CX12OMI236-BFx

NWAV™ Cylinder Antenna

12-port cylinder antenna 1695-4200 MHz:

4 ports 1695-2690 MHz and 8 ports 3700-4200 MHz

- Small Cell multi-port cylinder antenna for increased coverage & capacity applications
- 4x4 MIMO-capable 1695-2690, 8x8 beamforming-capable for 3700-4200 MHz
- Increased 3.5 GHz gain for improved coverage
- Symmetrical pattern performance across all 1695-2690 MHz ports
- Excellent cross-polar discrimination for MIMO performance

Electrical specification (min/max)	Ports 1, 2, 3, 4			
Frequency bands, MHz	1695-1880	1850-1990	1920-2280	2300-2690
Polarization	± 45°			
Gain, dBi (max)	9.4	9.6	10.0	10.5
Gain, dBi (average)	9.0±0.4	9.2±0.4	9.5±0.5	10.0±0.4
Horizontal beamwidth (HBW), degrees[1]	360°			
Vertical beamwidth (VBW), degrees[1]	15.2	14.0	13.2	10.7
Cross-polar discrimination over 360°[1]	16.0	17.0	17.5	18.0
Electrical downtilt (EDT), degrees	2° or 4° or 6° or 8°			
Cross-polar isolation, dB[1]	25			
Max VSWR / return loss, dB	1.5:1 / -14.0			
Max PIM, 3rd order 2x20W carrier, dBc	-153			
Maximum input power port, watts	125			

[1] Typical value over frequency and tilt.

Electrical specification, single column (non-beamforming) (minimum/maximum)	Ports 5, 6, 7, 8, 9, 10, 11, 12
Frequency bands, MHz	3700-4200
Gain, dBi	9.8
Vertical beamwidth (VBW), degrees[1]	9.4
Vertical beamwidth tolerance, degrees	±0.5
Tilt, degrees	2
First upper side lobe (USLS) suppression, dB[1]	15
Coupling level, Amp, Antenna port to Cal port, dB	26
Coupling level, max Amp Δ, Antenna port to Cal port, dB	±0.4
Coupler, max Amp Δ, Antenna port to Cal port, dB	0.5
Coupler, max Phase Δ, Antenna port to Cal port, degrees	4
Cross-polar isolation, port-to-port, dB[1]	25

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Electrical specification, single column (non-beamforming) (minimum/maximum)	Ports 5, 6, 7, 8, 9, 10, 11, 12
Max VSWR / return loss, dB	1.5:1 / -14.0
Max passive intermodulation (PIM), 2x20W carrier, dBc	-145
Max input power per port at 50 °C, watts	75

Electrical specification, Broadcast 65°	Ports 5, 6, 7, 8, 9, 10, 11, 12
Frequency bands, MHz	3700-4200
Gain over all tilts, dBi	14.4
Horizontal beamwidth (HBW), degrees per sector[1]	80
Vertical beamwidth (VBW), degrees[1]	9.4
Vertical beamwidth tolerance, degrees	±0.5
First upper side lobe (USLS) suppression, dB[1]	<-15

Electrical specification, Service Beam	Ports 5, 6, 7, 8, 9, 10, 11, 12
Frequency bands, MHz	3700-4200
Steered 0° gain, dBi	14.4
Steered 0° Gain tolerance, dBi	±0.6
Steered 0° Beamwidth, Horizontal, degrees	22
Steered 0° CPR at beampeak, dB	18
Steered 0° Horizontal Sidelobe, dB	14
Steered 30° Gain, dBi (max)	13.6
Steered 30° Gain tolerance, dBi	±0.6
Steered 30° Beamwidth, Horizontal, degree	26
Steered 30° CPR at beampeak, dB	18
Steered 30° Horizontal Sidelobe, dB	10

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	12 x 4.3-10 female, bottom
Calibration interface port, connector type, and location	1 x 4.3-10 female, bottom
RF connector torque	96 lbf·in (10.85 N·m or 8 lbf·ft)
Net antenna weight, lb (kg)	30 (13.6)
Rated wind survival speed, mph (km/h)	150 (241)
Frontal wind loading @ 160 km/h, lbf (N)	47.6 (211)

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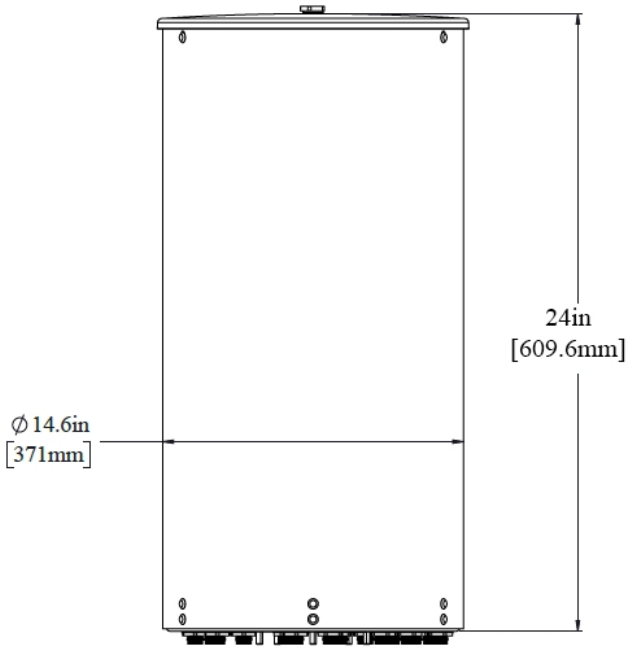
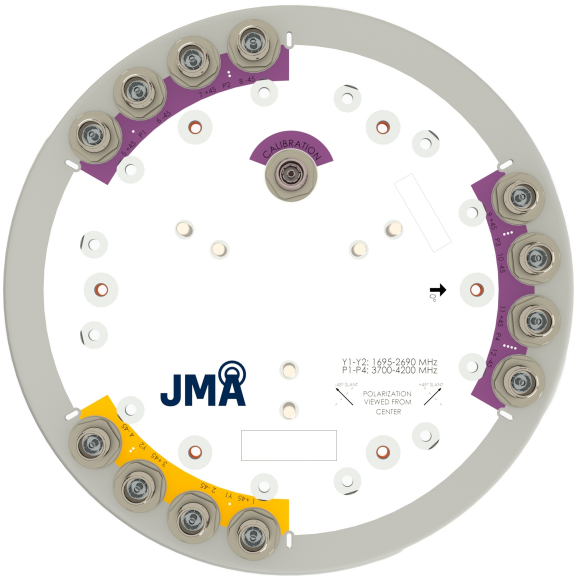
Front view	End view
	The 0 degree reference arrow corresponds to the 0 degree position in the antenna pattern file. Each antenna pattern file uses a top down orientation view (the patterns are viewed from the top of the antenna looking down).  End view details: 6 stud bolts for direct mount to the Universal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

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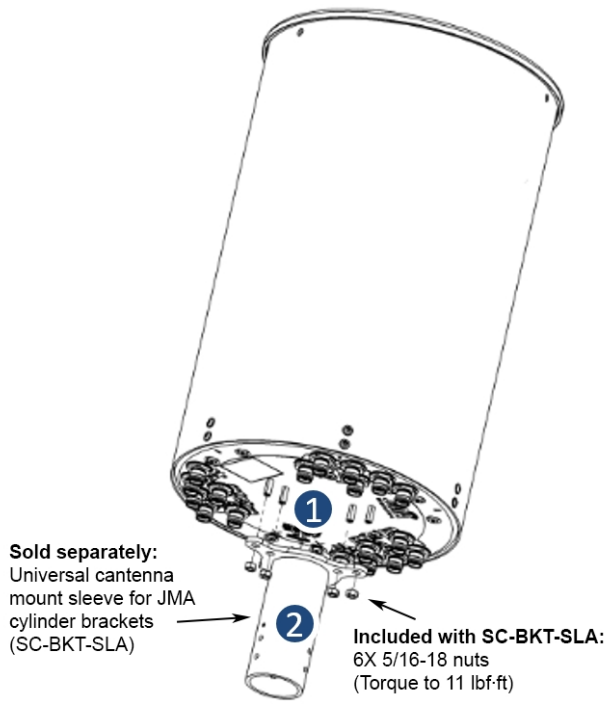
Ordering information	
Antenna model	**Description**
CX12OMI236-BFx (x represents the fixed down tilt value per 4 ports for 1695-2690 MHz	2ft 12 Port OMNI antenna 4MB 8LS6
	x= 2, 4, 6, or 8 deg per 4 ports 1695-2690 MHz x= FET value for ports 1, 2, 3, 4 (Y1, Y2)

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.	

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)		

Array topology

6 sets of radiating arrays

Y1: 1695-2690 MHz
Y2: 1695-2690 MHz
P1: 3700-4200 MHz
P2: 3700-4200 MHz
P3: 3700-4200 MHz
P4: 3700-4200 MHz

Band	RF port
1695-2690	1, 2, 3, 4
3700-4200	5, 6, 7, 8, 9, 10, 11, 12

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