

# CX12TRI565-1T

## NWAV™ X-Pol Tri-sector Antenna

**12-port 5.5 ft 65° antenna with RET-controlled HB:**

**12 ports 1695-2180 MHz**

- X-Pol, Small Cell, tri-sector antenna
- Suitable for pole or building mount
- 4x4 MIMO high-band
- 3-sector configuration
- Independent RET control on each sector
- Suitable for LTE/UMTS/CDMA/GSM technologies
- 5.88 cubic feet in size



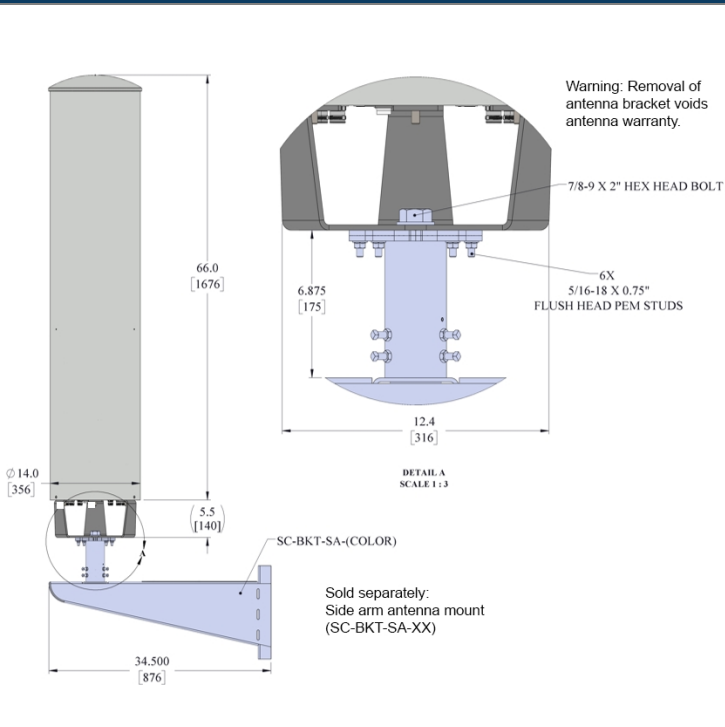

Electrical specification (minimum/maximum)	Ports 1-12		
	1695-1880	1850-1990	1920-2180
Frequency bands, MHz	1695-1880	1850-1990	1920-2180
Polarization	± 45°		
Average gain over all tilts, dBi	16.2	16.4	16.8
Horizontal beamwidth (HBW), degrees	65°	63°	60°
Vertical beamwidth (VBW), degrees <sup>1</sup>	7.7°	7.3°	6.7°
Electrical downtilt (EDT) range, degrees	2-8° (RET)		
Cross-polar isolation, port-to-port, dB <sup>1</sup>	25	25	25
Max VSWR / return loss, dB	1.5:1 / -14.0		
Max passive intermodulation (PIM), 2x20W carrier, dBc	-153		
Maximum input power per port, watts	80		
Maximum total input power, watts	960		

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

Ordering information	
Antenna model	Description
CX12TRI565-1T	5F X-Pol TRI 65° 1695-2700 MHz 2-8° RET, 4.3-10
Optional accessories	
<a href="#">AISG cables</a>	M/F cables for AISG connections
<a href="#">PCU-1000 RET controller</a>	Stand-alone controller for RET control and configurations

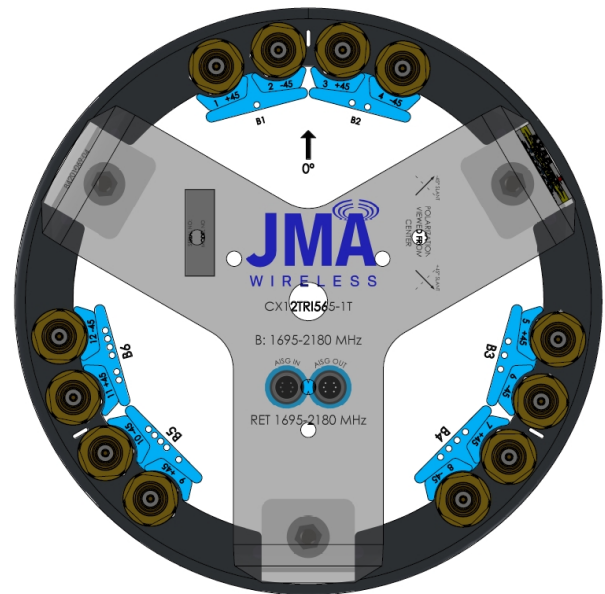
Mechanical specifications	
Dimensions height/diameter, inches (mm)	66.0/ 14.0 (1676.4/ 355)
Antenna volume (cubic feet)	5.88
No. of RF input ports, connector type, and location	12 x 4.3-10 female, bottom
RF connector torque	96 lbf·in (10.85 N·m or 8 lbf·ft)
Net antenna weight, lb (kg)	58.0 (26.3)
Rated wind survival speed, mph (km/h)	150 (241)
Frontal wind loading @ 160 km/h, lbf (N)	135.4 (602.3)
Equivalent flat plate @ 100 mph and Cd=2, sq ft	2.73

### Mechanical dimensions: example side arm mounting view



### End view

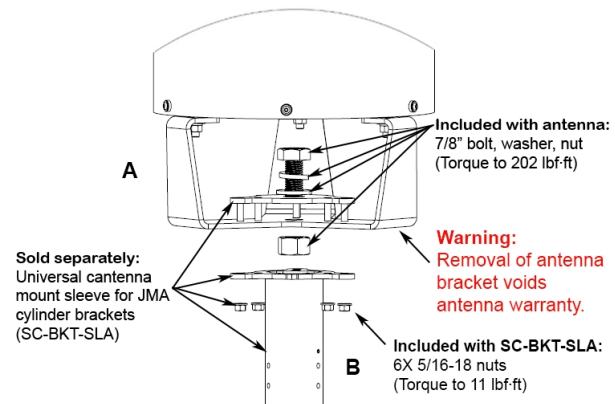
The 0 degree reference arrow corresponds to the 0 degree position in the antenna pattern file. Each antenna pattern file uses a top down orientation view (the patterns are viewed from the top of the antenna looking down).



### Notes on cylinder brackets

- All CX\* antennas come with the bottom mount bracket (marked as **A**) factory-installed (all factory testing is done with bracket attached)
- Hardware is included with each antenna to connect bottom bracket to different mounting systems.
- JMA cylinder brackets are compatible with bottom mount via universal antenna mount sleeve (marked as **B**), sold separately.
- To mitigate potential risk of PIM issues, the recommended torque values need to be applied.

### Mounting details



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

<a href="#">Side Arm Mounting System</a>	SC-BKT-SA4-(color)	<a href="#">Wide Diameter Pole</a>	SC-BKT-WTPE4-(color)
<a href="#">Steel Pole Mounting System</a>	SC-BKT-SLA (color)		

### Remote electrical tilt (RET 1000) information

<b>RET location</b>	Integrated into antenna
<b>RET interface connector type</b>	8-pin AISG connector per IEC 60130-9
<b>RET connector torque</b>	Min 0.5 N·m to max 1.0 N·m (hand pressure & finger tight)
<b>RET interface connector quantity</b>	1 pair of AISG male/female connectors
<b>RET interface connector location</b>	Bottom of the antenna
<b>Total no. of internal RETs high bands</b>	3 (1 per sector)
<b>RET input operating voltage, vdc</b>	10-30
<b>RET max power consumption, idle state, W</b>	≤ 2.0
<b>RET max power consumption, normal operating conditions, W</b>	≤ 13.0
<b>RET communication protocol</b>	AISG 2.0 / 3GPP

### RET topology

Three RETs are included in the antenna, one for each sector. All three sectors are controlled via the designated external AISG connector as shown below:

RET device	Band	RF port
1	1695-2180	1-4
2	1695-2180	5-8
3	1695-2180	9-12



### Array topology

2 sets of radiating arrays per sector

B1: 1695-2180 MHz  
B2: 1695-2180 MHz

Band	RF port
1695-2180	1-2, 5-6, 9-10
1695-2180	3-4, 7-8, 11-12

