CX20OMI218-3Pxy

NWAV™ Cylinder Antenna

20-port cylinder antenna 698-4200 MHz:

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

- Small Cell antenna with Peanut pattern shape
- Supports 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
- Optimal 3400-4200 MHz gain to realize EiRP limit

	Low band		Mid band				3.5 GHz			
Frequency bands, MHz	(2x) 698-960		(4x) 1695-2690				(4x) 3400-4200			
Array	R1	R2	Y1	Y2	Y3	Y4	P1	P2	P3	P4
Connector	4 PORTS		8 PORTS				8 PORTS			
Polarization	XPOL		XPOL				XPOL			
Horizontal beamwidth (HBW), degrees[1]	180		180				180			
Electrical downtilt (EDT), degrees[1]	0		2, 6, 10				0			
Configuration	Peanut omni antenna									
Connector type	(20x) 4.3-10 female									
Dimensions, in. (mm)	24.0/ 14.6 (609.6/ 370.8)									
Maximum composite power, watts (all ports)	1000									

Radome color	Gray (Pantone 420C)	Brown (Pantone 476C)

Electrical specifications Low Band R1 R2	
Frequency range, MHz	(2x) 698-960
Polarization	(2x) ± 45°
Gain, BASTA, dBi	3.4 ± 0.5
Gain, MAX, dBi	4.0
Horizontal beamwidth (HBW), 3 dB, degrees[1]	180
Vertical beamwidth (VBW), 3dB, degrees[1]	77.2
Electrical downtilt (EDT), degrees	0
Impedance, ohms	50
VSWR	≤ 1.5:1
PIM, 2x20W carrier, dBc	< -153
Isolation, intra-band, dB	>25

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Electrical specifications Low Band R1 R2	
Isolation, inter-band, dB	>28
Input power per port, watts	150

Electrical specifications Mid Band Y1 Y2 Y3 Y4				
Frequency range, MHz	(4x) 1695-2690			
Frequency sub-range, MHz	1695-1880	1850-1990	1920-2200	2300-2690
Polarization	(4x) ± 45°			
Gain, BASTA, dBi	7.8 ± 0.5	8.2 ± 0.4	8.5 ± 0.7	9.1 ± 0.5
Gain, MAX, dBi	8.3	8.7	9.0	10.0
Horizontal beamwidth (HBW), 3 dB, degrees[1]	180	180	180	180
Vertical beamwidth (VBW), 3dB, degrees[1]	31.5	30.0	24.8	23.2
Electrical downtilt (EDT), degrees	2 or 6 or 10			
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 3400-4200 MHz P1 P2 P3 P4	
Frequency range, MHz	(4x) 3400-4200
Polarization	(4x) ± 45°
Gain, BASTA, dBi	9.2 ± 0.5
Gain, MAX, dBi	9.6
Horizontal beamwidth (HBW), 3 dB, degrees[1]	180
Vertical beamwidth (VBW), 3dB, degrees[1]	19.1 ± 2
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

[1] Typical value over frequency and tilt.

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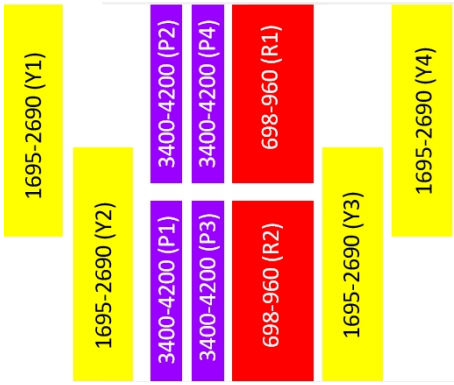
Mechanical specifications	
Dimensions height/diameter, inches (mm)	24.0/ 14.6 (609.6/ 370.8)
Antenna volume (cubic feet)	2.32
No. of RF input ports, connector type, and location	20 x 4.3-10 RF, bottom
RF connector torque	96 lbf·in (10.85 N·m or 8 lbf·ft)
Net antenna weight, lb (kg)	36 (16.32)
Rated wind 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

10 sets of radiating arrays

R1: 698-960 MHz
R2: 698-960 MHz
Y1: 1695-2690 MHz
Y2: 1695-2690 MHz
Y3: 1695-2690 MHz
Y4: 1695-2690 MHz
P1: 3400-4200 MHz
P2: 3400-4200 MHz
P3: 3400-4200 MHz
P4: 3400-4200 MHz

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
3400-4200	13-14
3400-4200	15-16
3400-4200	17-18
3400-4200	19-20



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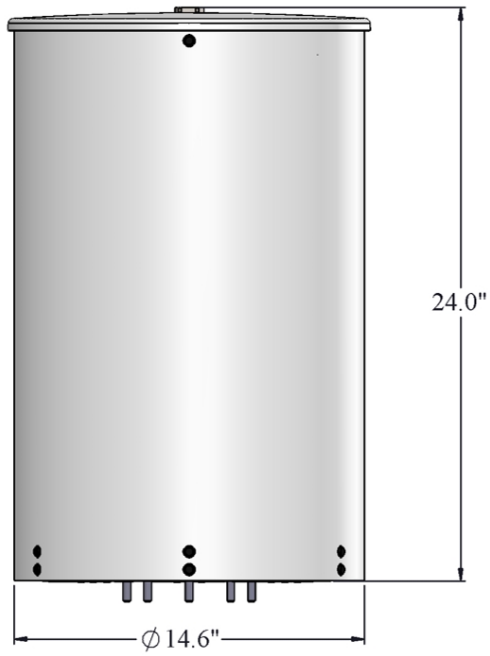
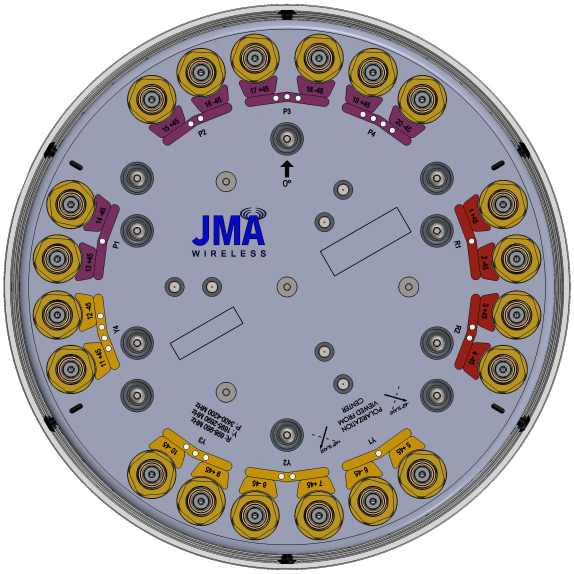
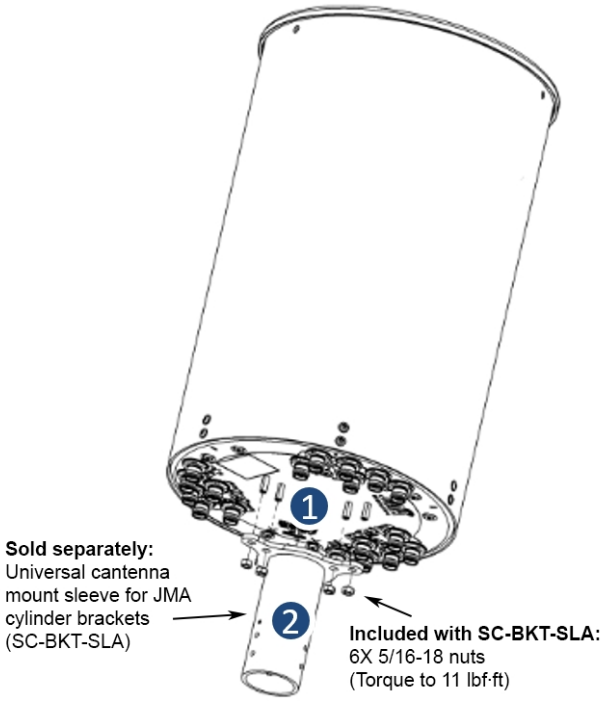
Front view	End view
	The 0 degree reference arrow corresponds to the 0 degree position in the antenna pattern file. Each antenna pattern file uses a top down orientation view (the patterns are viewed from the top of the antenna looking down).  End view details: 6 stud bolts for direct mount to the Universal 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**
CX20OMI218-3Pxy	2ft 20 Port OMNI antenna 4LB 8MB 8CBRS
xy= fixed electrical tilt for 1695-2690 MHz in degrees x= arrays Y1 & Y3 y= arrays Y2 & Y4	xy=2, 6, or 10 deg FET per 4 ports 1695-2690 MHz x= FET value for ports 5, 6, 9, 10 y= FET value for ports 7, 8, 11, 12

Model	Radome color	Tilt configuration			Radome color and tilt configuration description
		R1 R2	Y1-Y4 (x,y)	P1-P4	
CX20OMI218-3P22	GRAY (G)	0	2°	0	2ft 20 Port antenna with GRAY Radome and 2° & 2° tilt settings
CX20OMI218-3P26		0	Y1&Y3=2°,Y2&Y4=6°	0	2ft 20 Port antenna with GRAY Radome and 2° & 6° tilt settings
CX20OMI218-3P210		0	Y1&Y3=2°,Y2&Y4=10°	0	2ft 20 Port antenna with GRAY Radome and 2° & 10° tilt settings
CX20OMI218-3P66		0	6°	0	2ft 20 Port antenna with GRAY Radome and 6° & 6° tilt settings
CX20OMI218-3P610		0	Y1&Y3=6°,Y2&Y4=10°	0	2ft 20 Port antenna with GRAY Radome and 6° & 10° tilt settings
CX20OMI218-3P1010		0	10°	0	2ft 20 Port antenna with GRAY Radome and 10° & 10° tilt settings
CX20OMI218-3PW22	BROWN (W)	0	2°	0	2ft 20 Port antenna with BROWN Radome and 2° & 2° tilt settings
CX20OMI218-3PW26		0	Y1&Y3=2°,Y2&Y4=6°	0	2ft 20 Port antenna with BROWN Radome and 2° & 6° tilt settings
CX20OMI218-3PW210		0	Y1&Y3=2°,Y2&Y4=10°	0	2ft 20 Port antenna with BROWN Radome and 2° & 10° tilt settings
CX20OMI218-3PW66		0	6°	0	2ft 20 Port antenna with BROWN Radome and 6° & 6° tilt settings
CX20OMI218-3PW610		0	Y1&Y3=6°,Y2&Y4=10°	0	2ft 20 Port antenna with BROWN Radome and 6° & 10° tilt settings
CX20OMI218-3PW1010		0	10°	0	2ft 20 Port antenna with BROWN Radome and 10° & 10° 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)		

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