

## WWX063X19x00

### Features

- Twin band, 2x X-Pol (Quad-Pol) variable tilt, panel antenna
- Part of Amphenol's UNIVERSAL series of antennas featuring consistent form factors for future-proofing
- 4x4 MIMO
- Patented internal RET actuator adds no additional length to the antenna
- Features an adjustable mounting bracket channel for custom mounting in any situation



<b>PRODUCT OVERVIEW</b>	Frequency Range (MHz)	(2x) 1695-2180
	Array	<input type="checkbox"/> B1 <input checked="" type="checkbox"/> B2
	Connector	4 PORTS
	Polarization	XPOL
	Azimuth Beamwidth (avg)	65°
	Electrical Downtilt	0-10°
	Maximum Continuous Power Per Port @ 50° C (122° F)	250 WATTS
	Maximum Total Continuous Power at 50° C (122° F)	1000 WATTS
	Connector Type	(4x) 7/16-DIN FEMALE
	Dimensions	1906 x 305 x 180 mm (75.0 x 12.0 x 7.1 in)
	Radome Color Options	Grey

### ELECTRICAL SPECIFICATIONS

B1  B2


Frequency Range		MHz	(2x) 1695-2180		
Frequency Sub-Range		MHz	1695-1880	1850-1990	1920-2180
Polarization		---	(2x) ±45°		
Gain	BASTA	dBi	17.6 ± 0.5	18.1 ± 0.6	17.8 ± 0.8
	MAX	dBi	18.1	18.7	18.6
Azimuth Beamwidth (3 dB)		degrees	66.6° ± 7.8°	69.8° ± 7.7°	66.0° ± 6.4°
Elevation Beamwidth (3 dB)		degrees	5.1° ± 0.7°	5.6° ± 0.3°	5.2° ± 0.3°
Electrical Downtilt		degrees	0-10°		
Impedance		Ohms	50Ω		
VSWR		---	< 1.5:1		
Passive Intermodulation 3rd Order for 2x20 W Carriers		dBc	< -153		
Upper Sidelobe Suppression		dB	> 12		
Isolation	Intraband	dB	> 25		
	Interband	dB	> 28		

Standard values based on NGMN-P-BASTA v11.1 recommendation.

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### ELECTRICAL DOWNTILT CONTROL

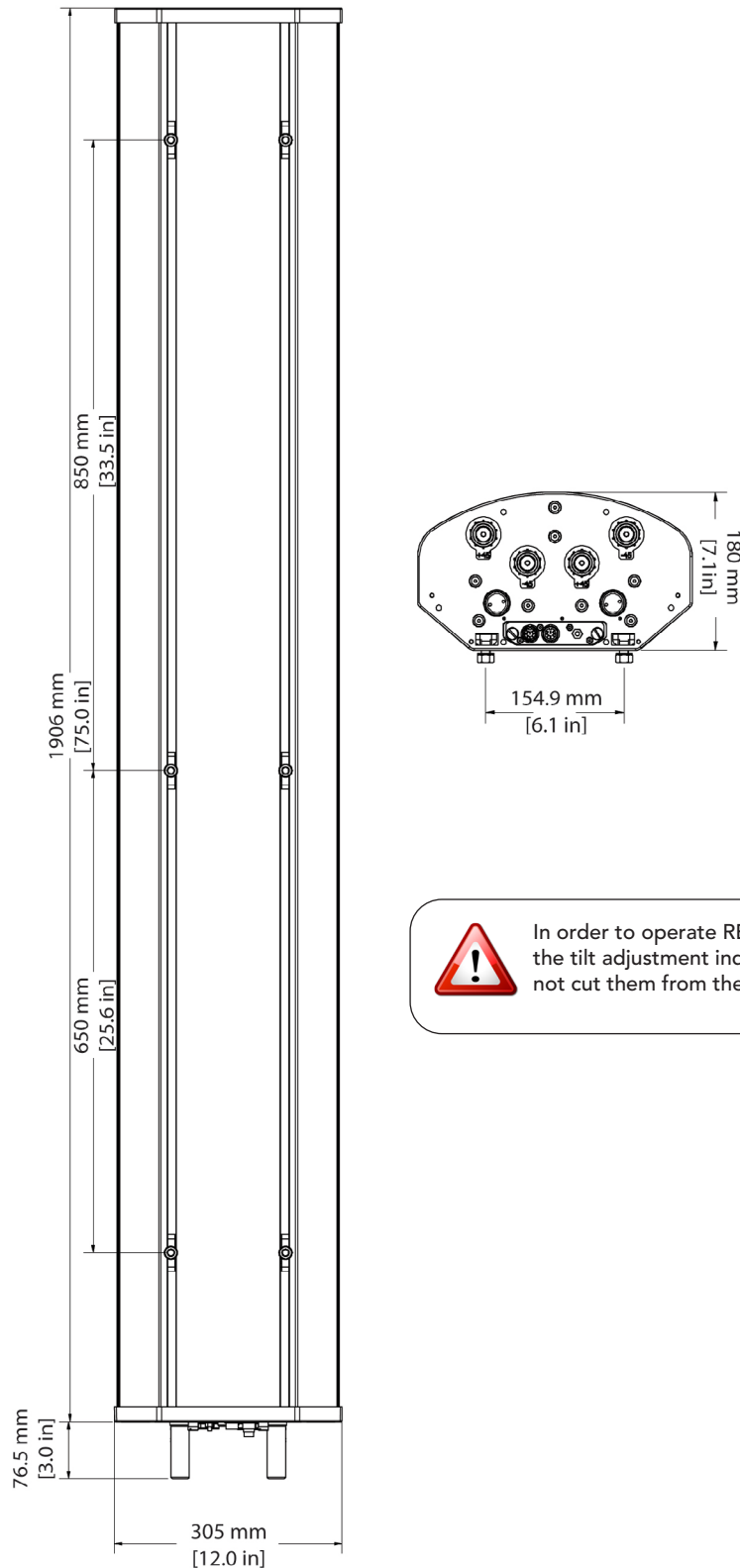
Electrical downtilt for each band can be controlled separately. Tilt indicator(s) are covered by removable transparent cap(s).					
Manual Electrical Tilt (MET) Control	A colored knob at the end of the tilt indicator allows change of the tilt without need of a tool. The knob color is identical to the corresponding connector ring color. To access the knob, remove the cap by turning it counter-clockwise. It is re-installed by opposite rotation. <b>Do not remove the transparent cap(s) from the antenna.</b>				
Remote Electrical Tilt (RET) Control	The remote control of the electrical tilt is managed by either a Multi-Device Control Unit (MDCU) or a Multi-Device Dual Unit (MDDU) inserted in the bottom of the antenna. A single actuator individually controls the tilt of each band (no need for daisy chain cables between the bands). This module does not add any additional length to the antenna. For RET control, the transparent caps must be in place and locked. The tilt angle indicators always remain visible and the antenna still has manual tilt control (manual override).				
RET Actuator	The RET module is factory installed and does not need to be ordered separately.				
	<table border="1"> <tr> <td>Multi-Device Control Unit (MDCU)</td> <td>The MDCU is an electronic module that allows the remote control of the electrical downtilt (RET) in Amphenol antennas with factory embedded motors. The MDCU is factory installed. Refer to ordering options.</td> </tr> <tr> <td>Multi-Device Dual Unit (MDDU)</td> <td>The MDDU allows two separate RET Controllers to independently drive the RETs in Amphenol antennas with factory installed motors (for antenna sharing). The MDDU is factory installed. Refer to ordering options.</td> </tr> </table>	Multi-Device Control Unit (MDCU)	The MDCU is an electronic module that allows the remote control of the electrical downtilt (RET) in Amphenol antennas with factory embedded motors. The MDCU is factory installed. Refer to ordering options.	Multi-Device Dual Unit (MDDU)	The MDDU allows two separate RET Controllers to independently drive the RETs in Amphenol antennas with factory installed motors (for antenna sharing). The MDDU is factory installed. Refer to ordering options.
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Multi-Device Dual Unit (MDDU)	The MDDU allows two separate RET Controllers to independently drive the RETs in Amphenol antennas with factory installed motors (for antenna sharing). The MDDU is factory installed. Refer to ordering options.				
Important Installation Instructions	 <p>In order to operate RET control, the transparent caps covering the tilt adjustment indicators must be engaged and locked. <b>Do not cut them from the antenna.</b></p> <p>Do not install the antenna with the connectors facing upward.</p>				

### MECHANICAL SPECIFICATIONS

Antenna	Length	mm (in)	1906 (75.0)
	Width	mm (in)	305 (12.0)
	Depth	mm (in)	180 (7.1)
Net Weight	Antenna Only	kg (lbs)	14.8 (32.7)
	Antenna with Mounting Bracket Kit MKS09P02	kg (lbs)	18.9 (41.7)
	Antenna with Mounting Bracket Kit MKS09T02	kg (lbs)	21.2 (46.7)
Windload	Calculation	km/h (mph)	160 (100)
	Frontal	N (lbf)	707 (159)
	Side	N (lbf)	419 (94)
Survival Wind Speed		km/h (mph)	241 (150)
Connector	Type	---	7/16-DIN Female
	Quantity	---	4
	Position	---	Bottom
Radome Color		---	Grey
Operating Temperature		degrees	-40 to +60 C (-40 to +140 F)
Lightning Protection (Grounding Type)		---	Direct Ground

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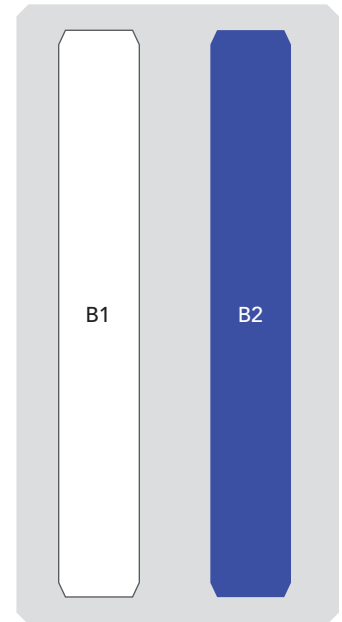


In order to operate RET control, the transparent caps covering the tilt adjustment indicators must be engaged and locked. Do not cut them from the antenna.

## WWX063X19x00

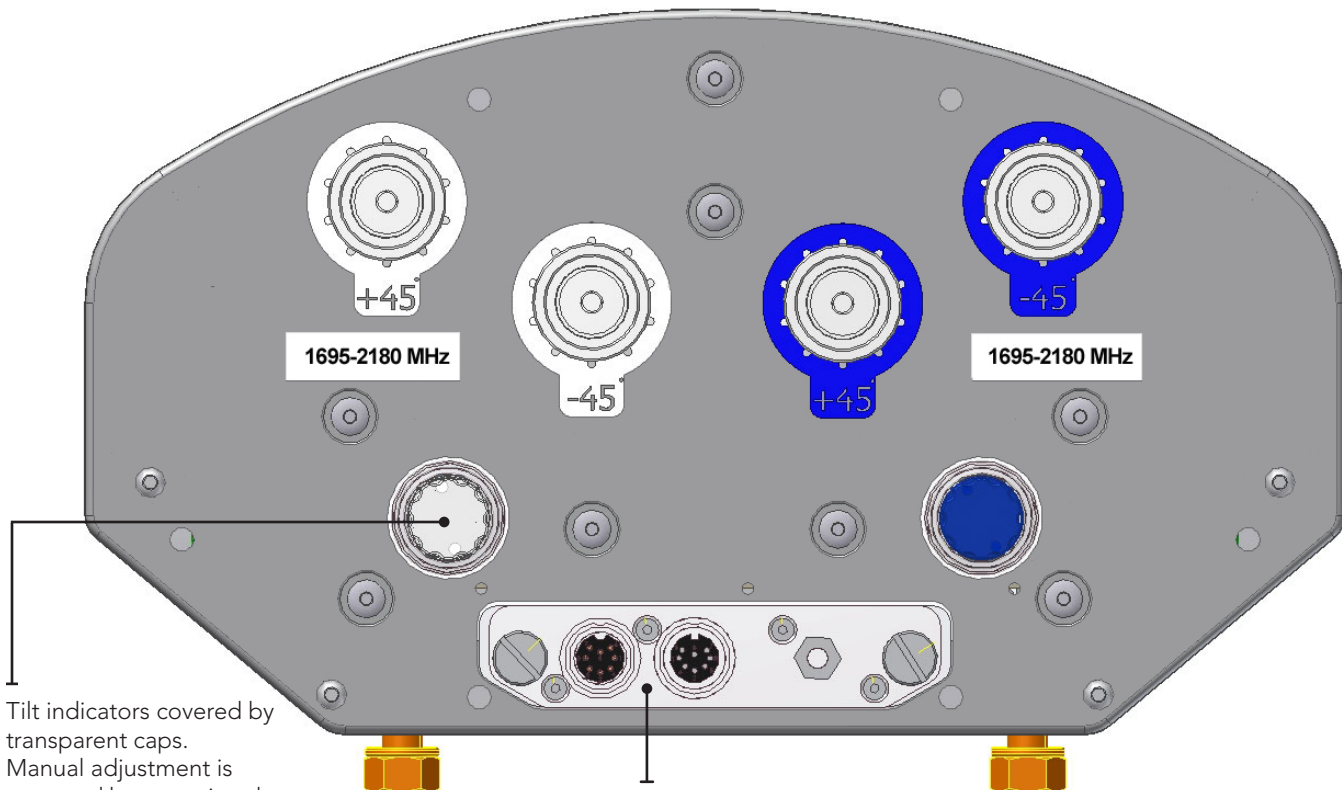
### ARRAY LAYOUT Topology

FREQUENCY	ARRAY	CONNECTOR	CONNECTOR TYPE
1695-2180 MHz	□ B1	1-2	(2x) 7/16-DIN Female
1695-2180 MHz	■ B2	3-4	(2x) 7/16-DIN Female



The illustration is not shown to scale.

### BOTTOM VIEW - LABELING



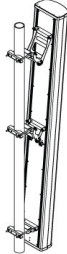

Tilt indicators covered by transparent caps. Manual adjustment is accessed by removing the caps. Knob colors are the same as the connectors.

Location of the MDCU or MDDU for RET Control (MDCU shown)

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**MOUNTING KITS** The default mounting kit is included in the price of the antenna. Any other mounting kits are optional and must be ordered separately.

	MODEL NUMBER	DESCRIPTION	FITS PIPE DIAMETER	WEIGHT
<b>DEFAULT MOUNTING KIT</b> <i>Shipped as standard and included in the price of the antenna</i> 	MKS09T02	3-Point, Scissor Tilt, Mounting & Downtilt Bracket Kit	50-115 mm (2.0-4.5 in)	6.4 kg (14 lbs)
<b>OPTIONAL MOUNTING KIT</b> <i>Must be ordered separately</i> 	MKS09P02	3-Point Mounting Bracket Kit	50-115 mm (2.0-4.5 in)	4.1 kg (9 lbs)

**INSTALLATION** Please read all installation notes before installing this product.



Always attach the antenna using all mounting points.

Do not install the antenna with the connectors facing upwards.

Do not remove the transparent cap(s) from the antenna.

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### HOW TO READ THE MODEL NUMBER

Each letter and number has meaning.

OPERATING FREQUENCY	POLARIZATION OR TYPE	AZIMUTH BEAMWIDTH	FEATURES OR STYLE	LENGTH IN METERS	TILT TYPE	DIPLEXED OR NON-DIPLEXED	RF OR MECHANICAL VARIATIONS
<b>WW</b>	<b>X</b>	<b>063</b>	<b>X</b>	<b>19</b>	<b>x</b>	<b>0</b>	<b>0</b>
(2x) 1695-2180 MHz	X-POL	63-65°	Standard X-Pol Panel	~ 1.9 meters	This letter is a placeholder for the tilt type.  Refer to Ordering Options below.	Indicates whether the antenna is diplexed or not.  0 = Non-Diplexed  1 = Diplexed	This number is used to indicate a difference in either electrical performance or mechanical features from another similar model; for example, an extended frequency range or a different tilt range.  The standard is "0". If this number is something other than 0, it means it's a variation of the original model.

### ORDERING OPTIONS

Select from the following ordering options

SELECT TILT TYPE	ORDER MODEL NUMBER
Manual Electrical Tilt	WWX063X19 <b>M</b> 00
Remote Electrical Tilt AISG v1.1 with an MDCU RET Actuator	WWX063X19 <b>R</b> 00
Remote Electrical Tilt AISG v2.0 / 3GPP with an MDCU RET Actuator	WWX063X19 <b>G</b> 00
Remote Electrical Tilt AISG v2.0 / 3GPP with an MDDU RET Actuator	WWX063X19 <b>L</b> 00

This antenna is shipped standard with the 3-Point Scissor Tilt Mounting Kit MKS09T02.

65°

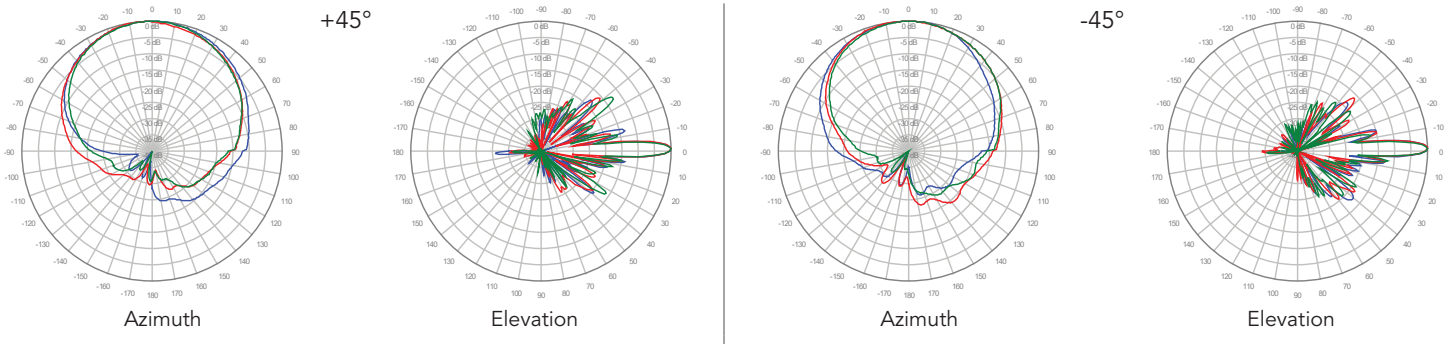
75.0 in

VARIABLE TILT

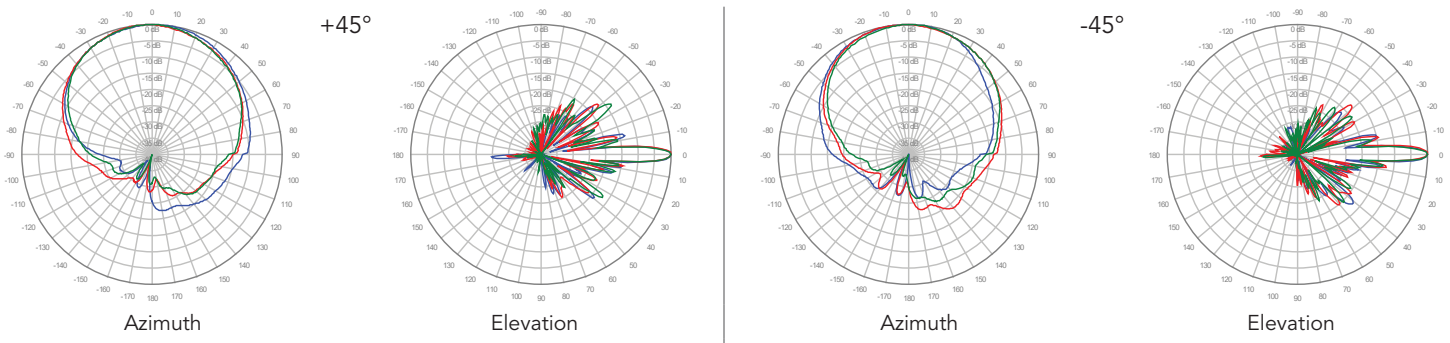
WWX063X19x00

1800 MHz ———  
1900 MHz ———  
2100 MHz ———

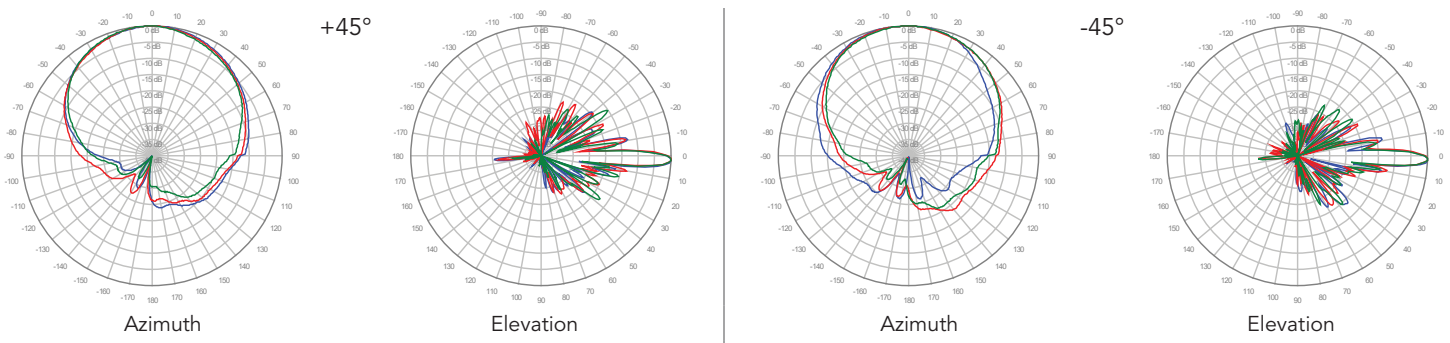
**B1, 0° TILT**



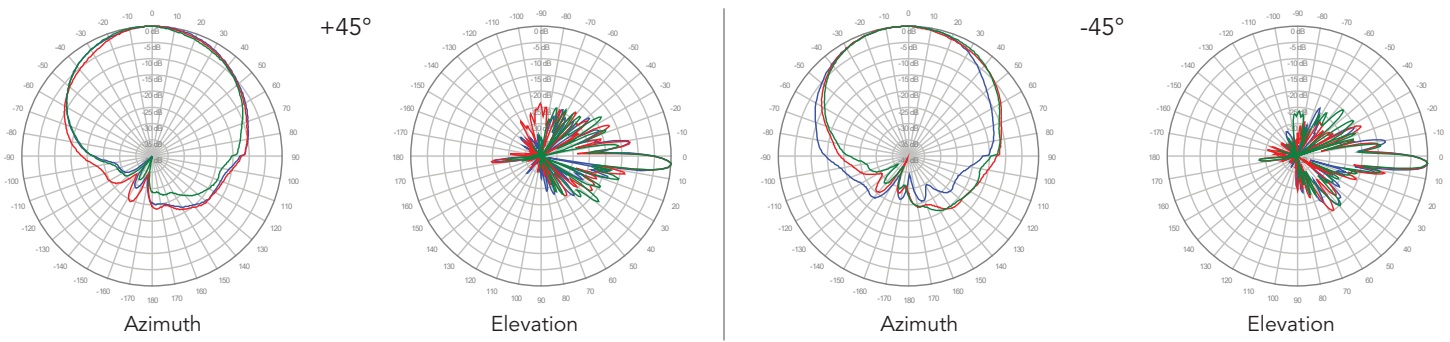
**B1, 2° TILT**



**B1, 4° TILT**



**B1, 6° TILT**



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65°

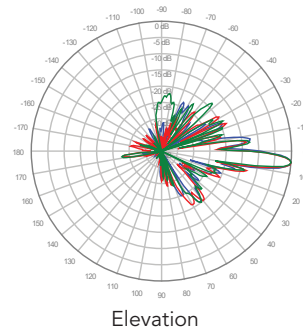
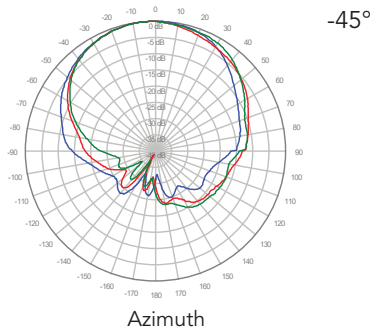
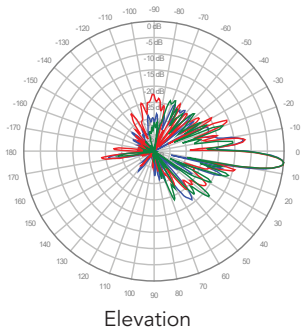
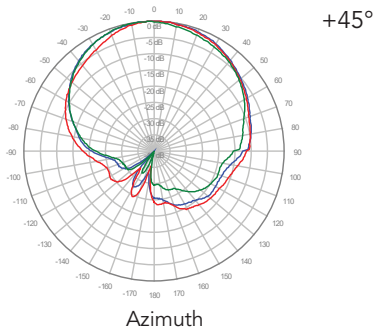
75.0 in

VARIABLE TILT

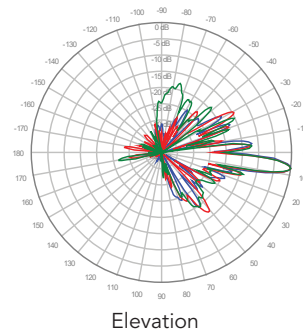
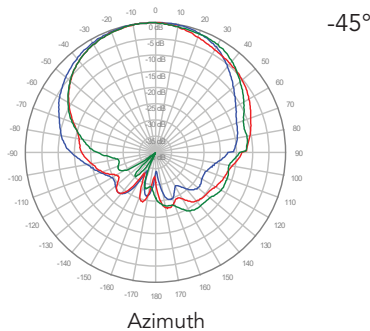
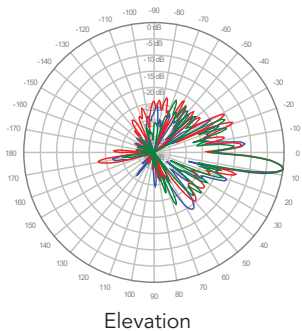
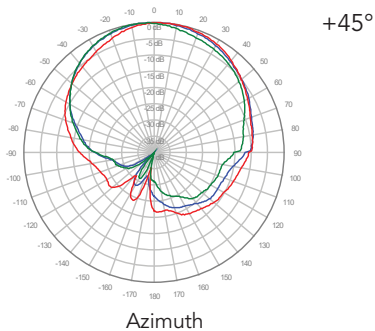
WWX063X19x00

1800 MHz ———  
1900 MHz ———  
2100 MHz ———

B1, 8° TILT



B1, 10° TILT



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65°

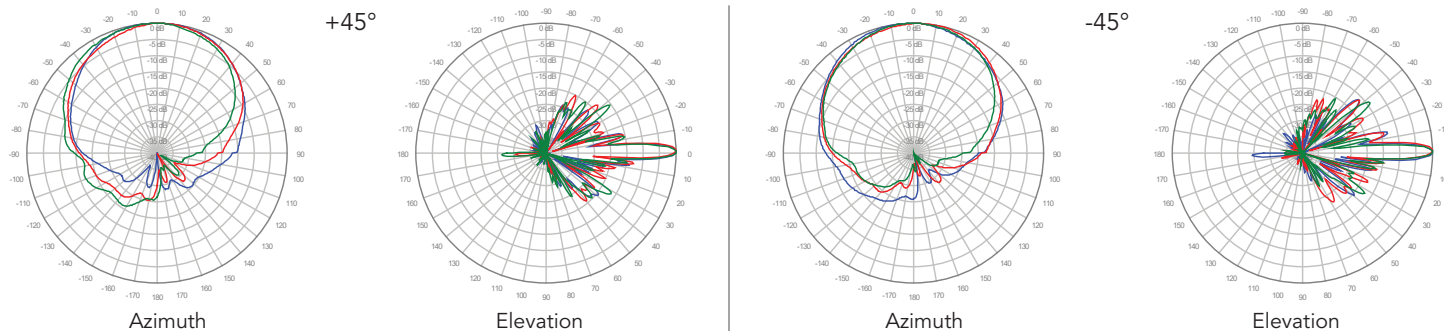
75.0 in

VARIABLE TILT

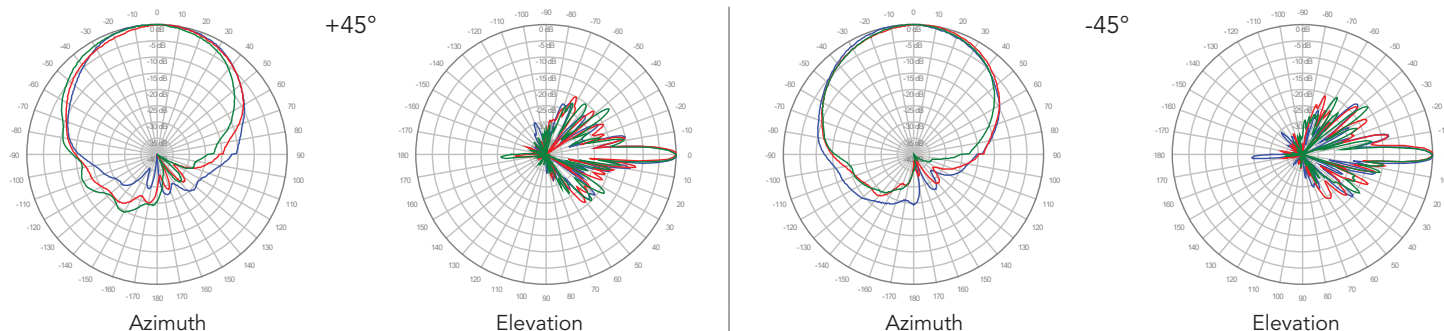
WWX063X19x00

1800 MHz ———  
1900 MHz ———  
2100 MHz ———

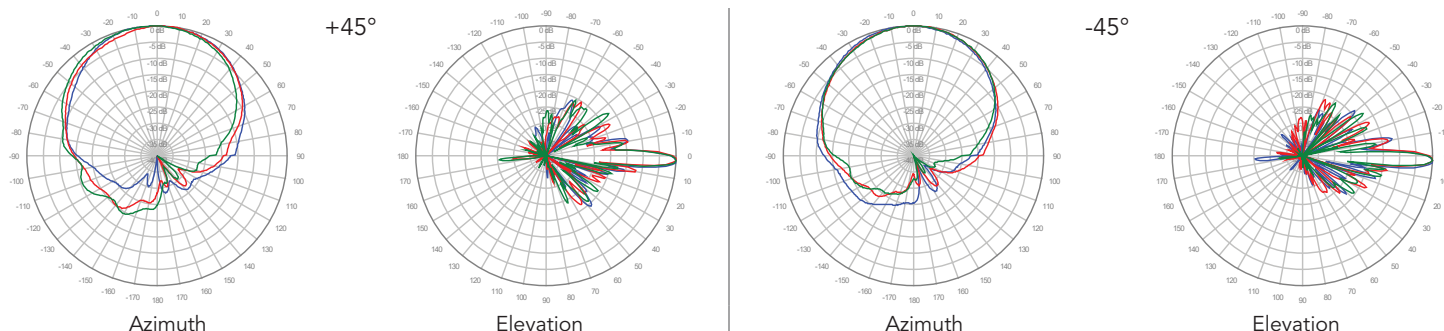
**B2, 0° TILT**



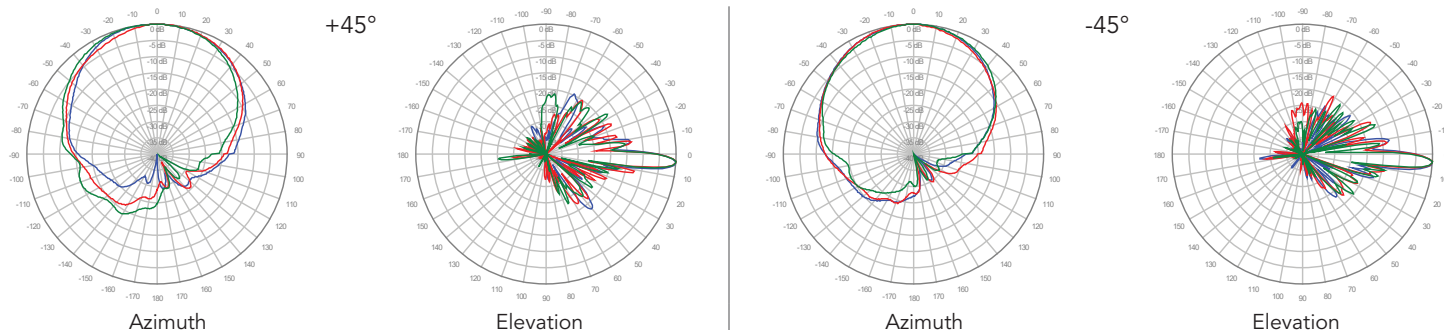
**B2, 2° TILT**



**B2, 4° TILT**



**B2, 6° TILT**



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65°

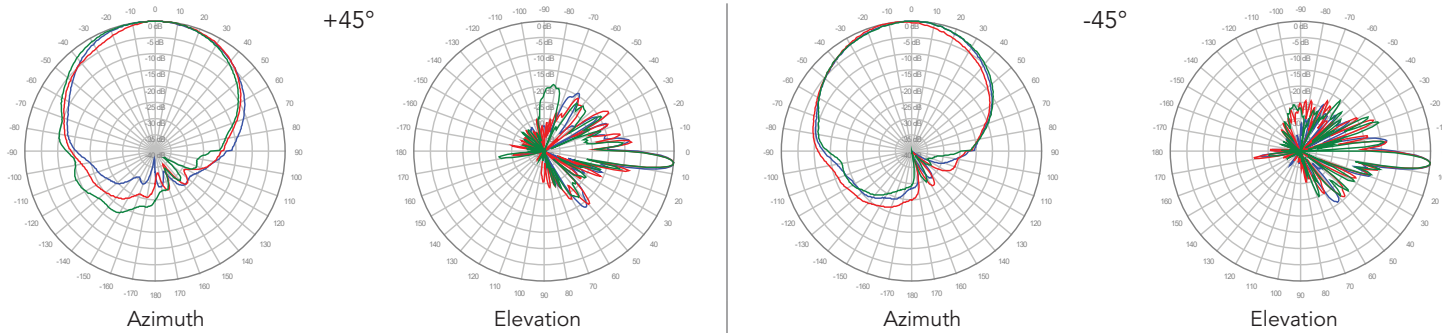
75.0 in

VARIABLE TILT

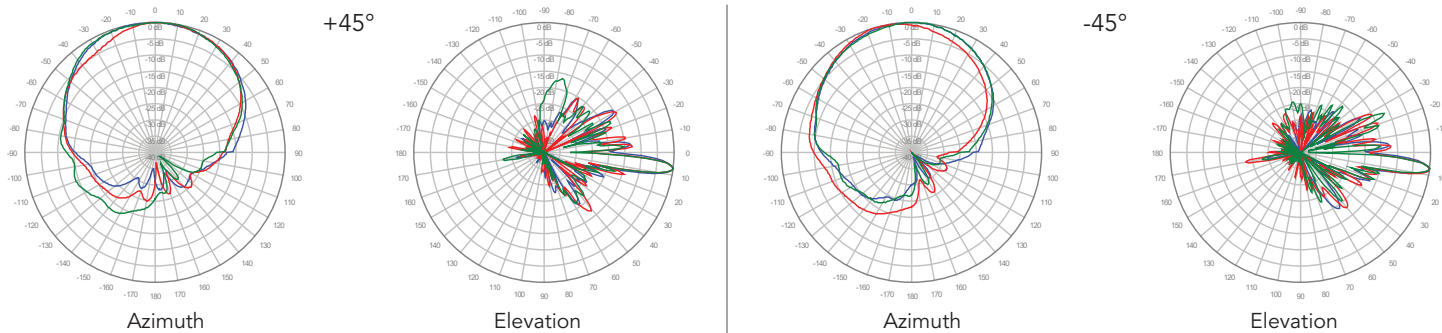
WWX063X19x00

1800 MHz ———  
1900 MHz ———  
2100 MHz ———

**B2, 8° TILT**



**B2, 10° TILT**



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