



# CX16OMI236-BFxy

NWAV™ Cylinder Antenna

16-port cylinder antenna 1695-4200 MHz:

8 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, 5, 6, 7, 8			
Frequency bands, MHz	1695-1880	1850-1990	1920-2280	2300-2690
Polarization	± 45°			
Gain, dBi (max)	6.9	7.2	7.4	8.2
Gain, dBi (average)	6.4±0.5	6.7±0.5	6.8±0.6	7.6±0.6
Horizontal beamwidth (HBW), degrees <sup>1</sup>	360°			
Vertical beamwidth (VBW), degrees <sup>1</sup>	31.0°	29.0°	27.1°	22.8°
Cross-polar discrimination over 360° <sup>1</sup>	16.0	17.0	16.5	17.5
Electrical downtilt (EDT), degrees	2° or 6° or 10°			
Cross-polar isolation, dB <sup>1</sup>	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			

<sup>1</sup> Typical value over frequency and tilt.

Electrical specification, single column (non-beamforming) (minimum/maximum)	Ports 9, 10, 11, 12, 13, 14, 15, 16
Frequency bands, MHz	3700-4200
Gain, dBi	9.8
Vertical beamwidth (VBW), degrees <sup>1</sup>	9.4
Vertical beamwidth tolerance, degrees	±0.5
Tilt, degrees	2
First upper side lobe (USLS) suppression, dB <sup>1</sup>	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 <sup>1</sup>	25



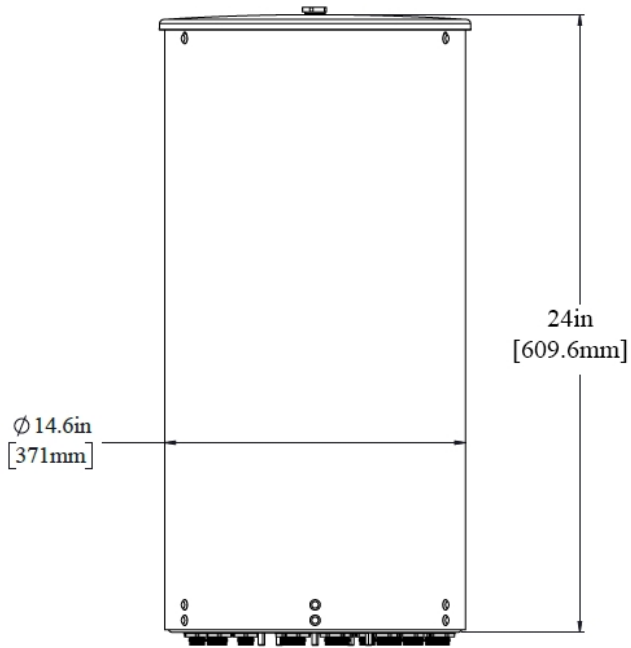
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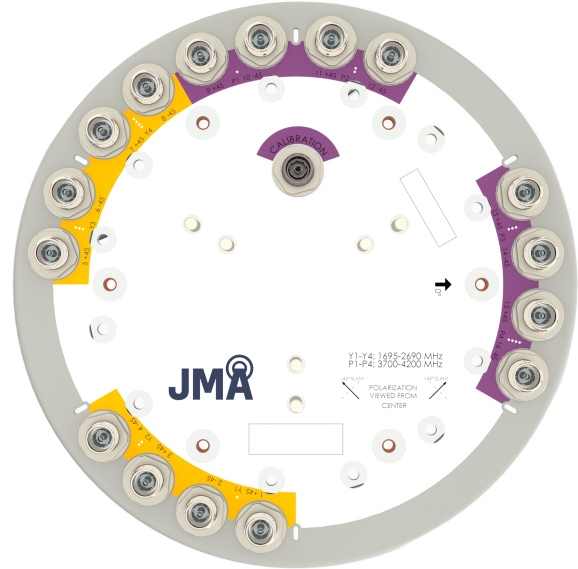
Electrical specification, single column (non-beamforming) (minimum/maximum)	Ports 9, 10, 11, 12, 13, 14, 15, 16
Max VSWR / return loss, dB	1.5:1 / -14.0
Max passive intermodulation (PIM), 2x20W carrier, dBc	-145
Max input power per port at 50 °C, watts	75
Electrical specification, Broadcast 65°	Ports 9, 10, 11, 12, 13, 14, 15, 16
Frequency bands, MHz	3700-4200
Gain over all tilts, dBi	14.4
Horizontal beamwidth (HBW), degrees per sector <sup>1</sup>	80
Vertical beamwidth (VBW), degrees <sup>1</sup>	9.4
Vertical beamwidth tolerance, degrees	±0.5
First upper side lobe (USLS) suppression, dB <sup>1</sup>	<-15
Electrical specification, Service Beam	Ports 9, 10, 11, 12, 13, 14, 15, 16
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	16 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)

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)

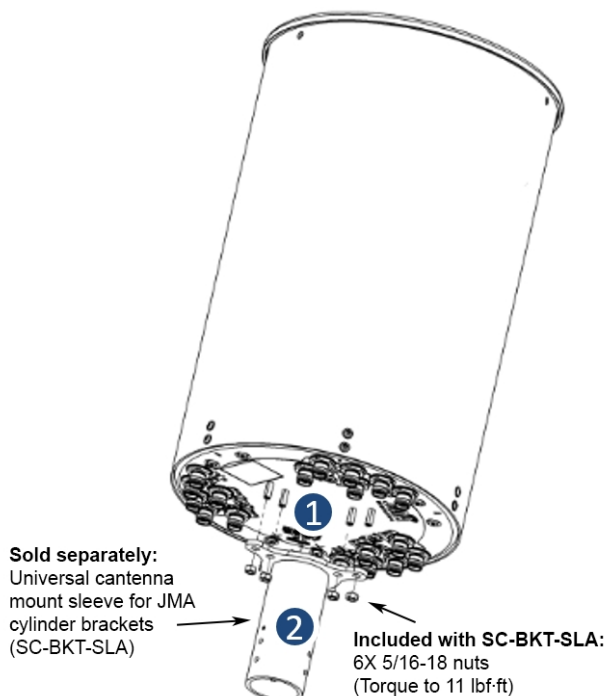
### Ordering information

Antenna model	Description
CX16OMI236-BFxy (xy represents the fixed down tilt value per 4 ports for 1695-2690 MHz)	2ft 16 Port OMNI antenna 8MB 8HB  xy= 2, 6, or 10 deg per 4 ports 1695-2690 MHz x= FET value for ports 5, 6, 9, 10 (Y1 & Y3) y= FET value for ports 7, 8, 11, 12 (Y2 & Y4)

### 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



### Small Cell solutions and mounting systems (sold separately)

<a href="#">Side Arm Mounting System</a>	SC-BKT-SA-(color)	<a href="#">Wide Diameter Pole</a>	SC-BKT-WTPE-(color)
<a href="#">Steel Pole Mounting System</a>	SC-BKT-SLA (color)		

### Array topology

6 sets of radiating arrays  Y1: 1695-2690 MHz Y2: 1695-2690 MHz Y3: 1695-2690 MHz Y4: 1695-2690 MHz P1: 3700-4200 MHz P2: 3700-4200 MHz P3: 3700-4200 MHz P4: 3700-4200 MHz	<table border="1"> <thead> <tr> <th>Band</th> <th>RF port</th> </tr> </thead> <tbody> <tr> <td>1695-2690</td> <td>1, 2, 3, 4, 5, 6, 7, 8</td> </tr> <tr> <td>3700-4200</td> <td>9, 10, 11, 12, 13, 14, 15, 16</td> </tr> </tbody> </table>	Band	RF port	1695-2690	1, 2, 3, 4, 5, 6, 7, 8	3700-4200	9, 10, 11, 12, 13, 14, 15, 16	
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