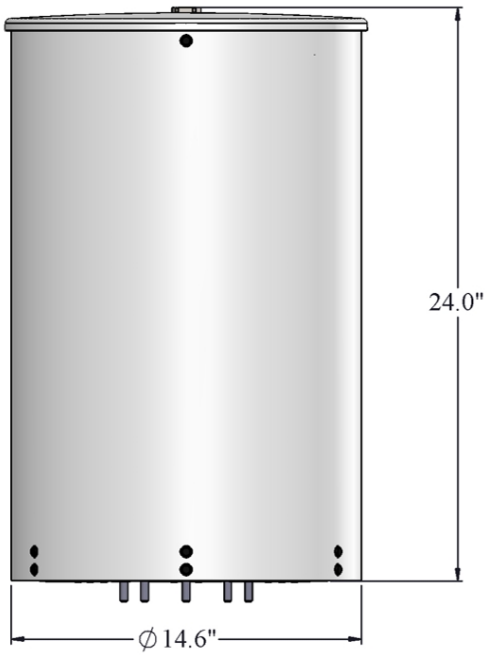
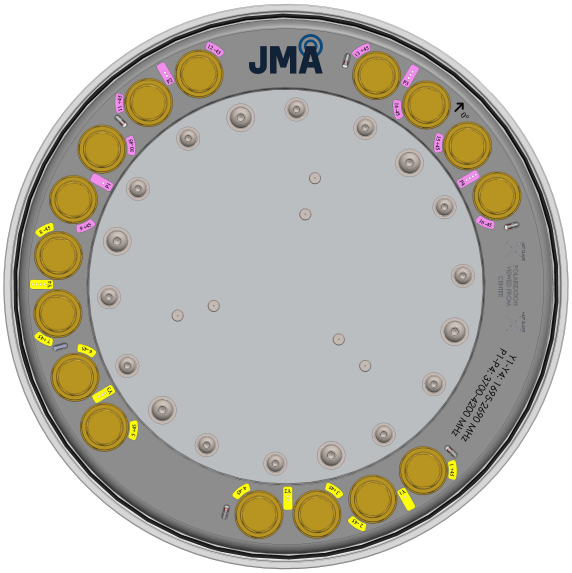
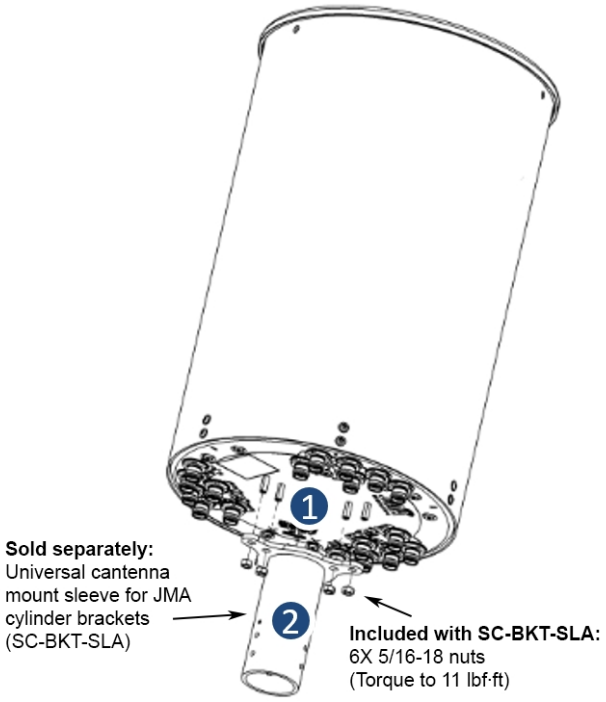
Front view	End view
	The 0 degree reference arrow corresponds to the 0 degree position in the antenna pattern file. Each antenna pattern file uses a top down orientation view (the patterns are viewed from the top of the antenna looking down).  End view details: 6 stud bolts for direct mount to the Universal Sleeve (SC-BKT-SLA)

Notes on mounting brackets	Example bracket configuration
• 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.	

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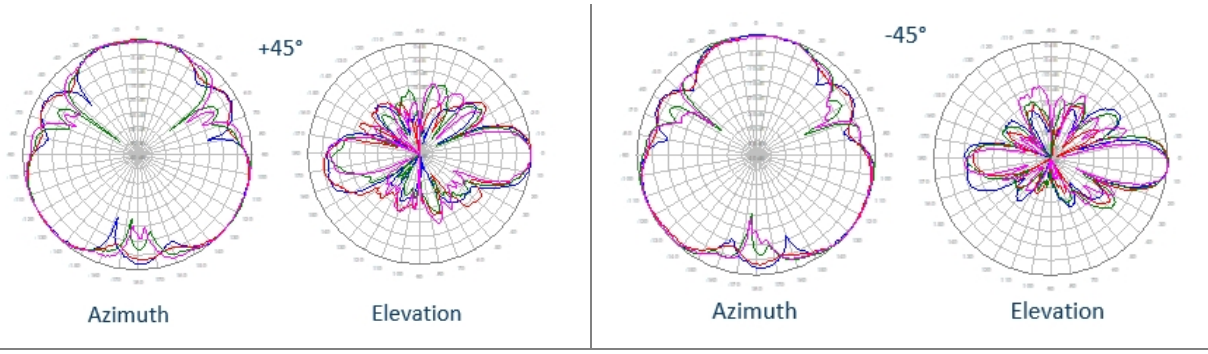
Ordering information				
Antenna model				**Description**
CYL2Q16R-2xy R represents the selected Radome color of GRAY (G), BROWN (W), or BLACK (B) xy= fixed electrical tilt for 1695-2690 MHz in degrees x= arrays Y1 & Y2 y= arrays Y3 & Y4				2ft 16 Port OMNI antenna 8MB 8 3.5GHz
Model	**Radome color (R)**	**Tilt configuration**		**Radome color and tilt configuration description**
		Y1-Y4 (x,y)	**P1-P4**	
CYL2Q16G-222	GRAY (G)	2°	0	2ft 16 Port antenna with GRAY Radome and 2° & 2° tilt settings
CYL2Q16G-224		Y1&Y2=2°,Y3&Y4=4°	0	2ft 16 Port antenna with GRAY Radome and 2° & 4° tilt settings
CYL2Q16G-226		Y1&Y2=2°,Y3&Y4=6°	0	2ft 16 Port antenna with GRAY Radome and 2° & 6° tilt settings
CYL2Q16G-244		4°	0	2ft 16 Port antenna with GRAY Radome and 4° & 4° tilt settings
CYL2Q16G-246		Y1&Y2=4°,Y3&Y4=6°	0	2ft 16 Port antenna with GRAY Radome and 4° & 6° tilt settings
CYL2Q16G-266		6°	0	2ft 16 Port antenna with GRAY Radome and 6° & 6° tilt settings
CYL2Q16W-222	BROWN (W)	2°	0	2ft 16 Port antenna with BROWN Radome and 2° & 2° tilt settings
CYL2Q16W-224		Y1&Y2=2°,Y3&Y4=4°	0	2ft 16 Port antenna with BROWN Radome and 2° & 4° tilt settings
CYL2Q16W-226		Y1&Y2=2°,Y3&Y4=6°	0	2ft 16 Port antenna with BROWN Radome and 2° & 6° tilt settings
CYL2Q16W-244		4°	0	2ft 16 Port antenna with BROWN Radome and 4° & 4° tilt settings
CYL2Q16W-246		Y1&Y2=4°,Y3&Y4=6°	0	2ft 16 Port antenna with BROWN Radome and 4° & 6° tilt settings
CYL2Q16W-266		6°	0	2ft 16 Port antenna with BROWN Radome and 6° & 6° tilt settings
CYL2Q16B-222	BLACK (B)	2°	0	2ft 16 Port antenna with BLACK Radome and 2° & 2° tilt settings
CYL2Q16B-224		Y1&Y2=2°,Y3&Y4=4°	0	2ft 16 Port antenna with BLACK Radome and 2° & 4° tilt settings
CYL2Q16B-226		Y1&Y2=2°,Y3&Y4=6°	0	2ft 16 Port antenna with BLACK Radome and 2° & 6° tilt settings
CYL2Q16B-244		4°	0	2ft 16 Port antenna with BLACK Radome and 4° & 4° tilt settings
CYL2Q16B-246		Y1&Y2=4°,Y3&Y4=6°	0	2ft 16 Port antenna with BLACK Radome and 4° & 6° tilt settings
CYL2Q16B-266		6°	0	2ft 16 Port antenna with BLACK Radome and 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

1800
1900
2100
2600

Y1-Y4



3600
3800

P1-P4