CX20OMI236-1Cxy

NWAV™ Cylinder Antenna

20-port cylinder antenna 1695-3980 MHz:

8 ports 1695-2690 MHz, 4 ports 3400-3700 MHz, and 8 ports 3700-3980 MHz

- Small Cell multi-port cylinder antenna for increased coverage & capacity applications
- 4x4 MIMO-capable 1695-2690 & 3400-3700 MHz, 8x8 beamforming-capable for 3700-3980 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[1]	360°			
Vertical beamwidth (VBW), degrees[1]	31.0°	29.0°	27.1°	22.8°
Cross-polar discrimination over 360°[1]	16.0	17.0	16.5	17.5
Electrical downtilt (EDT), degrees	2° or 6° or 10°			
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			

Electrical specification (min/max)	Ports 9, 10, 11, 12
Frequency bands, MHz	3400-3700
Polarization	± 45°
Gain, dBi (max)	7.6
Gain, dBi (average)	7.2±0.4
Horizontal beamwidth (HBW), degrees[1]	360°
Vertical beamwidth (VBW), degrees[1]	33°
Cross-polar discrimination over 360°[1]	15.6
Electrical downtilt (EDT), degrees	0°
Cross-polar isolation, dB[1]	28
Max VSWR / return loss, dB	1.5:1 / -14.0
Maximum input power port, watts	100
Maximum composite power, watts (all ports)	1000

[1] Typical value over frequency and tilt.

Electrical specification, single column (non-beamforming) (minimum/maximum)	Ports 13, 14, 15, 16, 17, 18, 19, 20
Frequency bands, MHz	3700-3980
Gain, dBi	9.7
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	±0.6
Coupler, max Amp Δ, Antenna port to Cal port, dB	0.65
Coupler, max Phase Δ, Antenna port to Cal port, degrees	4
Cross-polar isolation, port-to-port, dB[1]	25
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

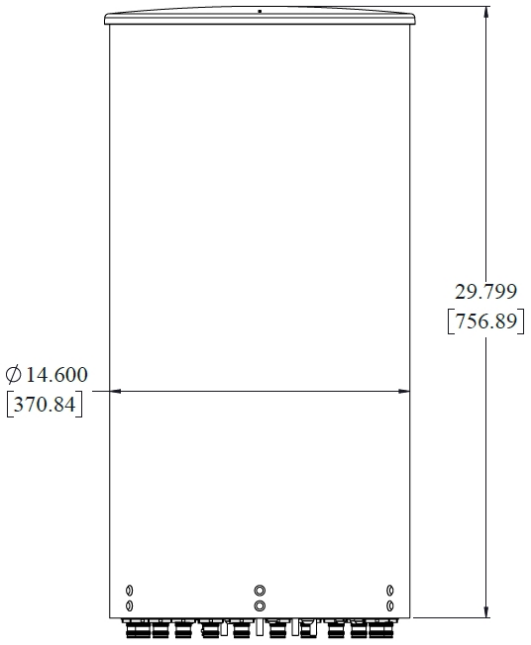
Electrical specification, Broadcast 65°	Ports 13, 14, 15, 16, 17, 18, 19, 20
Frequency bands, MHz	3700-3980
Gain over all tilts, dBi	14.4
Horizontal beamwidth (HBW), degrees per sector[1]	80
Vertical beamwidth (VBW), degrees[1]	9.4
Vertical beamwidth tolerance, degrees	±0.5
First upper side lobe (USLS) suppression, dB[1]	<-15

Electrical specification, Service Beam	Ports 13, 14, 15, 16, 17, 18, 19, 20
Frequency bands, MHz	3700-3980
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)	29.799/ 14.60 (756.89/ 370.84)
Antenna volume (cubic feet)	2.91
No. of RF input ports, connector type, and location	20 x 4.3-10 female, bottom
Calibration interface port, connector type, and location	1 x 4.3-10 female, bottom

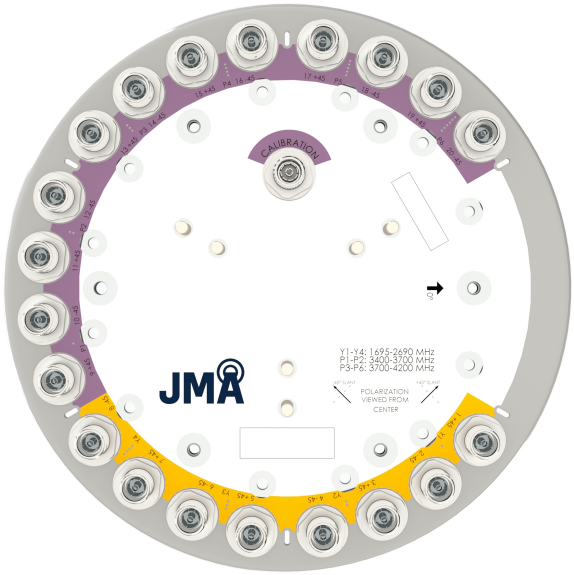
Mechanical specifications	
RF connector torque	96 lbf·in (10.85 N·m or 8 lbf·ft)
Net antenna weight, lb (kg)	30 (13.6)
Rated wind survival speed, mph (km/h)	150 (241)
Frontal wind loading @ 160 km/h, lbf (N)	47.6 (211)

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)

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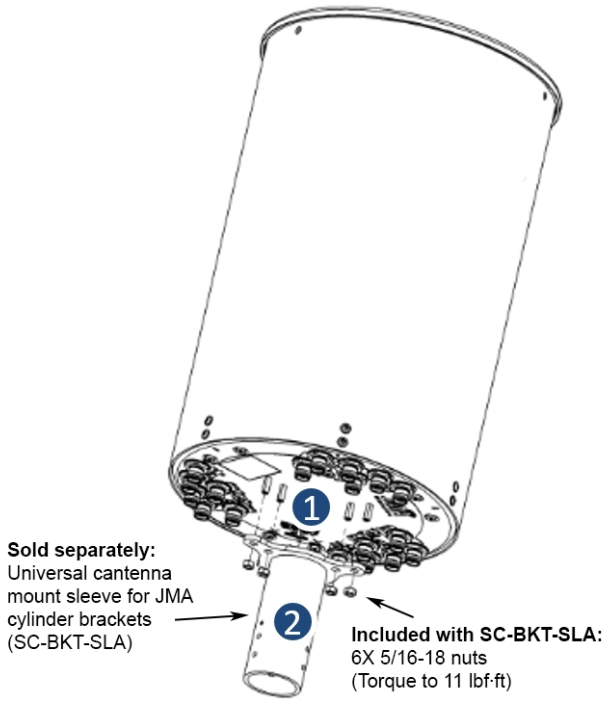
Ordering information

Antenna model	Description
CX20OMI236-1Cxy (xy represents the fixed down tilt value per 4 ports for 1695-2690 MHz)	2ft 20 Port OMNI antenna 8MB 4CBRS 8LS6
	xy= 2, 6, or 10 deg per 4 ports 1695-2690 MHz x= FET value for ports 1, 2, 5, 6 (Y1 & Y3) y= FET value for ports 3, 4, 7, 8 (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)

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

10 sets of radiating arrays

Y1: 1695-2690 MHz
Y2: 1695-2690 MHz
Y3: 1695-2690 MHz
Y4: 1695-2690 MHz
P1: 3400-3700 MHz
P6: 3400-3700 MHz
P2: 3700-3980 MHz
P3: 3700-3980 MHz
P4: 3700-3980 MHz
P5: 3700-3980 MHz

Band	RF port
1695-2690	1, 2, 3, 4, 5, 6, 7, 8
3400-3700	9, 10, 11, 12
3700-3980	13, 14, 15, 16, 17, 18, 19, 20