



# MX08FRO645-20

## NWAV™ X-Pol 8-Port Antenna

### X-Pol 8-Port 6 ft 45° Fast Roll Off:

#### 4 ports 617-894 MHz and 4 ports 1695-2200 MHz

- Fast Roll Off (FRO™) azimuth beam pattern improves Intra- and Inter-cell SINR
- Excellent passive intermodulation (PIM) performance reduces harmful interference.
- Fully integrated (iRETs) with independent RET control for low and mid bands for ease of network optimization
- SON-Ready array spacing supports beamforming capabilities.
- High total power handling to maximize network efficiency
- Reduced tower loading for ease of site deployment



**NWAV™**

Electrical specification (minimum/maximum)	Ports 1, 2, 3, 4		Ports 5, 6, 7, 8		
Frequency bands, MHz	617-698	698-894	1695-1880	1850-1990	1920-2200
Polarization	± 45°		± 45°		
Gain over all tilts, max, dBi	14.8	15.4	19.2	19.8	20.5
Horizontal beamwidth (HBW), degrees <sup>1</sup>	49	47	45	43	41
Front-to-back ratio, co-polar power @180°, dB	>28	>29	>32	>31	>32
Vertical beamwidth (VBW), degrees <sup>1</sup>	14.2	12.5	5.4	5.2	4.9
Electrical downtilt (EDT) range, degrees	2-14		2-12		
First upper side lobe (USLS) suppression, dB <sup>1</sup>	≤-16.0	≤-16.5	≤-18.0	≤-18.0	≤-18.0
Minimum 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		250		
Total composite power all ports (1-8), watts <sup>2</sup>	1500				

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

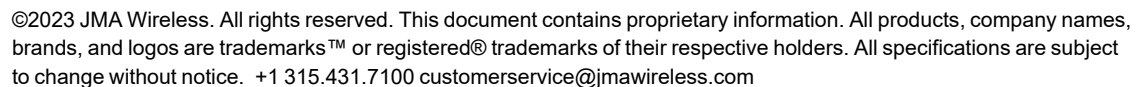
<sup>2</sup> Power rated up to +55 °C

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Electrical specification (minimum/maximum)	Ports 1, 2, 3, 4		Ports 5, 6, 7, 8		
Frequency bands, MHz	617-698	698-894	1695-1880	1850-1990	1920-2200
Average gain over all tilts, dBi (Gain Tolerance)	14.0±0.8	14.8±0.6	18.8±0.4	19.4±0.4	20±0.5
Horizontal beamwidth tolerance (HBW), degrees <sup>1</sup>	±5	±6.5	±5.0	±3.5	±3.5
Vertical beamwidth tolerance (VBW), degrees	±2.5	±2.0	±0.3	±0.3	±0.3
Front-to-back ratio, co-polar power @180°± 30°, dB	>27	>25	>25	>27	>26
X-Pol discrimination (CPR) at boresight, dB	>22	>20	20	>21	>22
First upper side lobe (USLS) suppression boresight to 20°, dB <sup>1</sup>	≤-16	≤-15	≤-16	≤-16	≤-16

Mechanical specifications	
Dimensions height/width/depth, inches (mm)	72.0/ 20.0/ 8.0 (1828.8/ 508.0/ 203.2)
Shipping dimensions length/width/height, inches (mm)	77.3/ 23.8/ 14.5 (1963.42/ 605/ 368)
No. of RF input ports, connector type, and location	8 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)	73 (33.1) estimated
Shipping weight, lb (kg)	112.5 (51.0) estimated
Antenna mounting and downtilt kit included with antenna	91900318
Net weight of the mounting and downtilt kit, lb (kg)	18 (8.2)
Range of mechanical up/down tilt	-2° to 12°
Rated wind survival speed, mph (km/h)	150 (241)
Frontal and lateral wind loading @ 150 km/h, lbf (N)	108.1 (480.9), 20.5 (91.2)
Effective projected area @ 150 km/h (EPA), frontal, sq ft	4.9

### Back view

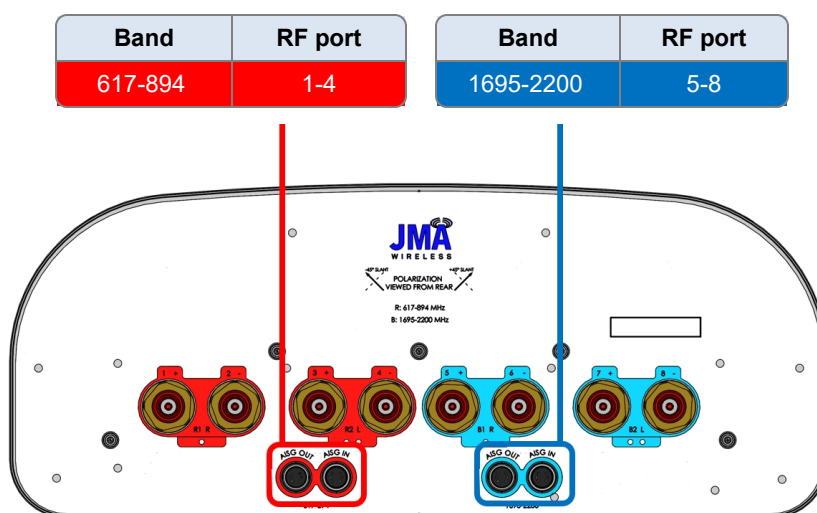


### Remote electrical tilt (RET 2000) information

RET location	Integrated into antenna
RET interface connector type	8-pin AISG connector per IEC 60130-9
RET connector torque	Min 0.5 N·m to max 1.0 N·m (hand pressure & finger tight)
RET interface connector quantity	2 pairs of AISG male/female connectors
RET interface connector location	Bottom of the antenna
Total no. of internal RETs 617-894 MHz	1
Total no. of internal RETs 1695-2200 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	≤ 10.0
RET communication protocol	Hardware AISG 3.0; firmware AISG 2.0, field-upgradable to AISG 3.0

### RET and RF connector topology

Each RET device can be controlled via the designated external AISG connector as shown below:



### Array topology

4 sets of radiating arrays

R1: 617-894 MHz  
R2: 617-894 MHz  
B1: 1695-2200 MHz  
B2: 1695-2200 MHz

Band	RF port
617-894	1-2
617-894	3-4
1695-2200	5-6
1695-2200	7-8

