

2C4U4MTSP1X06Fwxys4



Features

- Sector & omni configuration with 32 connectors
- Sectorized and omni arrays in both the 696-960 and 1695-2700 frequencies
- Ideal for multi-carrier or 4x4 MIMO deployments
- Broadband networks 696-960, 1695-2700 and 3300-4200 MHz
- Easily removable lifting ring
- Improvements in gain, port isolation and VSWR
- Can be ordered with an integrated GPS unit
- 5 GHz U-NII FCC compliant

PRODUCT OVERVIEW	Frequency Range (MHz)	(4x) 696-960		(8x) 1695-2700				(2x) 3300-4200	(2x) 5150-5925	Optional GPS BAND 1575.42 ± 10
	Array	■ R1	■ R2 ■ R3 ■ R4	■ Y1 ■ Y2	■ Y3 ■ Y4 ■ Y5 ■ Y6 ■ Y7 ■ Y8	■ P1 ■ P2	■ O1 ■ O2			---
	Connector	2 PORTS	6 PORTS	4 PORTS	12 PORTS	4 PORTS	4 PORTS			1 PORT
	Polarization	XPOL	XPOL	XPOL	XPOL	XPOL	XPOL			RIGHT HAND CIRCULAR
	Azimuth Beamwidth (avg)	OMNI	SECTORIZED	OMNI	SECTORIZED	OMNI	OMNI			---
	Electrical Downtilt	0°	0°	0°, 2°, 4°, 6°	0°, 2°, 4°, 6°	0°	0°			---
	Configuration	OMNI AND SECTOR COMBINATION CONFIGURATION								---
	Maximum Continuous Power Per Port @ 50° C (122° F)	500W	500W	300W	300W	100W	50W			---
	Maximum Total Continuous Power at 50° C (122° F)	9400 WATTS								---
	Connector Type	(32x) 4.3-10 FEMALE								(1x) N-TYPE FEMALE
	Dimensions	608 x Ø369 mm (23.9 x Ø14.6 in)								---
	Radome Color Options	GREY, BROWN or BLACK								---

ELECTRICAL SPECIFICATIONS Omni

■ R1

Frequency Range		MHz	(1x) 696-960	
Frequency Sub-Range		MHz	696-806	806-960
Polarization		---	(1x) ±45°	
Gain	BASTA	dBi	4.3 ± 0.6	3.8 ± 0.8
	MAX	dBi	4.9	4.6
Azimuth Beamwidth (3 dB)		degrees	360°	360°
Elevation Beamwidth (3 dB)		degrees	69.5° ± 9.9°	65.1° ± 12.7°
Electrical Downtilt		degrees	(w) 0°	
Impedance		Ohms	50Ω	
VSWR		---	≤ 1.5:1	
Passive Intermodulation 3rd Order for 2x20 W Carriers		dBc	< -153	
Upper Sidelobe Suppression		dB	N/A	
Front-to-Back Ratio		dB	N/A	
Isolation	Intraband	dB	> 25	
	Interband	dB	> 28	

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ELECTRICAL SPECIFICATIONS Sectorized

■ R2 ■ R3 ■ R4

Frequency Range		MHz	(3x) 696-960	
Frequency Sub-Range		MHz	696-806	806-960
Polarization		---	(3x) $\pm 45^\circ$	
Gain	BASTA	dBi	7.4 ± 0.5	7.5 ± 0.8
	MAX	dBi	7.9	8.3
Azimuth Beamwidth (3 dB)		degrees	$90.2^\circ \pm 7.3^\circ$	$78.1^\circ \pm 12.3^\circ$
Elevation Beamwidth (3 dB)		degrees	$77.8^\circ \pm 11.3^\circ$	$71.4^\circ \pm 11.9^\circ$
Electrical Downtilt		degrees	(w) 0°	
Impedance		Ohms	50 Ω	
VSWR		---	$\leq 1.5:1$	
Passive Intermodulation 3rd Order for 2x20 W Carriers		dBc	< -153	
Upper Sidelobe Suppression		dB	N/A	N/A
Front-to-Back Ratio		dB	> 16	> 12
Isolation	Intraband	dB	> 25	
	Interband	dB	> 28	
Input Power		Watts	500W	

ELECTRICAL SPECIFICATIONS Omni

■ Y1 ■ Y2

Frequency Range		MHz	(2x) 1695-2700			
Frequency Sub-Range		MHz	1695-1880	1850-1990	1920-2200	2300-2700
Polarization		---	(2x) $\pm 45^\circ$			
Gain	BASTA	dBi	7.0 ± 1.0	6.9 ± 1.1	6.9 ± 1.1	7.0 ± 1.1
	MAX	dBi	8.0	8.0	8.0	8.1
Azimuth Beamwidth (3 dB)		degrees	360°	360°	360°	360°
Elevation Beamwidth (3 dB)		degrees	$35.2^\circ \pm 9.7^\circ$	$31.3^\circ \pm 6.5^\circ$	$32.0^\circ \pm 7.3^\circ$	$24.1^\circ \pm 7.2^\circ$
Electrical Downtilt ($\pm 1/2^\circ$) Combined Tilt		degrees	(x) $0^\circ, 2^\circ, 4^\circ, 6^\circ$			
Impedance		Ohms	50 Ω			
VSWR		---	$\leq 1.5:1$			
Passive Intermodulation 3rd Order for 2x20 W Carriers		dBc	< -153			
Upper Sidelobe Suppression		dB	N/A			
Front-to-Back Ratio		dB	N/A			
Isolation	Intraband	dB	> 25			
	Interband	dB	> 28			
Input Power		Watts	300W			

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ELECTRICAL SPECIFICATIONS Sectorized

■ Y3 ■ Y4 ■ Y5 ■ Y6 ■ Y7 ■ Y8

Frequency Range		MHz	(6x) 1695-2700			
Frequency Sub-Range		MHz	1695-1880	1850-1990	1920-2200	2300-2700
Polarization		---	(6x) ±45°			
Gain	BASTA	dBi	10.5 ± 0.8	10.1 ± 1.1	10.2 ± 1.2	11.0 ± 1.3
	MAX	dBi	11.3	11.2	11.4	12.3
Azimuth Beamwidth (3 dB)		degrees	68.1° ± 13.9°	76.5° ± 11.0°	71.3° ± 14.8°	57.0° ± 11.0°
Elevation Beamwidth (3 dB)		degrees	35.8° ± 5.1°	32.9° ± 4.8°	33.5° ± 27.9°	26.3° ± 6.7°
Electrical Downtilt		degrees	(x) 0°, 2°, 4°, 6°			
Impedance		Ohms	50Ω			
VSWR		---	≤ 1.5:1			
Passive Intermodulation 3rd Order for 2x20 W Carriers		dBc	< -153			
Front-to-Back Ratio		dB	> 18	> 17	> 18	> 17
Isolation	Intraband	dB	> 25			
	Interband	dB	> 28			

ELECTRICAL SPECIFICATIONS

■ P1 ■ P2

Frequency Range		MHz	(2x) 3300-4200
Polarization		---	(2x) ±45°
Gain	BASTA	dBi	5.7 ± 0.4
	MAX	dBi	6.1
Azimuth Beamwidth (3 dB)		degrees	360°
Elevation Beamwidth (3 dB)		degrees	29.3° ± 4.8°
Electrical Downtilt		degrees	(y) 0°
Impedance		Ohms	50Ω
VSWR		---	≤ 1.5:1
Passive Intermodulation 3rd Order for 2x20 W Carriers		dBc	< -153
Upper Sidelobe Suppression		dB	N/A
Isolation	Intraband	dB	> 25
	Interband	dB	> 28

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ELECTRICAL SPECIFICATIONS

■ O1 ■ O2

Frequency Range		MHz	(2x) 5150-5925
Polarization		---	(2x) ±45°
Gain	BASTA	dBi	4.6 ± 0.7
	MAX	dBi	5.3
Azimuth Beamwidth (3 dB)		degrees	360°
Elevation Beamwidth (3 dB)		degrees	20.4° ± 2.9°
Electrical Downtilt		degrees	(y) 0°
Impedance		Ohms	50Ω
VSWR		---	≤ 1.5:1
Passive Intermodulation 3rd Order for 2x20 W Carriers		dBc	N/A
Upper Sidelobe Suppression		dB	Meets FCC requirements upper pattern control for use in LAA outdoor network
Isolation	Intraband	dB	> 25
	Interband	dB	> 28
U-NII Compliant		---	Yes

INTEGRATED GPS UNIT OPTIONAL

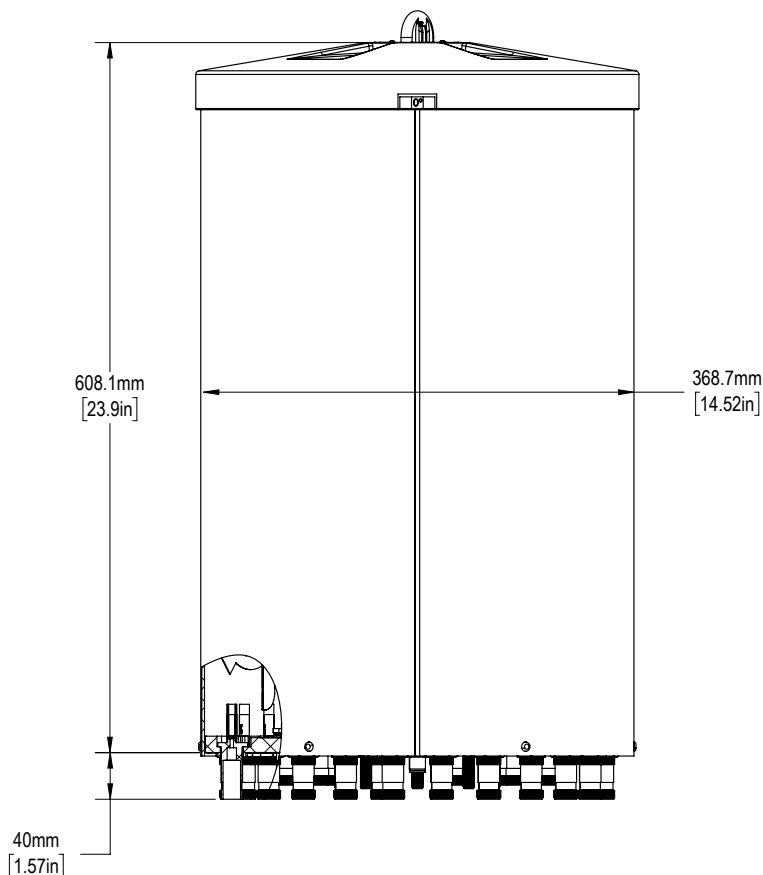
Frequency Range	1575.42 MHz \pm 10 MHz
Polarization	Right Hand Circular
Nominal Gain	3 dBic at 90°; -2 dBic at 20°
Current Draw	22 mA @ 5V
Out-of-Band Rejection	> 55 dB at 1559 MHz; > 60 dB at 1625 MHz
Amplifier Gain	28 dB \pm 3 dB
Nominal Impedance	50 ohm
Noise Figure	3.9 dB
DC Voltage	2.7-5.5 VDC
VSWR	< 2.0:1
Connector	N-Type Female

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MECHANICAL SPECIFICATIONS

Antenna	Height	mm (in)	608 (23.9)
	Diameter	mm (in)	369 (14.6)
Net Weight - Antenna Only		kg (lbs)	14.1 (31)
Windload	Calculation	km/h (mph)	160 (100)
	Frontal	N (lbf)	191 (43)
Survival Wind Speed		km/h (mph)	241 (150)
Wind Area		m ² (ft ²)	0.22 (2.4)
Volume		m ³ (ft ³)	0.07 (2.3)
Connector	Type	---	(32x) 4.3-10 Female; (1x) N-Type Female for optional GPS Unit
	Position	---	Bottom
Radome Color		---	Grey (RAL 7035), Brown (RAL 8022), Black (RAL 9011)
Lightning Protection (Grounding Type)		---	Direct Ground

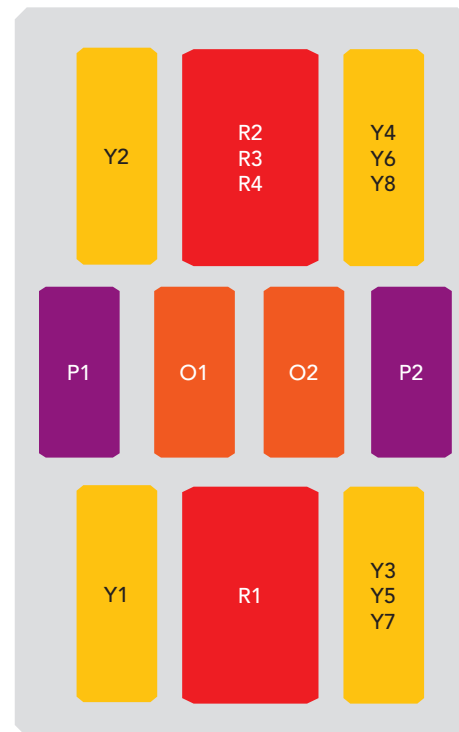


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ARRAY LAYOUT Topology

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
696-960 MHz	■ R3	5-6	(2x) 4.3-10 Female
696-960 MHz	■ R4	7-8	(2x) 4.3-10 Female
1695-2700 MHz	■ Y1	9-10	(2x) 4.3-10 Female
1695-2700 MHz	■ Y2	11-12	(2x) 4.3-10 Female
1695-2700 MHz	■ Y3	13-14	(2x) 4.3-10 Female
1695-2700 MHz	■ Y4	15-16	(2x) 4.3-10 Female
1695-2700 MHz	■ Y5	17-18	(2x) 4.3-10 Female
1695-2700 MHz	■ Y6	19-20	(2x) 4.3-10 Female
1695-2700 MHz	■ Y7	21-22	(2x) 4.3-10 Female
1695-2700 MHz	■ Y8	23-24	(2x) 4.3-10 Female
3300-4200 MHz	■ P1	25-26	(2x) 4.3-10 Female
3300-4200 MHz	■ P2	27-28	(2x) 4.3-10 Female
5150-5925 MHz	■ O1	29-30	(2x) 4.3-10 Female
5150-5925 MHz	■ O2	31-32	(2x) 4.3-10 Female
Optional GPS BAND 1575.42 MHz	---	---	(1x) N-Type Female

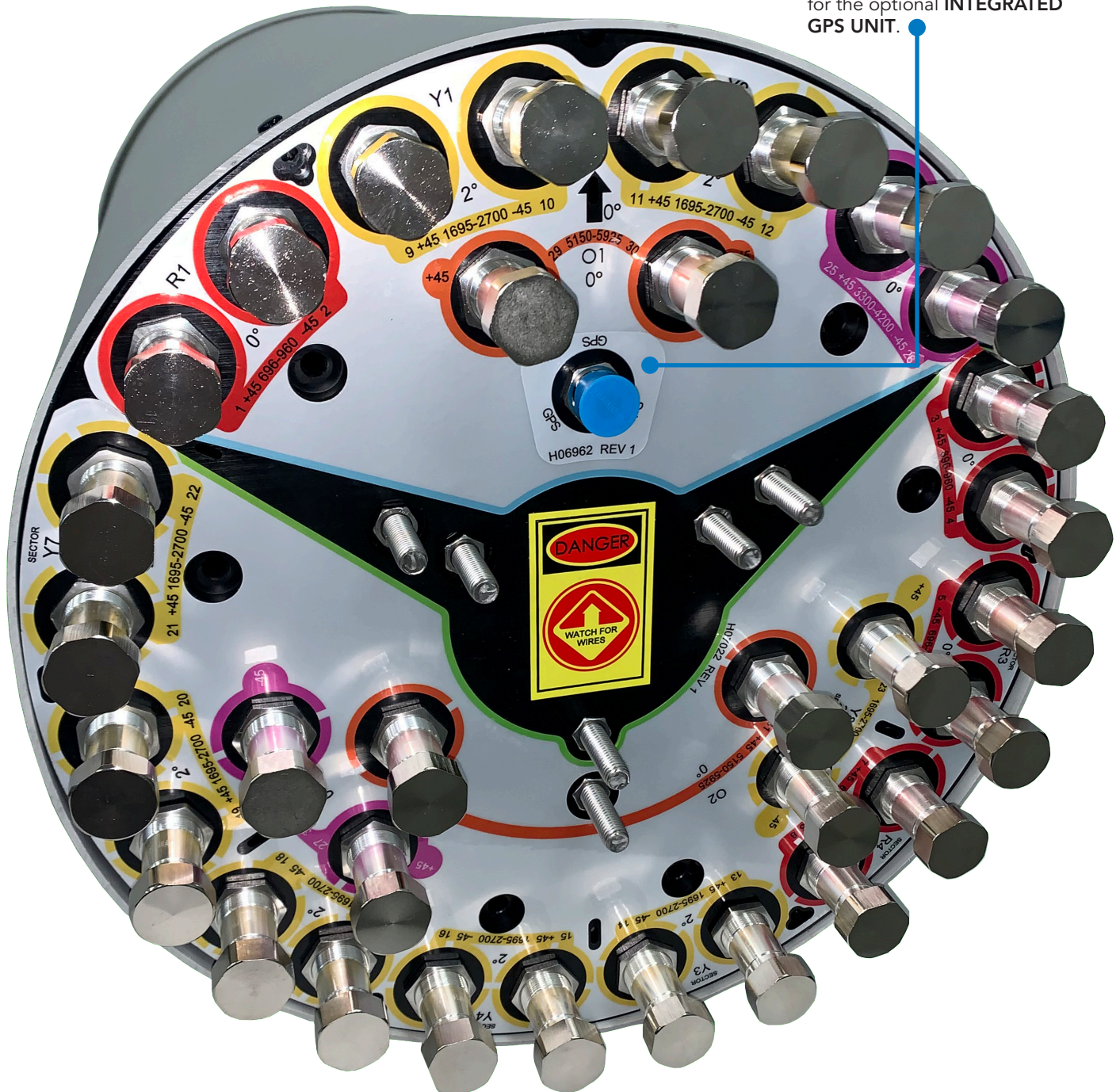


The illustration is not shown to scale.

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BOTTOM VIEW - LABELING

Image shows the N-Type Connector for the optional **INTEGRATED GPS UNIT**.

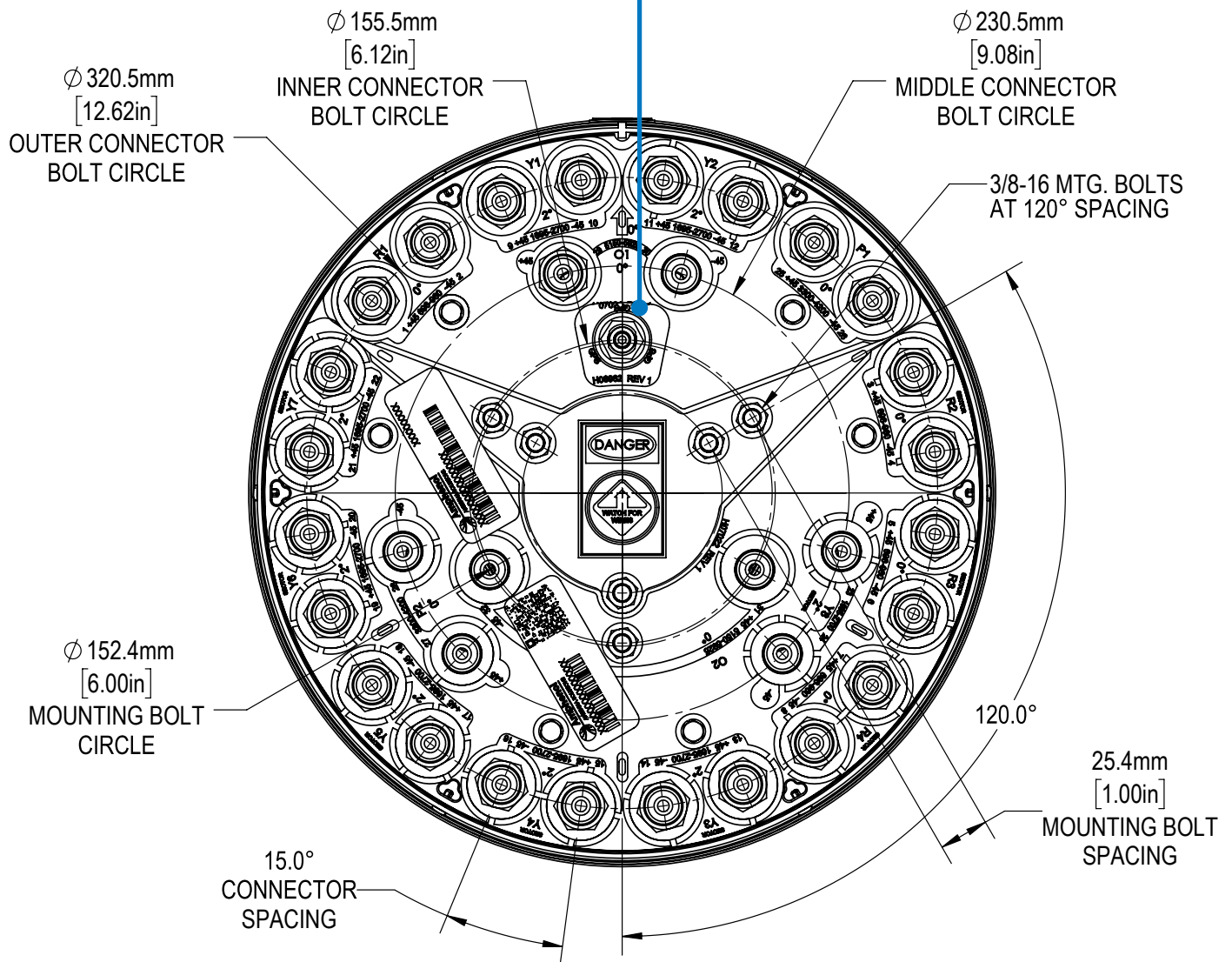


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BOTTOM VIEW - CONNECTOR DIAGRAM

Image shows the N-Type Connector for the optional **INTEGRATED GPS UNIT**.



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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MOUNTING KITS Select from the following mounting options when ordering. Mounting kits for canister antennas are ordered as a separate line item.

MODEL NUMBER		DESCRIPTION
CWT-MKS-SIDE		SIDE MOUNTING BRACKET KIT FOR CANISTER ANTENNA
CWT-MKS-TOP		TOP MOUNTING BRACKET KIT FOR CANISTER ANTENNA
WB3X-MKS-01		UTILITY POLE MOUNTING BRACKET KIT FOR CANISTER ANTENNA
CWT-MKS-BASE-xx		WIDE DIAMETER POLE TOP MOUNTING BRACKET KIT FOR CANISTER ANTENNA. AVAILABLE IN BROWN, BLACK AND GREY TO MATCH ANTENNA RADOME AND/OR MOUNTING STRUCTURE.

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

NUMBER OF BANDS and OPERATING FREQUENCY				PATTERN TYPE	AZIMUTH BMWIDTH	POLARIZATION	LENGTH	TILT TYPE	TILT OPTIONS	CONNECTOR TYPE	VARIATION	RADOME COLOR OPTIONS	GPS
2C	4U	4M		T	SP1	X	06	F	wxy	s	4	BK BR	-GPS
(4x) 696-960	(8x) 1695-2700	(2x) 3300-4200	(2x) 5150-5925	Tri-Sector	Sector & Omni Combination	XPOL	0.6 meters	Fixed Tilt	These letters are placeholders for fixed tilt options. Refer to Electrical Specifications for available tilt options.	4.3-10 Connector	4th generation enhanced mechanical package	BK indicates a Black radome. BR indicates a Brown radome. The default radome color is Grey. No letters are required for a Grey radome.	Indicates an integrated GPS unit

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ORDERING OPTIONS Select from the following ordering options

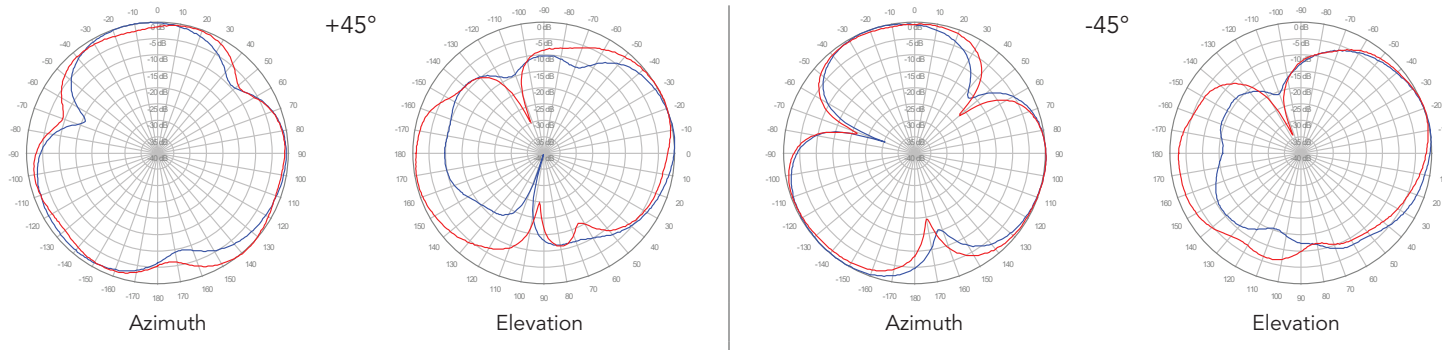
SELECT RADOME COLOR	SELECT DEGREE OF ELECTRICAL DOWNTILT FOR EACH BAND				SELECT ANTENNA TYPE	
	696-960 MHz	1695-2700 MHz	3300-4200 MHz	5150-5925 MHz	WITHOUT GPS UNIT	WITH GPS UNIT
Grey RAL 7035	0°	0°	0°	0°	2C4U4MTSP1X06F000s4	2C4U4MTSP1X06F000s4-GPS
	0°	2°	0°	0°	2C4U4MTSP1X06F020s4	2C4U4MTSP1X06F020s4-GPS
	0°	4°	0°	0°	2C4U4MTSP1X06F040s4	2C4U4MTSP1X06F040s4-GPS
	0°	6°	0°	0°	2C4U4MTSP1X06F060s4	2C4U4MTSP1X06F060s4-GPS
	0°	Y1-Y2=2°; Y3-Y8=4°	0°	0°	2C4U4MTSP1X06FAAAs4	2C4U4MTSP1X06FAAAs4-GPS
	0°	Y1-Y2=2°; Y3-Y8=6°	0°	0°	2C4U4MTSP1X06FBBBs4	2C4U4MTSP1X06FBBBs4-GPS
	0°	Y1-Y2=4°; Y3-Y8=6°	0°	0°	2C4U4MTSP1X06FCCCs4	2C4U4MTSP1X06FCCCs4-GPS
Brown RAL 8022	0°	0°	0°	0°	2C4U4MTSP1X06F000s4BR	2C4U4MTSP1X06F000s4BR-GPS
	0°	2°	0°	0°	2C4U4MTSP1X06F020s4BR	2C4U4MTSP1X06F020s4BR-GPS
	0°	4°	0°	0°	2C4U4MTSP1X06F040s4BR	2C4U4MTSP1X06F040s4BR-GPS
	0°	6°	0°	0°	2C4U4MTSP1X06F060s4BR	2C4U4MTSP1X06F060s4BR-GPS
	0°	Y1-Y2=2°; Y3-Y8=4°	0°	0°	2C4U4MTSP1X06FAAAs4BR	2C4U4MTSP1X06FAAAs4BR-GPS
	0°	Y1-Y2=2°; Y3-Y8=6°	0°	0°	2C4U4MTSP1X06FBBBs4BR	2C4U4MTSP1X06FBBBs4BR-GPS
	0°	Y1-Y2=4°; Y3-Y8=6°	0°	0°	2C4U4MTSP1X06FCCCs4BR	2C4U4MTSP1X06FCCCs4BR-GPS
Black RAL 9011	0°	0°	0°	0°	2C4U4MTSP1X06F000s4BK	2C4U4MTSP1X06F000s4BK-GPS
	0°	2°	0°	0°	2C4U4MTSP1X06F020s4BK	2C4U4MTSP1X06F020s4BK-GPS
	0°	4°	0°	0°	2C4U4MTSP1X06F040s4BK	2C4U4MTSP1X06F040s4BK-GPS
	0°	6°	0°	0°	2C4U4MTSP1X06F060s4BK	2C4U4MTSP1X06F060s4BK-GPS
	0°	Y1-Y2=2°; Y3-Y8=4°	0°	0°	2C4U4MTSP1X06FAAAs4BK	2C4U4MTSP1X06FAAAs4BK-GPS
	0°	Y1-Y2=2°; Y3-Y8=6°	0°	0°	2C4U4MTSP1X06FBBBs4BK	2C4U4MTSP1X06FBBBs4BK-GPS
	0°	Y1-Y2=4°; Y3-Y8=6°	0°	0°	2C4U4MTSP1X06FCCCs4BK	2C4U4MTSP1X06FCCCs4BK-GPS

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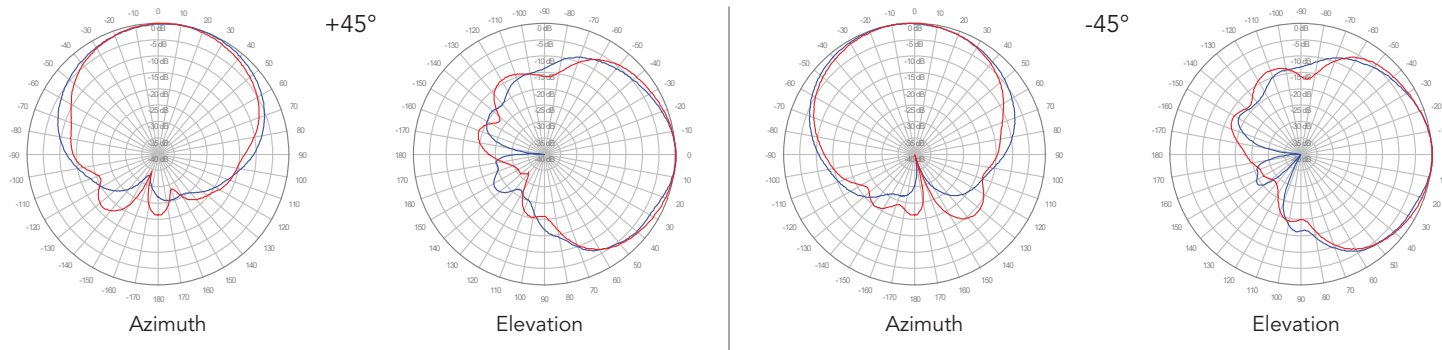
750 MHz ————

850 MHz ————

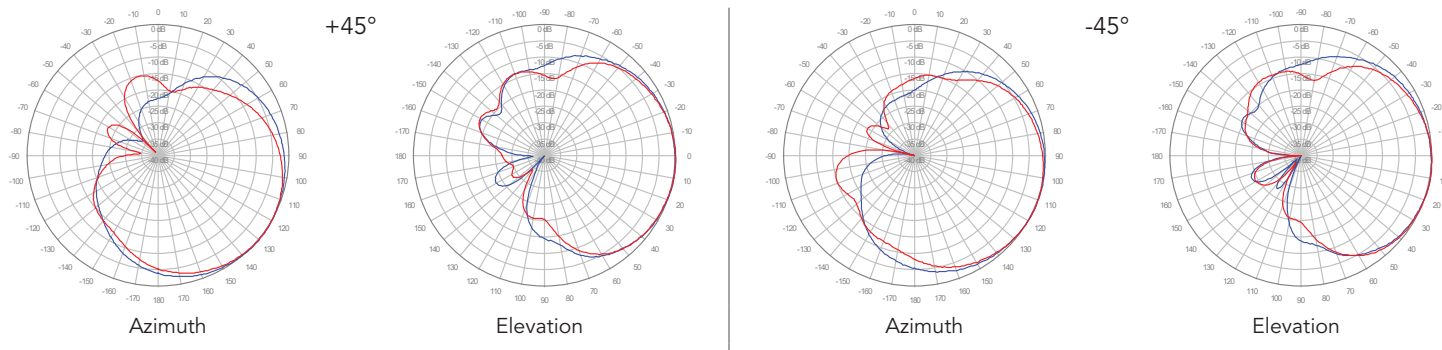
R1, 0° TILT



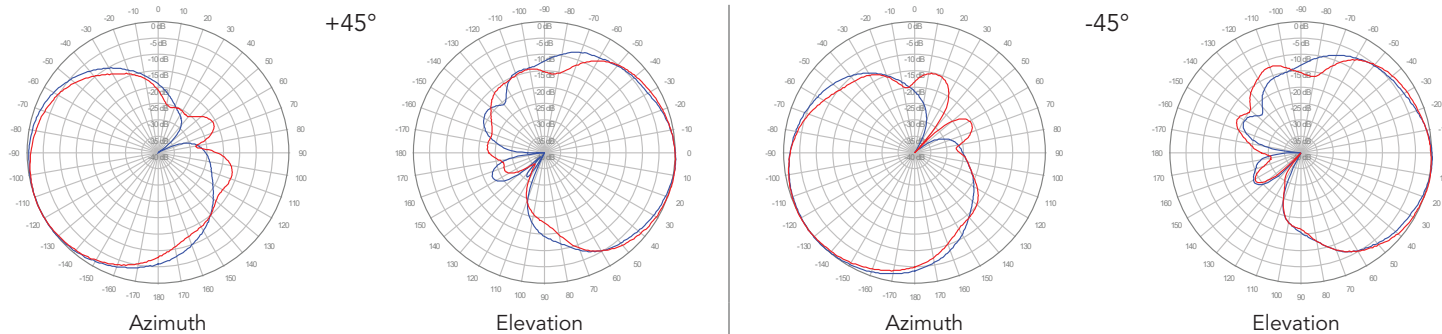
R2, 0° TILT



R3, 0° TILT



R4, 0° TILT

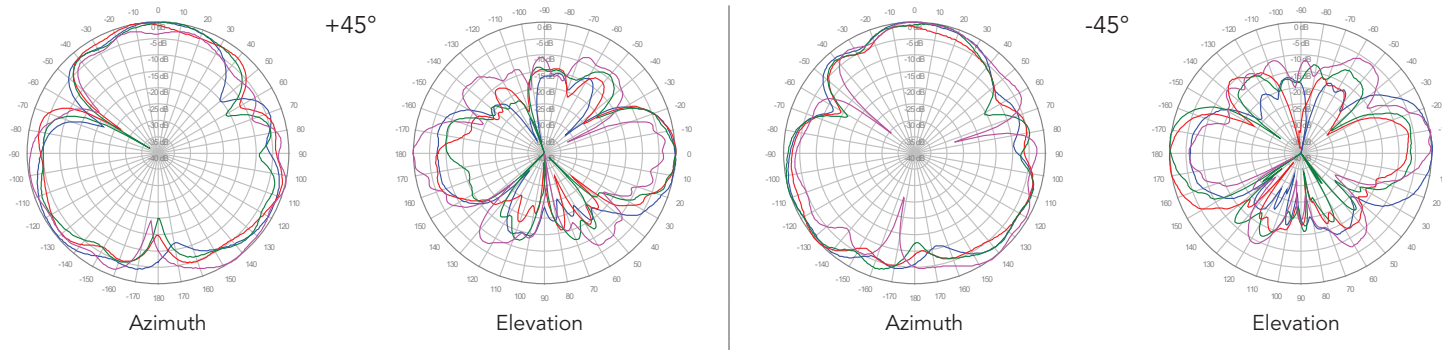


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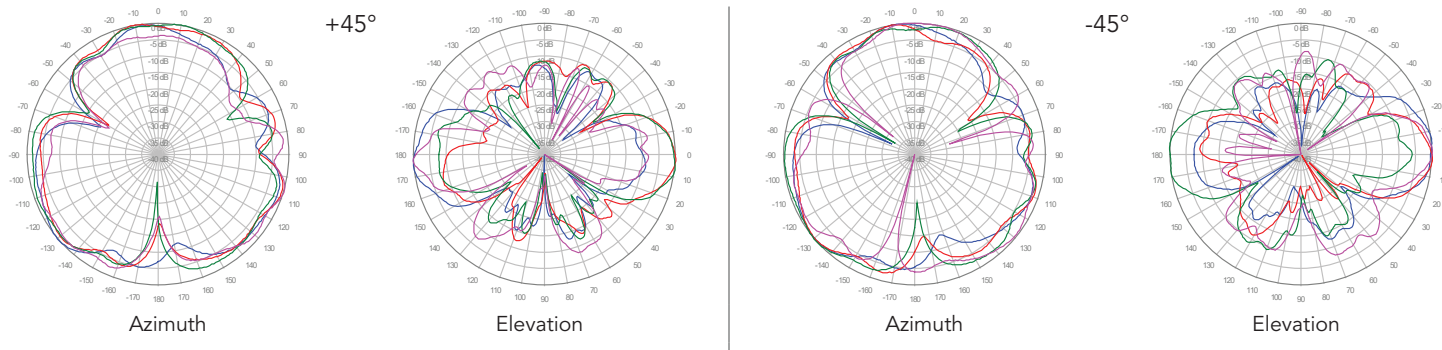
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1800 MHz —
1900 MHz —
2100 MHz —
2600 MHz —

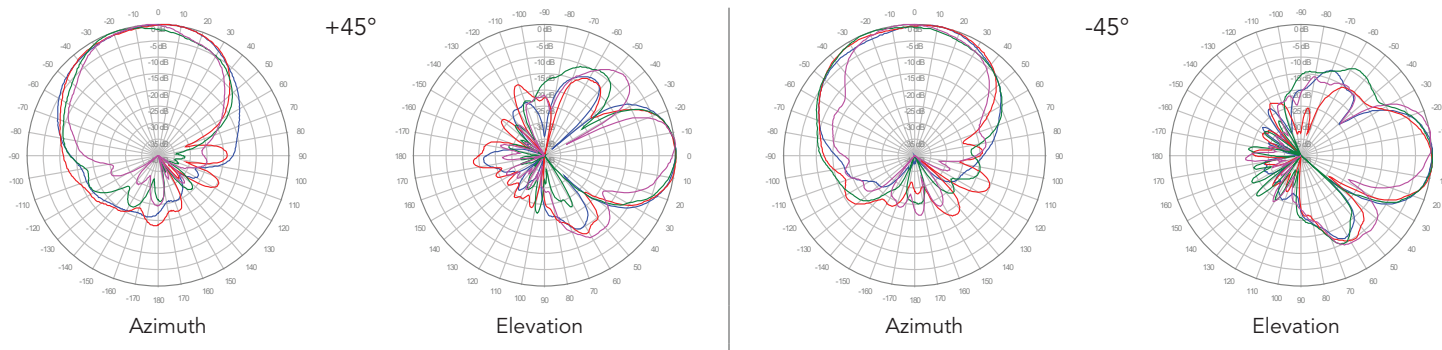
Y1, 2° TILT



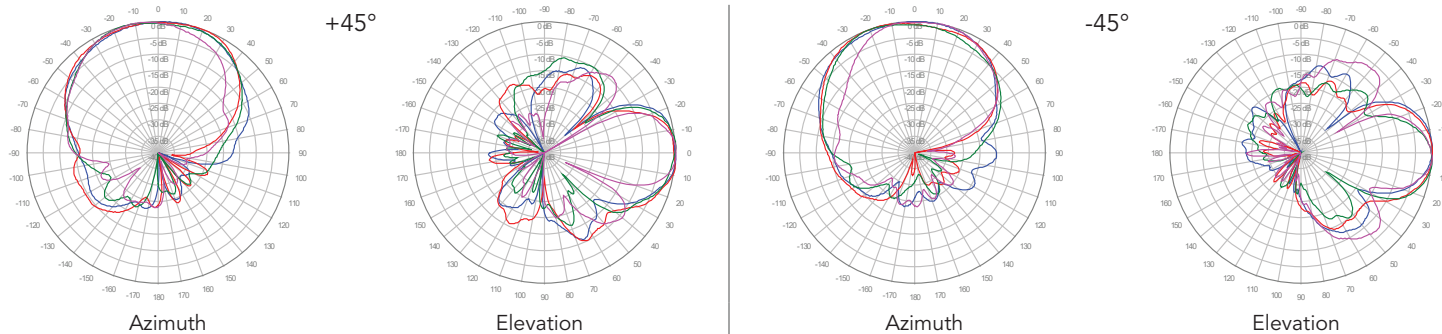
Y2, 2° TILT



Y3, 2° TILT



Y4, 2° TILT

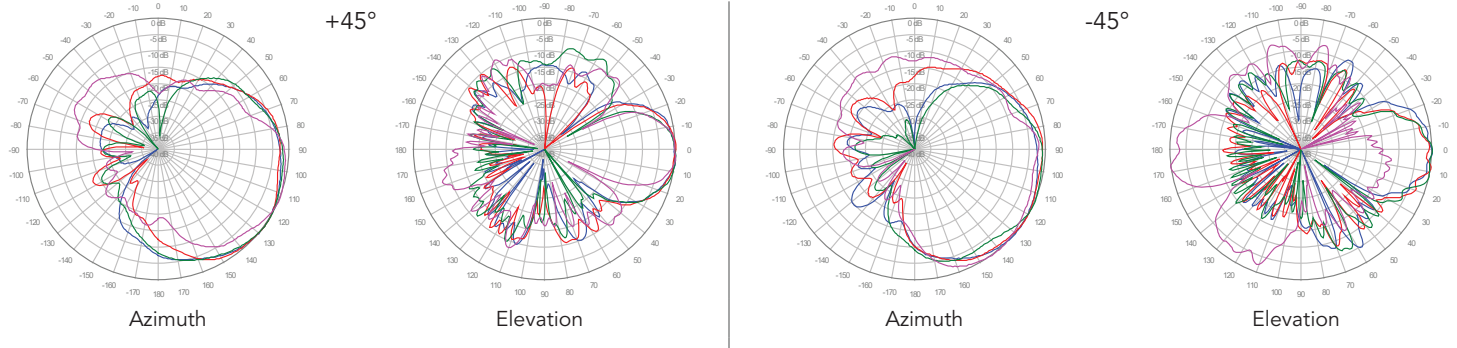


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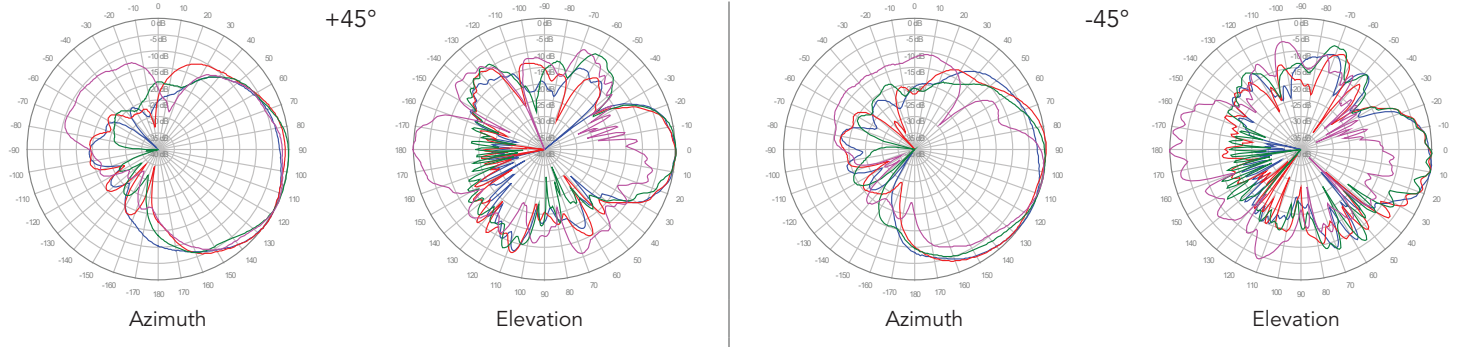
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1800 MHz —
1900 MHz —
2100 MHz —
2600 MHz —

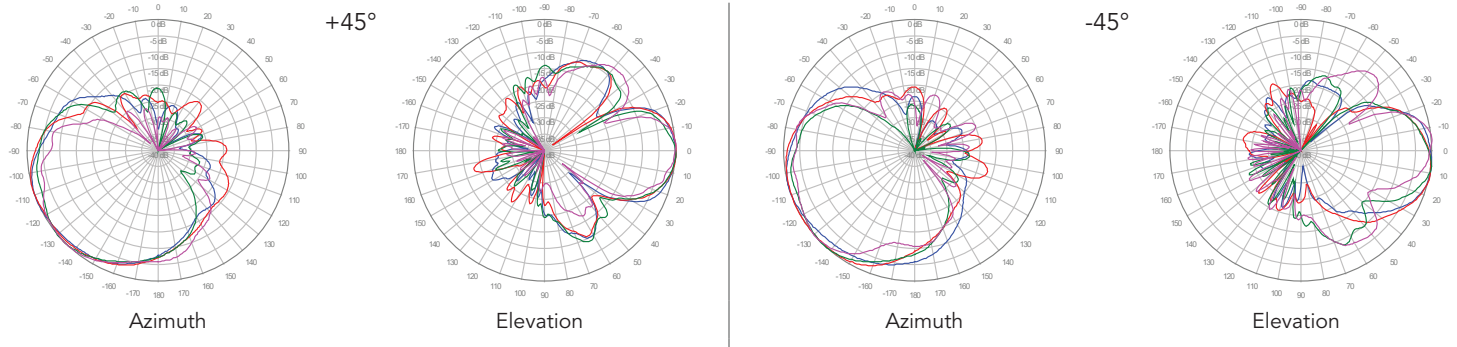
Y5, 2° TILT



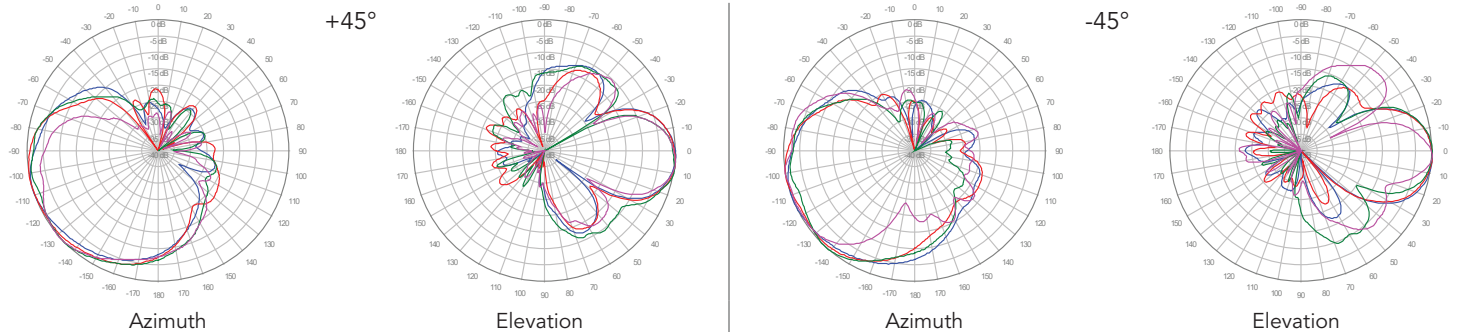
Y6, 2° TILT



Y7, 2° TILT



Y8, 2° TILT

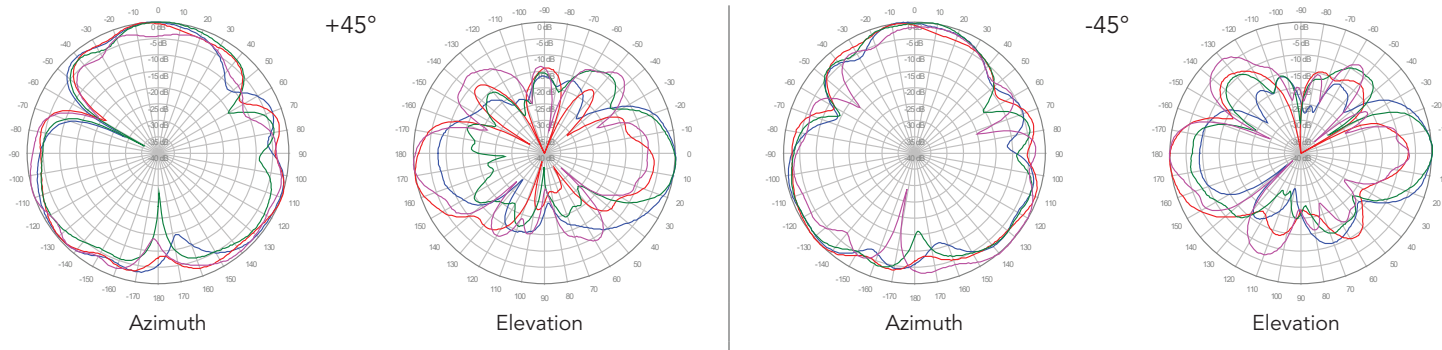


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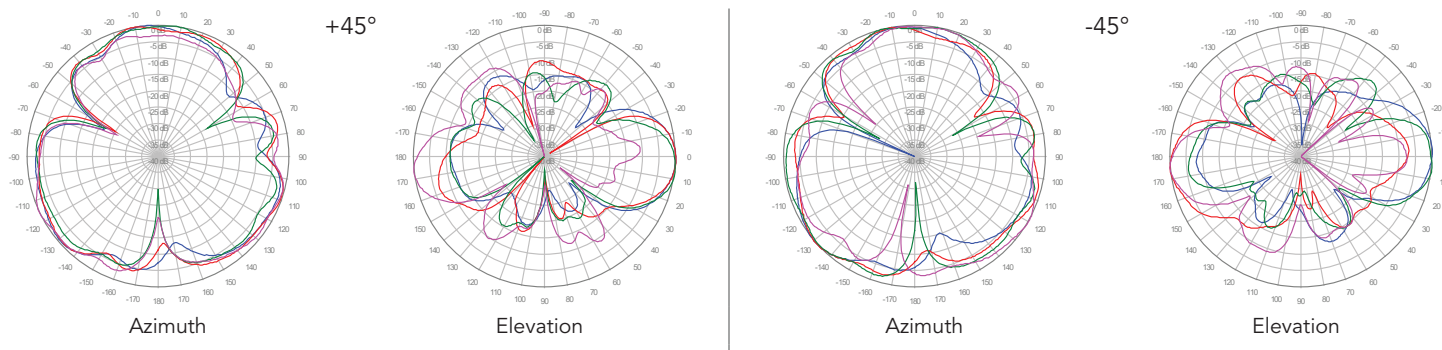
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1800 MHz —
1900 MHz —
2100 MHz —
2600 MHz —

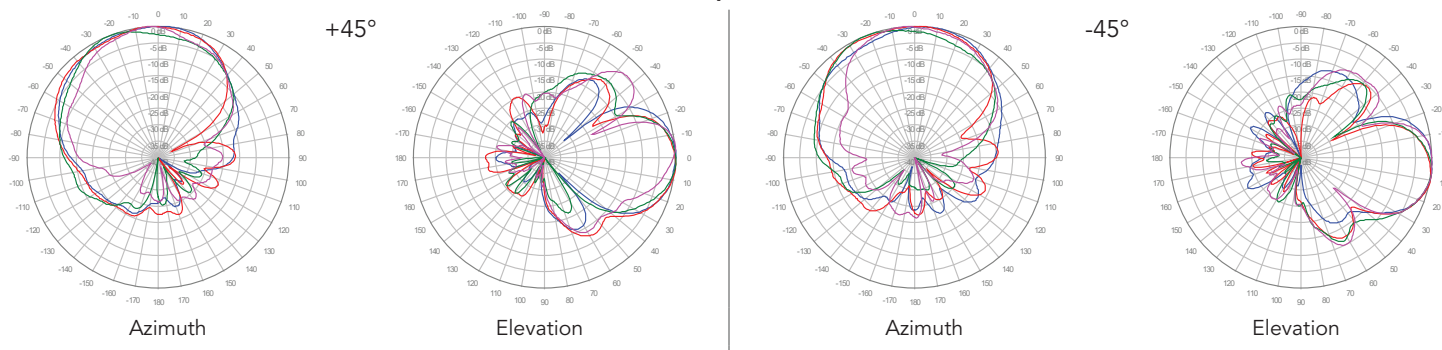
Y1, 4° TILT



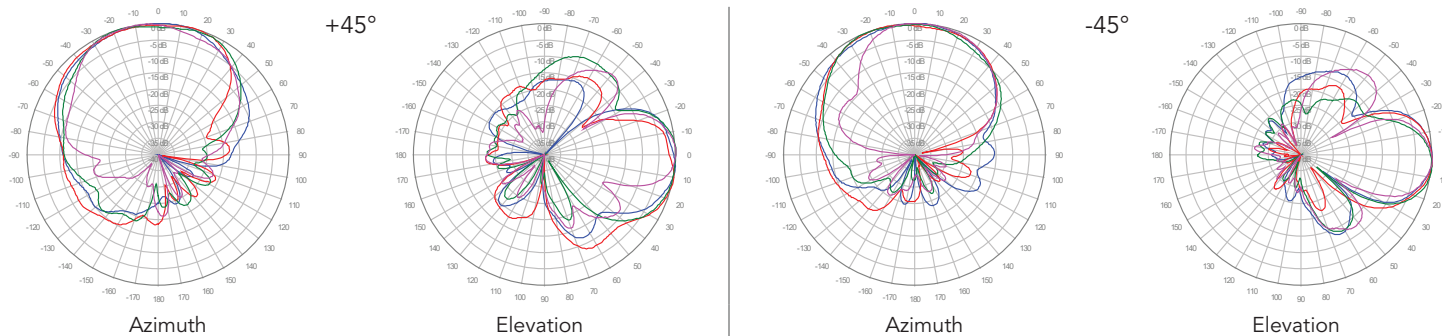
Y2, 4° TILT



Y3, 4° TILT



Y4, 4° TILT

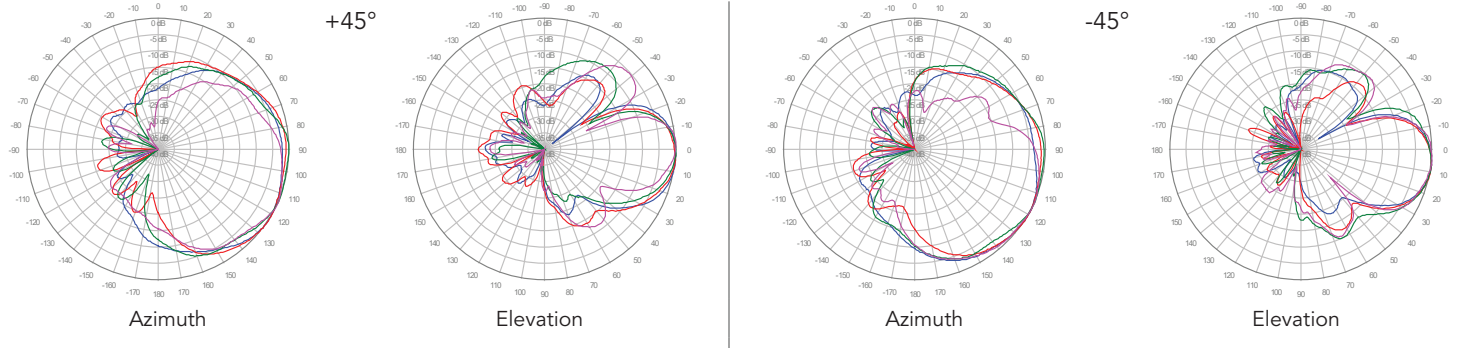


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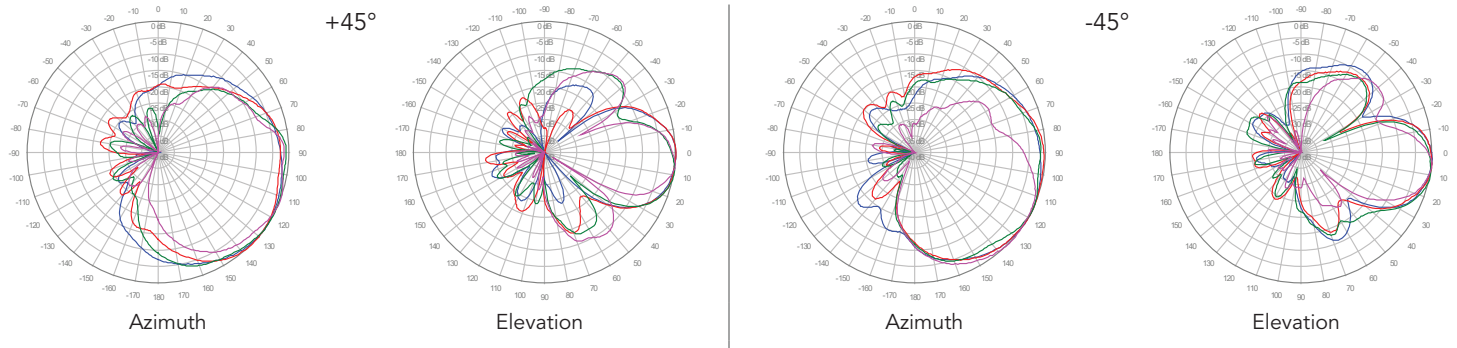
2C4U4MTSP1X06Fwxys4

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

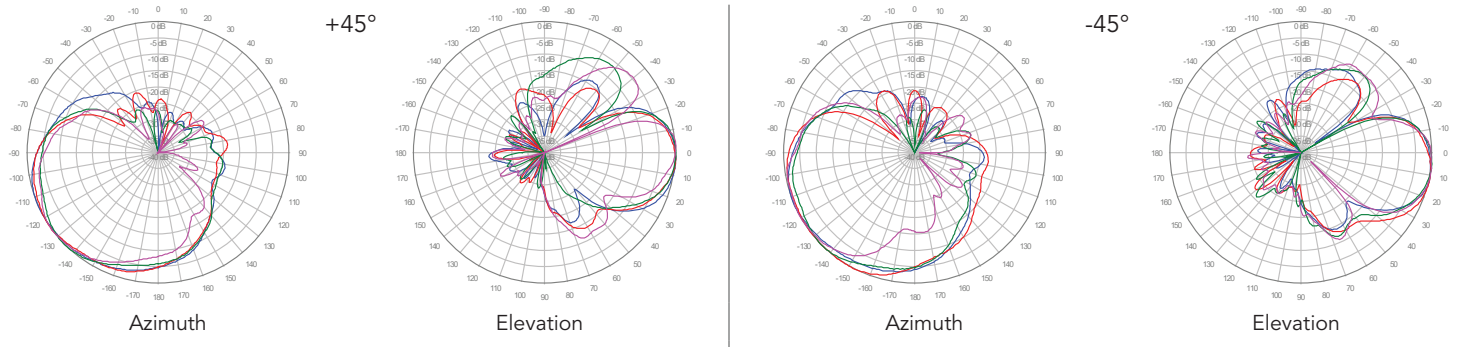
Y5, 4° TILT



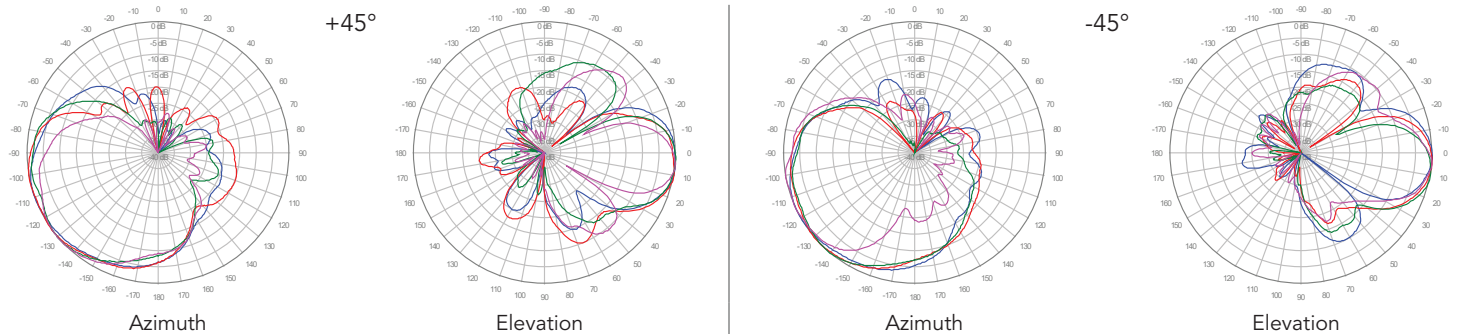
Y6, 4° TILT



Y7, 4° TILT



Y8, 4° TILT

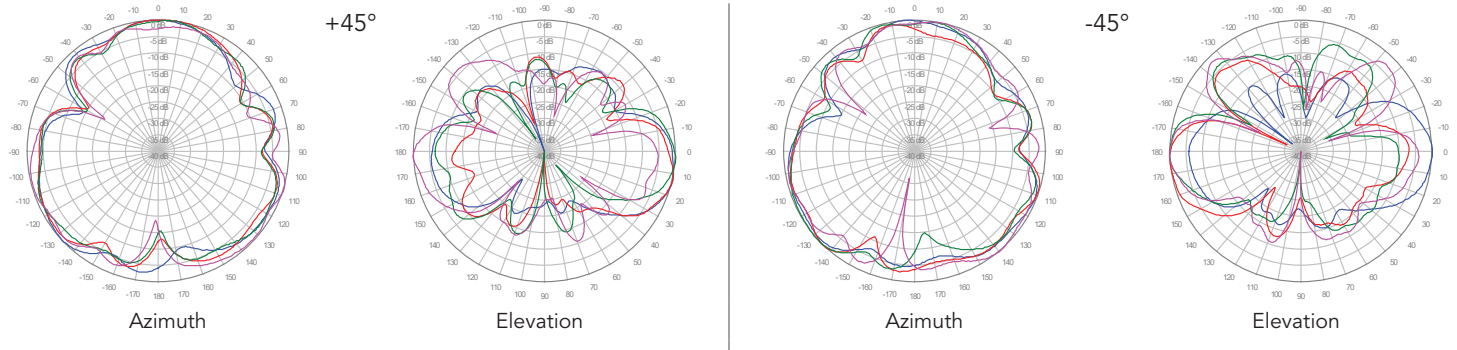


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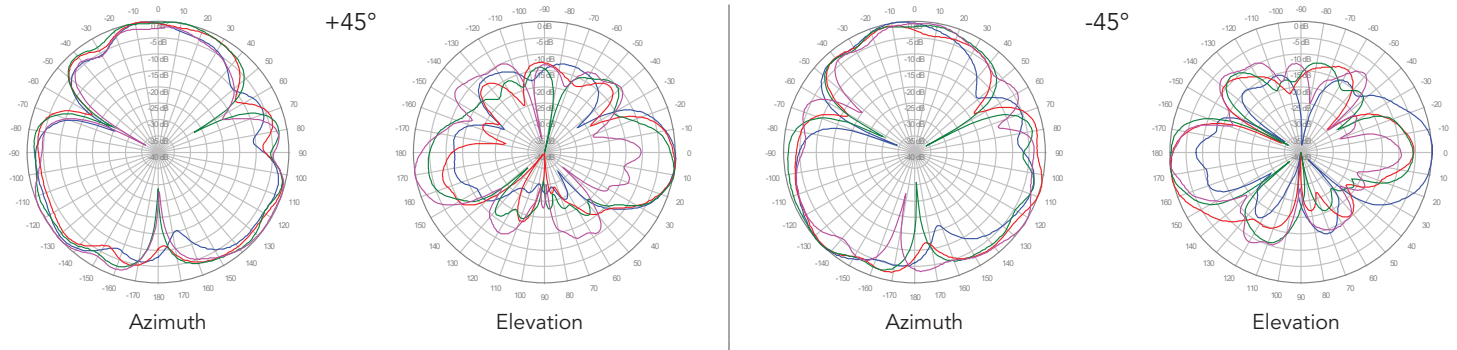
2C4U4MTSP1X06Fwxys4

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

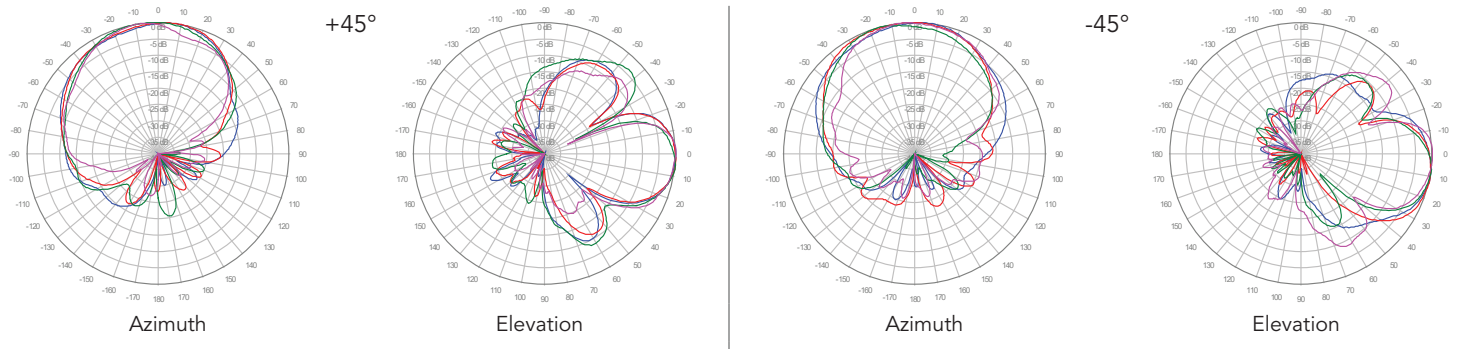
Y1, 6° TILT



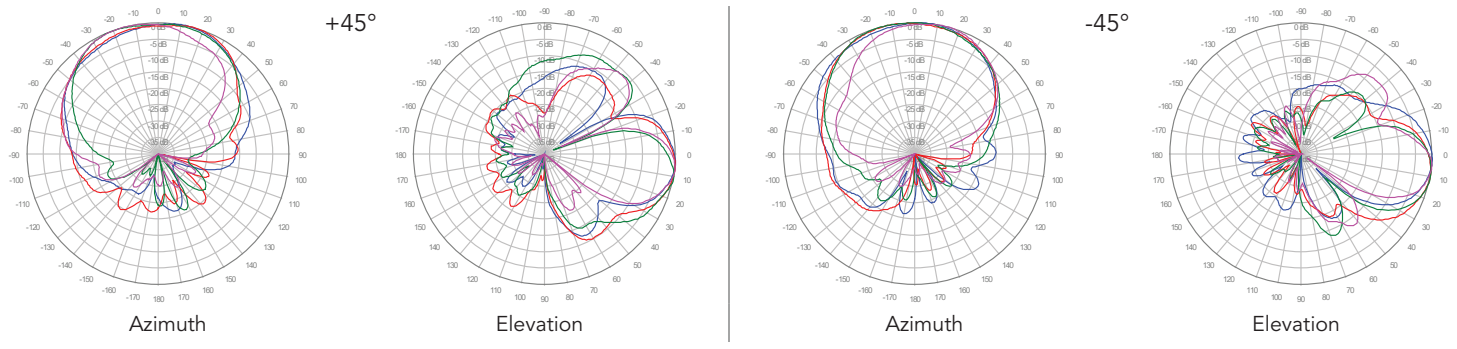
Y2, 6° TILT



Y3, 6° TILT



Y4, 6° TILT

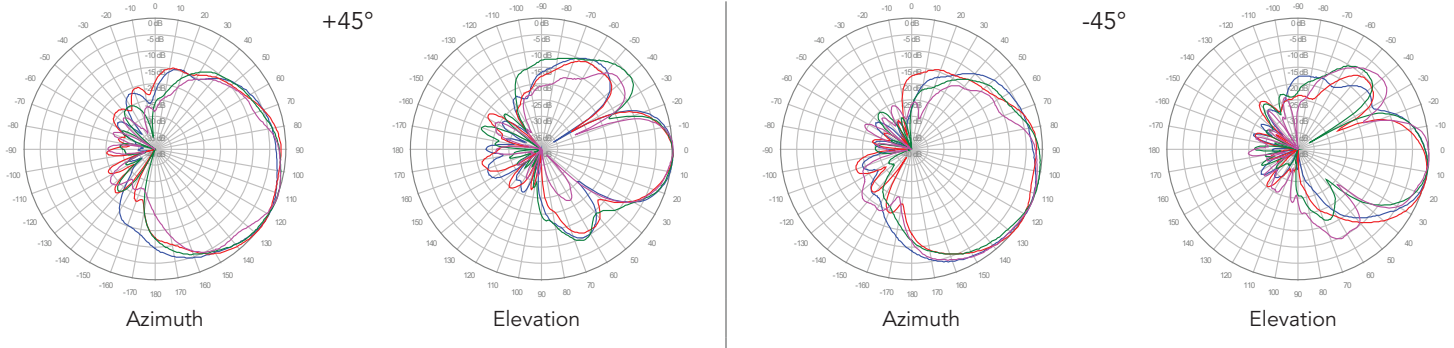


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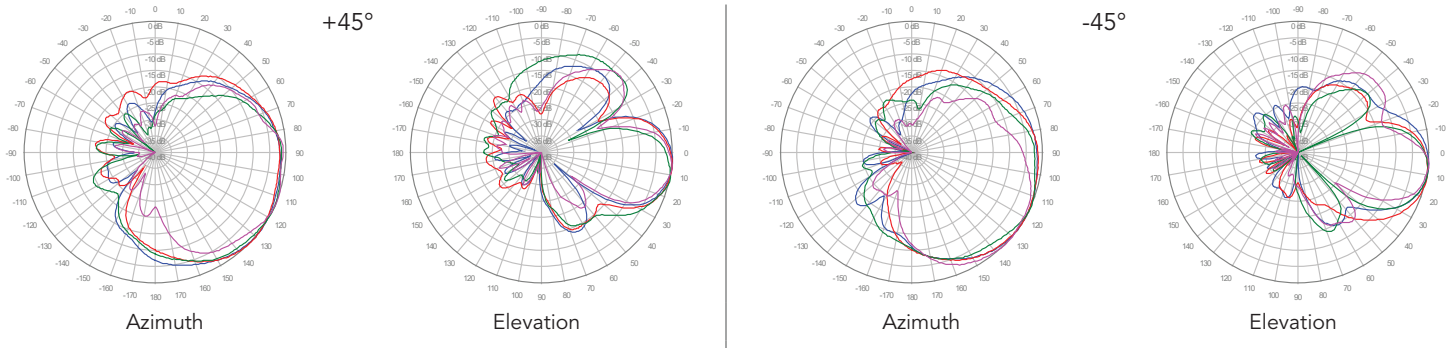
2C4U4MTSP1X06Fwxys4

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

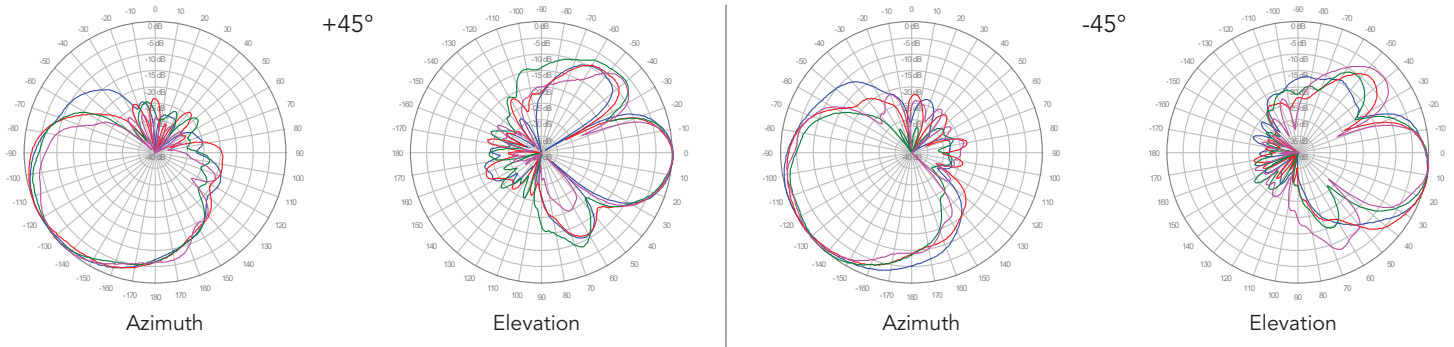
Y5, 6° TILT



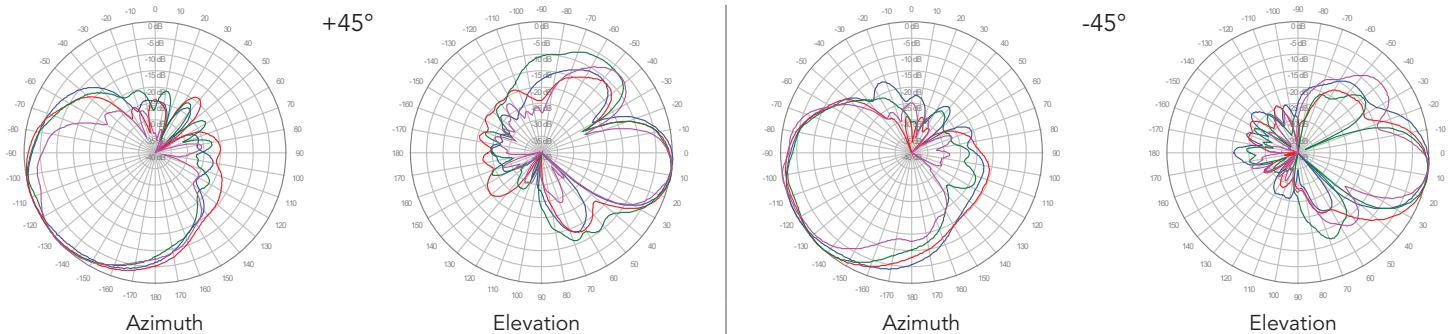
Y6, 6° TILT



Y7, 6° TILT



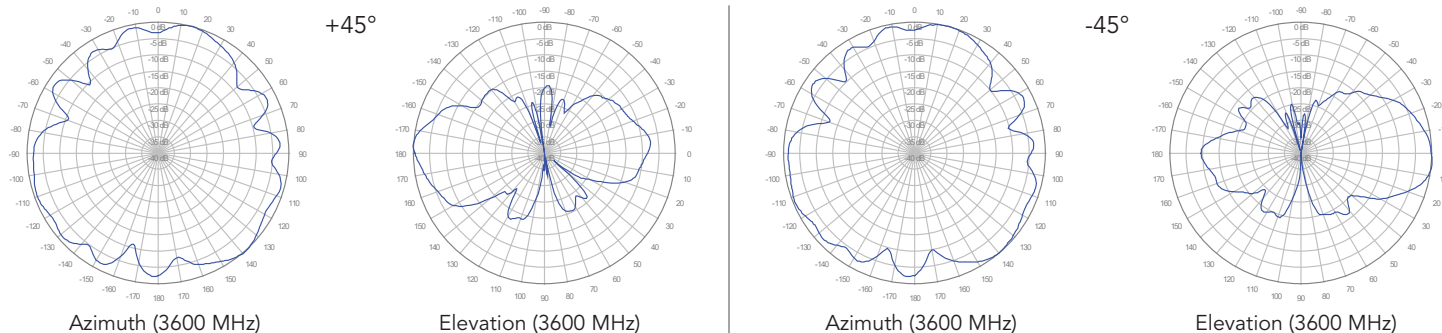
Y8, 6° TILT



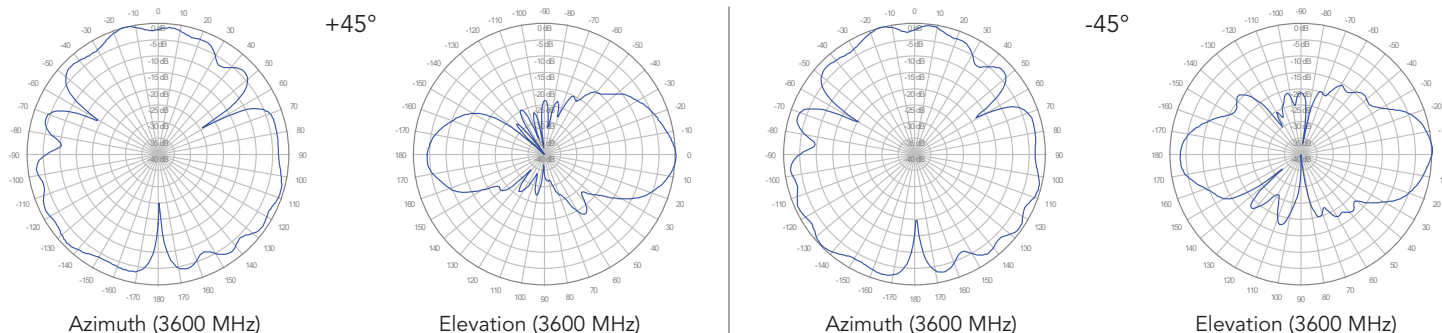
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2C4U4MTSP1X06Fwxys4

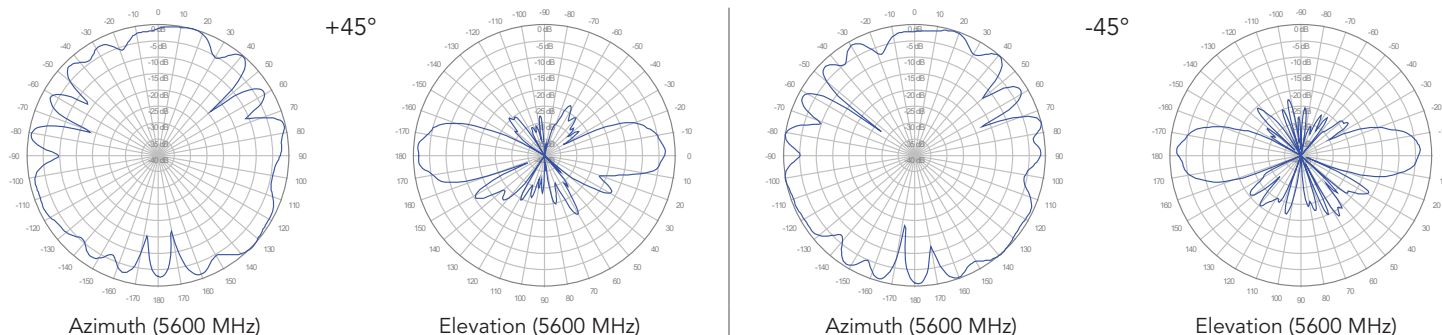
P1, 0° TILT



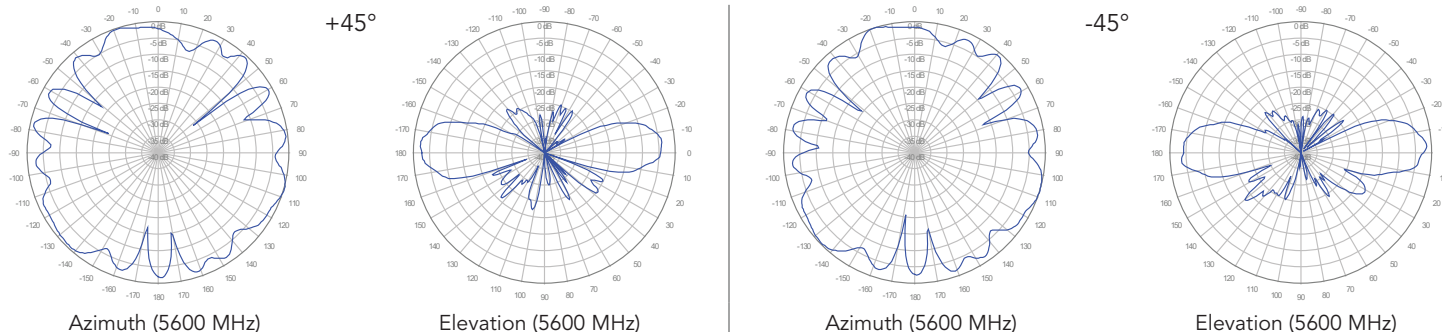
P2, 0° TILT



O1, 0° TILT



O2, 0° TILT



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