

2C4U2VX065X12wGy

Features

- Unique high port count panel antenna for 4G/5G small cell applications
- Fixed tilt and variable tilt combination with fixed tilt options for the low and high bands and variable tilt on the mid band
- 16 total connectors to service the 696-960, 1695-2700 and 3300-4200 MHz bands
- Ideal for multi-carrier or 4x4 MIMO deployments



PRODUCT OVERVIEW	Frequency Range (MHz)	(2x) 696-960	(4x) 1695-2700	(2x) 3300-4200
	Array	■ R1 ■ R2	■ Y1 ■ Y2 ■ Y3 ■ Y4	■ P1 ■ P2
	Connector	4 PORTS	8 PORTS	4 PORTS
	Polarization	XPOL	XPOL	XPOL
	Azimuth Beamwidth (avg)	65°	65°	65°
	Electrical Downtilt	0°, 5°	2-12°	3°, 6°
	Maximum Continuous Power Per Port @ 50° C (122° F)	500 WATTS	300 WATTS	100 WATTS
	Maximum Total Continuous Power at 50° C (122° F)	4800 WATTS		
	Connector Type	(16x) 4.3-10 FEMALE		
	Dimensions	1219 x 344 x 246 mm (48.0 x 13.5 x 9.7 in)		
	Radome Color Options	GREY		

ELECTRICAL SPECIFICATIONS

■ R1 ■ R2

Frequency Range		MHz	(2x) 696-960	
Frequency Sub-Range		MHz	696-806	806-960
Polarization		---	(2x) ±45°	
Gain	Over all Tilts	dBi	10.0 ± 0.7	9.9 ± 0.6
	Max Gain	dBi	10.7	10.5
Azimuth Beamwidth (3 dB)		degrees	84.3° ± 4.8°	82.7° ± 10.4°
Elevation Beamwidth (3 dB)		degrees	42.1° ± 3.8°	38.4° ± 6.1°
Electrical Downtilt		degrees	0°, 5°	
Impedance		Ohms	50Ω	
VSWR		---	1.5:1	
Passive Intermodulation 3rd Order for 2x20 W Carriers		dBc	< -153	
Front-to-Back Ratio ± 30° @ 180° from boresite		dB	> 23.0	> 23.0
Upper Sidelobe Rejection 20° Sector Above Main Beam		dB	N/A	N/A
Cross Polar Discrimination at Mechanical Boresight (0°)		dB	> 20.0	> 20.0
Isolation	Intraband	dB	> 25	
	Interband	dB	> 28 same band; > 30 different band	

Standard values based on NGMN-P-BASTA version 9.6 recommendation.

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ELECTRICAL SPECIFICATIONS

Y1 Y2 Y3 Y4

Frequency Range	MHz	(4x) 1695-2700			
Frequency Sub-Range	MHz	1695-1880	1850-1990	1920-2200	2300-2700
Polarization	---	(2x) $\pm 45^\circ$			
Gain	Over all Tilts	dBi	13.2 ± 0.7	13.3 ± 0.6	13.4 ± 0.7
	Max Gain	dBi	13.9	13.9	14.1
Azimuth Beamwidth (3 dB)	degrees	$71.0^\circ \pm 9.8^\circ$	$78.5^\circ \pm 5.0^\circ$	$74.4^\circ \pm 8.3^\circ$	$68.4^\circ \pm 6.3^\circ$
Elevation Beamwidth (3 dB)	degrees	$16.2^\circ \pm 1.5^\circ$	$15.5^\circ \pm 0.9^\circ$	$14.8^\circ \pm 1.2^\circ$	$12.6^\circ \pm 1.3^\circ$
Electrical Downtilt	degrees	2-12°			
Impedance	Ohms	50Ω			
VSWR	---	1.5:1			
Passive Intermodulation 3rd Order for 2x20 W Carriers	dBc	< -153			
Front-to-Back Ratio $\pm 30^\circ$ @ 180° from boresight	dB	> 30	> 35	> 29.7	> 30.6
Upper Sidelobe Rejection 20° Sector Above Main Beam	dB	> 14.6	> 14.7	> 16.5	> 15.6
Cross Polar Discrimination at Mechanical Boresight (0°)	dB	> 16.4	> 16.6	> 20.5	> 16.2
Isolation	Intraband	dB	> 25		
	Interband	dB	> 28 same band; > 30 different band		

Standard values based on NGMN-P-BASTA version 9.6 recommendation.

ELECTRICAL SPECIFICATIONS

P1 P2

Frequency Range	MHz	(2x) 3300-4200		
Frequency Sub-Range	MHz	3300-3550	3550-3700	3700-4200
Polarization	---	(2x) $\pm 45^\circ$		
Gain	Over all Tilts	dBi	14.4 ± 0.8	15.2 ± 0.7
	Max Gain	dBi	15.2	15.9
Azimuth Beamwidth (3 dB)	degrees	$55.5^\circ \pm 4.4^\circ$	$54.7^\circ \pm 9.3^\circ$	$66.0^\circ \pm 8.5^\circ$
Elevation Beamwidth (3 dB)	degrees	$14.1^\circ \pm 0.5^\circ$	$12.7^\circ \pm 1.2^\circ$	$11.5^\circ \pm 0.9^\circ$
Electrical Downtilt	degrees	3°, 6°		
Impedance	Ohms	50Ω		
VSWR	---	1.5:1		
Passive Intermodulation 3rd Order for 2x20 W Carriers	dBc	< -153		
Front-to-Back Ratio $\pm 30^\circ$ @ 180° from boresight	dB	> 28	> 30	> 32
Upper Sidelobe Rejection 20° Sector Above Main Beam	dB	> 15	> 16	> 18
Cross Polar Discrimination at Mechanical Boresight (0°)	dB	> 16	> 16	> 16
Isolation	Intraband	dB	> 25	
	Interband	dB	> 28 same band; > 30 different band	

Standard values based on NGMN-P-BASTA version 9.6 recommendation.

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RET ACTUATOR

Amphenol's **RET-READY** antennas are delivered with the RET Actuator already installed and pre-commissioned with all antenna parameters. Every RET device is factory configured and calibrated so the antenna is ready to be used once delivered to the site which means that there is no need for further installation of RET devices or for programming their configuration or for running a calibration process.

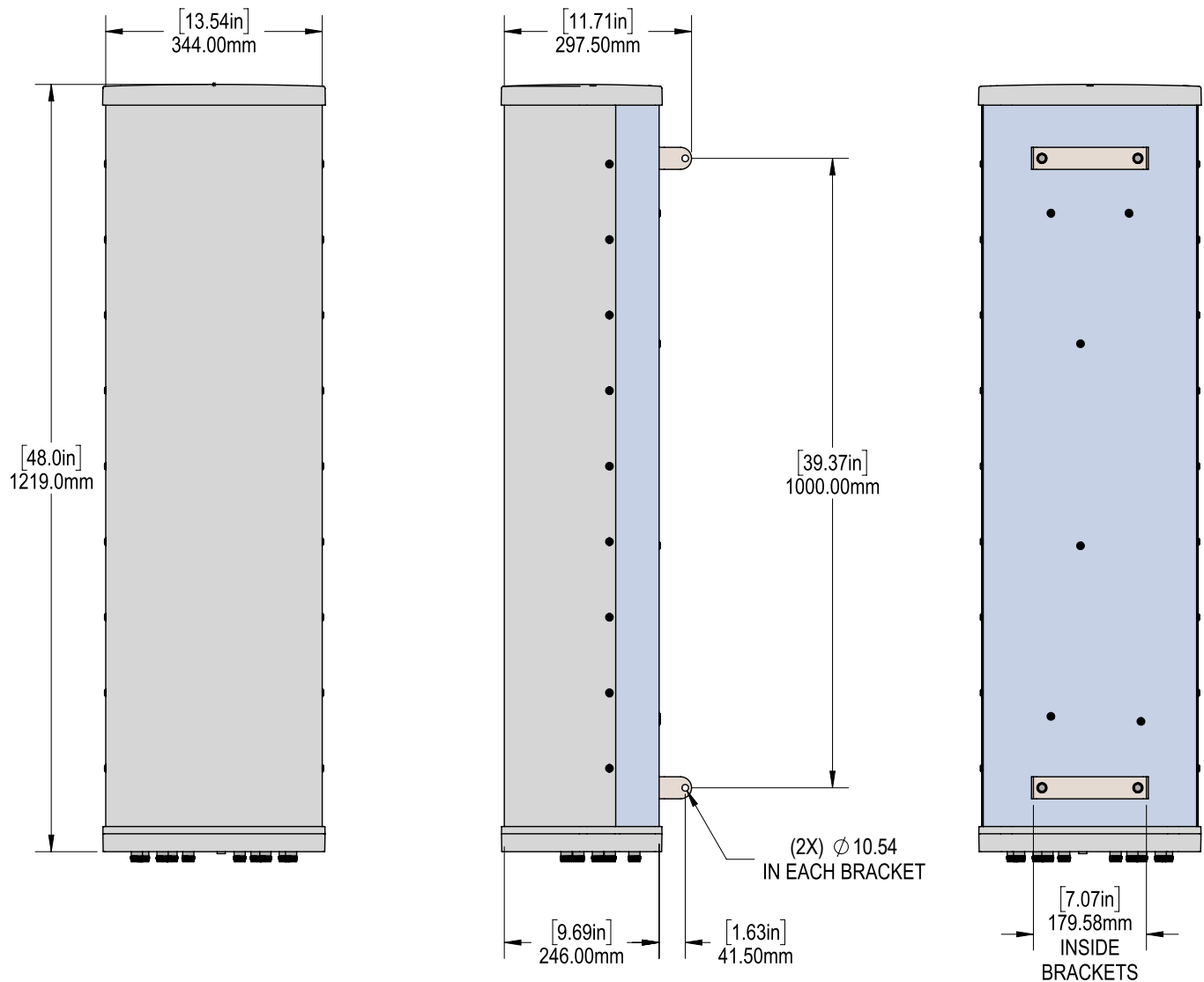
Input Voltage		Vdc	10-30
Power Consumption	Idle State, maximum	Watts	0.5
	Normal Conditions, maximum	Watts	10.0
Protocol		---	3GPP/AISG v2.0 (Single RET)
RET Interface		---	DIN Male and DIN Female
Field Replaceable Unit		---	No

MECHANICAL SPECIFICATIONS

Antenna	Length	mm (in)	1219 (48.0)
	Width	mm (in)	344 (13.5)
	Depth	mm (in)	246 (9.7)
Net Weight - Antenna Only		kg (lbs)	13 (28)
Windload	Calculation	km/h (mph)	161 (100)
	Frontal	N (lbf)	480 (108)
	Lateral	N (lbf)	285 (64)
Survival Wind Speed		km/h (mph)	241 (150)
Connector	Type	---	4.3-10 Female
	Quantity	---	16
	Position	---	Bottom
Radome Color		---	ANSI 70 Gray
Radome Material		---	UV Stabilized ABS or Hips
Lightning Protection (Grounding Type)		---	Direct Ground

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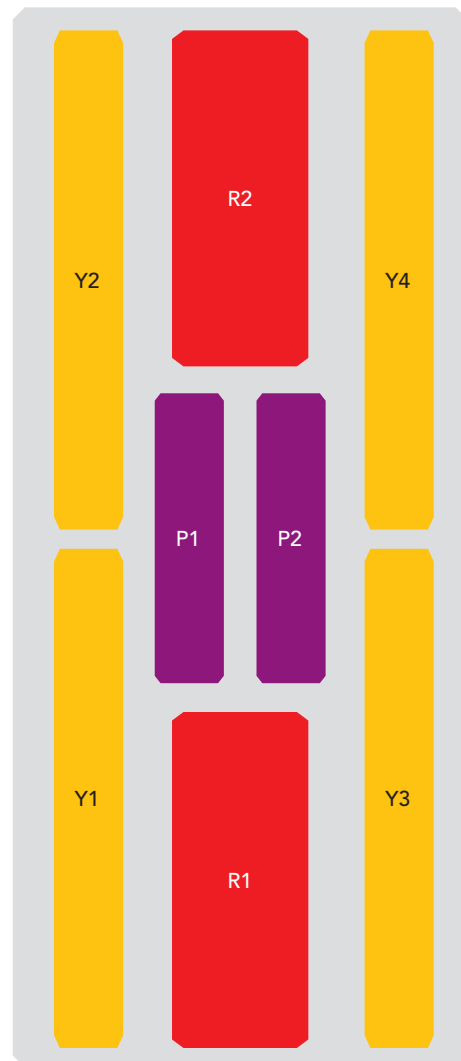
2C4U2VX065X12wGy



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ARRAY LAYOUT Topology

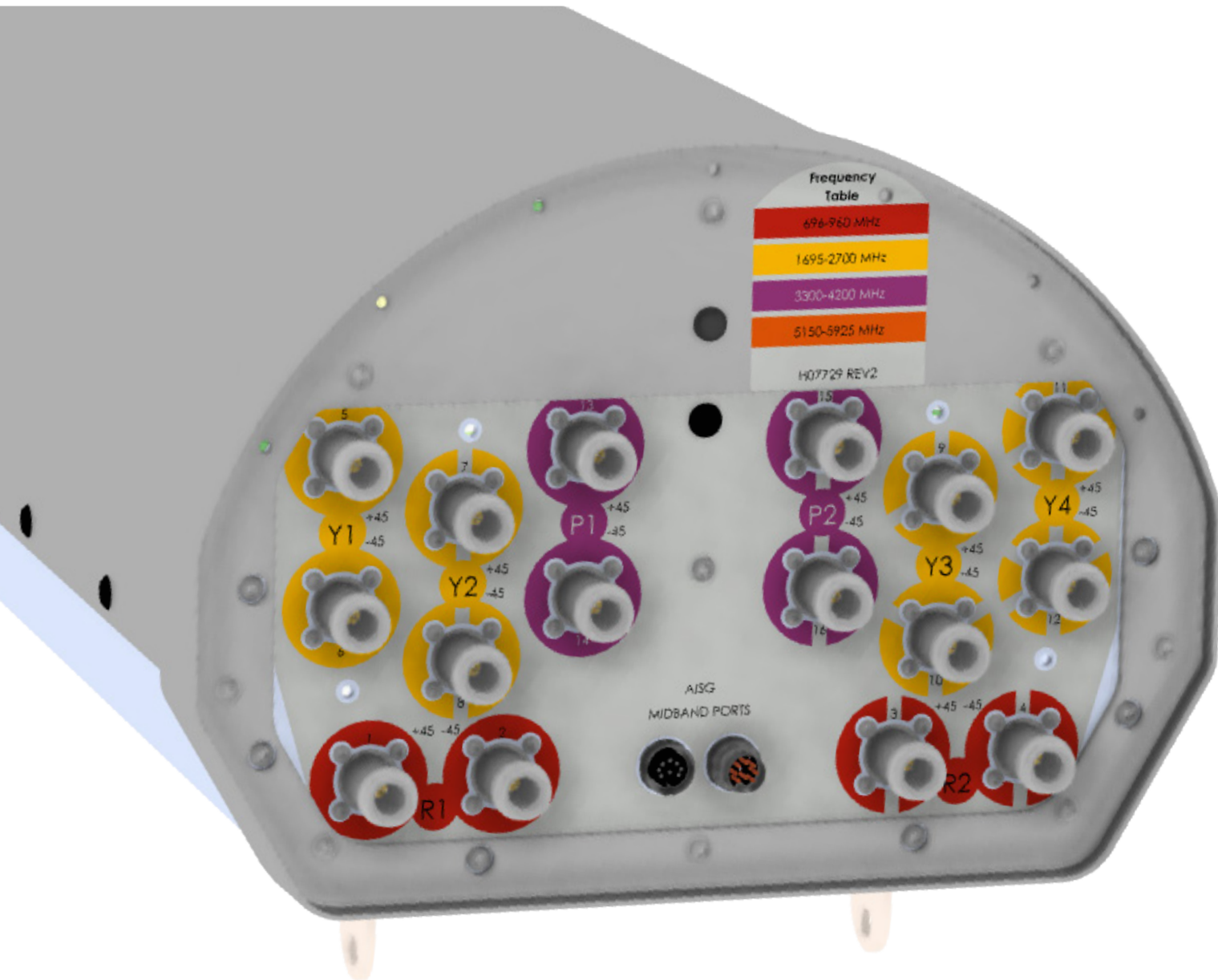
FREQUENCY	ARRAY	CONNECTOR	CONNECTOR TYPE
696-960 MHz	■ R1	1-2	(2x) 4.3-10 Female
696-960 MHz	■ R2	3-4	(2x) 4.3-10 Female
1695-2700 MHz	■ Y1	5-6	(2x) 4.3-10 Female
1695-2700 MHz	■ Y2	7-8	(2x) 4.3-10 Female
1695-2700 MHz	■ Y3	9-10	(2x) 4.3-10 Female
1695-2700 MHz	■ Y4	11-12	(2x) 4.3-10 Female
3300-4200 MHz	■ P1	13-14	(2x) 4.3-10 Female
3300-4200 MHz	■ P2	15-16	(2x) 4.3-10 Female



The illustration is not shown to scale.

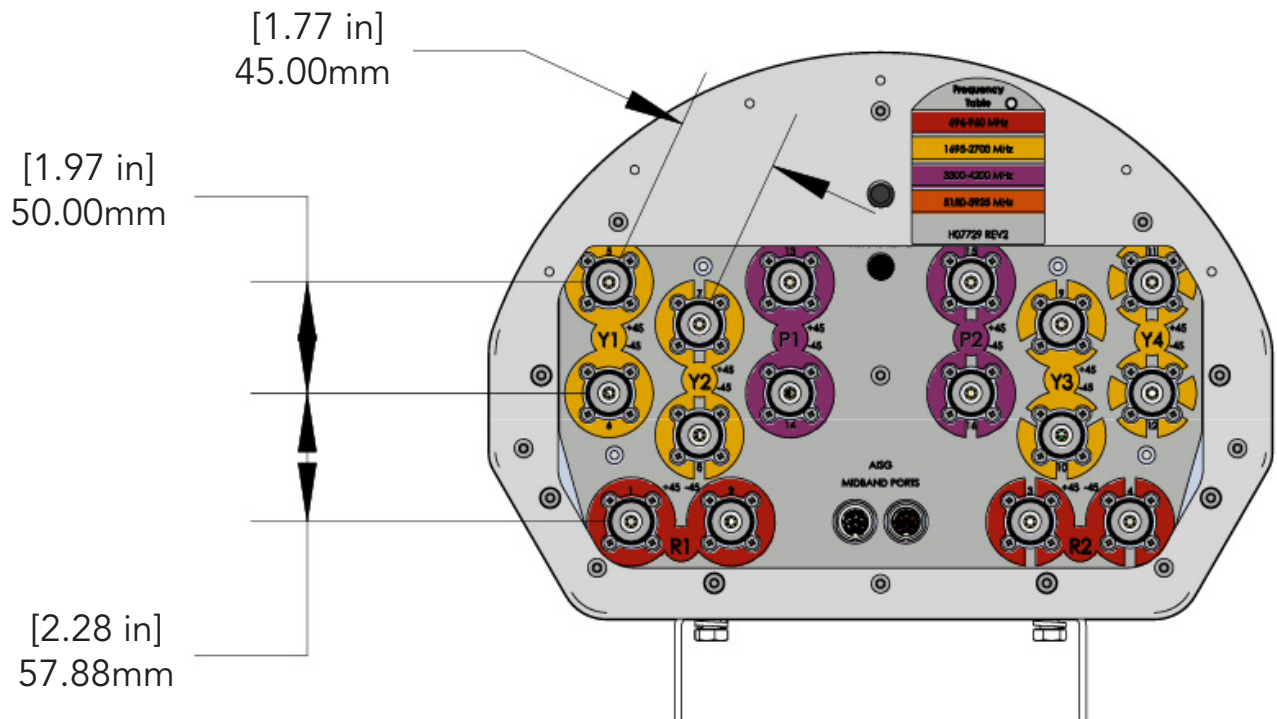
2C4U2VX065X12wGy

BOTTOM VIEW - LABELING



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BOTTOM VIEW - CONNECTOR DIAGRAM



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MOUNTING KITS Select from the following mounting options when ordering.

MODEL NUMBER	DESCRIPTION	FITS PIPE DIAMETER	WEIGHT
MKS09P01	2-POINT MOUNTING BRACKET KIT	50-115 mm (2.0-4.5 in)	2.9 kg (6 lbs)
MKS09T01	2-POINT, SCISSOR TILT, MOUNTING & DOWNTILT BRACKET KIT	50-115 mm (2.0-4.5 in)	4.5 kg (10 lbs)



The antennas shown in the mounting kit illustrations above are generic representations and may not resemble the antenna described within this data sheet.

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.

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HOW TO READ THE MODEL NUMBER Each letter and number has meaning.

NUMBER OF BANDS & OPERATING FREQUENCY			ANTENNA TYPE	AZIMUTH BEAMWIDTH	POLARIZATION	LENGTH IN METERS	LOW BAND TILT OPTIONS	MID BAND TILT OPTIONS	n77 BAND TILT OPTIONS	ORDERING OPTION
2C	4U	2V	X	065	X	12	w	G	y	-P -T
(2x) 696-960	(4x) 1695-2700	(2x) 3300-4200	Standard Panel Antenna	65°	XPOL	~ 1.2 meters	<p>This letter is a placeholder for the low band fixed tilt options.</p> <p>Refer to Electrical Specifications for available tilt options.</p>	<p>G indicates the antenna is equipped with a Multi-Device Control Unit for remote electrical tilt (RET) on the mid band.</p>	<p>This letter is a placeholder for the n77 band fixed tilt options.</p> <p>Refer to Electrical Specifications for available tilt options.</p>	<p>To order the antenna and mounting kit together as one line item, add a -P for the 2-POINT MOUNTING BRACKET KIT (MKS09P01) or a -T for the 2-POINT, SCISSOR TILT, MOUNTING & DOWNTILT BRACKET KIT (MKS09T01) to the end of the model number.</p> <p>If -P or -T is not added, the bracket kit can be added as a separate line item, or the antenna shipped without a bracket.</p> <p>Refer to the ordering options on the following page for further detail.</p>

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ORDERING OPTIONS Select from the following ordering options

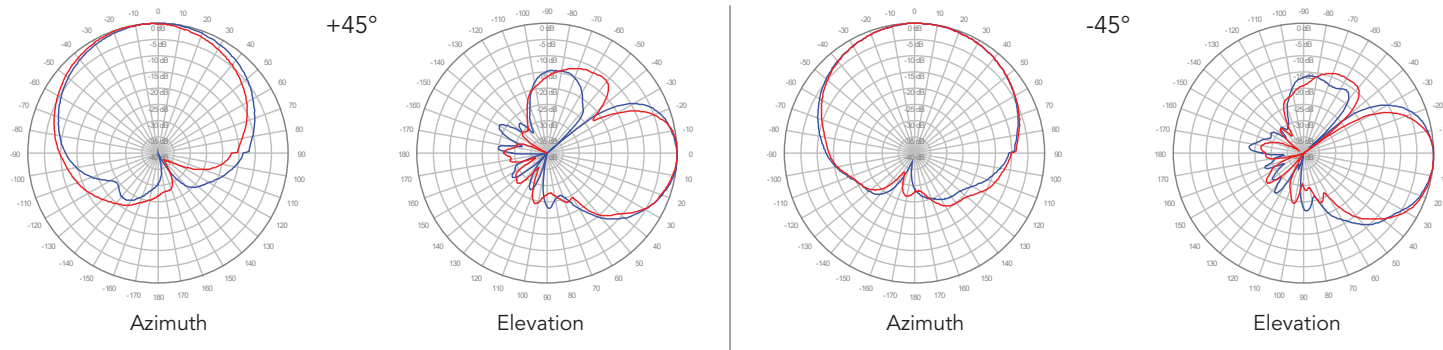
SELECT MOUNTING KIT	SELECT DEGREE OF ELECTRICAL DOWNTILT FOR EACH BAND			ORDER MODEL NUMBER
	696-960 MHz	1695-2700 MHz	3300-4200 MHz	
ANTENNA ONLY - NO MOUNTING KIT	0°	2-12° Variable Tilt	3°	2C4U2VX065X120G3
	0°	2-12° Variable Tilt	6°	2C4U2VX065X120G6
	5°	2-12° Variable Tilt	3°	2C4U2VX065X125G3
	5°	2-12° Variable Tilt	6°	2C4U2VX065X125G6
ANTENNA WITH MKS09P01 MOUNTING KIT 2-Point Mounting Bracket Kit	0°	2-12° Variable Tilt	3°	2C4U2VX065X120G3-P
	0°	2-12° Variable Tilt	6°	2C4U2VX065X120G6-P
	5°	2-12° Variable Tilt	3°	2C4U2VX065X125G3-P
	5°	2-12° Variable Tilt	6°	2C4U2VX065X12-5G6-P
ANTENNA WITH MKS09T01 MOUNTING KIT 2-Point, Scissor Tilt, Mounting & Downtilt Bracket Kit	0°	2-12° Variable Tilt	3°	2C4U2VX065X120G3-T
	0°	2-12° Variable Tilt	6°	2C4U2VX065X120G6-T
	5°	2-12° Variable Tilt	3°	2C4U2VX065X125G3-T
	5°	2-12° Variable Tilt	6°	2C4U2VX065X125G6-T

2C4U2VX065X12wGy

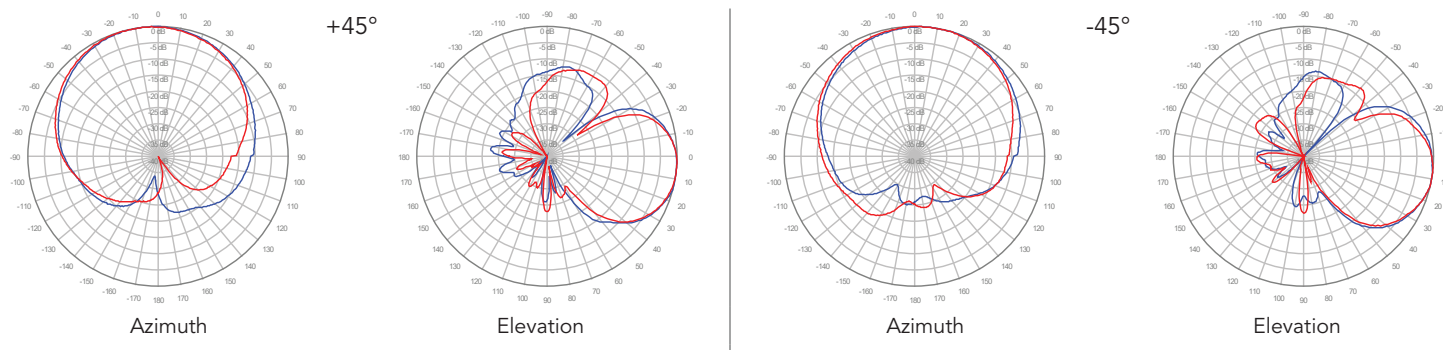
750 MHz ————

850 MHz ————

■ R1, 0° TILT



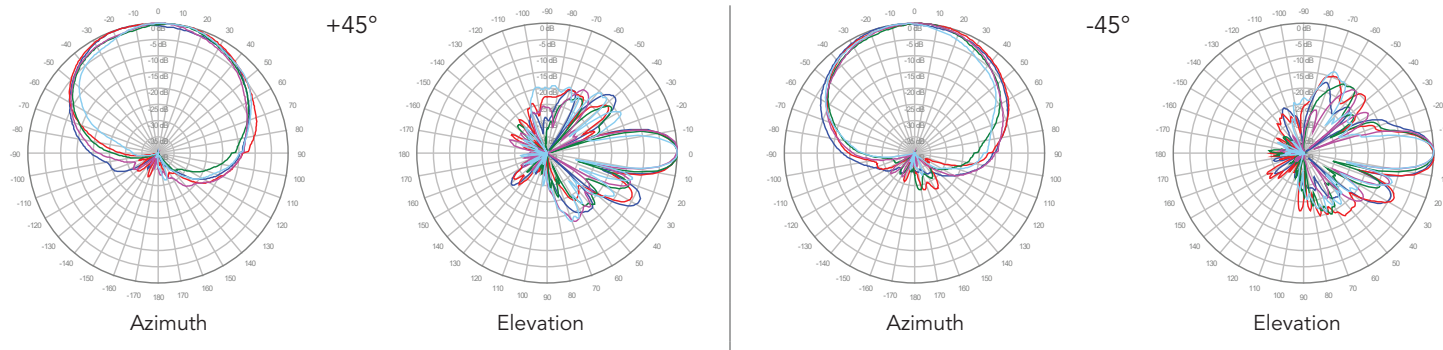
■ R2, 0° TILT



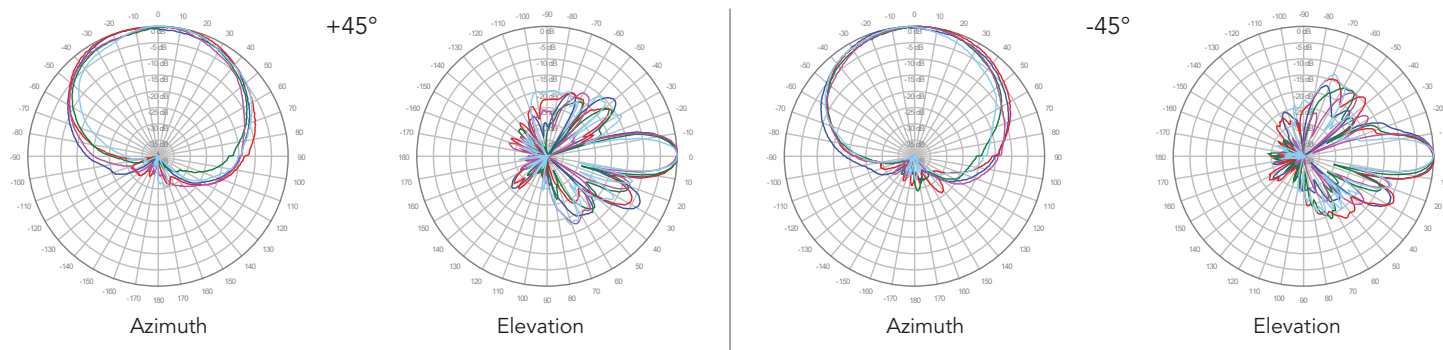
2C4U2VX065X12wGy

1800 MHz —
1900 MHz —
2100 MHz —
2300 MHz —
2600 MHz —

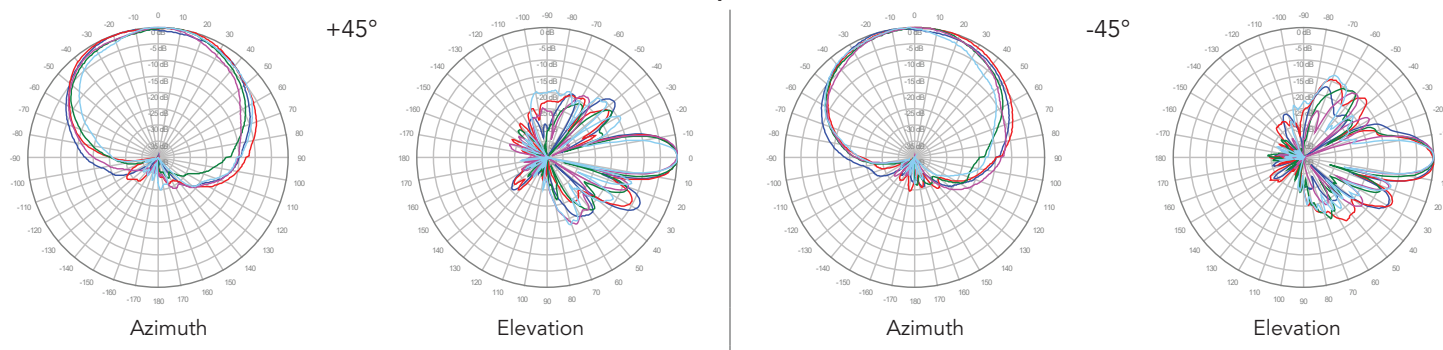
Y1, 2° TILT



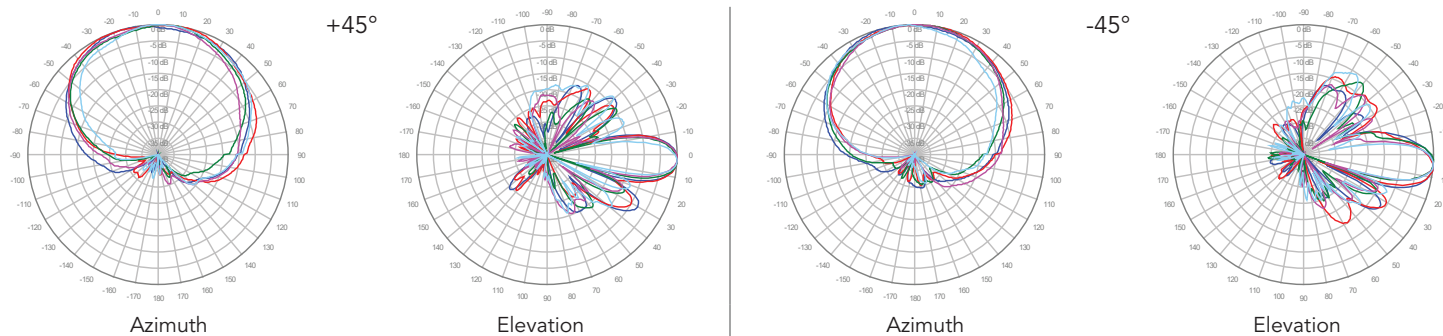
Y1, 4° TILT



Y1, 6° TILT



Y1, 8° TILT

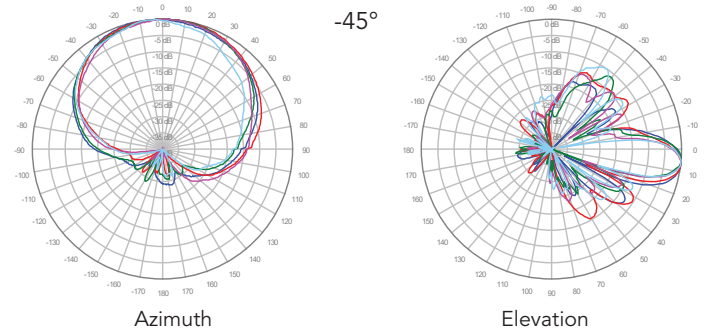
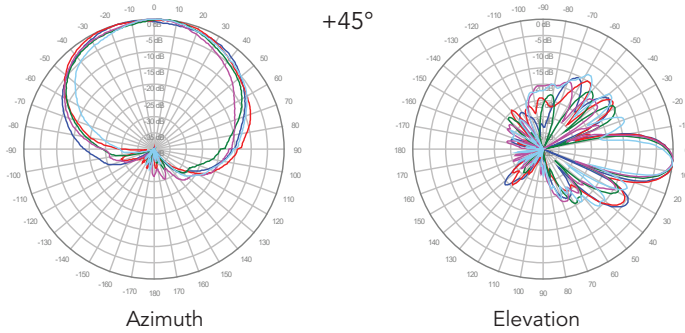


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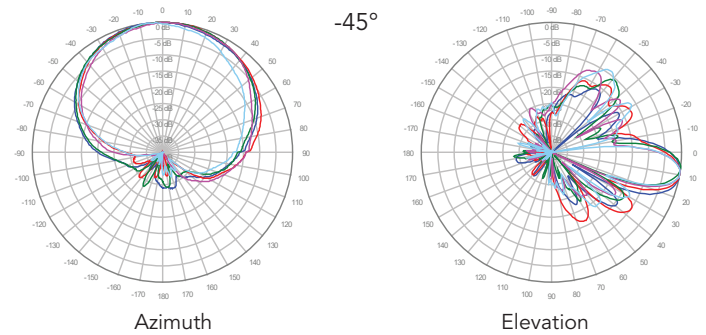
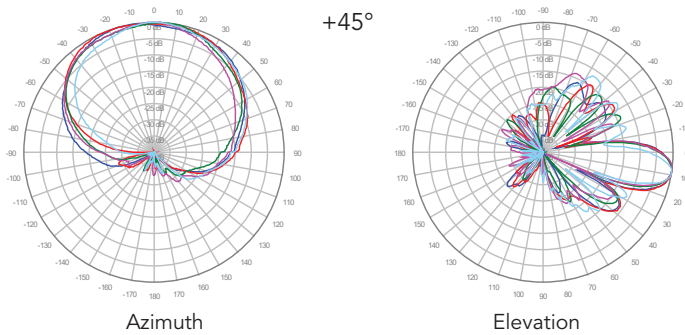
2C4U2VX065X12wGy

1800 MHz —
1900 MHz —
2100 MHz —
2300 MHz —
2600 MHz —

■ Y1, 10° TILT



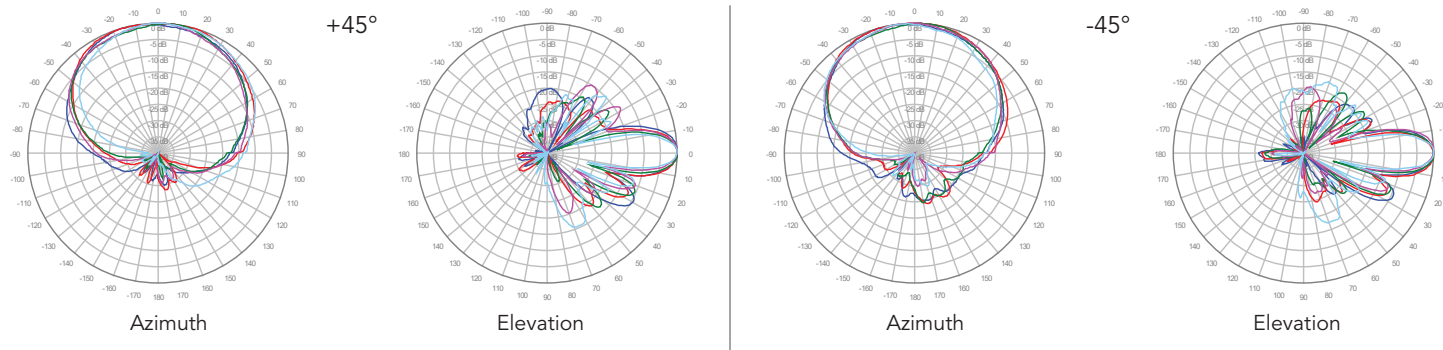
■ Y1, 12° TILT



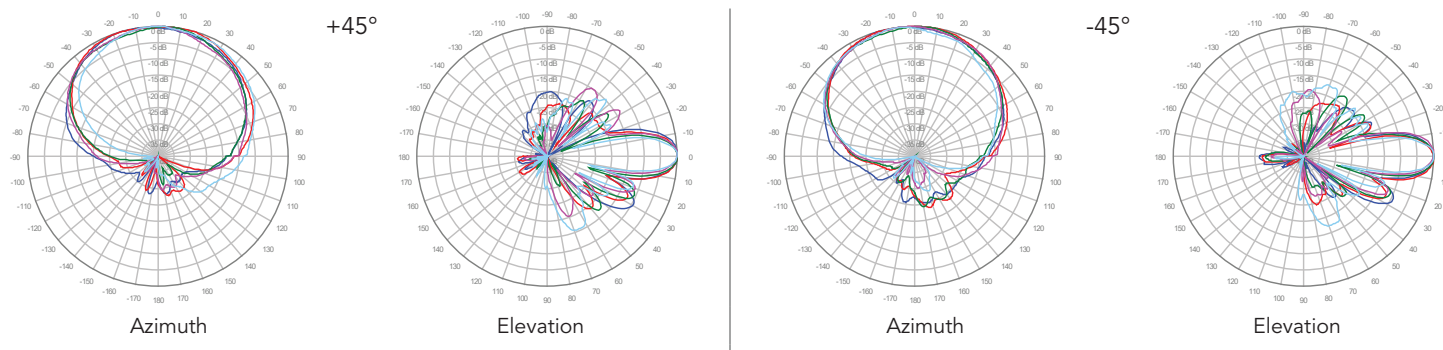
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1800 MHz —
1900 MHz —
2100 MHz —
2300 MHz —
2600 MHz —

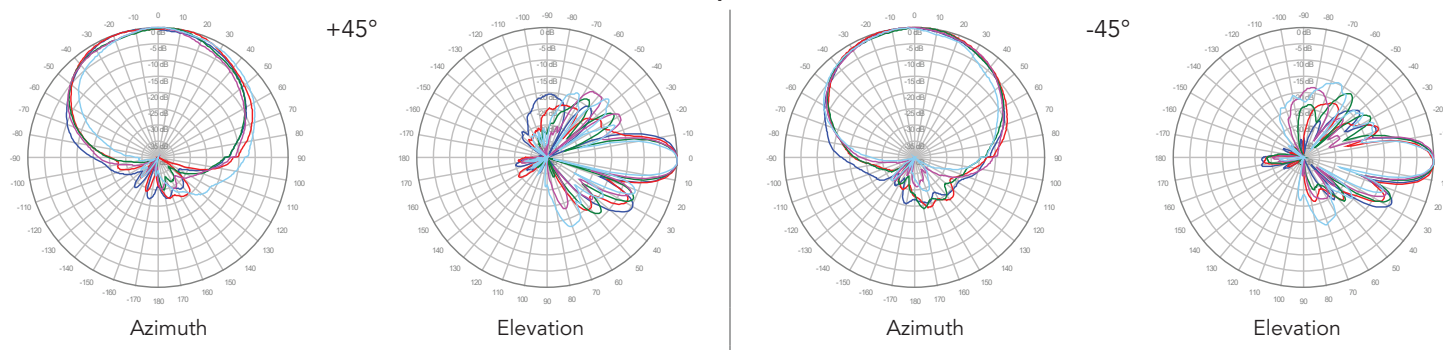
Y2, 2° TILT



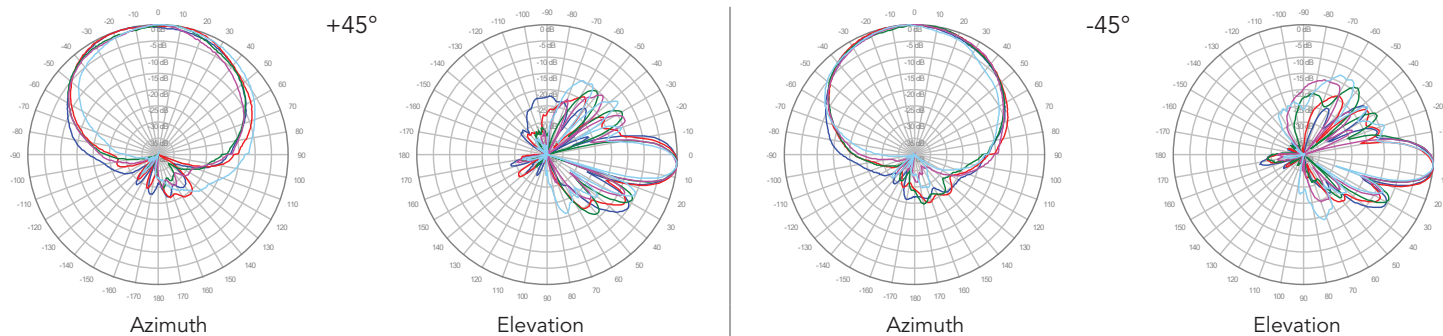
Y2, 4° TILT



Y2, 6° TILT



Y2, 8° TILT

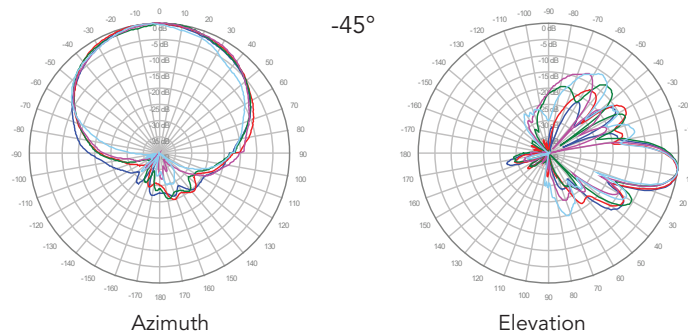
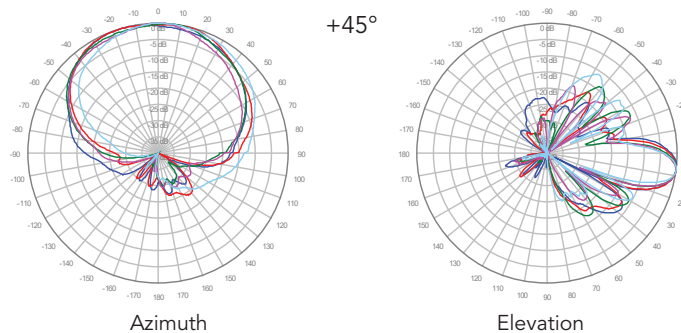


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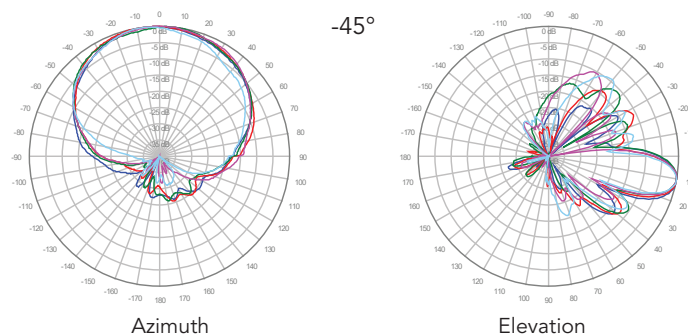
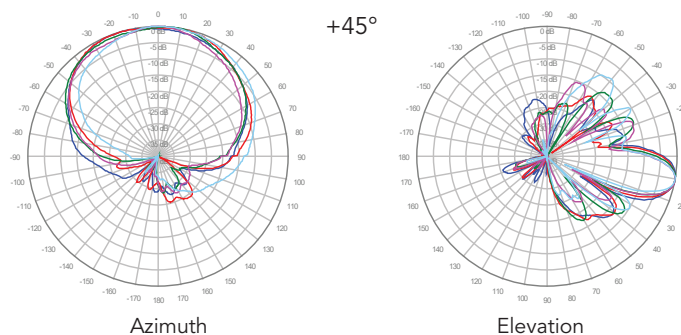
2C4U2VX065X12wGy

1800 MHz —
1900 MHz —
2100 MHz —
2300 MHz —
2600 MHz —

■ Y2, 10° TILT



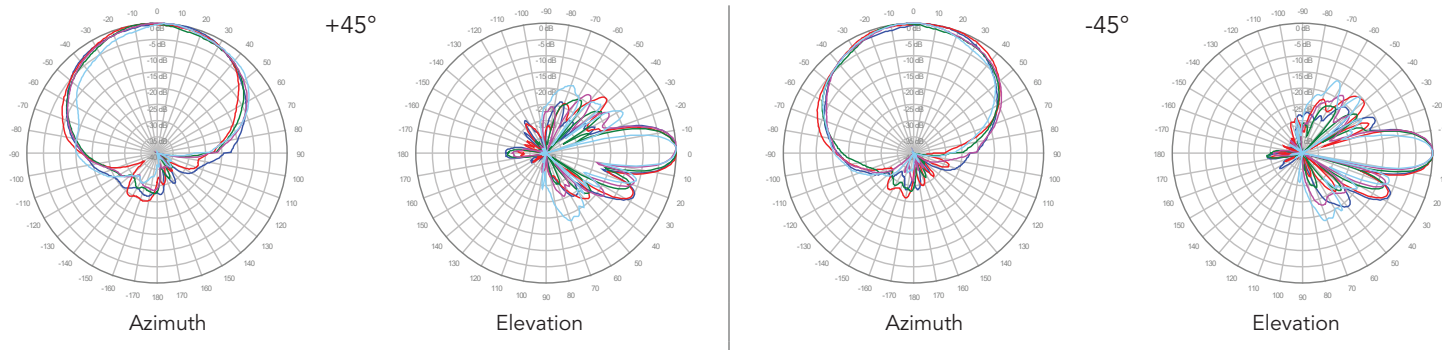
■ Y2, 12° TILT



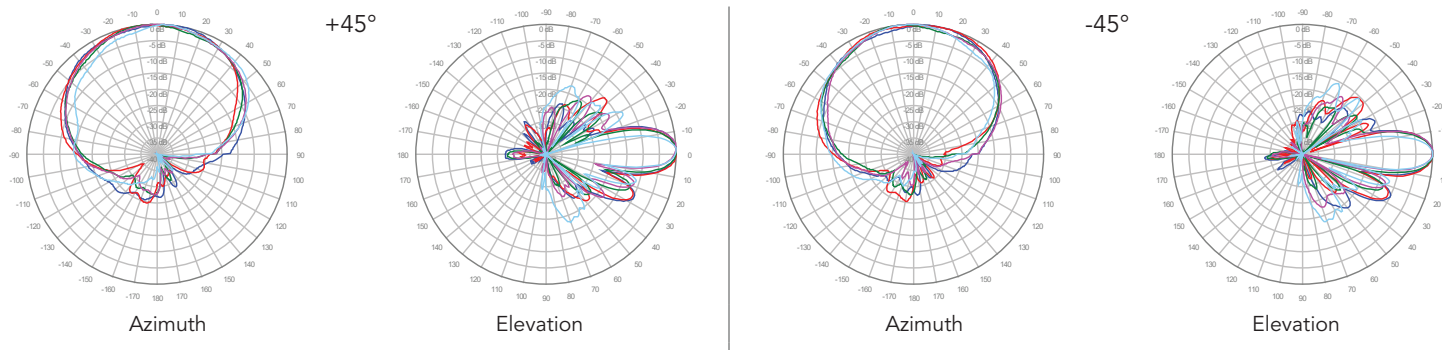
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1800 MHz —
1900 MHz —
2100 MHz —
2300 MHz —
2600 MHz —

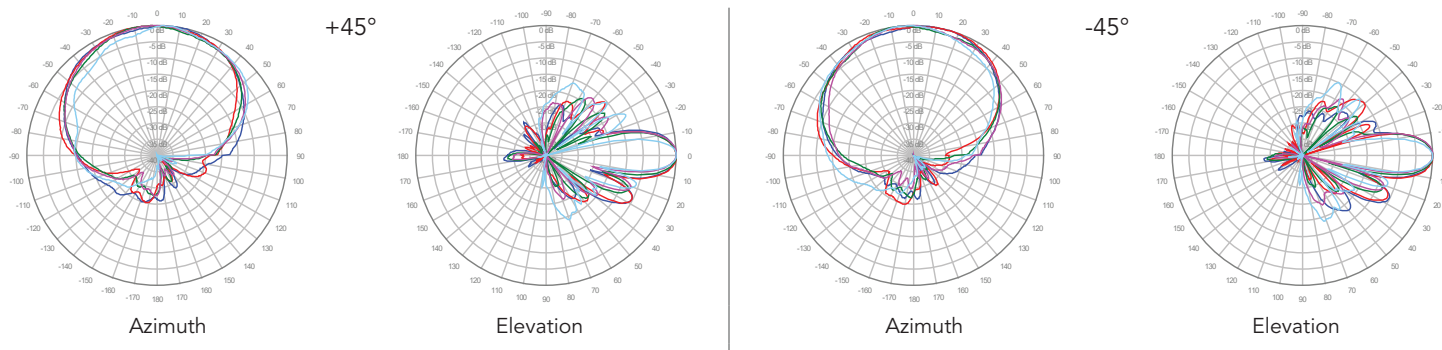
Y3, 2° TILT



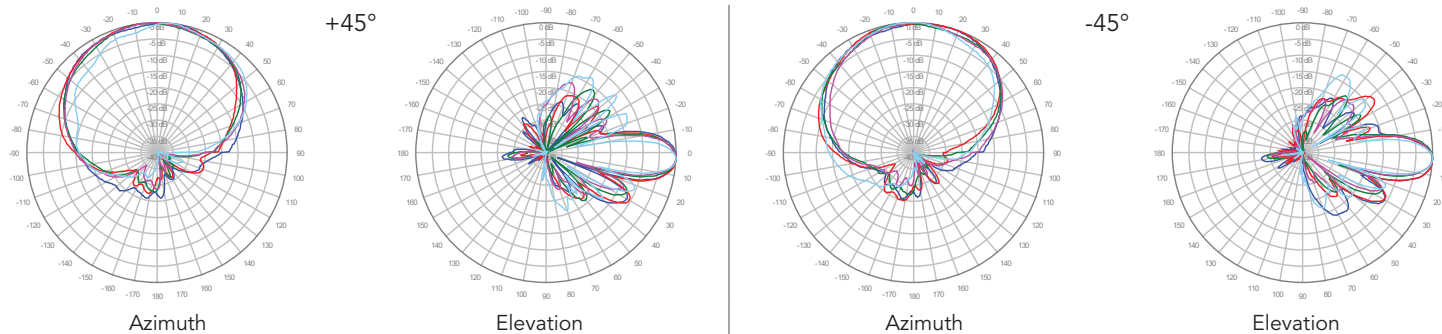
Y3, 4° TILT



Y3, 6° TILT



Y3, 8° TILT

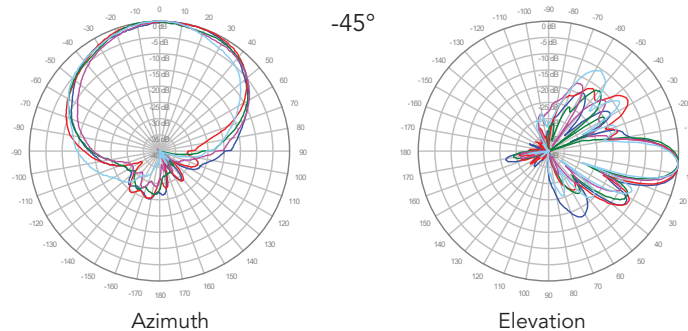
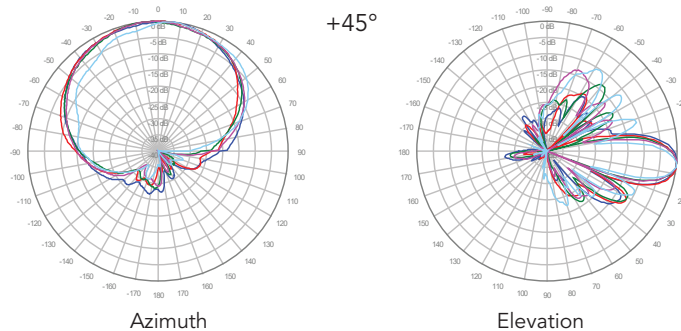


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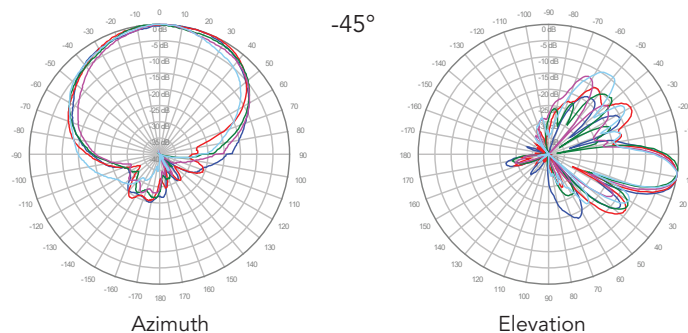
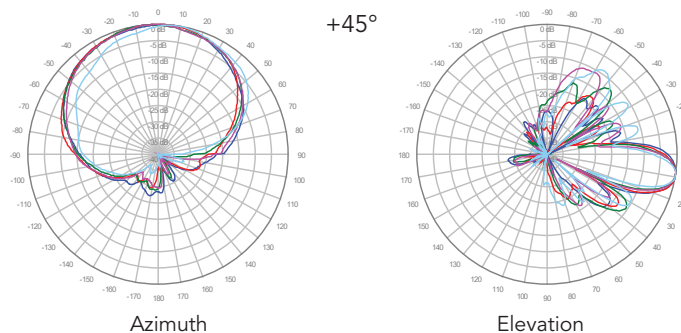
2C4U2VX065X12wGy

1800 MHz —
1900 MHz —
2100 MHz —
2300 MHz —
2600 MHz —

■ Y3, 10° TILT



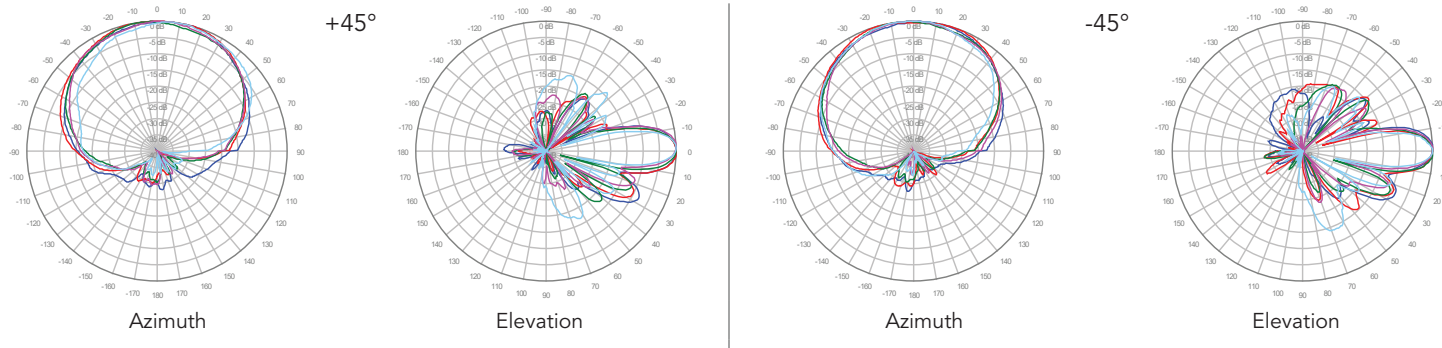
■ Y3, 12° TILT



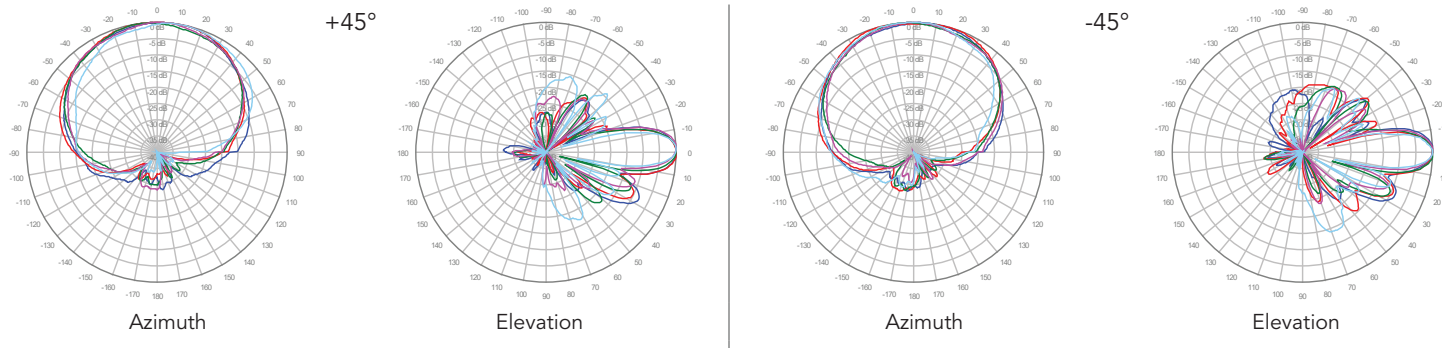
2C4U2VX065X12wGy

1800 MHz —
1900 MHz —
2100 MHz —
2300 MHz —
2600 MHz —

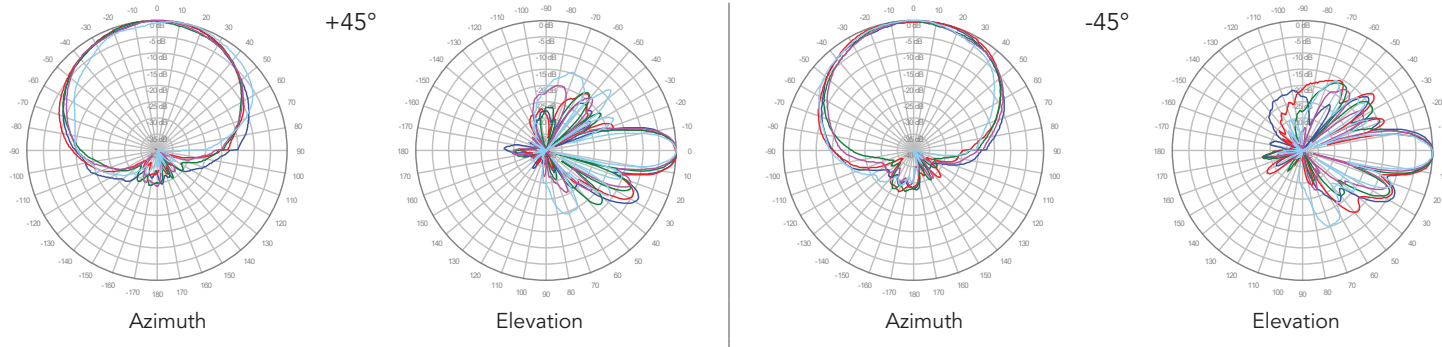
Y4, 2° TILT



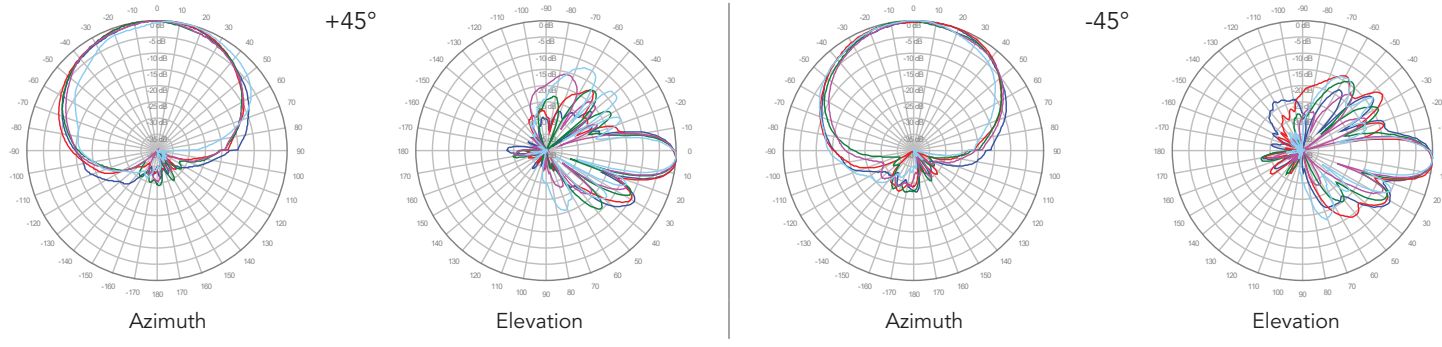
Y4, 4° TILT



Y4, 6° TILT



Y4, 8° TILT

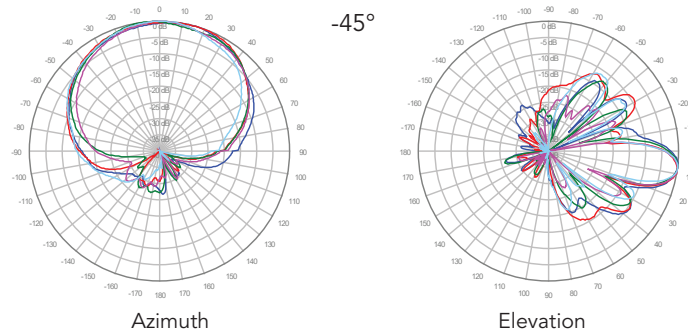
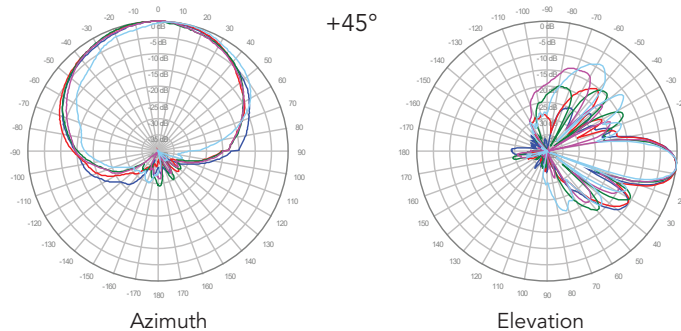


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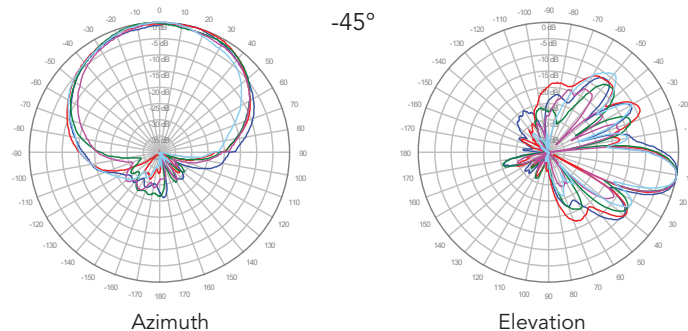
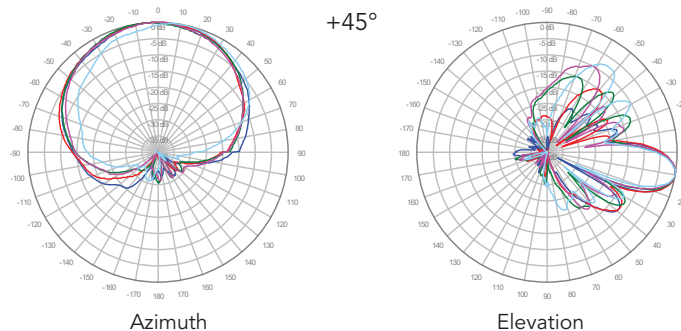
2C4U2VX065X12wGy

1800 MHz —
1900 MHz —
2100 MHz —
2300 MHz —
2600 MHz —

■ Y4, 10° TILT



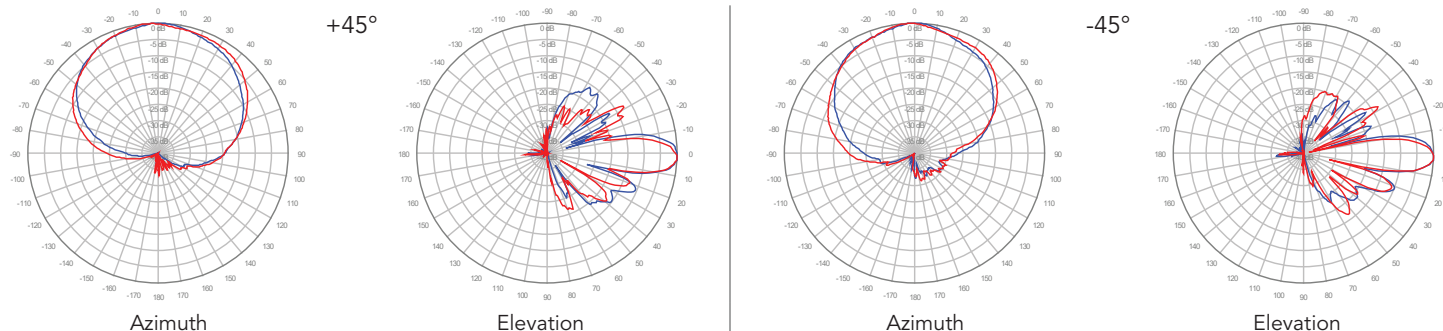
■ Y4, 12° TILT



2C4U2VX065X12wGy

3600 MHz ————
4000 MHz ————

P1, 3° TILT



P2, 3° TILT

