

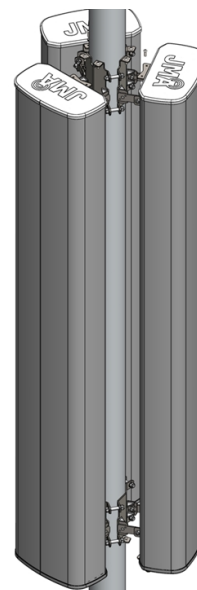
# MX04FFP665-01

## NWAV™ X-Pol Four-Port Antenna

### X-Pol Four-Port 6 ft, 65° Form in Tighter with Smart Bias Ts, 698-3980 MHz:

#### 4 ports 698-3980 MHz

- Low profile / smaller form-factor antennas suitable for shrouded sites, flagpoles, etc., for enabling full 4x4 C-Band spectrum deployment.
- Integrated feeder reduction and Smart Bias-Ts for ease of deployment and reduced leasing costs
- Optimized form-factor for reduced weight and wind loading
- Fully integrated (iRETs) with independent RET control for low band, midband, and CBRS/C-Band.
- Excellent passive intermodulation (PIM) performance reduces harmful interference.
- Advanced element technology for improved RF efficiency
- Optimized CBRS radiation pattern for improved RSRP
- Consistent higher gain at 3.5 GHz with enhanced pattern characteristics



Electrical specification (minimum/maximum)	Ports 1, 2		Ports 1, 2, 3, 4		
Frequency bands, MHz	698-806	806-894	1695-1880	1850-1990	1920-2200
Polarization	± 45°		± 45°		
Maximum gain over all tilts, dBi	14.4	14.5	17.6	17.8	18.1
Average gain over all tilts, dBi	14.0 ± 0.4	14.3 ± 0.2	17.3 ± 0.3	17.5 ± 0.3	17.7 ± 0.4
Horizontal beamwidth (HBW), degrees <sup>1</sup>	75.0	72.0	61.0	60.0	60.0
Front-to-back ratio, co-polar power @180°± 30°, dB	>27	>26	>30	>31	>29
X-Pol discrimination (CPR) at boresight, dB	>17.0	>15.6	>23	>18	>18
Vertical beamwidth (VBW), degrees <sup>1</sup>	13.0	12.0	6.0	5.5	5.4
Electrical downtilt (EDT) range, degrees	2-14		0-9		
First upper side lobe (USLS) suppression, dB <sup>1</sup>	≤-17.0	≤-16.0	≤-17.0	≤-16.0	≤-16.0
Cross-polar isolation, port-to-port, dB <sup>1</sup>	25	25	25	25	25
Max VSWR / return loss, dB	1.5:1 / -14.0		1.5:1 / -14.0		
Max passive intermodulation (PIM), 2x20W carrier, dBc	-153		-153		
Max input power per any port, watts	300		200		
Total composite power all ports (1-4), watts	1200				

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



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## NWAV™ X-Pol Four-Port Antenna

Electrical specification (minimum/maximum)	Ports 1, 2, 3, 4		
Frequency bands, MHz	3400-3550	3550-3700	3700-3980
Polarization	± 45°		
Maximum gain over all tilts, dBi	17.2	17.4	17.5
Average gain over all tilts, dBi	16.8 ± 0.4	17.1 ± 0.3	17.2 ± 0.3
Horizontal beamwidth (HBW), degrees	65	60	61
Front-to-back ratio, co-polar power @180°± 30°, dB	>29	>30	>31
Vertical beamwidth (VBW), degrees <sup>1</sup>	8.4	8.1	7.9
Electrical downtilt (EDT) range, degrees	2-12		
First upper side lobe (USLS) suppression, dB <sup>1</sup>	≤-15	≤-16	≤-16
Cross-polar isolation, port-to-port, dB <sup>1</sup>	25	25	25
Max VSWR / return loss, dB	1.5:1 / -14.0		
Max input power per any port, watts	150		
Total composite power all ports (1-4), watts	1200		

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

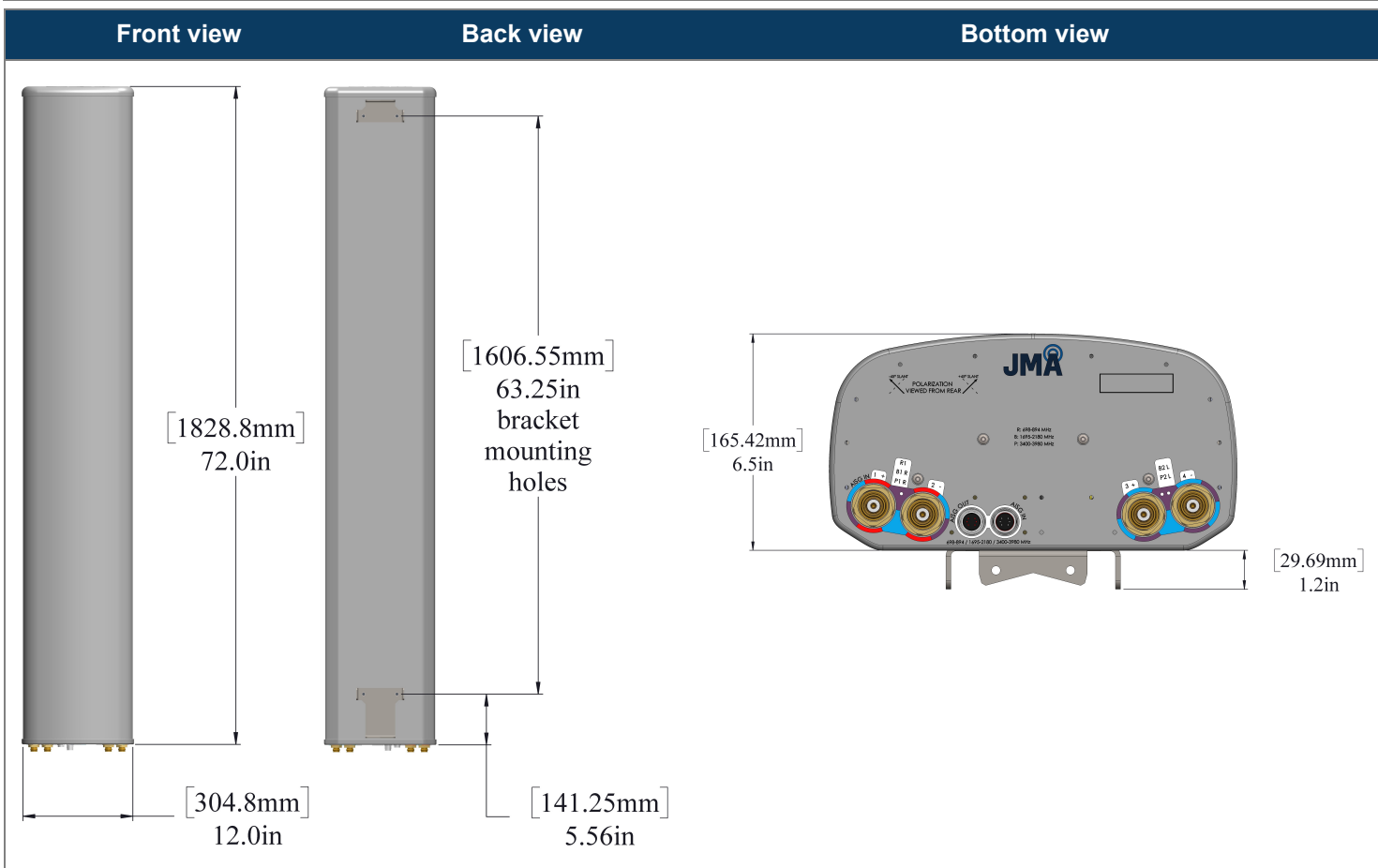
Ordering information	
Antenna model	Description
MX04FFP665-01	6F X- Pol 4 Port FFP 65° 2-14°/ 0-9°/ 2-12°, 4.3-10 & SBTs
Optional accessories	
<a href="#">AISG cables</a>	M/F cables for AISG connections
<a href="#">PCU-1000 RET controller</a>	Stand-alone controller for RET control and configurations
<a href="#">91900339-01 (1 per 3 antennas)</a>	Tri-Sector Pole-Mount Bracket (see 91900339-01 bracket document for details)



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## NWAV™ X-Pol Four-Port Antenna

Mechanical specifications	
Dimensions height/width/depth, inches (mm)	72/ 12/ 6.5 (1828.8/ 304.8/ 165)
Shipping dimensions length/width/height, inches (mm)	76/ 20/ 14.5 (1930/ 508/ 368)
No. of RF input ports, connector type, and location	4 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)	42 (19.05)
Shipping weight, lb (kg)	55.3 (25.05)
Antenna mounting kit, 1 per 3 antennas (sold separately)	See <a href="#">91900339-01</a>
Rated wind survival speed, mph (km/h)	150 (241)
Frontal and lateral, and rear wind loading @ 150 km/h, lbf (N)	62.6 (278.5), 14.5 (63.6)
EPA frontal and lateral, ft <sup>2</sup> , (m <sup>2</sup> )	2.8 (0.26), 0.7 (0.065)

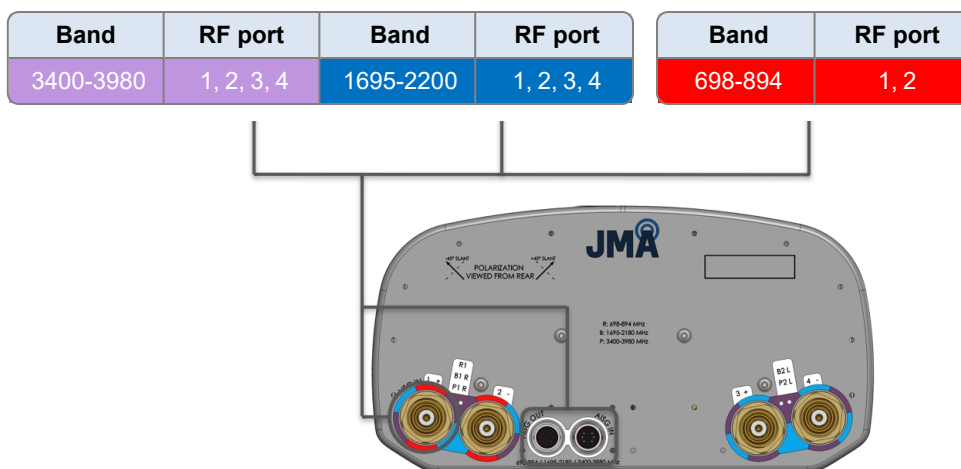


### Remote electrical tilt (RET 1000) information

RET location	Integrated into antenna
RET interface connector type	8-pin AISG connector per IEC 60130-9 or RF port bias-t
RET connector torque	Min 0.5 N·m to max 1.0 N·m (hand pressure & finger tight)
RET interface connector quantity	1 pair of AISG male/female connectors and 1 RF port bias-t
RET interface connector location	Bottom of the antenna
Total no. of internal RETs 698-894 MHz	1
Total no. of internal RETs 1695-2200 MHz	1
Total no. of internal RETs 3400-3980 MHz	1
RET input operating voltage, vdc	10-30
RET max power consumption, idle state, W	≤ 2.0
RET max power consumption, normal operating conditions, W	≤ 13.0
RET communication protocol	AISG 2.0 / 3GPP

### RET and RF connector topology

Each RET device can be controlled either via the designated external AISG connector or RF smart bias-t port as shown below:



### Array topology

5 sets of radiating arrays

- R1: 698-894 MHz
- B1: 1695-2200 MHz
- B2: 1695-2200 MHz
- P1: 3400-3980 MHz
- P2: 3400-3980 MHz

Band	RF port
698-894	1-2
1695-2200	1-2
1695-2200	3-4
3400-3980	1-2
3400-3980	3-4

