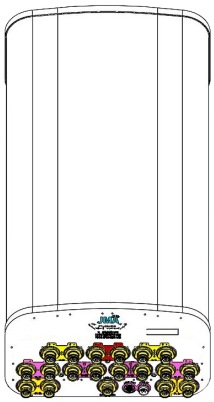
DX18FRO265-01

NWAV™ 2F Panel Antenna

18-port panel antenna from 698-3980 MHz:

2 ports 698-894 MHz, 8 ports 1695-2690 MHz, and 8 ports 3400-3980 MHz

- X-Pol, Small Cell, panel antenna
- Suitable for pole or building mount
- Higher gain for midband and C-Band
- 4T8R-capable for AWS/PCS
- 8x8 MIMO for C-Band with beamforming
- Fully integrated internal (iRET) with SBT and calibration for independent RET control on C-Band



Electrical specification (min/max)	Ports 1, 2		Ports 3, 4, 5, 6, 7, 8, 9, 10				
Frequency bands, MHz	698-798	824-894	1695-1880	1850-1990	1920-2180	2300-2400	2496-2690
Polarization	± 45°		± 45°				
Average gain, dBi	9.5	9.8	11.8	12.5	13.2	13.3	13.6
Horizontal beamwidth (HBW), degrees[1]	72	70	68	66	64	62	60
Vertical beamwidth (VBW), degrees[1]	37	32	28	26	25	23	20.8
Fixed electrical downtilt (EDT), degrees	2°		4°				
Cross-polar isolation, port-to-port, dB[1]	25		25				
Max VSWR / return loss, dB	1.5:1 / -14.0		1.5:1 / -14.0				
Max PIM (3rd order, 2x20W) dBc	-153		-153				
Maximum input power port, watts	100		150				

[1] Typical value over frequency.

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Electrical specification (minimum/maximum)	Ports 11, 12, 13, 14, 15, 16, 17, 18
Frequency bands, MHz	3400-3980
Gain, dBi	16.7
Horizontal beamwidth (HBW), degrees	75
Horizontal beamwidth tolerance, degrees	±5
Front-to-back ratio, co-polar power @180°± 30°, dB	27
Vertical beamwidth (VBW), degrees[1]	6.8
Vertical beamwidth tolerance, degrees	±0.3
Beam tilt, degrees	2-12
Electrical downtilt (EDT), degrees	0
First upper side lobe (USLS) suppression, dB[1]	17
Coupling level, Amp, Antenna port to Cal port, dB	26
Coupling level, max Amp Δ, Antenna port to Cal port, dB	±0.7
Coupler, max Amp Δ, Antenna port to Cal port, dB	0.65
Coupler, max Phase Δ, Antenna port to Cal port, degrees	5
Cross-polar isolation, port-to-port, dB[1]	22
Isolation, Inter-band, dB	20
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 11, 12, 13, 14, 15, 16, 17, 18
Frequency bands, MHz	3400-3980
Gain over all tilts, dBi	21.6
Horizontal beamwidth (HBW), degrees1	65
Horizontal beamwidth tolerance, degrees	±4
Vertical beamwidth (VBW), degrees[1]	6.8
Vertical beamwidth tolerance, degrees	±0.3
First upper side lobe (USLS) suppression, dB[1]	<-16

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Electrical specification, Service Beam	Ports 11, 12, 13, 14, 15, 16, 17, 18
Frequency bands, MHz	3400-3980
Steered 0° gain, dBi	21.6
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	12
Steered 30° Gain, dBi (max)	21.2
Steered 30° Gain tolerance, dBi	±0.6
Steered 30° Gain, dBi	21
Steered 30° Beamwidth, Horizontal, degree	22
Steered 30° CPR at beampeak, dB	18
Steered 30° Horizontal Sidelobe, dB	10

Ordering information	
Antenna model	**Description**
DX18FRO265-01	2F panel antenna, 18 ports, (2) 698-894, (8) 1695-2690 four degrees EDT, (8) 3400-3980 with 2-12° RET, 4.3-10 & SBT
Mounting kit (included)	Fixed-mount and 91900324 articulating brackets with X- and Y-axis adjustments and rotation

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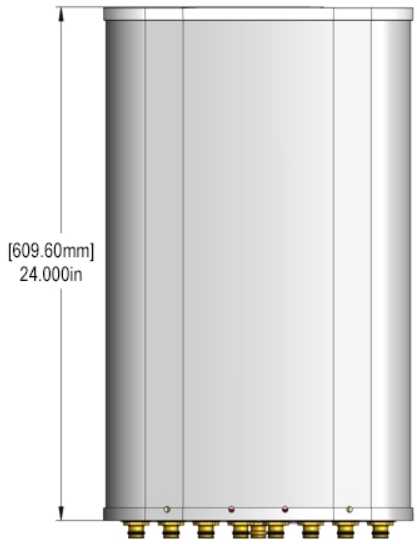
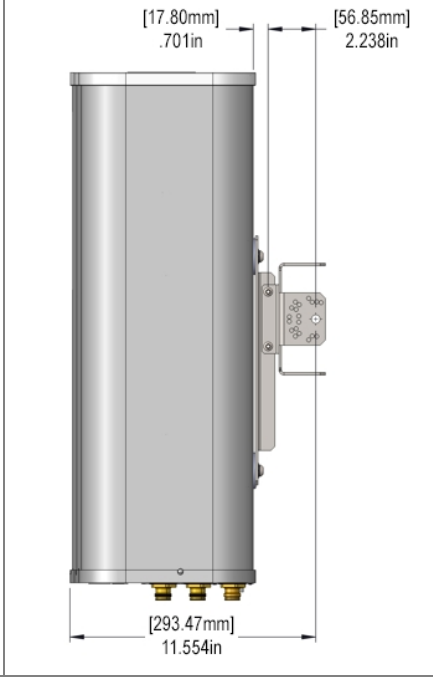
Mechanical specifications	
Dimensions height/width/depth, inches (mm)	24/ 14.2/ 8.5 (609.6/ 360.7/ 215.9)
No. of RF input ports, connector type, and location	18 x 4.3-10 female, bottom & 1 cal x 4.3-10 female, bottom
RF connector torque	96 lbf·in (10.85 N·m or 8 lbf·ft)
Net antenna weight, lb (kg)	33 (15.0)
Weight with supplied pipe mount bracket, lb (kg)	38.1 (17.3)
Shipping weight, lb (kg)	43 (19.5)
Rated wind survival speed, mph (km/h)	150 (241)
Frontal wind loading @ 150 km/h, lbf (N)	22.3 (99.4)
Installation instructions	DX-*/SX-*/IX-* Antenna Mounting Instructions and Kits 81900511
Weep hole drilling instructions	DX-*/SX-*/IX-* Antenna Weep Hole Modification Guide

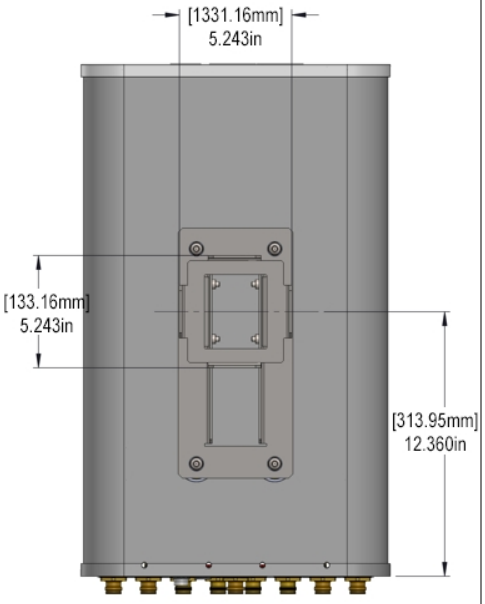
Front view pole-mount



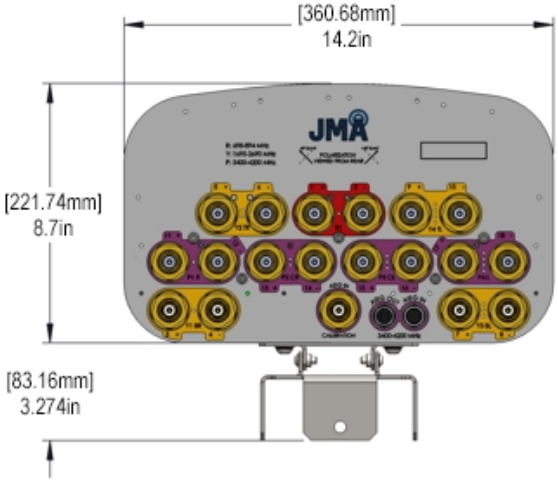
Side view pole-mount



Back view pole-mount



Bottom view pole-mount



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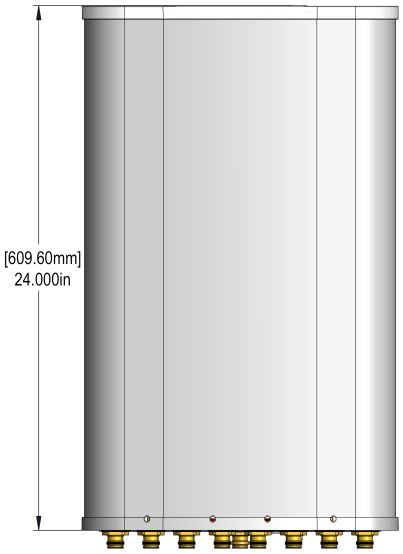
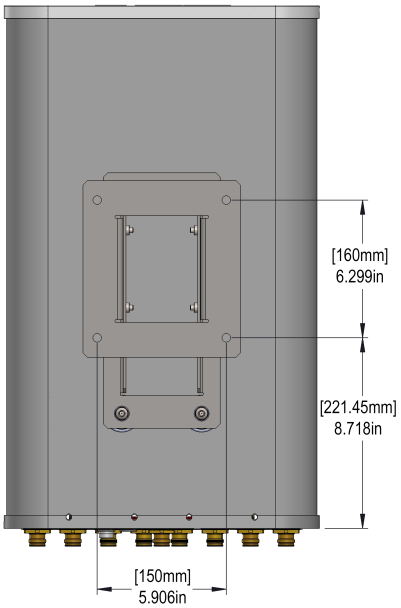
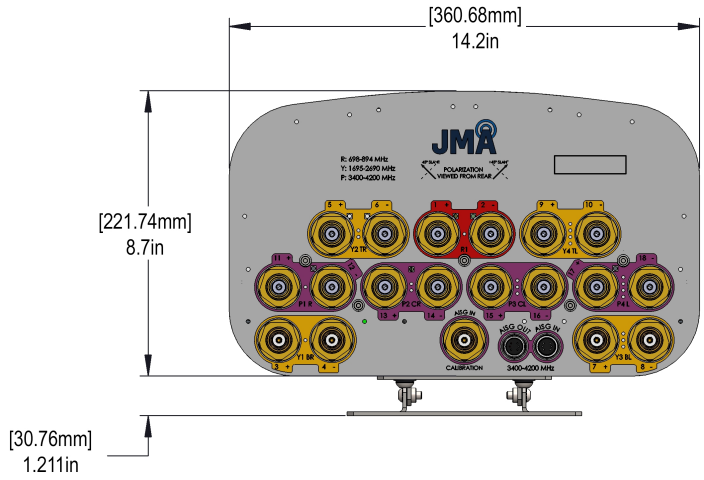
Front view fixed-mount	Side view fixed-mount	Back view fixed-mount
		

Bottom view fixed-mount

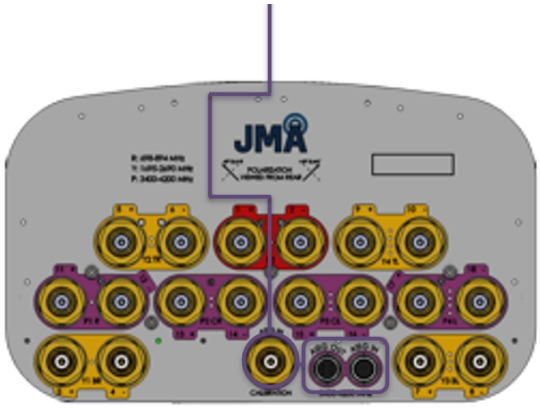


Remote electrical tilt (RET 1000) information	
RET location	Integrated into antenna
RET interface connector type	8-pin AISG connector per IEC 60130-9 or RF port bias-t
RET connector torque	Min 0.5 N·m to max 1.0 N·m (hand pressure & finger tight)
RET interface connector quantity	1 pair of AISG male/female connectors and 1 RF port bias-t
RET interface connector location	Bottom of the antenna
Total no. of internal RETs 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 port as shown below:

RET device	Band	RF port
1	3400-3980	11-18

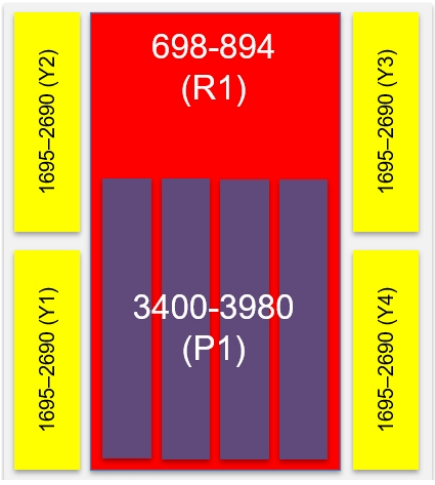


Array topology

6 sets of radiating arrays

R1: 698-894 MHz
Y1: 1695-2690 MHz
Y2: 1695-2690 MHz
Y3: 1695-2690 MHz
Y4: 1695-2690 MHz
P1: 3400-3980 MHz

Band	RF port
698-894	1-2
1695-2690	3-10
3400-3980	11-18



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