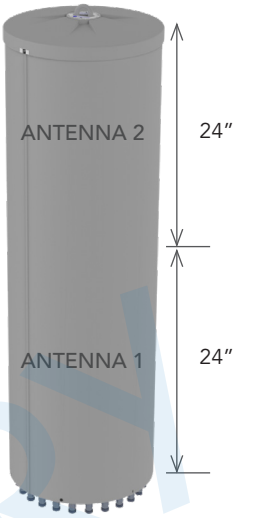
Amphenol ANTENNA SOLUTIONS

28-Port Canister Antenna with GPS

(6x) 1695-2700 | (2x) 3300-4200 | (2x) 5150-5925 MHz

SECTOR / OMNI COMBINATION | 47.4 IN | FIXED TILT

6U4MTSP1X12Fxys4-GPS



Features

- 4G/5G sector & omni configuration with 28 connectors and a separate port for an integrated GPS unit
- Dual antennas integrated under a single radome
- Ideal for multi-carrier or 4x4 MIMO deployments
- New, enhanced mechanical and antenna design
  - Easily removable lifting ring
  - Extended CBRS Band
  - Improvements in gain, port isolation and VSWR
- This antenna meets the requirements of the U-NII
- Available for order with a grey, brown or black radome

PRODUCT OVERVIEW						
	Frequency Range (MHz)	GPS BAND	MID BAND		CBRS BAND	LAA BAND
		1575.42± 10 MHz	(6x) 1695-2700		(2x) 3300-4200	(2x) 5150-5925
	Array	---	Y1 Y2 Y3 Y4 Y5 Y6	Y7 Y8 Y9 Y10	P1 P2	O1 O2
	Connector	1 PORT	12 PORTS	8 PORTS	4 PORTS	4 PORTS
	Polarization	RIGHT HAND CIRCULAR	XPOL	XPOL	XPOL	XPOL
	Azimuth Beamwidth (avg)	---	SECTORIZED	OMNI	OMNI	OMNI
	Electrical Downtilt	---	2°, 4°, 6°		0°	0°
	Configuration	SECTOR & OMNI COMBINATION WITH INTEGRATED GPS UNIT				
	Connector Type	(28x) 4.3-10 FEMALE CONNECTORS and (1x) N-TYPE FEMALE CONNECTOR FOR GPS				
	Dimensions	1205 x Ø371 mm (47.4 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	12.9 ± 0.6	13.4 ± 0.3	13.6 ± 0.4	14.1 ± 0.7
	MAX	dBi	13.4	13.3	13.7	14.7
Azimuth Beamwidth (3 dB)		degrees	84.0° ± 8.2°	79.2° ± 5.5°	75.6° ± 6.4°	66.7° ± 6.5°
Elevation Beamwidth (3 dB)		degrees	23.1° ± 1.7°	21.6° ± 0.9°	20.4° ± 1.9°	16.9° ± 1.2°
Electrical Downtilt		degrees	(x) 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	> 21	> 22	> 24	> 24
Upper Sidelobe Suppression		dB	> 14	> 14	> 14	> 14
Isolation	Intraband	dB	> 25			
	Interband	dB	> 28			
Input Power		Watts	300W			

Quoted performance parameters are provided to offer typical, peak or range values only and may vary as a result of normal testing, manufacturing and operational conditions. Extreme operational conditions and/or stress on structural supports is beyond our control. Such conditions may result in damage to this product. Improvements to products may be made without notice.

6U4MTSP1X12Fxys4-GPS

ELECTRICAL SPECIFICATIONS Mid Band - Omni

■ Y7 ■ Y8 ■ Y9 ■ Y10

Frequency Range		MHz	(2x) 1695-2700			
Frequency Sub-Range		MHz	1695-1880	1850-1990	1920-2200	2300-2700
Polarization		---	(2x) ±45°			
Gain	BASTA	dBi	8.3 ± 0.8	9.0 ± 0.5	9.1 ± 0.5	9.0 ± 0.9
	MAX	dBi	9.1	9.5	9.6	9.9
Azimuth Beamwidth (3 dB)		degrees	360°	360°	360°	360°
Elevation Beamwidth (3 dB)		degrees	23.1° ± 1.7°	21.6° ± 0.9°	20.4° ± 1.9°	16.9° ± 1.2°
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	> 14	> 14	> 14	> 14
Isolation	Intraband	dB	> 25			
	Interband	dB	> 28			
Input Power		Watts	300W			

ELECTRICAL SPECIFICATIONS CBRS Band

■ P1 ■ P2

Frequency Range		MHz	(2x) 3300-4200
Polarization		---	(2x) ±45°
Gain	BASTA	dBi	5.5 ± 0.6
	MAX	dBi	6.1
Azimuth Beamwidth (3 dB)		degrees	360°
Elevation Beamwidth (3 dB)		degrees	32.6 ± 4.1°
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	N/A
Isolation	Intraband	dB	> 25
	Interband	dB	> 28
Input Power		Watts	100W

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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	22.0° ± 1.6°
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	> 20
Isolation	Intraband	dB	> 25
	Interband	dB	> 28
Input Power		Watts	50W
U-NII Compliant		---	Yes

GPS UNIT Integrated	
Frequency Range	1575.42 MHz ± 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 ± 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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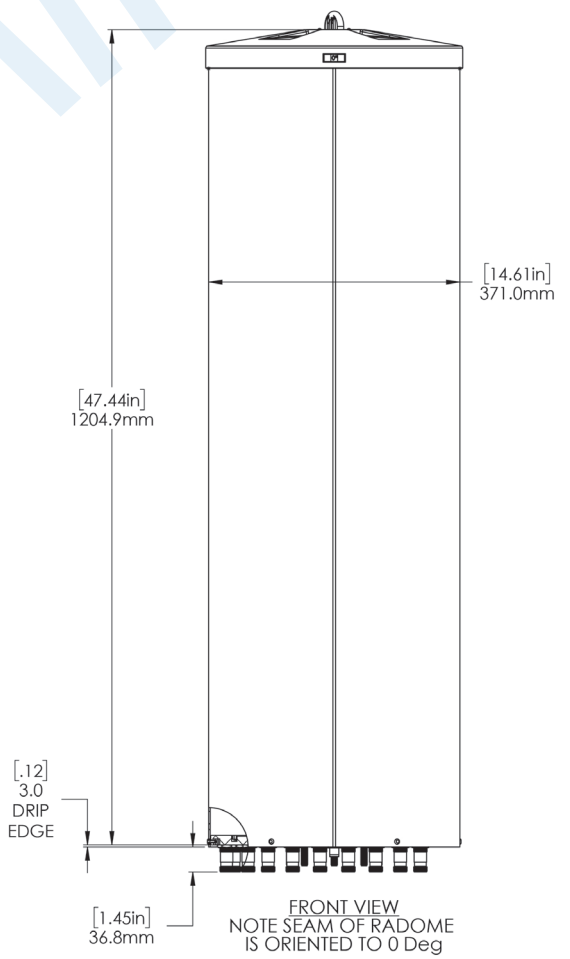
MECHANICAL SPECIFICATIONS

Height		mm (in)	1205 (47.4)
Diameter		mm (in)	371 (14.6)
Net Weight - Antenna Only		kg (lbs)	20 (44)
Windload	Calculation	km/h (mph)	160 (100)
	Frontal	N (lbf)	391 (88)
Survival Wind Speed		km/h (mph)	241 (150)
Wind Area		m^2 (ft^2)	0.47 (5.0)
Volume	Total	m^3 (ft^3)	0.13 (4.7)
	Each Antenna	m^3 (ft^3)	0.065 (2.33)
Connector	Type & Quantity	---	(28x) 4.3-10 Female and (1x) N-Type Female for GPS
	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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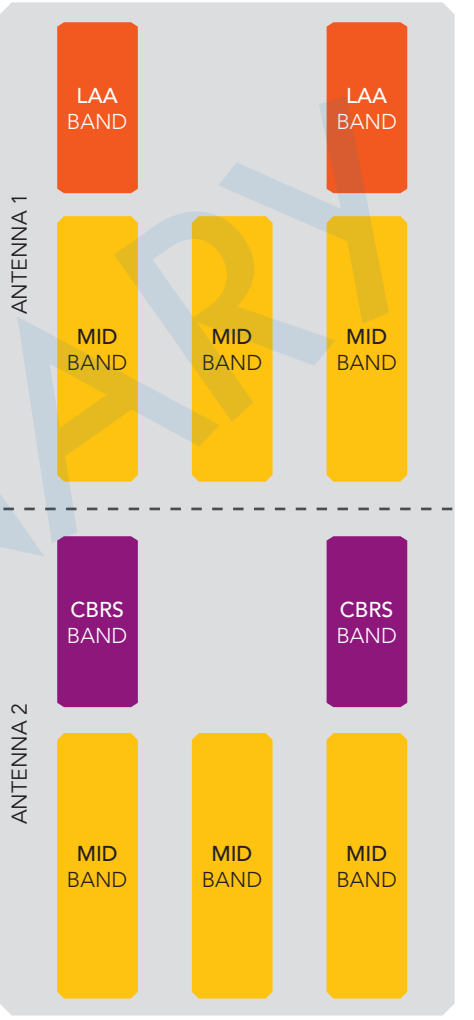
ARRAY LAYOUT Topology

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
	1695-2700	Y9	17-18	(2x) 4.3-10 Female
	1695-2700	Y10	19-20	(2x) 4.3-10 Female
CBRS BAND	3550-3700	P1	21-22	(2x) 4.3-10 Female
	3550-3700	P2	23-24	(2x) 4.3-10 Female
LAA BAND	5150-5925	O1	25-26	(2x) 4.3-10 Female
	5150-5925	O2	27-28	(2x) 4.3-10 Female
GPS BAND	1575.42	---	29	(1x) N-Type Female



The illustration is not shown to scale.

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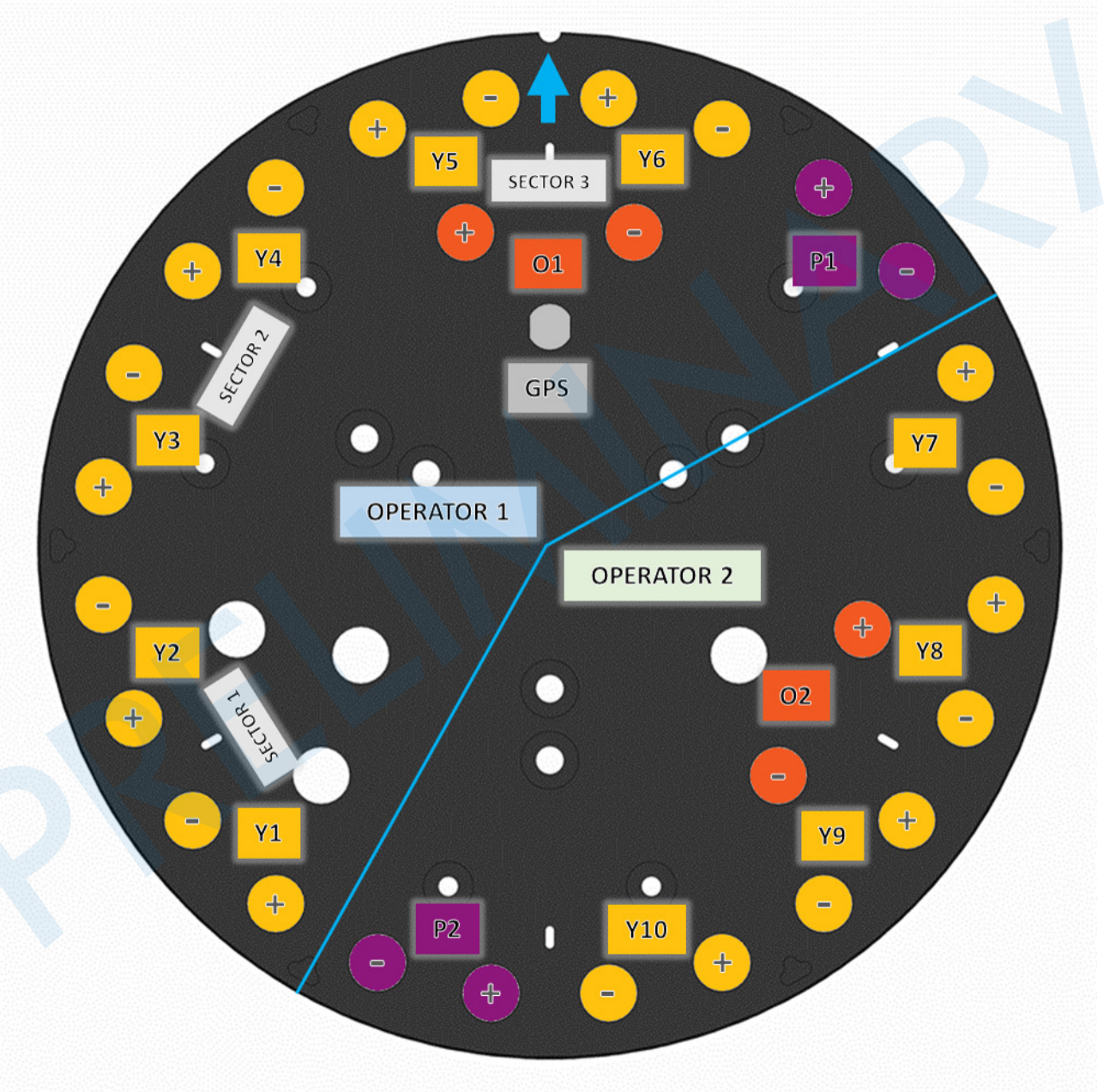
BOTTOM VIEW - LABELING



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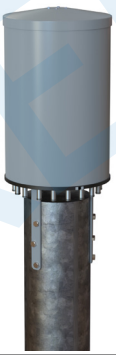
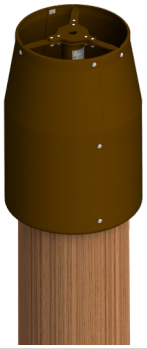
MOUNTING KITS Select from the following mounting options when ordering. Mounting kits for canister antennas are ordered as a separate line item.

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 & OPERATING FREQUENCY			PATTERN TYPE	AZIMUTH BMWDTH	POLARIZA-TION	LENGTH	TILT TYPE	TILT OPTIONS	CONNECTOR TYPE	VARIATION	RADOME COLOR OPTIONS	GPS
6U	4M		T	SP1	X	12	F	xy	s	4	BK BR	-GPS
(6x) 1695-2700	(2x) 3300-4200	(2x) 5150-5925	Tri-Sector	Sector and Pseudo Omni Combina-tion	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	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 inte-grated GPS unit

ORDERING OPTIONS Select from the following ordering options

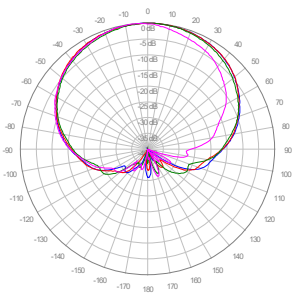
SELECT RADOME COLOR	SELECT DEGREE OF ELECTRICAL DOWNTILT FOR EACH BAND			ORDER MODEL NUMBER
	MID BAND	CBRS BAND	LAA BAND	
Grey Pantone 420 C	2°	0°	0°	6U4MTSP1X12F20s4-GPS
	4°	0°	0°	6U4MTSP1X12F40s4-GPS
	6°	0°	0°	6U4MTSP1X12F60s4-GPS
	Y1-Y6=6°; Y7-Y10=2°	0°	0°	6U4MTSP1X12FAAs4-GPS
Brown Pantone 476 C	2°	0°	0°	6U4MTSP1X12F20s4BR-GPS
	4°	0°	0°	6U4MTSP1X12F40s4BR-GPS
	6°	0°	0°	6U4MTSP1X12F60s4BR-GPS
	Y1-Y6=6°; Y7-Y10=2°	0°	0°	6U4MTSP1X12FAAs4BR-GPS
Black RAL 9011	2°	0°	0°	6U4MTSP1X12F20s4BK-GPS
	4°	0°	0°	6U4MTSP1X12F40s4BK-GPS
	6°	0°	0°	6U4MTSP1X12F60s4BK-GPS
	Y1-Y6=6°; Y7-Y10=2°	0°	0°	6U4MTSP1X12FAAs4BK-GPS

6U4MTSP1X12Fxys4-GPS

1800 MHz
1900 MHz
2100 MHz
2600 MHz

Y1, 2° TILT

+45°



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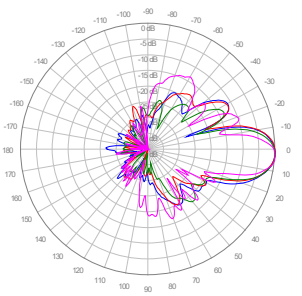
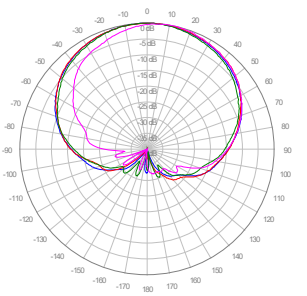


Elevation

-45°



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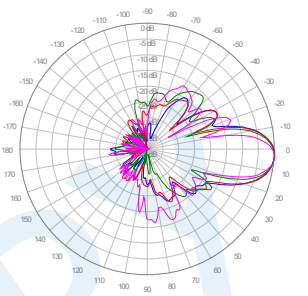
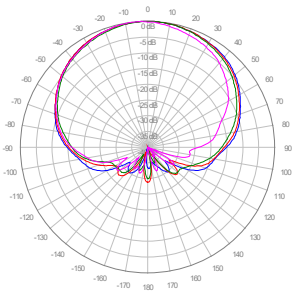


Elevation

Y2, 2° TILT

+45°



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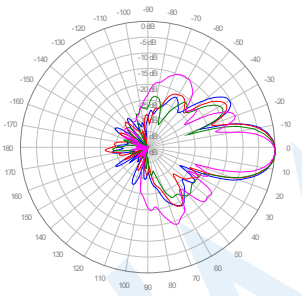
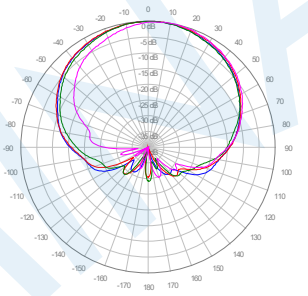


Elevation

-45°



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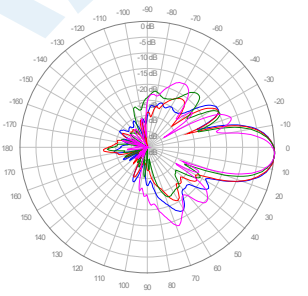
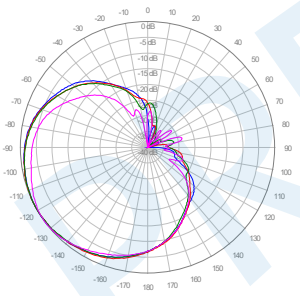


Elevation

Y3, 2° TILT

+45°



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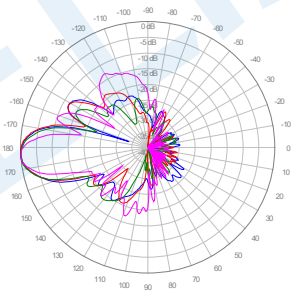
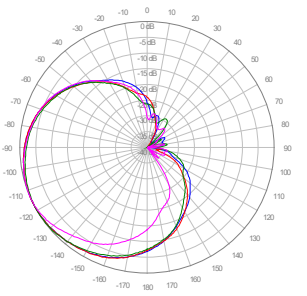


Elevation

-45°



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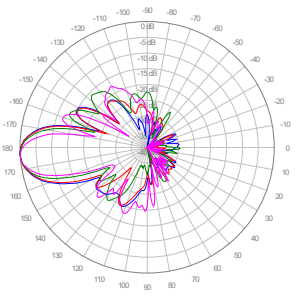
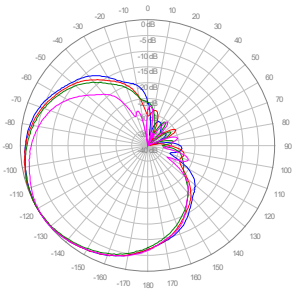


Elevation

Y4, 2° TILT

+45°



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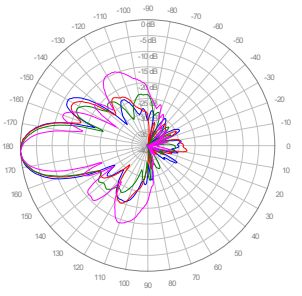
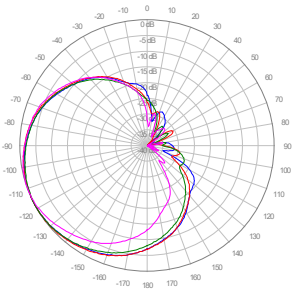


Elevation

-45°



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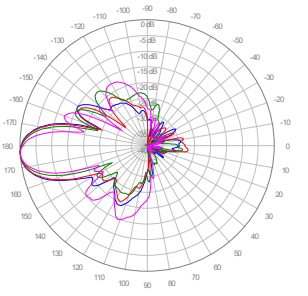


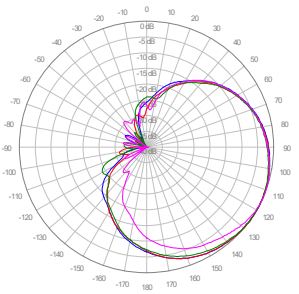
Elevation

6U4MTSP1X12Fxys4-GPS

1800 MHz
1900 MHz
2100 MHz
2600 MHz

Y5, 2° TILT

+45°



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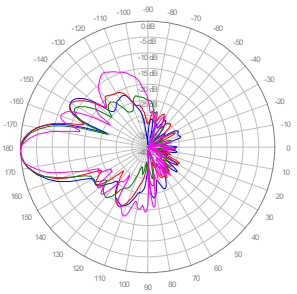
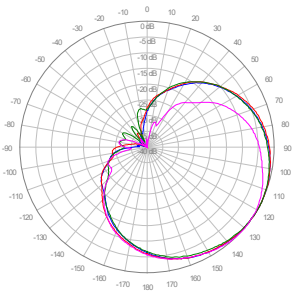


Elevation

-45°



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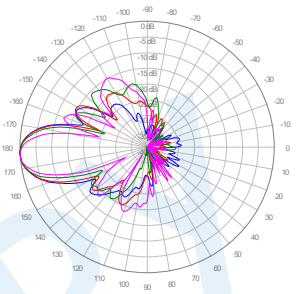
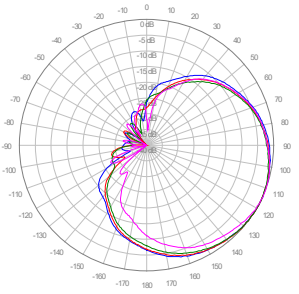


Elevation

Y6, 2° TILT

+45°



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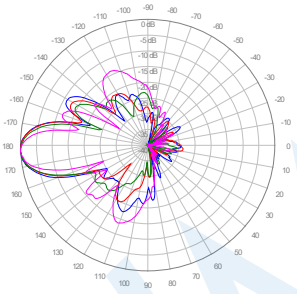
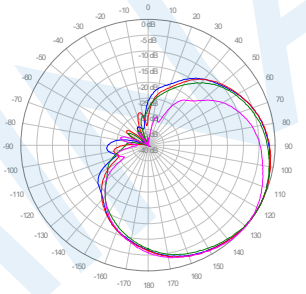


Elevation

-45°



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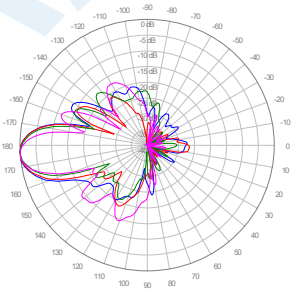


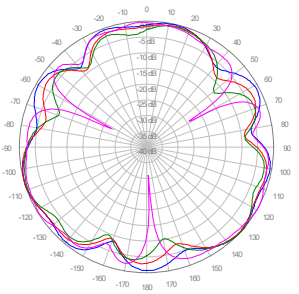
Elevation

6U4MTSP1X12Fxys4-GPS

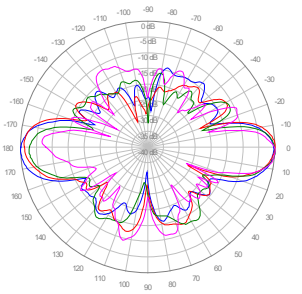
1800 MHz
1900 MHz
2100 MHz
2600 MHz

Y7, 2° TILT

+45°

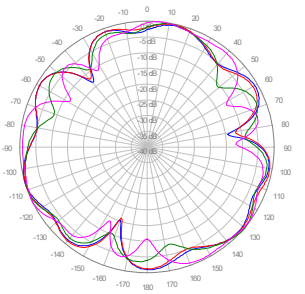


Azimuth

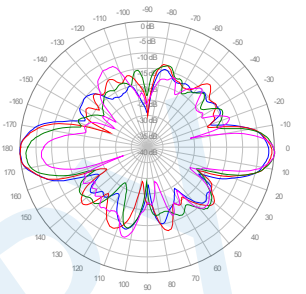


Elevation

-45°



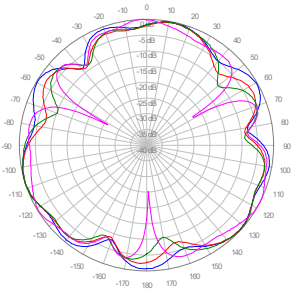
Azimuth



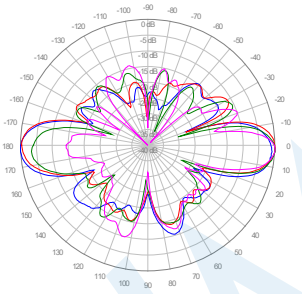
Elevation

Y8, 2° TILT

+45°

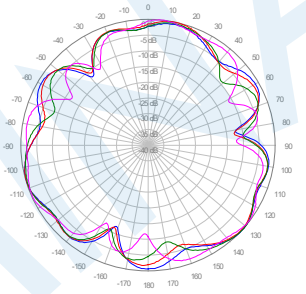


Azimuth

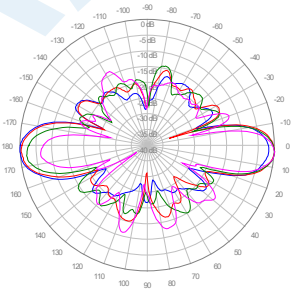


Elevation

-45°



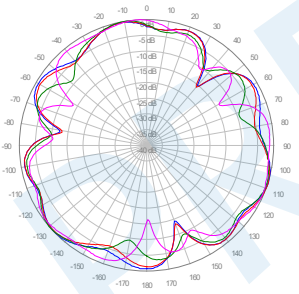
Azimuth



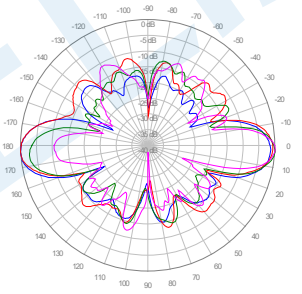
Elevation

Y9, 2° TILT

+45°

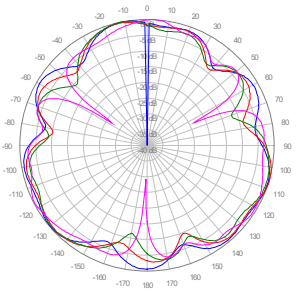


Azimuth

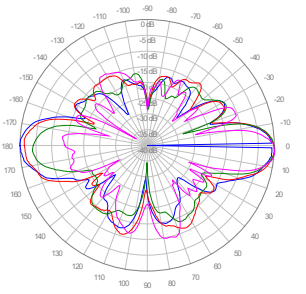


Elevation

-45°



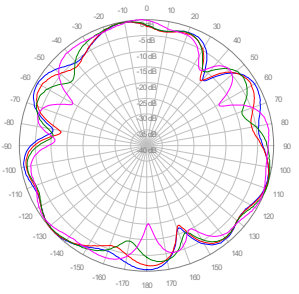
Azimuth



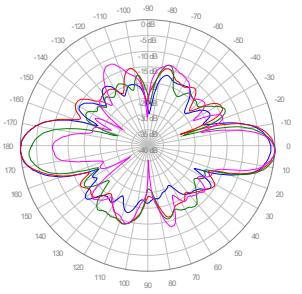
Elevation

Y10, 2° TILT

+45°

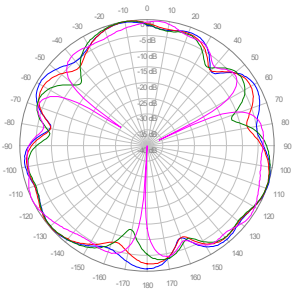


Azimuth

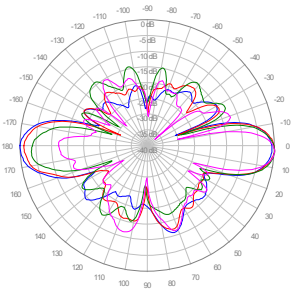


Elevation

-45°



Azimuth



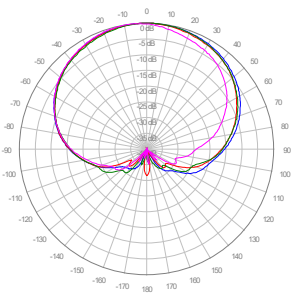
Elevation

6U4MTSP1X12Fxys4-GPS

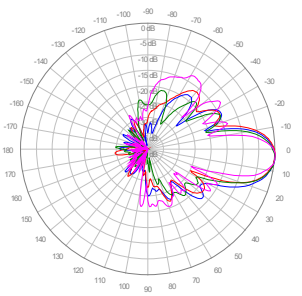
1800 MHz
1900 MHz
2100 MHz
2600 MHz

Y1, 4° TILT

+45°

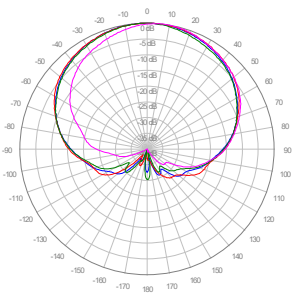


Azimuth

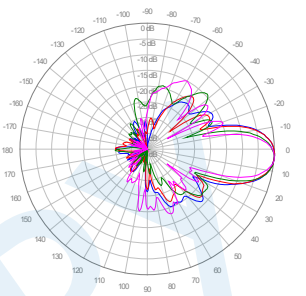


Elevation

-45°



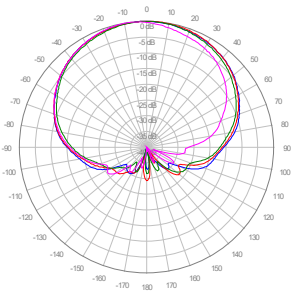
Azimuth



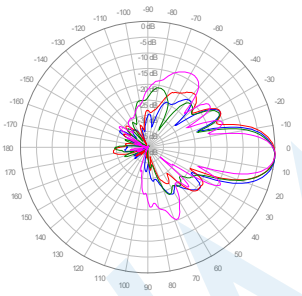
Elevation

Y2, 4° TILT

+45°

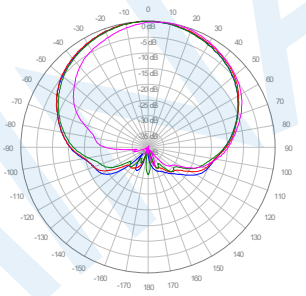


Azimuth

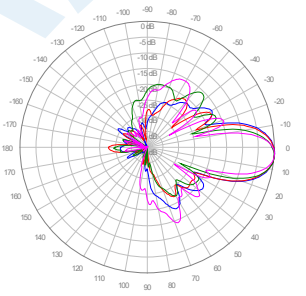


Elevation

-45°



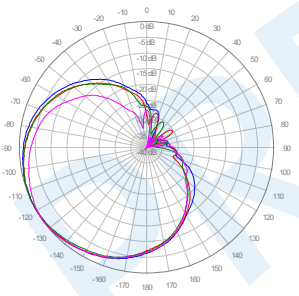
Azimuth



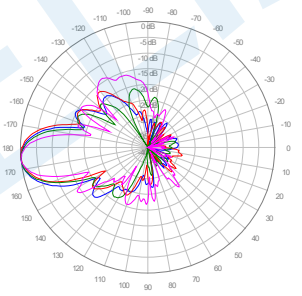
Elevation

Y3, 4° TILT

+45°

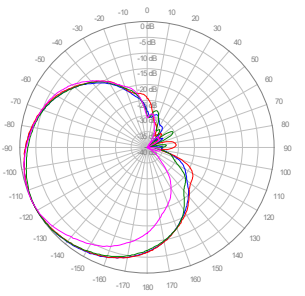


Azimuth

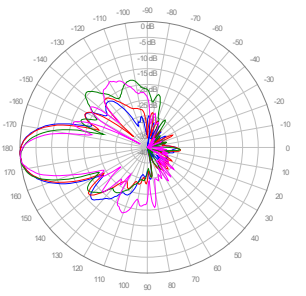


Elevation

-45°



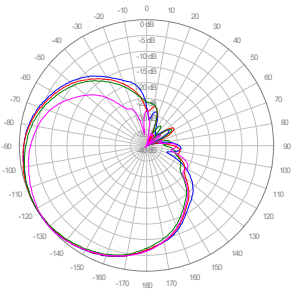
Azimuth



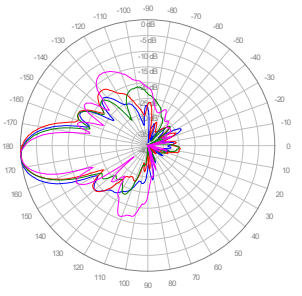
Elevation

Y4, 4° TILT

+45°

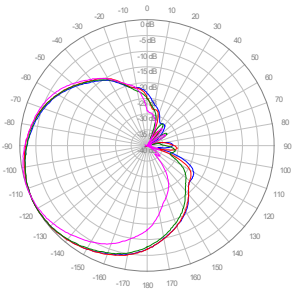


Azimuth

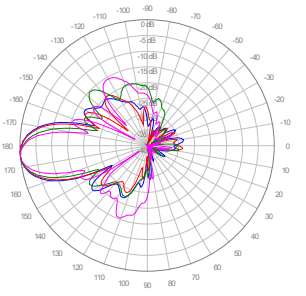


Elevation

-45°



Azimuth



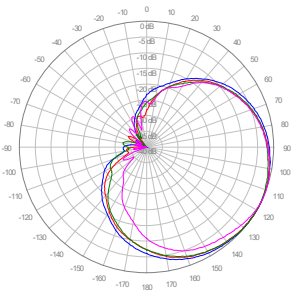
Elevation

6U4MTSP1X12Fxys4-GPS

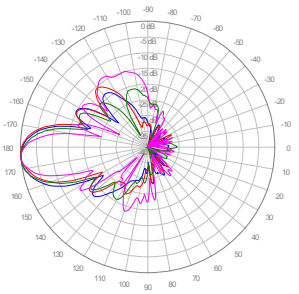
1800 MHz
1900 MHz
2100 MHz
2600 MHz

Y5, 4° TILT

+45°

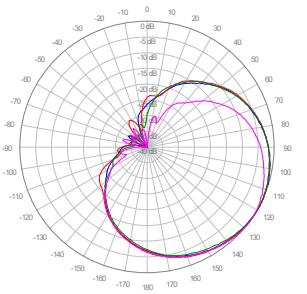


Azimuth

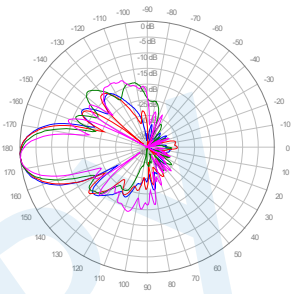


Elevation

-45°



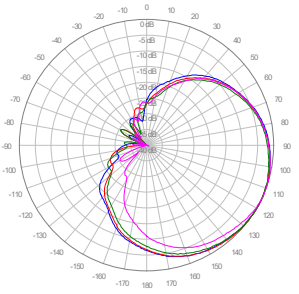
Azimuth



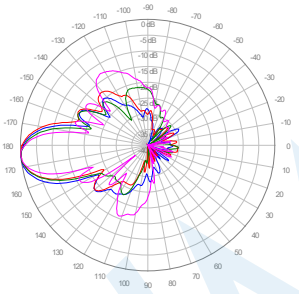
Elevation

Y6, 4° TILT

+45°

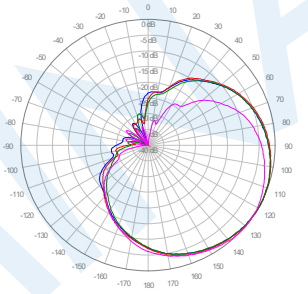


Azimuth

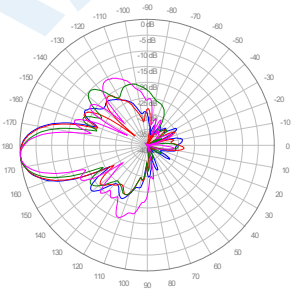


Elevation

-45°



Azimuth



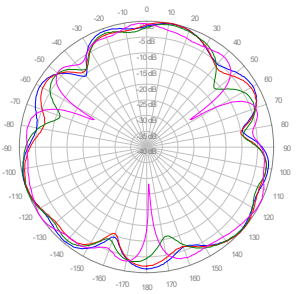
Elevation

6U4MTSP1X12Fxys4-GPS

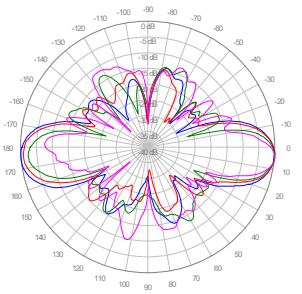
1800 MHz
1900 MHz
2100 MHz
2600 MHz

Y7, 4° TILT

+45°

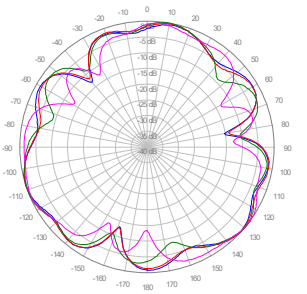


Azimuth

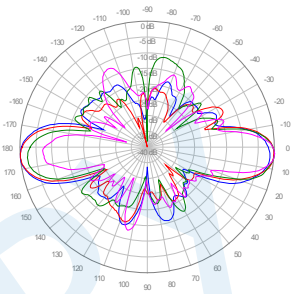


Elevation

-45°



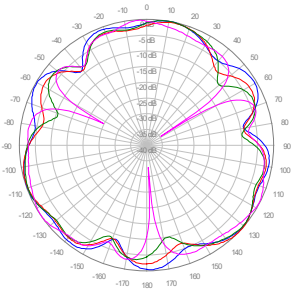
Azimuth



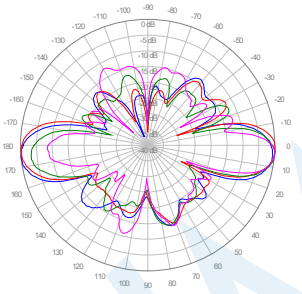
Elevation

Y8, 4° TILT

+45°

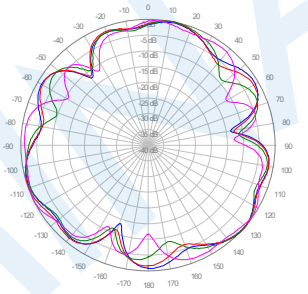


Azimuth

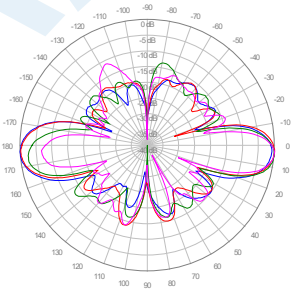


Elevation

-45°



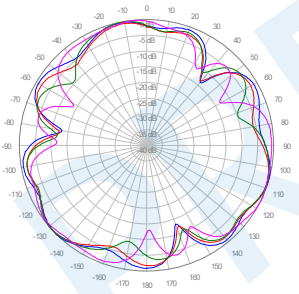
Azimuth



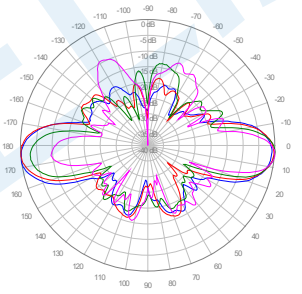
Elevation

Y9, 4° TILT

+45°

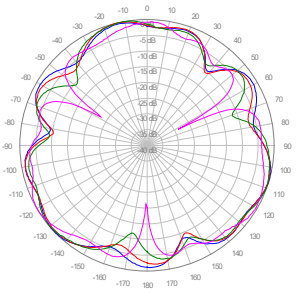


Azimuth

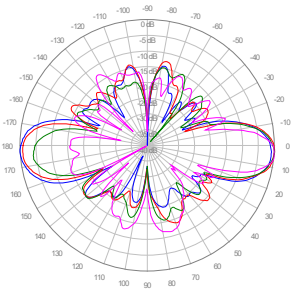


Elevation

-45°



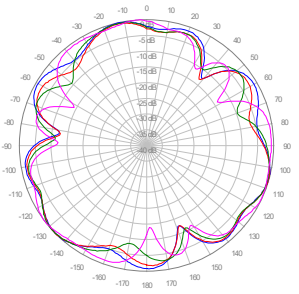
Azimuth



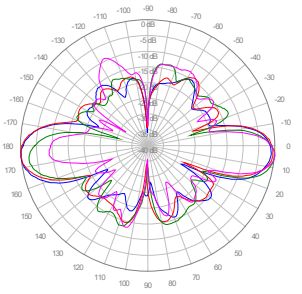
Elevation

Y10, 4° TILT

+45°

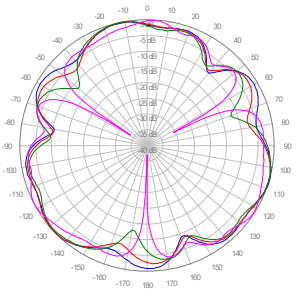


Azimuth

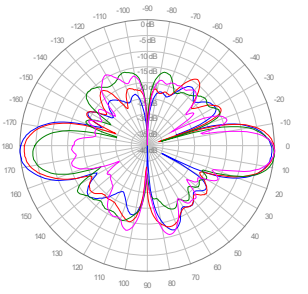


Elevation

-45°



Azimuth



Elevation

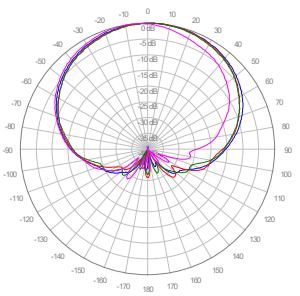
Quoted performance parameters are provided to offer typical, peak or range values only and may vary as a result of normal testing, manufacturing and operational conditions. Extreme operational conditions and/or stress on structural supports is beyond our control. Such conditions may result in damage to this product. Improvements to products may be made without notice.

6U4MTSP1X12Fxys4-GPS

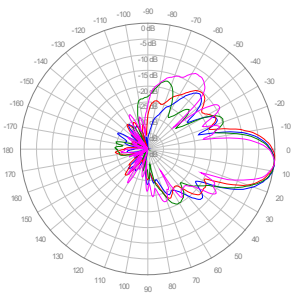
1800 MHz
1900 MHz
2100 MHz
2600 MHz

Y1, 6° TILT

+45°

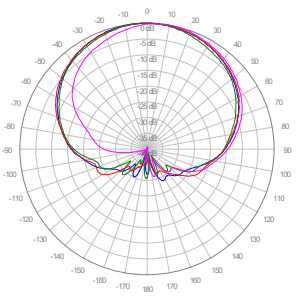


Azimuth

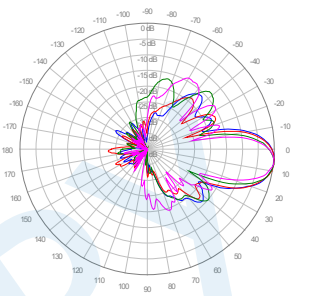


Elevation

-45°



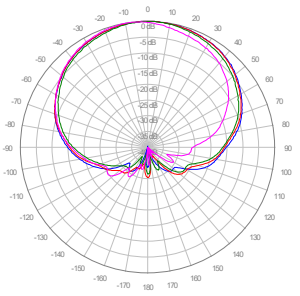
Azimuth



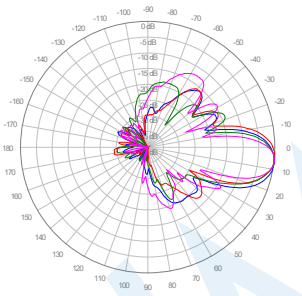
Elevation

Y2, 6° TILT

+45°

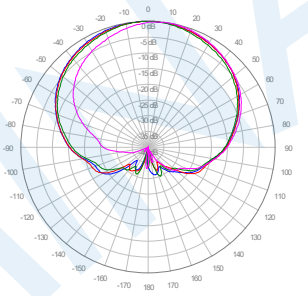


Azimuth

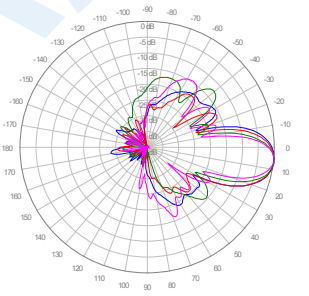


Elevation

-45°



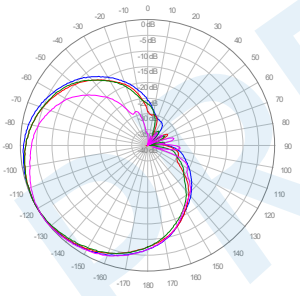
Azimuth



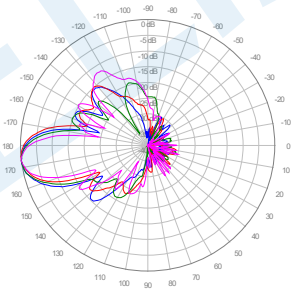
Elevation

Y3, 6° TILT

+45°

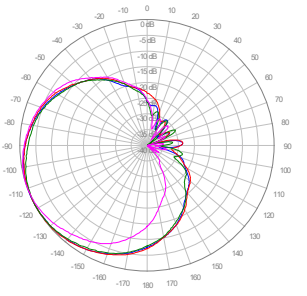


Azimuth

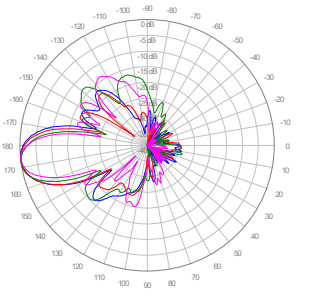


Elevation

-45°



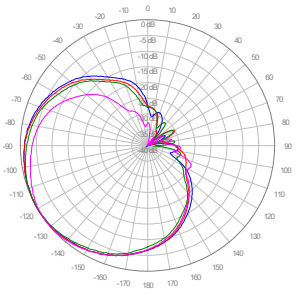
Azimuth



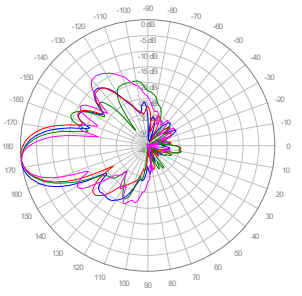
Elevation

Y4, 6° TILT

+45°

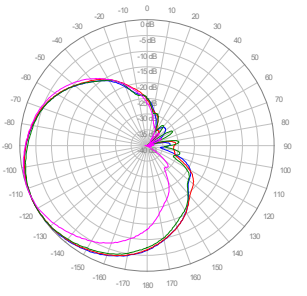


Azimuth

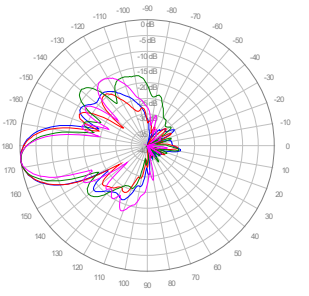


Elevation

-45°



Azimuth



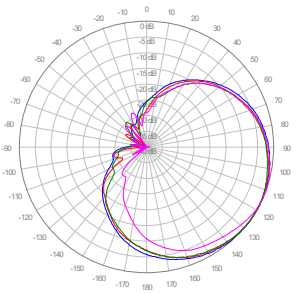
Elevation

6U4MTSP1X12Fxys4-GPS

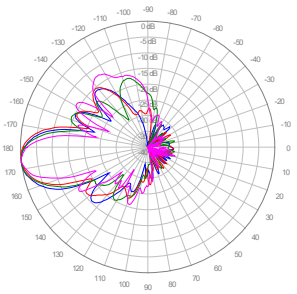
1800 MHz
1900 MHz
2100 MHz
2600 MHz

Y5, 6° TILT

+45°

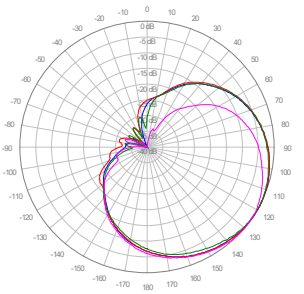


Azimuth

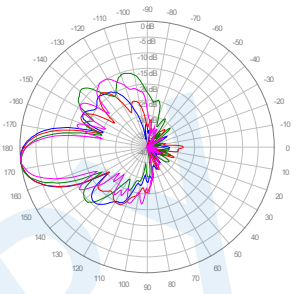


Elevation

-45°



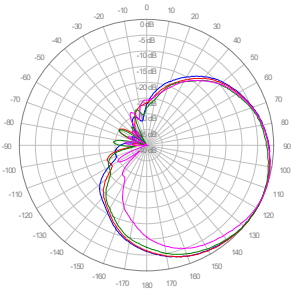
Azimuth



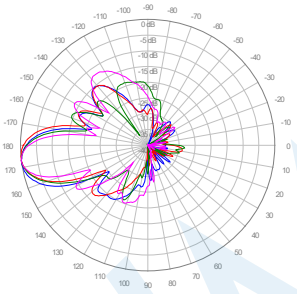
Elevation

Y6, 6° TILT

+45°

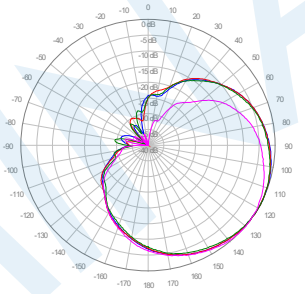


Azimuth

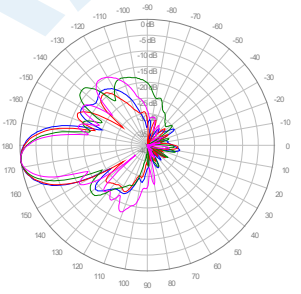


Elevation

-45°



Azimuth



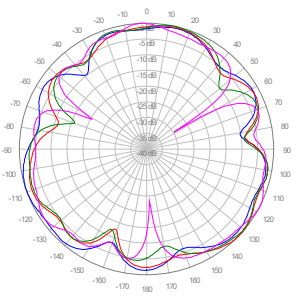
Elevation

6U4MTSP1X12Fxys4-GPS

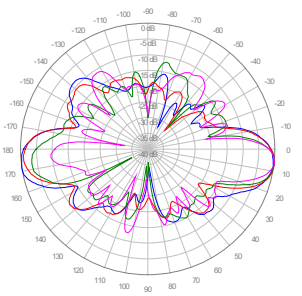
1800 MHz
1900 MHz
2100 MHz
2600 MHz

Y7, 6° TILT

+45°

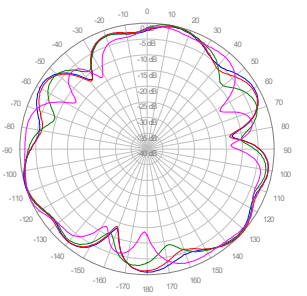


Azimuth

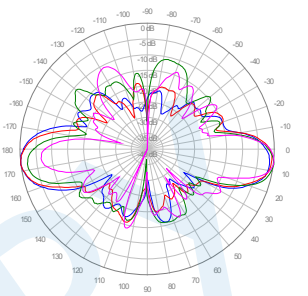


Elevation

-45°



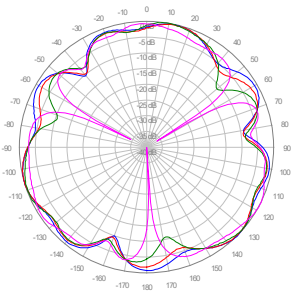
Azimuth



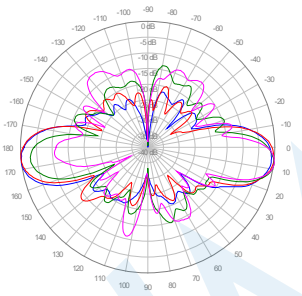
Elevation

Y8, 6° TILT

+45°

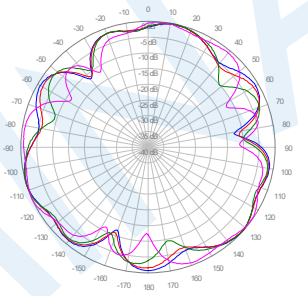


Azimuth

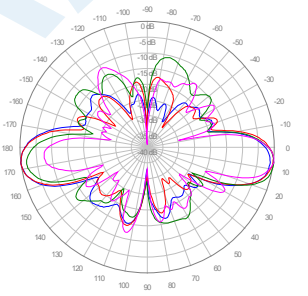


Elevation

-45°



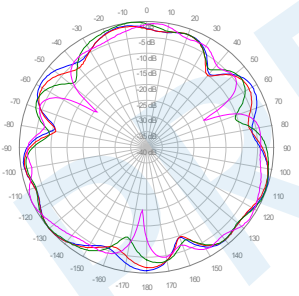
Azimuth



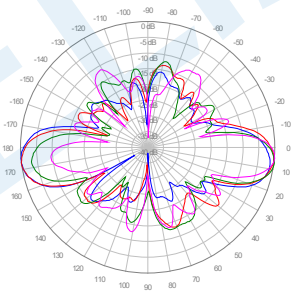
Elevation

Y9, 6° TILT

+45°

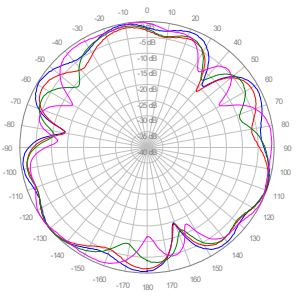


Azimuth

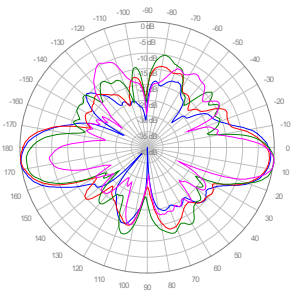


Elevation

-45°



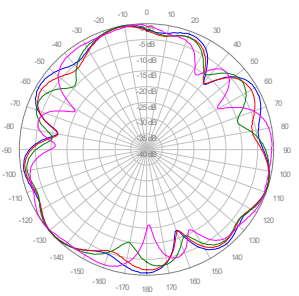
Azimuth



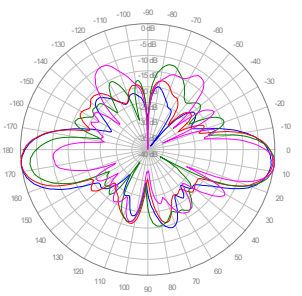
Elevation

Y10, 6° TILT

+45°

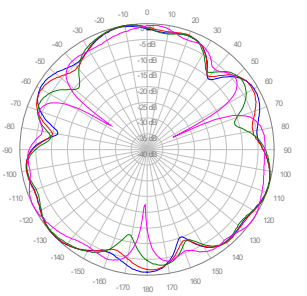


Azimuth

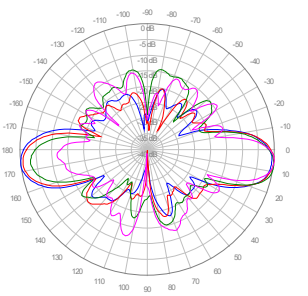


Elevation

-45°



Azimuth

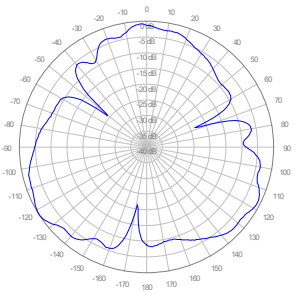


Elevation

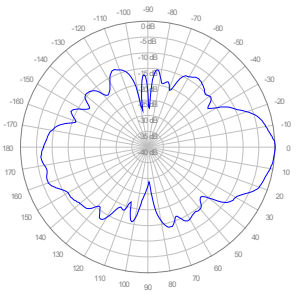
6U4MTSP1X12Fxys4-GPS

P1, 0° TILT

+45°

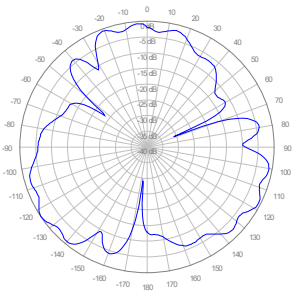


Azimuth (3600 MHz)

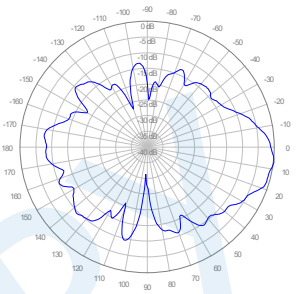


Elevation (3600 MHz)

-45°



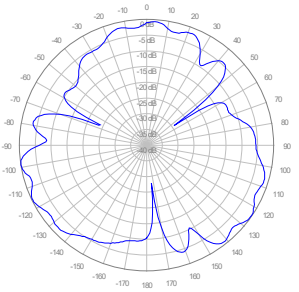
Azimuth (3600 MHz)



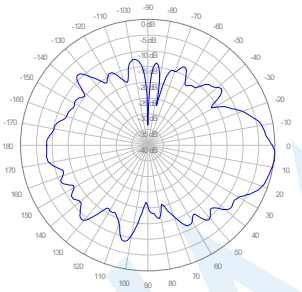
Elevation (3600 MHz)

P2, 0° TILT

+45°

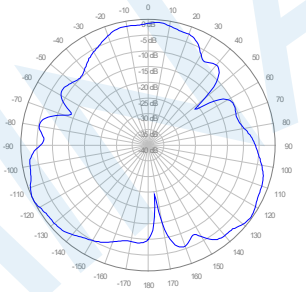


Azimuth (3600 MHz)

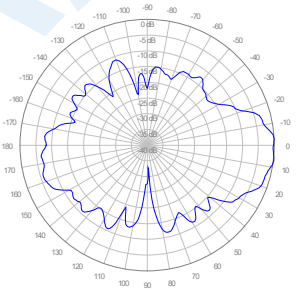


Elevation (3600 MHz)

-45°



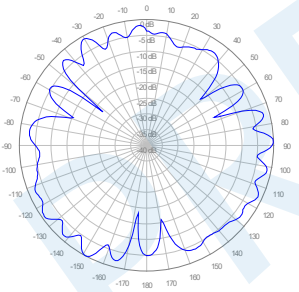
Azimuth (3600 MHz)



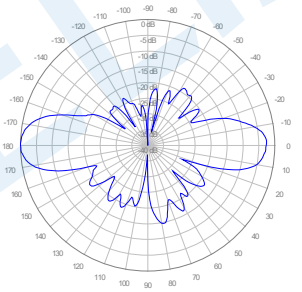
Elevation (3600 MHz)

O1, 0° TILT

+45°

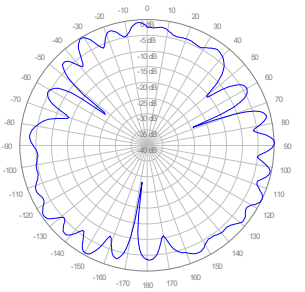


Azimuth (5600 MHz)

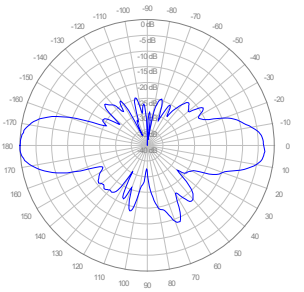


Elevation (5600 MHz)

-45°



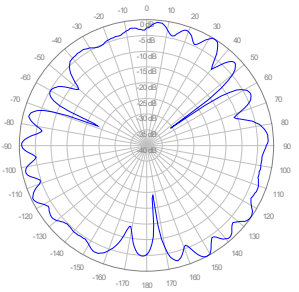
Azimuth (5600 MHz)



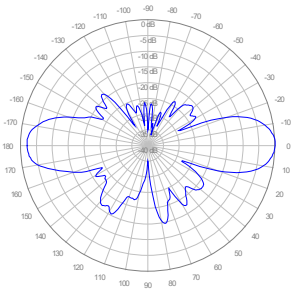
Elevation (5600 MHz)

O2, 0° TILT

+45°

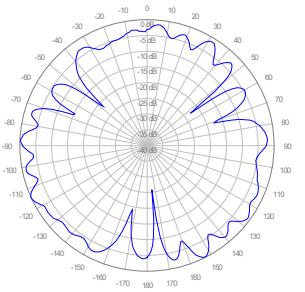


Azimuth (5600 MHz)

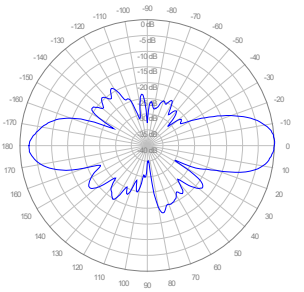


Elevation (5600 MHz)

-45°



Azimuth (5600 MHz)



Elevation (5600 MHz)