

# MX06FRO860-02

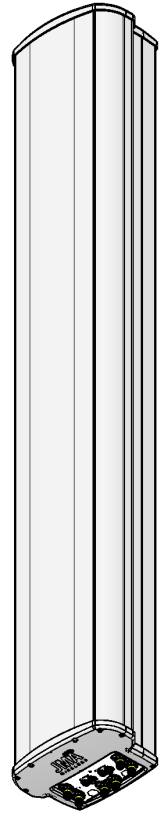
NWAV™ X-Pol Antenna | Hex-Port | 8 ft | 60°



## X-Pol, Hex-Port 8 ft 60° Fast Roll Off with Smart Bias T

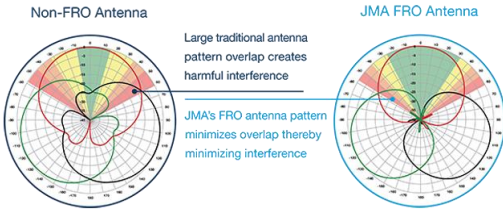
### (2) 698–894 MHz & (4) 1695–2180 MHz

- 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 high bands for ease of network optimization
- SON-Ready array spacing supports beamforming capabilities
- Suitable for LTE/CDMA/PCS/UMTS/GSM Air interface technologies
- Integrated Smart BIAS-Ts reduces leasing costs



Fast Roll-Off (FRO) increased throughput, without compromising coverage.

FRO technology increases the Signal to Interference & Noise Ratio (SINR) by eliminating overlap between sectors.



LTE Throughput	SINR	Speed (bps/Hz)	Speed Increase	CQI
Excellent	>20	>5	333+ %	14-15
Good	12-20	3.3-5	277%	10-13
Fair	6-12	1.5-3.3	160%	7-9
Poor	<6	<1.5	0%	1-7



Electrical Specification (Minimum/ Maximum)	Ports 1,2		Ports 3,4,5,6		
	698–798	824–894	1695–1880	1850–1990	1920–2180
Frequency bands, MHz	698–798	824–894	1695–1880	1850–1990	1920–2180
Polarization	± 45°		± 45°		
Average gain over all tilts, dBi	15.9	15.4	17.6	17.9	18.2
Horizontal beamwidth (HBW), degrees <sup>1</sup>	60.0	53.5	55.0	55.0	55.5
Front-to-back ratio, co-polar power @ 180°± 30°, dB	>22.0	>21.0	>25.0	>25.0	>25.0
X-Pol discrimination (CPR) at boresight, dB	>18.0	>15.0	>18	>18	>15
Sector power ratio, percent	<4.5	<3.5	<3.7	<3.8	<3.6
Vertical beamwidth, (VBW), degrees <sup>1</sup>	9.0	8.3	6.0	5.5	5.5
Electrical downtilt (EDT) range, degrees	2-12	2-12	0-9		
First upper side lobe (USLS) suppression, dB <sup>1</sup>	≤ -15.0	≤ -15.0	≤ -16.0	≤ -16.0	≤ -16.0
Minimum cross polar isolation, port-to-port, dB	25	25	25	25	25
Maximum VSWR/ return loss, dB	1.5/ -14.0	1.5/ -14.0	1.5/ -14.0	1.5/ -14.0	1.5/ -14.0
Maximum passive Intermodulation (PIM), 2x 20W carrier, dBc	-153	-153	-153		
Maximum input power per any port, watts	300		250		
Total composite power all ports, watts	1500				

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

# MX06FRO860-02

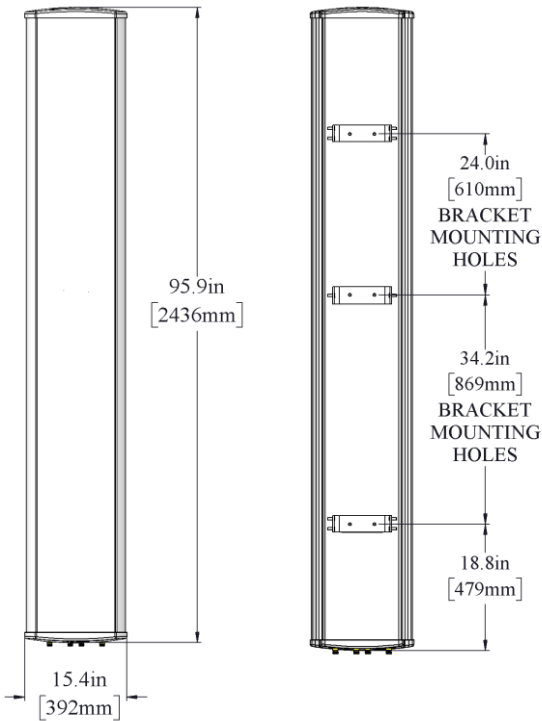
NWAV™ X-Pol Antenna | Hex-Port | 8 ft | 60°



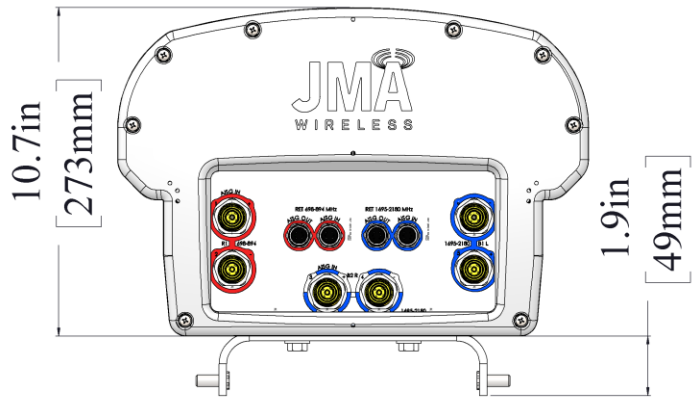
Mechanical Specifications	
Dimensions height/ width/ depth, inches (mm)	95.9/ 15.4/ 10.7 (2436/ 392/ 273)
Shipping dimensions length/ width/ height, inches (mm)	106/ 20/ 15 (2692/ 508/ 381)
No. of RF input ports, connector type & location	6 x 4.3-10 female, bottom
RF connector torque	96 lbf-in (10.85 N m or 8 lbf-ft)
Net antenna weight, lb (kg)	79 (35.91)
Shipping weight, lb (kg)	128 (58.18)
Antenna mounting and downtilt kit included with antenna	91900318, 91900319 (middle bracket)
Net weight of the mounting and downtilt kit, lb (kg)	26 (11.82)
Range of mechanical up/ down tilt	-2° to 12°
Rated wind survival speed, mph (km/h)	150 (241)
Frontal, lateral & rear wind loading @ 150 km/h, lbf (N)	208 (925), 98 (435), 212 (943)
Equivalent flat plate @100 mph and Cd=2, sq. ft.	3.46

FRONT VIEW

BACK VIEW



BOTTOM VIEW



Ordering Information	
<b>Antenna Model</b>	<b>Description</b>
MX06FRO860-02	8F X- Pol HEX FRO 60° 2-12°/ 0-9° RET, 4.3-10 & SBT
<b>Optional Accessories</b>	
992100-CA030-SC	Optional AISG jumper cable, M/F, 3.0 meters
PCU-1000	Primary control unit, USB

# MX06FRO860-02

NWAV™ X-Pol Antenna | Hex-Port | 8 ft | 60°

Remote Electrical Tilt (RET 1000) Information	
RET location	Integrated into antenna
RET interface connector type	8-pin AISG connector per IEC 60130-9
RET interface connector quantity	2 pairs of AISG male/ female connectors
RET interface connector location	Bottom of the antenna
Total No. of internal RETs low bands	1
Total No. of internal RETs high bands	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 & RF Connector Topology

Each RET device can be controlled either via the designated external AISG connector or RF port as shown below

RET Device	Band	RF Port
1	698–894	1–2

RET Device	Band	RF Port
2	1695–2180	3–6

### Array Topology

3 sets of radiating arrays

R1: 698–894MHz  
B1: 1695–2180MHz  
B2: 1695–2180MHz

Band	RF Port
1695–2180	3–4
698–894	1–2
1695–2180	5–6