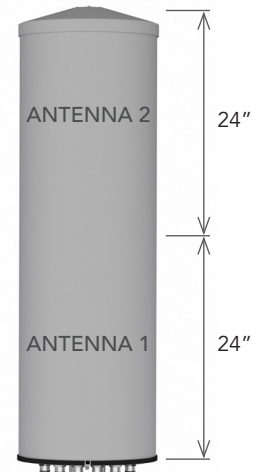














4U4MTSP1X12F_{xy}s0

Features

- Sector & Omni combination configuration with 24 connectors
- Dual antennas integrated under a single radome
- Ideal for multi-carrier or 4x4 MIMO deployments
- 4x4 MIMO capable on both the sectorized and pseudo omni mid bands
- 5 GHz U-NII FCC compliant
- Available for order with a grey, brown or black radome



PRODUCT OVERVIEW	Frequency Range (MHz)	MID BAND							CBRS BAND		LAA BAND			
		(4x) 1695-2700							(2x) 3550-3700		(2x) 5150-5925			
	Array	 Y1	 Y2	 Y3	 Y4	 Y5	 Y6	 Y7	 Y8	 P1	 P2	 O1	 O2	
	Connector	12 PORTS						4 PORTS		4 PORTS		4 PORTS		
	Polarization	XPOL						XPOL		XPOL		XPOL		
	Azimuth Beamwidth (avg)	SECTORIZED						OMNI		OMNI		OMNI		
	Electrical Downtilt	2°, 4°, 6°							0°		0°			
	Configuration	SECTOR & OMNI COMBINATION												
	Connector Type	(24x) 4.3-10 FEMALE CONNECTORS												
	Dimensions	1222 x Ø371 mm (48.1 x Ø14.6 in)												
	Radome Color Options	GREY, BROWN or BLACK												

ELECTRICAL SPECIFICATIONS Mid Band - Sectorized

Y1 Y2 Y3 Y4 Y5 Y6

Frequency Range		MHz	(4x) 1695-2700			
Frequency Sub-Range		MHz	1695-1880	1850-1990	1920-2200	2300-2700
Polarization		---	(4x) ±45°			
Gain	BASTA	dBi	15.1 ± 0.6	15.7 ± 0.7	15.8 ± 0.7	16.0 ± 0.8
	MAX	dBi	15.7	16.4	16.5	16.8
Azimuth Beamwidth (3 dB)		degrees	95.9° ± 10.5°	88.2° ± 7.6°	83.6° ± 10.6°	72.5° ± 15°
Elevation Beamwidth (3 dB)		degrees	11.5° ± 1.0°	10.9° ± 0.9°	10.4° ± 1.1°	8.8° ± 1.1°
Electrical Downtilt		degrees	(x) 2°, 4°, 6°			
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			
Input Power		Watts	300W			

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4U4MTSP1X12F_{xy}s0

ELECTRICAL SPECIFICATIONS Mid Band - Omni

■ Y7 ■ Y8

Frequency Range		MHz	(4x) 1695-2700			
Frequency Sub-Range		MHz	1695-1880	1850-1990	1920-2200	2300-2700
Polarization		---	(4x) $\pm 45^\circ$			
Gain	BASTA	dBi	11.8 ± 0.8	11.4 ± 0.5	11.8 ± 0.8	11.7 ± 0.8
	MAX	dBi	12.6	11.9	12.6	12.5
Azimuth Beamwidth (3 dB)		degrees	360°	360°	360°	360°
Elevation Beamwidth (3 dB)		degrees	$11.5^\circ \pm 1.0^\circ$	$10.9^\circ \pm 0.9^\circ$	$10.4^\circ \pm 1.1^\circ$	$8.8^\circ \pm 1.1^\circ$
Electrical Downtilt		degrees	(x) $2^\circ, 4^\circ, 6^\circ$			
Impedance		Ohms	50 Ω			
VSWR		---	$\leq 1.5:1$			
Passive Intermodulation 3rd Order for 2x20 W Carriers		dBc	< -153			
Upper Sidelobe Suppression		dB	> 12			
Isolation	Intraband	dB	> 25			
	Interband	dB	> 28			
Input Power		Watts	300W			

ELECTRICAL SPECIFICATIONS CBRS Band

■ P1 ■ P2

Frequency Range		MHz	(2x) 3550-3700			
Polarization		---	(2x) $\pm 45^\circ$			
Gain	BASTA	dBi	4.9 ± 0.3			
	MAX	dBi	5.2			
Azimuth Beamwidth (3 dB)		degrees	360°			
Elevation Beamwidth (3 dB)		degrees	$34.9^\circ \pm 13.3^\circ$			
Electrical Downtilt		degrees	(y) 0°			
Impedance		Ohms	50 Ω			
VSWR		---	$\leq 1.5:1$			
Passive Intermodulation 3rd Order for 2x20 W Carriers		dBc	N/A			
Upper Sidelobe Suppression		dB	N/A			
Isolation	Intraband	dB	> 25			
	Interband	dB	> 28			
Input Power		Watts	100W			

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4U4MTSP1X12F_{xy}s0

ELECTRICAL SPECIFICATIONS LAA Band

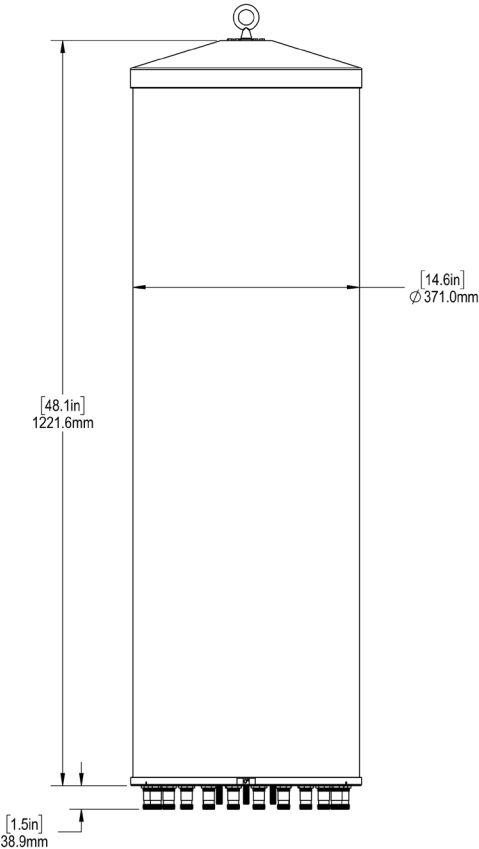
■ O1 ■ O2

Frequency Range		MHz	(2x) 5150-5925
Polarization		---	(2x) ±45°
Gain	BASTA	dBi	5.1 ± 0.7
	MAX	dBi	5.8
Azimuth Beamwidth (3 dB)		degrees	360°
Elevation Beamwidth (3 dB)		degrees	22.7° ± 4.9°
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	> 16
Isolation	Intraband	dB	> 25
	Interband	dB	> 28
Input Power		Watts	50W
U-NII Compliant		---	Yes

4U4MTSP1X12F_{xy}s0

MECHANICAL SPECIFICATIONS

Antenna	Height	mm (in)	1222 (48.1)
	Diameter	mm (in)	371 (14.6)
Net Weight - Antenna Only		kg (lbs)	19.5 (43)
Windload	Calculation	km/h (mph)	160 (100)
	Frontal	N (lbf)	391 (88)
Survival Wind Speed		km/h (mph)	241 (150)
Wind Area		m² (ft²)	0.47 (5.0)
Volume	Total	m³ (ft³)	0.13 (4.7)
	Each Antenna	m³ (ft³)	0.065 (2.33)
Connector	Type	---	4.3-10 Female
	Quantity	---	24
	Position	---	Bottom
Radome Color		---	Grey (Pantone 420 C) Brown (Pantone 476 C) Black (RAL 9011)
Lightning Protection (Grounding Type)		---	Direct Ground

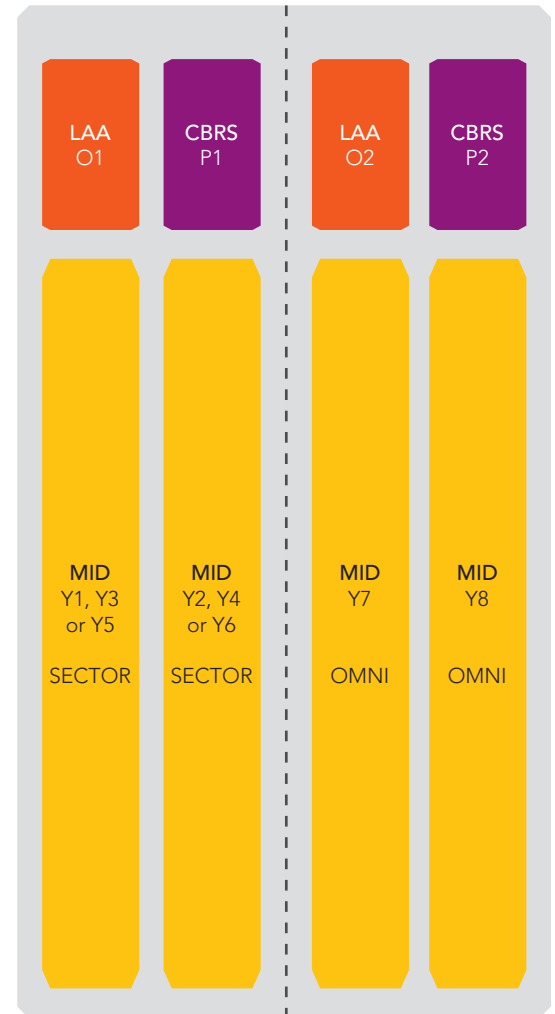


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4U4MTSP1X12F_{xy}s0

ARRAY LAYOUT Topology

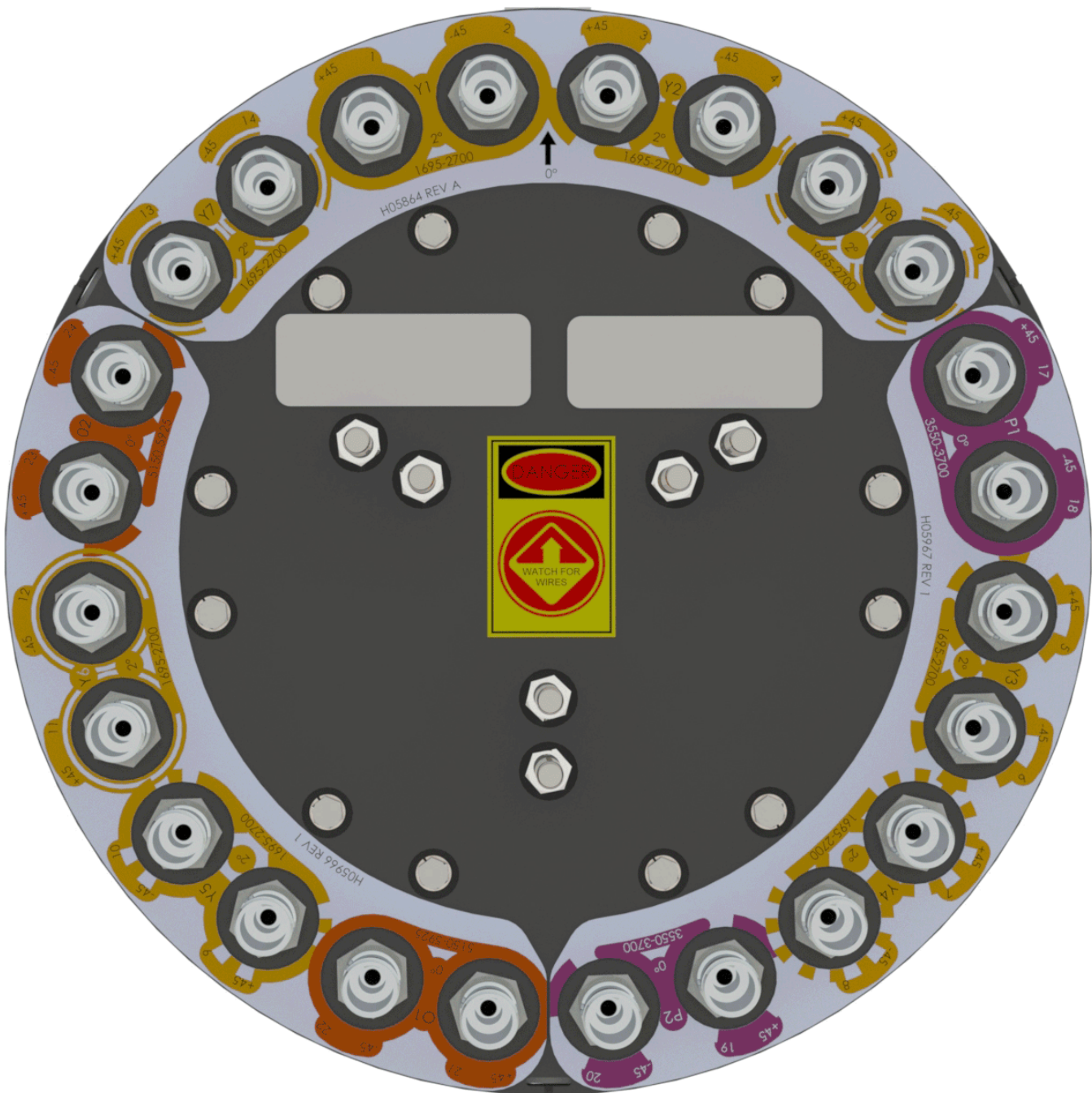
FREQUENCY		ARRAY	CONNECTOR	CONNECTOR TYPE
MID BAND	1695-2700	■ Y1	1-2	(2x) 4.3-10 Female
	1695-2700	■ Y2	3-4	(2x) 4.3-10 Female
	1695-2700	■ Y3	5-6	(2x) 4.3-10 Female
	1695-2700	■ Y4	7-8	(2x) 4.3-10 Female
	1695-2700	■ Y5	9-10	(2x) 4.3-10 Female
	1695-2700	■ Y6	11-12	(2x) 4.3-10 Female
	1695-2700	■ Y7	13-14	(2x) 4.3-10 Female
	1695-2700	■ Y8	15-16	(2x) 4.3-10 Female
CBRS BAND	3550-3700	■ P1	17-18	(2x) 4.3-10 Female
	3550-3700	■ P2	19-20	(2x) 4.3-10 Female
LAA BAND	5150-5925	■ O1	21-22	(2x) 4.3-10 Female
	5150-5925	■ O2	23-24	(2x) 4.3-10 Female



The illustration is not shown to scale.

4U4MTSP1X12F_{xy}s0

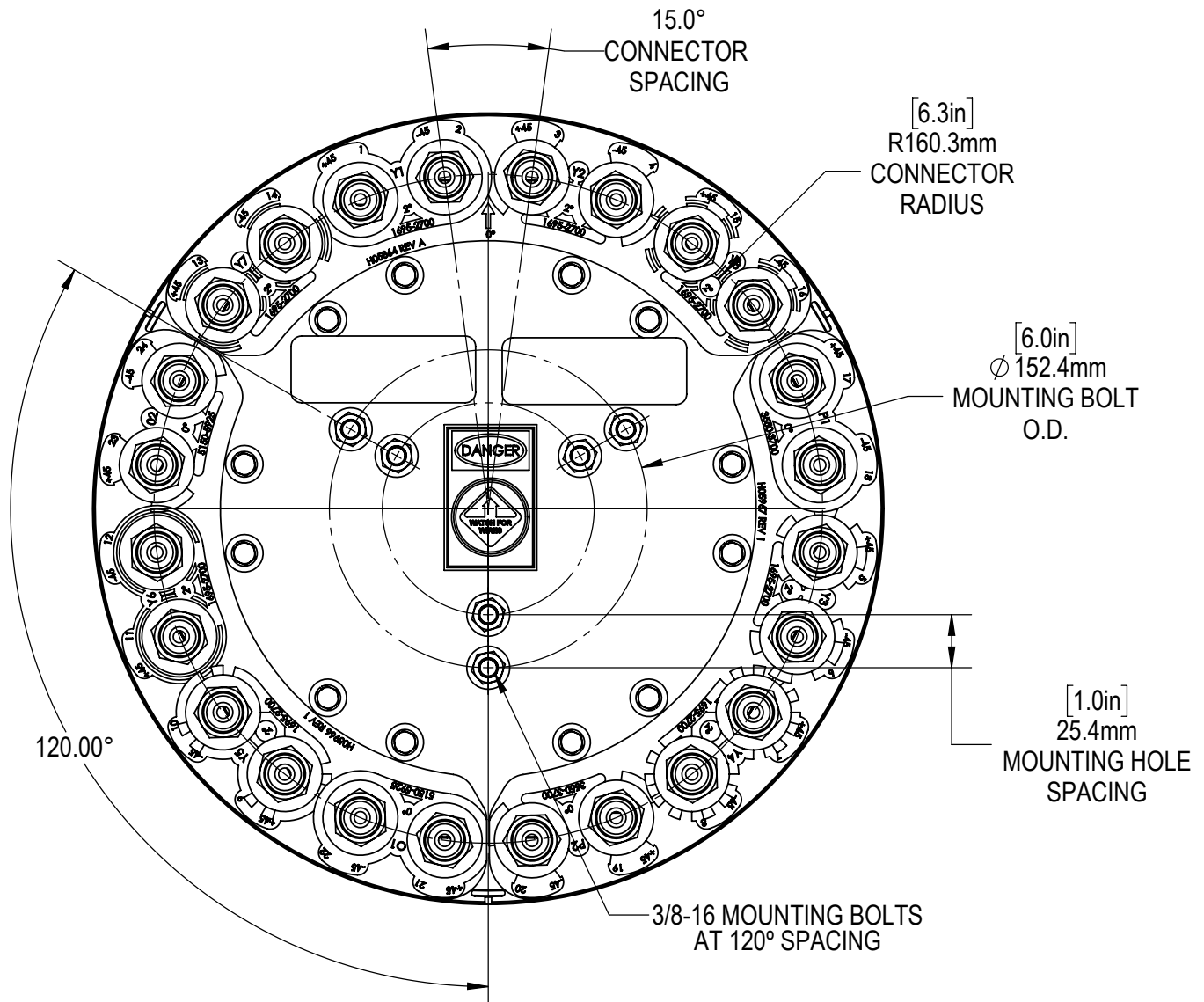
BOTTOM VIEW - LABELING



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4U4MTSP1X12F_{xy}s0

BOTTOM VIEW - CONNECTOR DIAGRAM



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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4U4MTSP1X12Fxy_s0

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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4U4MTSP1X12F_{xy}s0

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

NUMBER OF BANDS & OPERATING FREQUENCY			PATTERN TYPE	AZIMUTH BMWIDTH	POLARIZATION	LENGTH	TILT TYPE	TILT OPTIONS	CONNECTOR TYPE	VARIATION	RADOME COLOR OPTIONS
4U	4M		T	SP1	X	12	F	xy	s	0	BK BR
(4x) 1695- 2700	(2x) 3550- 3700	(2x) 5150- 5925	Tri-Sector	Sector and Omni Combination	XPOL	1.2 meters	Fixed Tilt	These letters are placeholders for fixed tilt options. Refer to Electrical Specifications for available tilt options.	4.3-10 Connector	Original variation	BK indicates a Black radome. BR indicates a Brown radome. The default radome color is Grey. No letters are required for a Grey radome.

ORDERING OPTIONS Select from the following ordering options

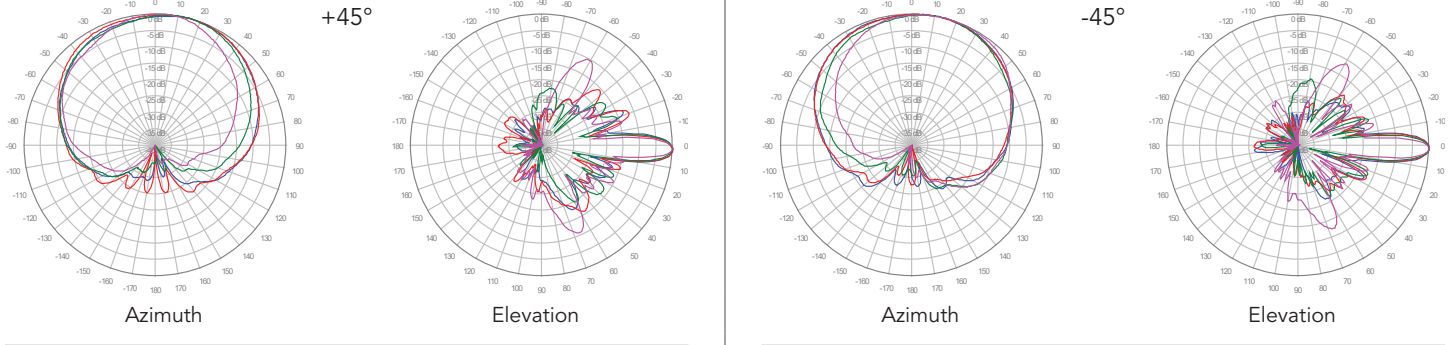
SELECT RADOME COLOR	SELECT DEGREE OF ELECTRICAL DOWNTILT FOR EACH BAND			ORDER MODEL NUMBER
	MID BAND	CBRS BAND	LAA BAND	
Grey Pantone 420 C	2°	0°	0°	4U4MTSP1X12F20s0
	4°	0°	0°	4U4MTSP1X12F40s0
	6°	0°	0°	4U4MTSP1X12F60s0
	Y1-Y6=6°; Y7-Y8=2°	0°	0°	4U4MTSP1X12FAAs0
Brown Pantone 476 C	2°	0°	0°	4U4MTSP1X12F20s0BR
	4°	0°	0°	4U4MTSP1X12F40s0BR
	6°	0°	0°	4U4MTSP1X12F60s0BR
	Y1-Y6=6°; Y7-Y8=2°	0°	0°	4U4MTSP1X12FAAs0BR
Black RAL 9011	2°	0°	0°	4U4MTSP1X12F20s0BK
	4°	0°	0°	4U4MTSP1X12F40s0BK
	6°	0°	0°	4U4MTSP1X12F60s0BK
	Y1-Y6=6°; Y7-Y8=2°	0°	0°	4U4MTSP1X12FAAs0BK

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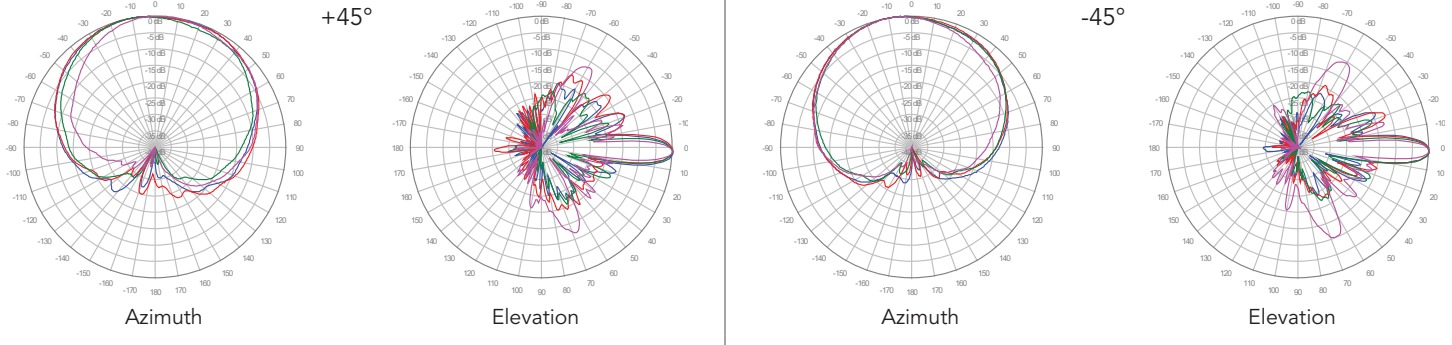
4U4MTSP1X12F_{xy}s0

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

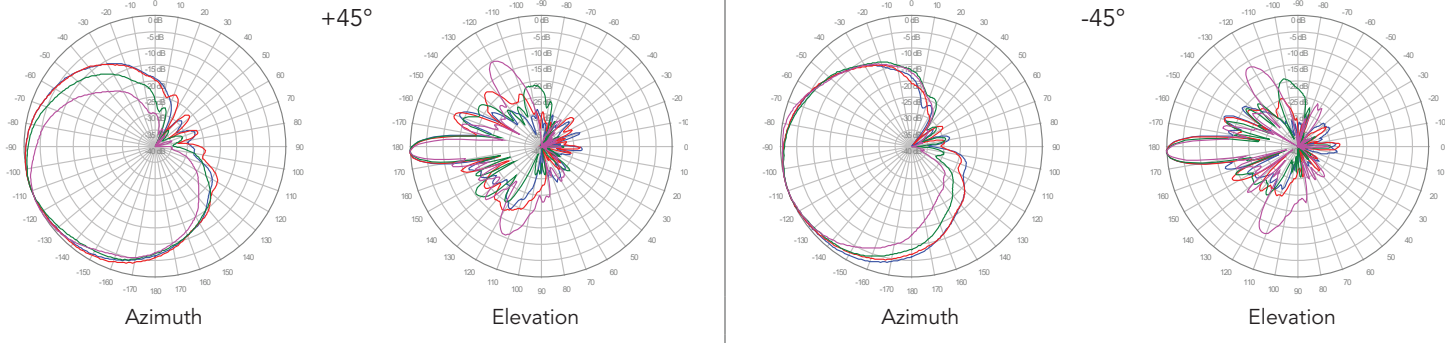
Y1, 2° TILT



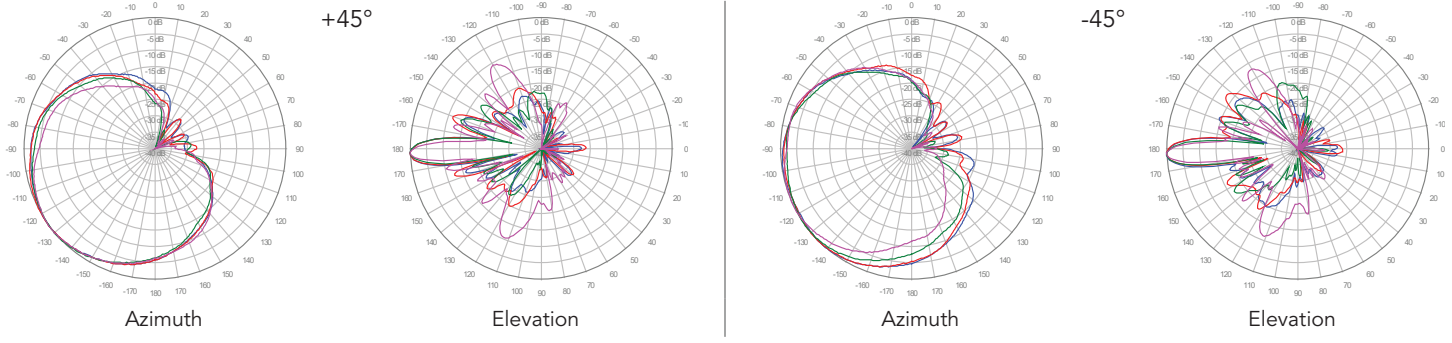
Y2, 2° TILT



Y3, 2° TILT



Y4, 2° TILT

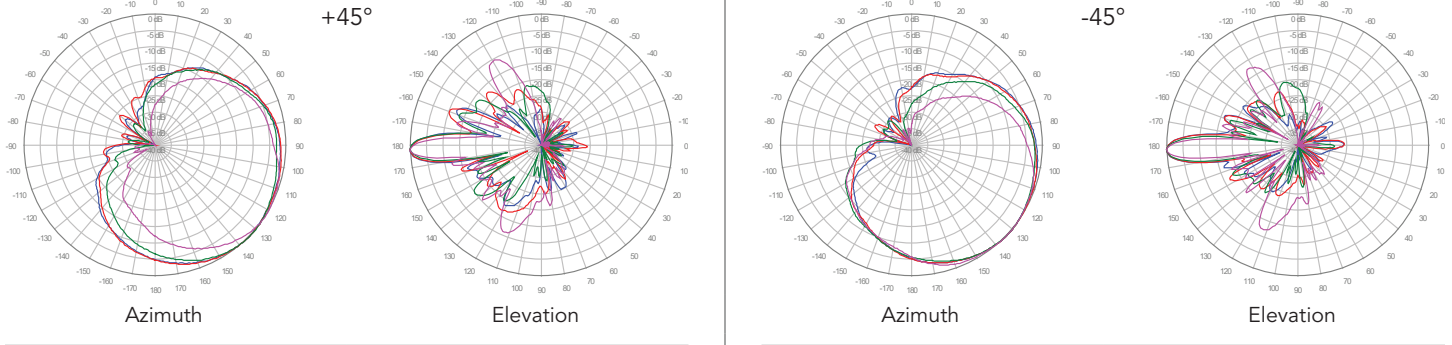


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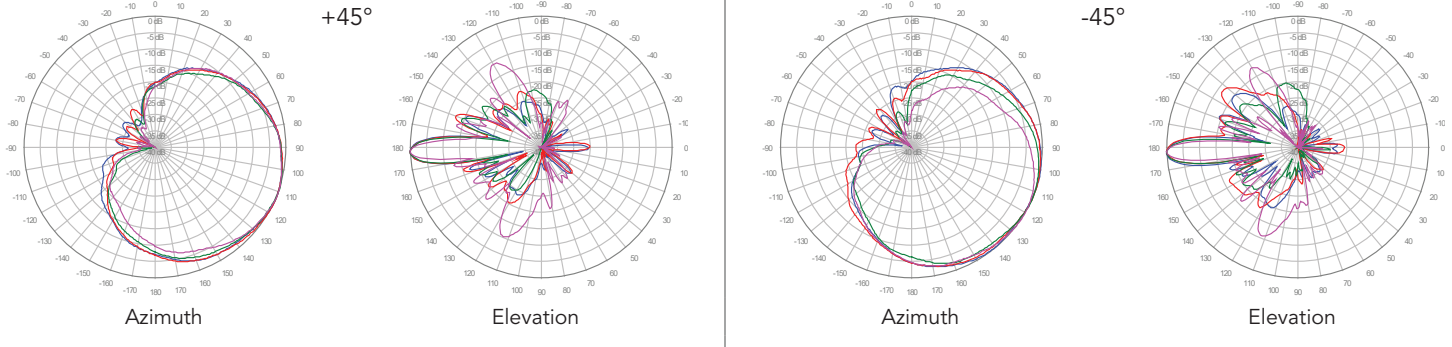
4U4MTSP1X12F_{xy}s0

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

■ Y5, 2° TILT



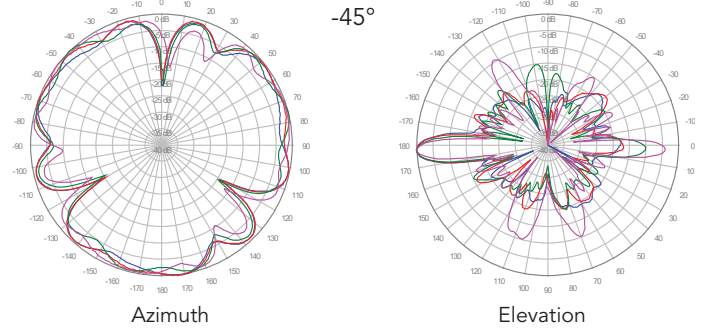
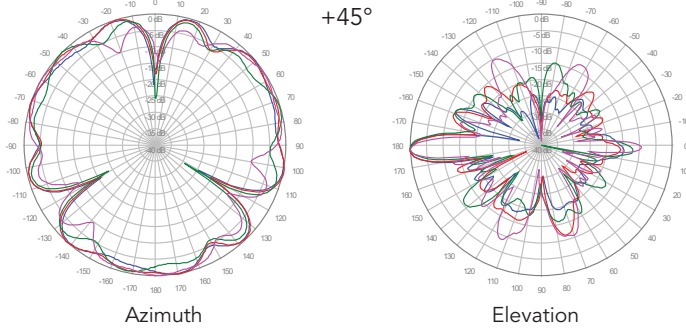
■ Y6, 2° TILT



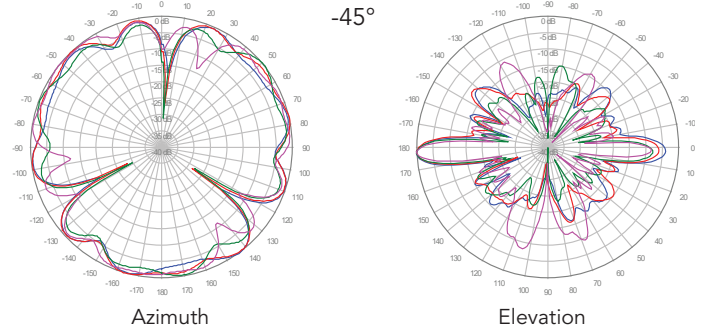
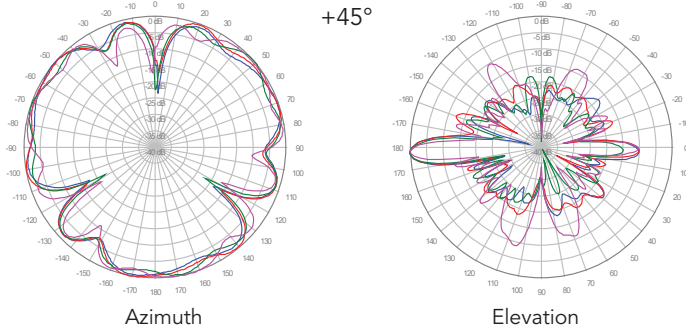
4U4MTSP1X12F_{xy}s0

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

Y7, 2° TILT



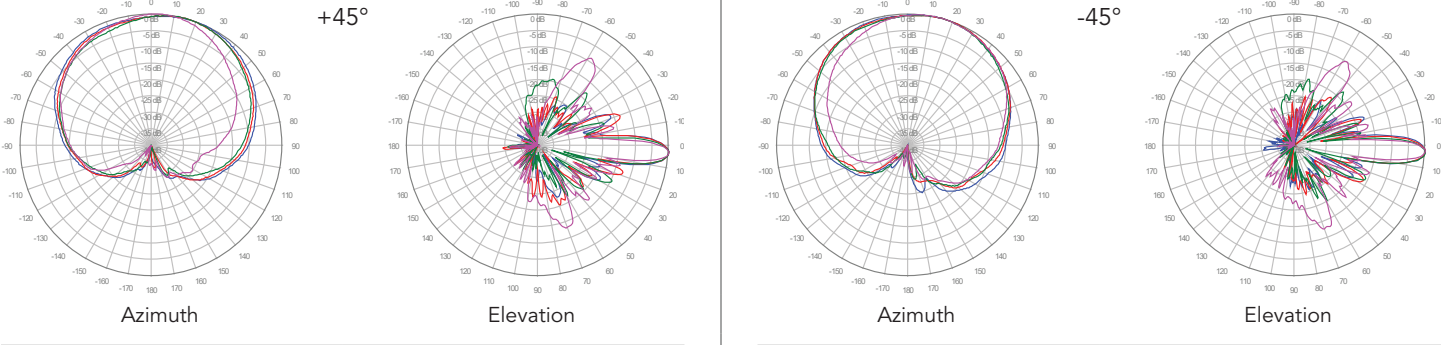
Y8, 2° TILT



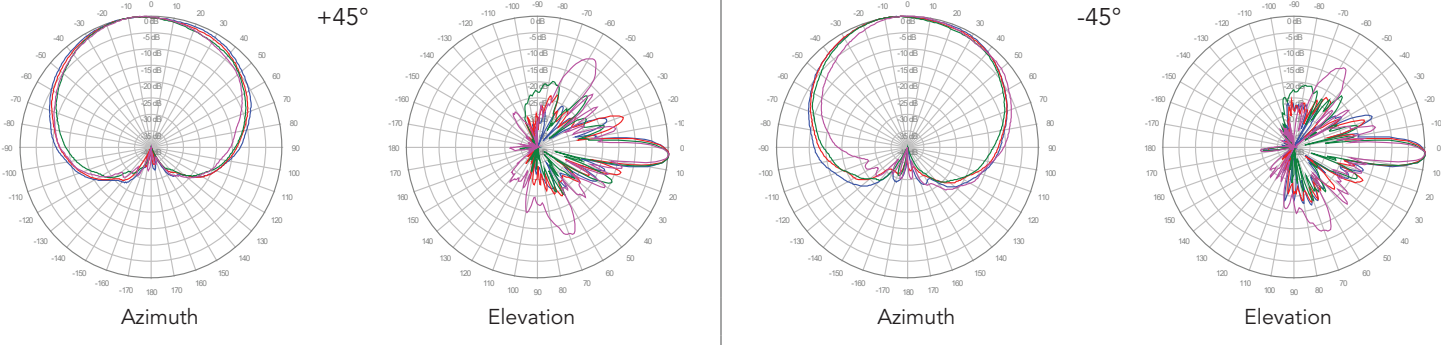
4U4MTSP1X12F_{xy}s0

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

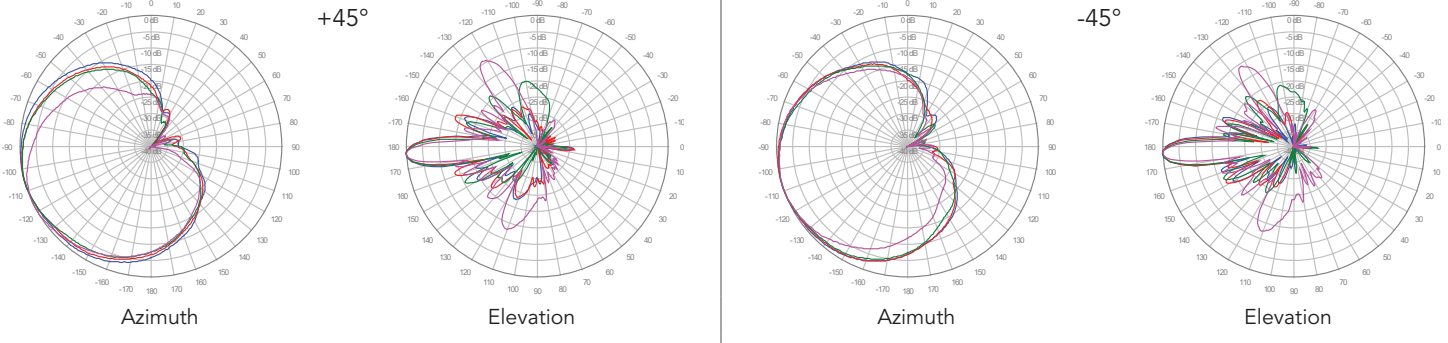
■ Y1, 4° TILT



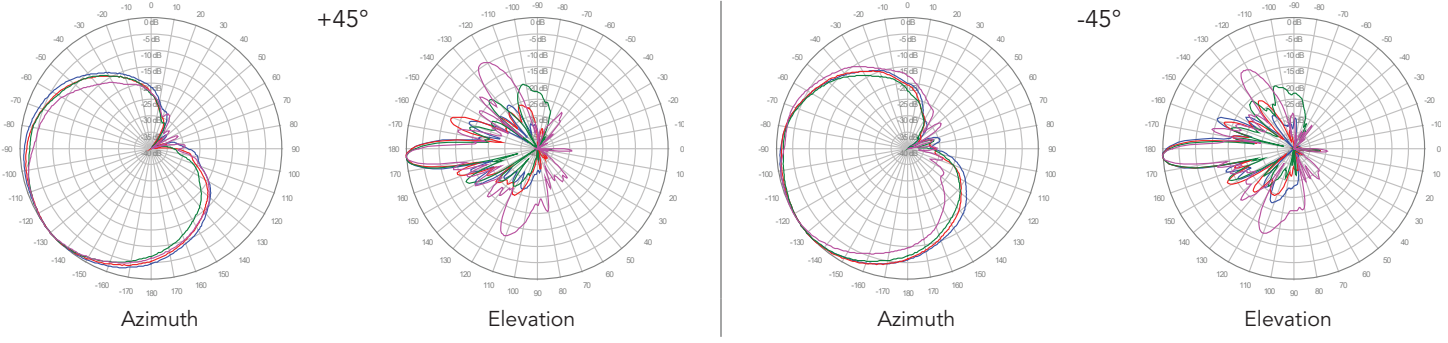
■ Y2, 4° TILT



■ Y3, 4° TILT



■ Y4, 4° TILT

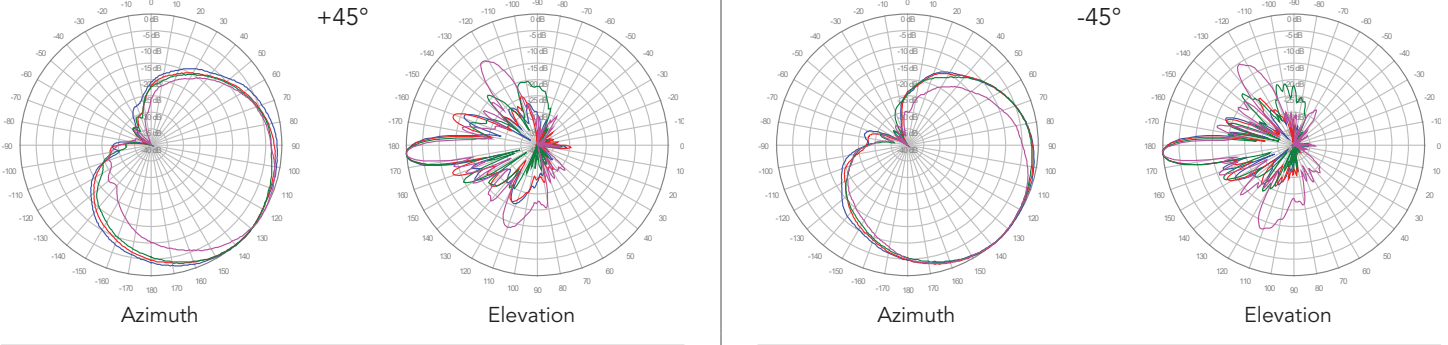


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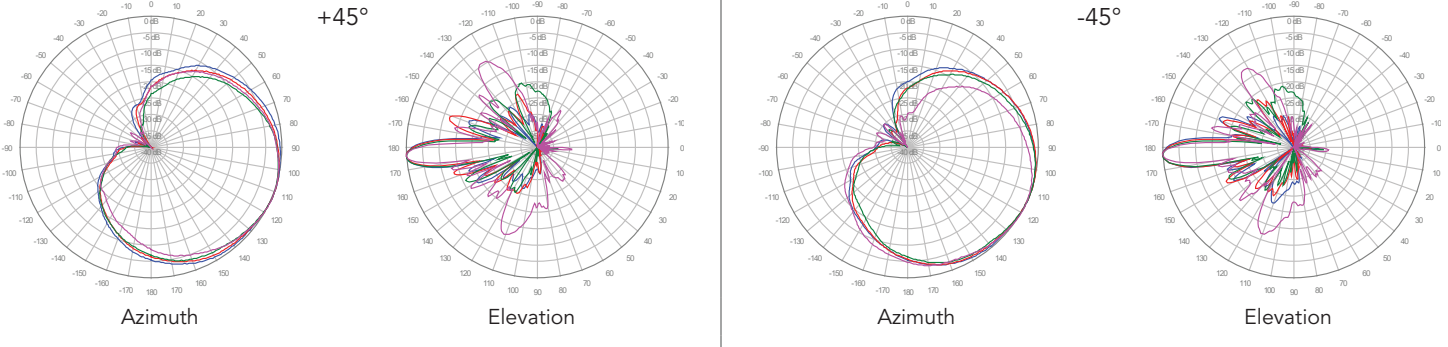
4U4MTSP1X12F_{xy}s0

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

Y5, 4° TILT



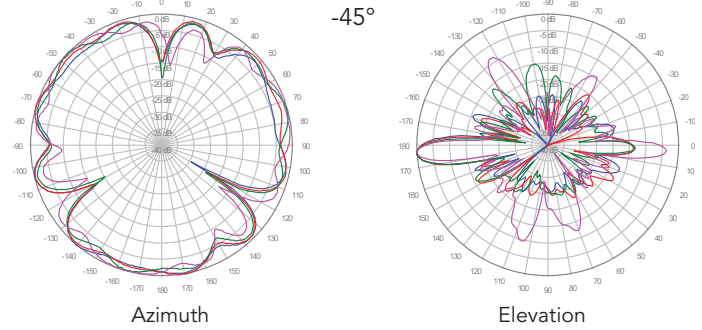
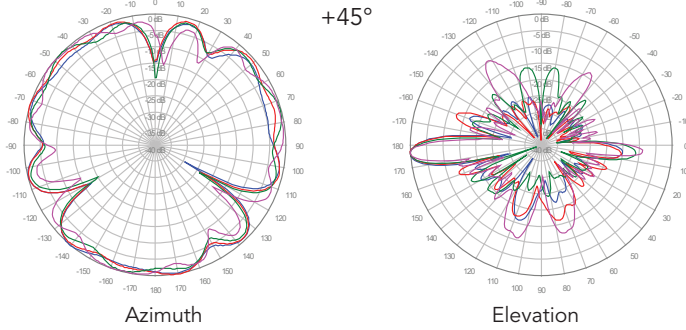
Y6, 4° TILT



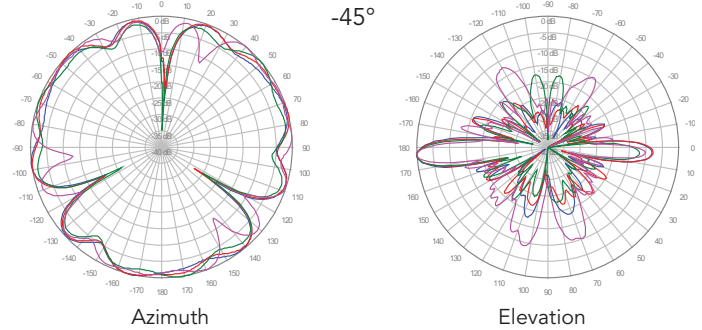
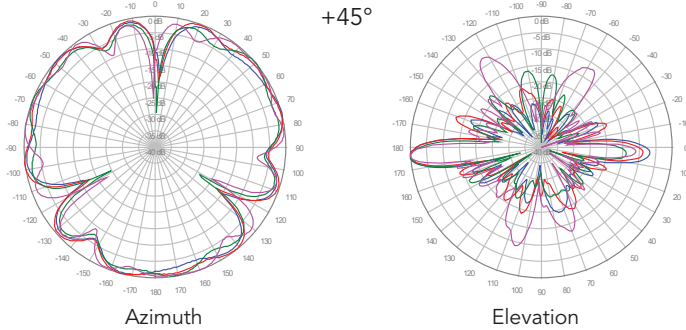
4U4MTSP1X12Fxy**s0**

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

Y7, 4° TILT



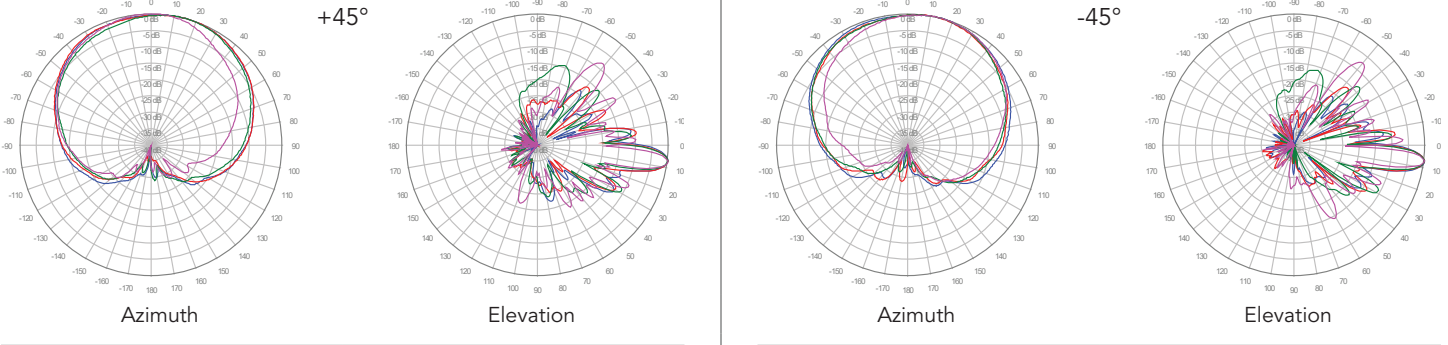
Y8, 4° TILT



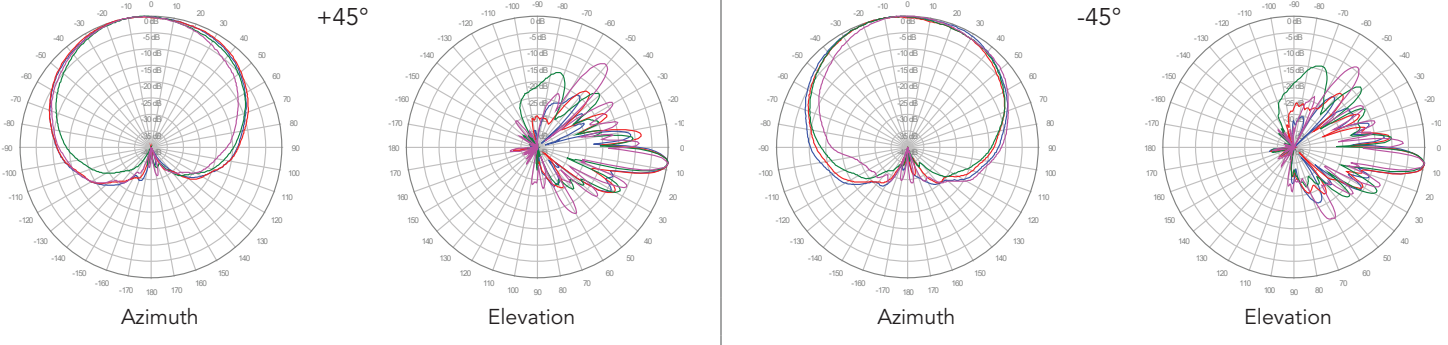
4U4MTSP1X12F_{xy}s0

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

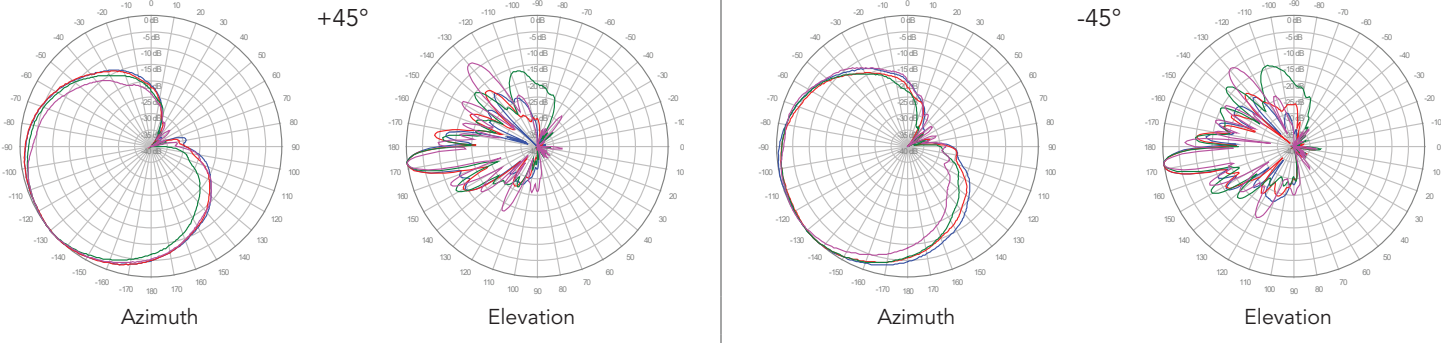
■ Y1, 6° TILT



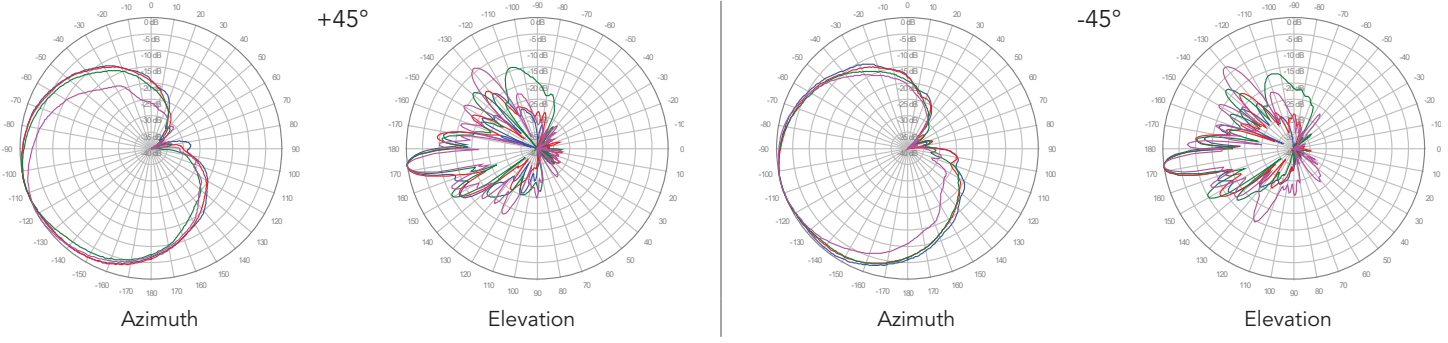
■ Y2, 6° TILT



■ Y3, 6° TILT



■ Y4, 6° TILT

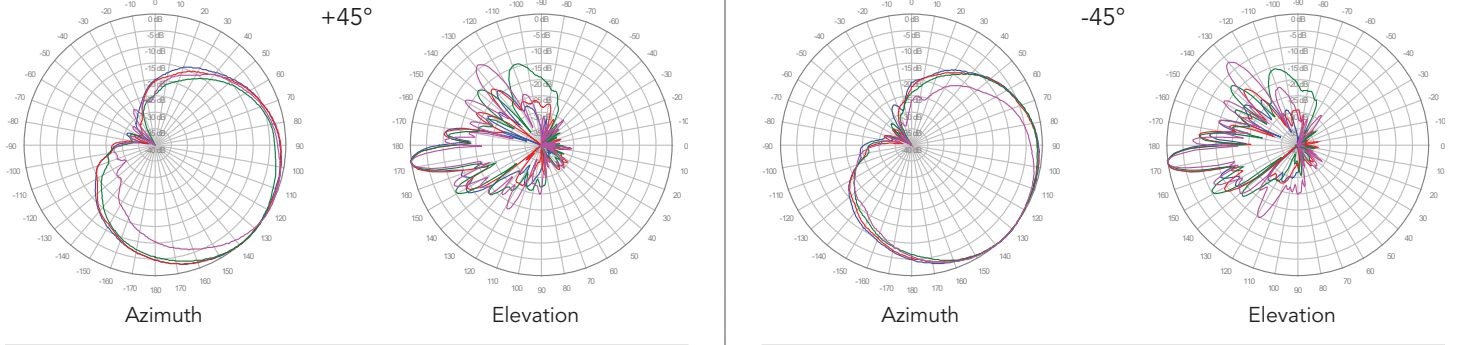


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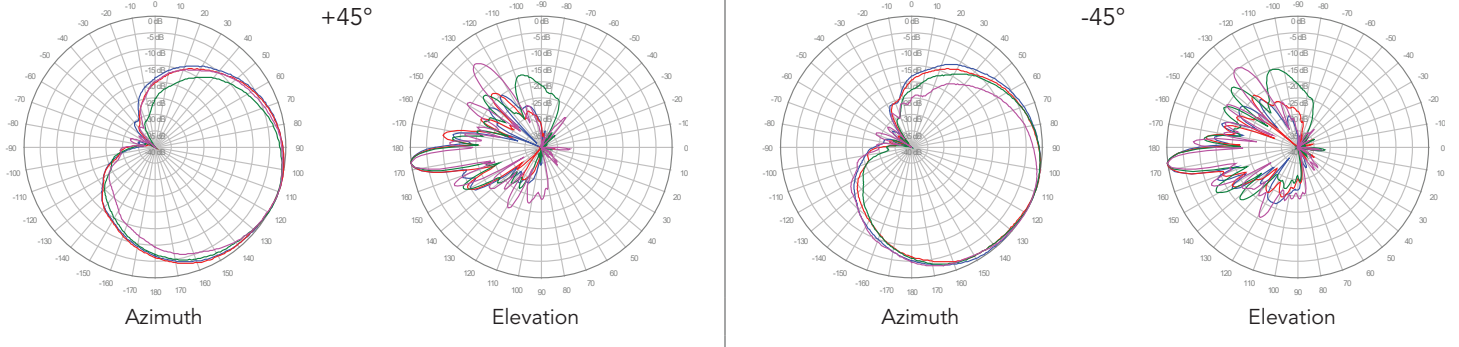
4U4MTSP1X12F_{xy}s0

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

■ Y5, 6° TILT



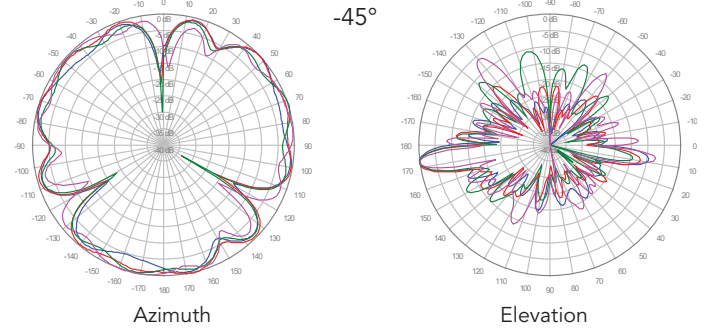
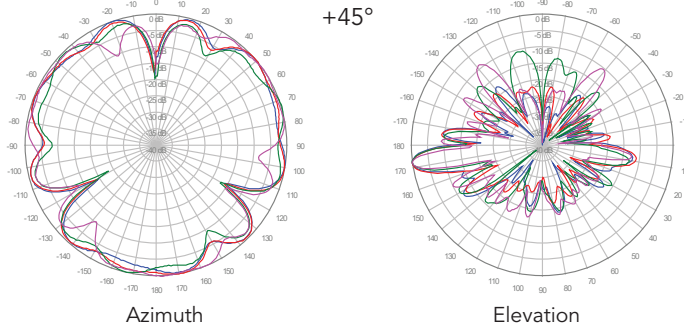
■ Y6, 6° TILT



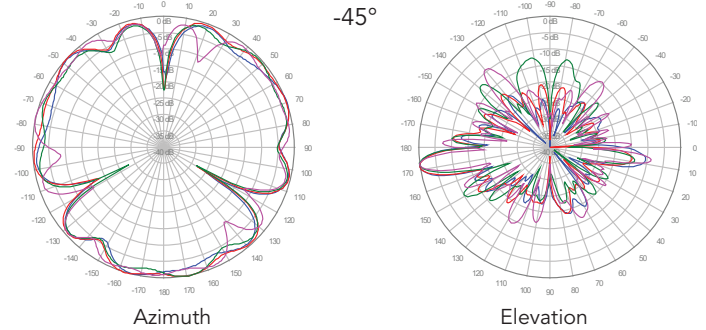
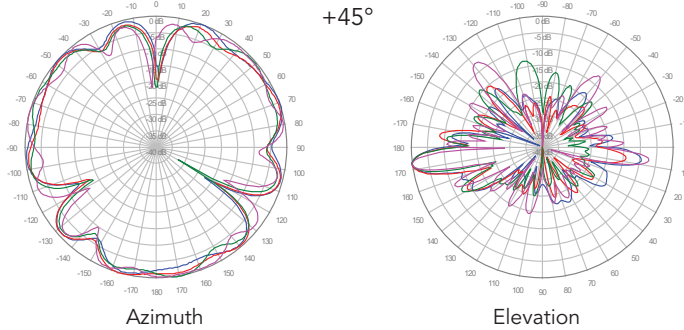
4U4MTSP1X12F_{xy}s0

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

■ Y7, 6° TILT

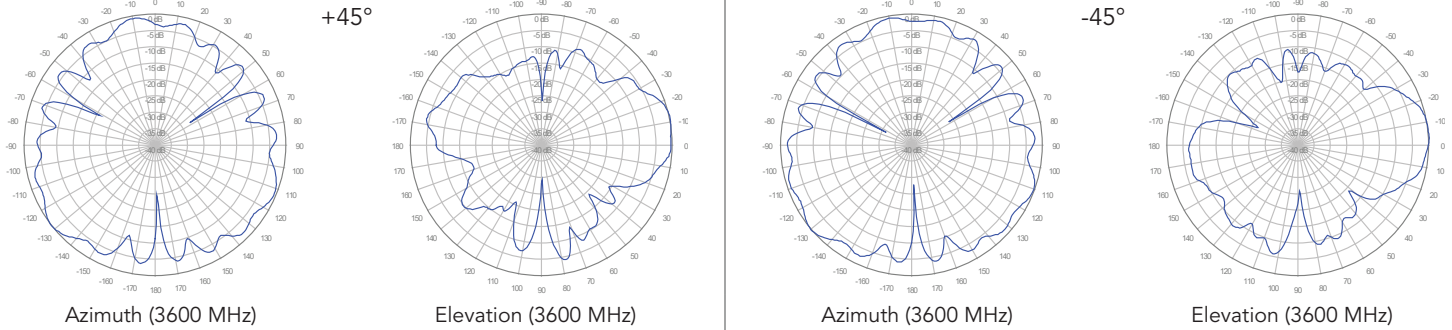


■ Y8, 6° TILT

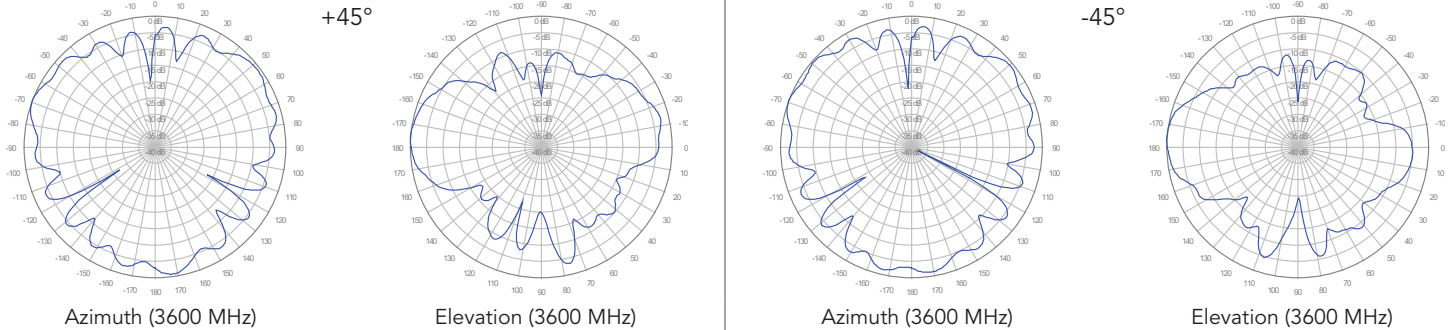


4U4MTSP1X12F_{xy}s0

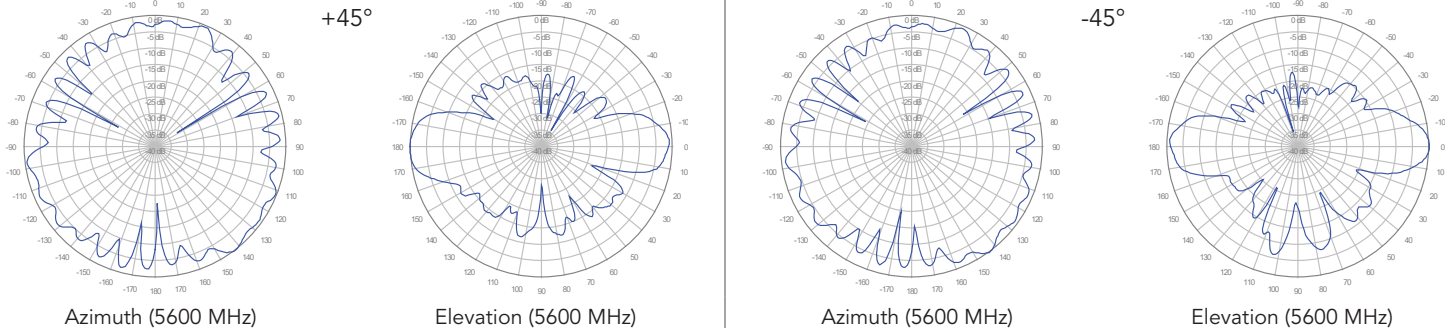
P1, 0° TILT



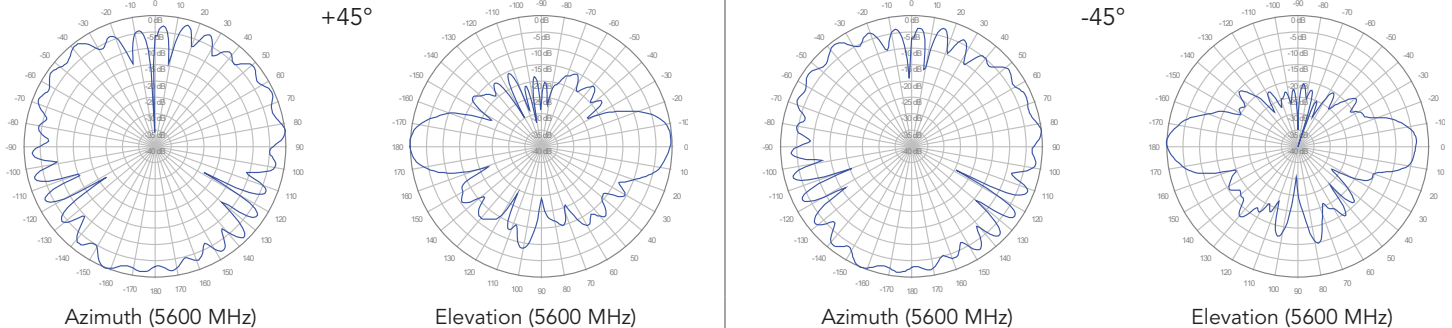
P2, 0° TILT



O1, 0° TILT



O2, 0° TILT



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