ANTENNA SPECIFICATION

Cellular Antenna

Summary

Antenna Type

Antenna	**Type**
Main	PIFA
Aux	PIFA
MIMO1	Wide-band Monopole Antenna
MIMO2	Wide-band Monopole Antenna

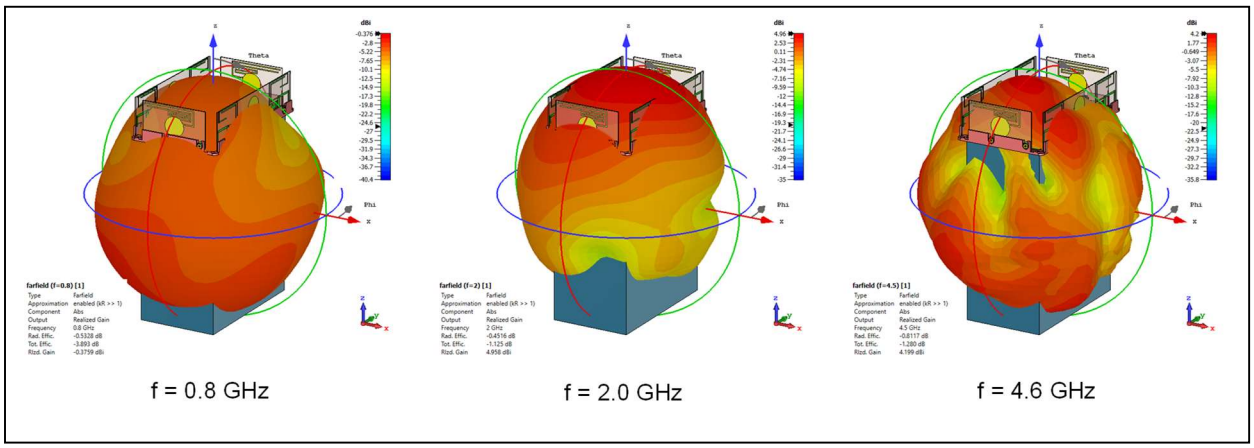
Summary of Antenna Specifications:

Antenna	Band	Frequency Range (MHz)	Mode	Max Gain (dBi)	Max Efficiency
Main	(LB)	500 – 1000	Tx / Rx	-1.01	0.45
	(MB)	1000 – 2200	Tx / Rx	3.91	0.73
	(HB)	2200 – 3000	Tx / Rx	4.61	0.78
	(UHB)	3000 – 6000	Tx / Rx	5.45	0.81
AUX	(LB)	500 – 1000	Rx	-0.07	0.44
	(MB)	1000 – 2200	Rx	4.34	0.78
	(HB)	2200 – 3000	Rx	4.24	0.76
	(UHB)	3000 – 6000	Rx	4.90	0.82
MIMO1	(MB)	1000 – 2200	Rx	1.87	0.71
	(HB)	2200 – 3000	Rx	5.83	0.84
	n41	2496 – 2690	Tx / Rx	3.5	0.84
	(UHB)	3000 – 6000	Rx	6.07	0.85
MIMO2	(LB)	500 – 1000	Rx	-1.81	0.38
	(MB)	1000 – 2200	Rx	2.85	0.78
	(HB)	2200 – 3000	Rx	4.59	0.78
	(UHB)	3000 – 6000	Rx	5.24	0.89

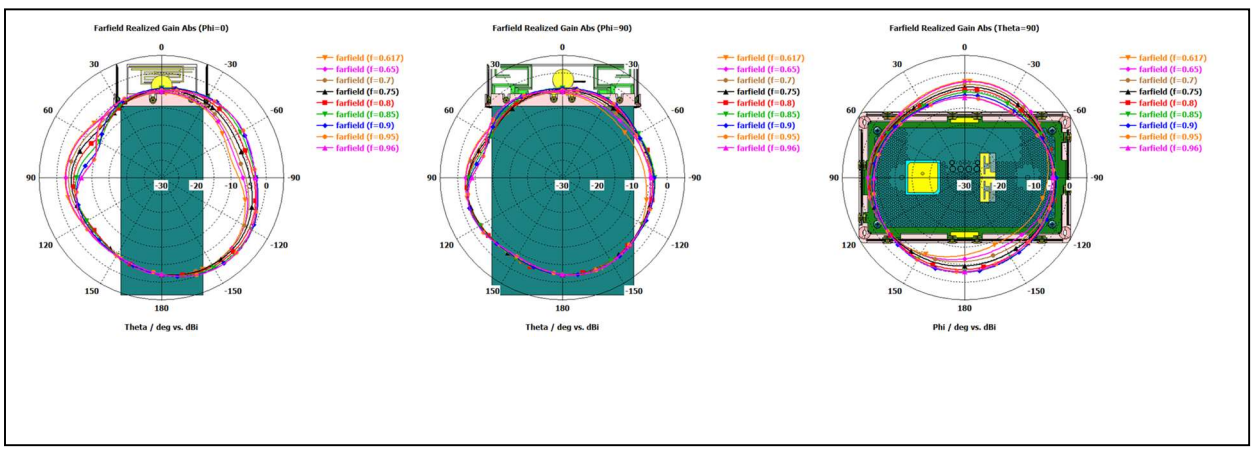
Radiation Patterns

Main (Similar patterns for Aux)

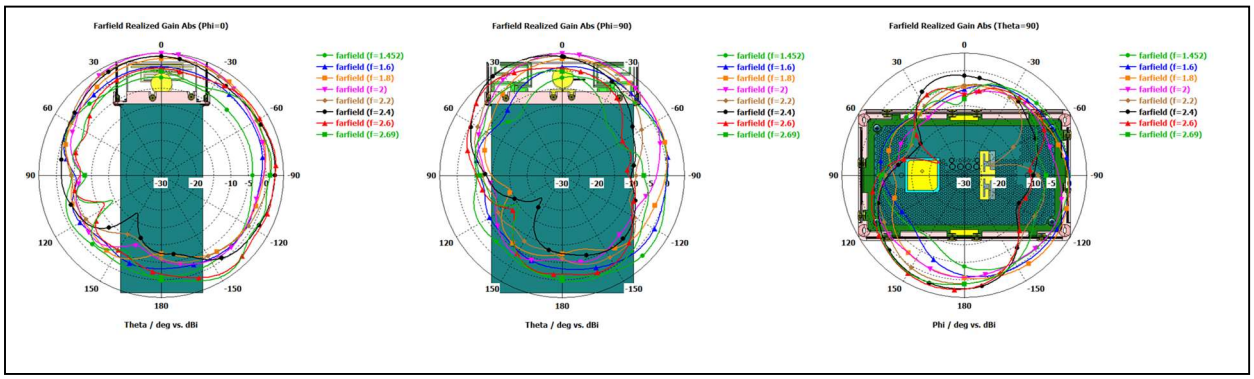
3D Patterns



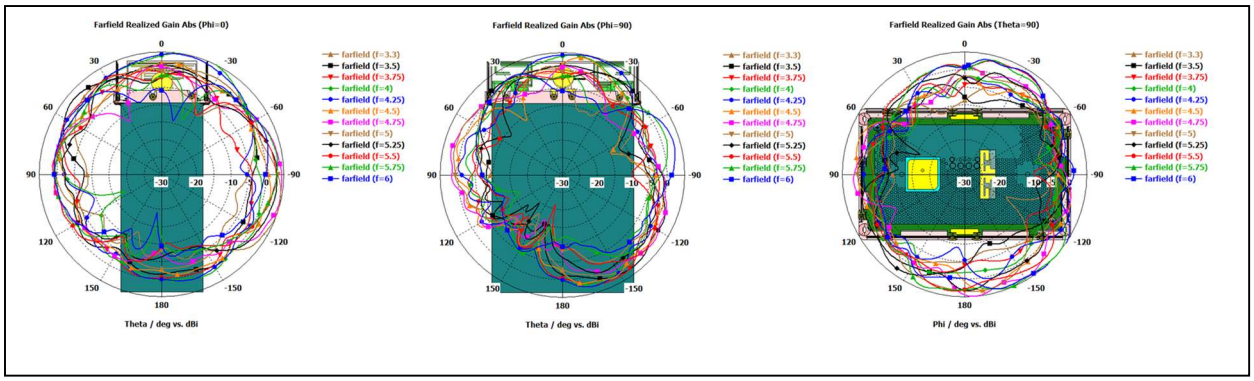
2D Patterns – Low Band



2D Patterns – Mid Band (2000 MHz)

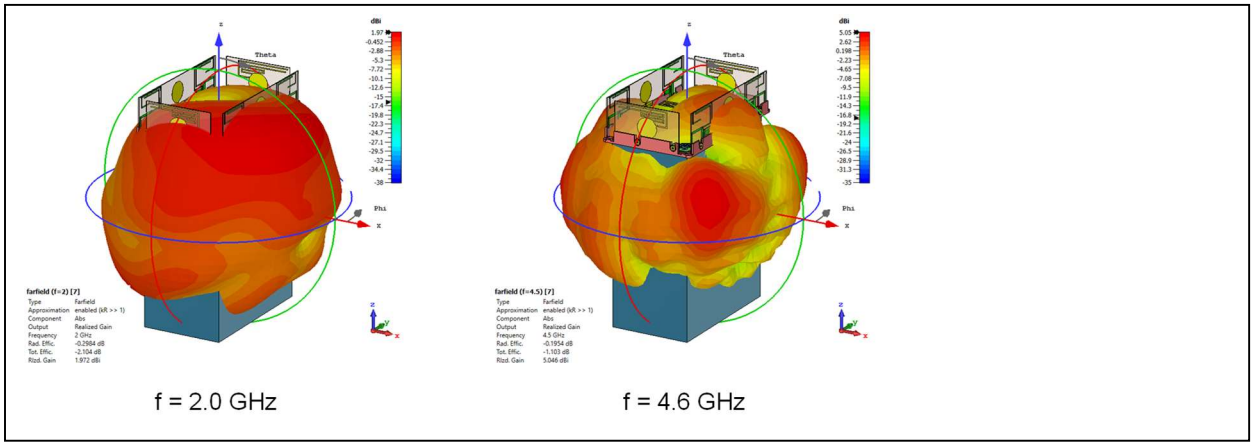


2D Patterns – High Band (4600 MHz)

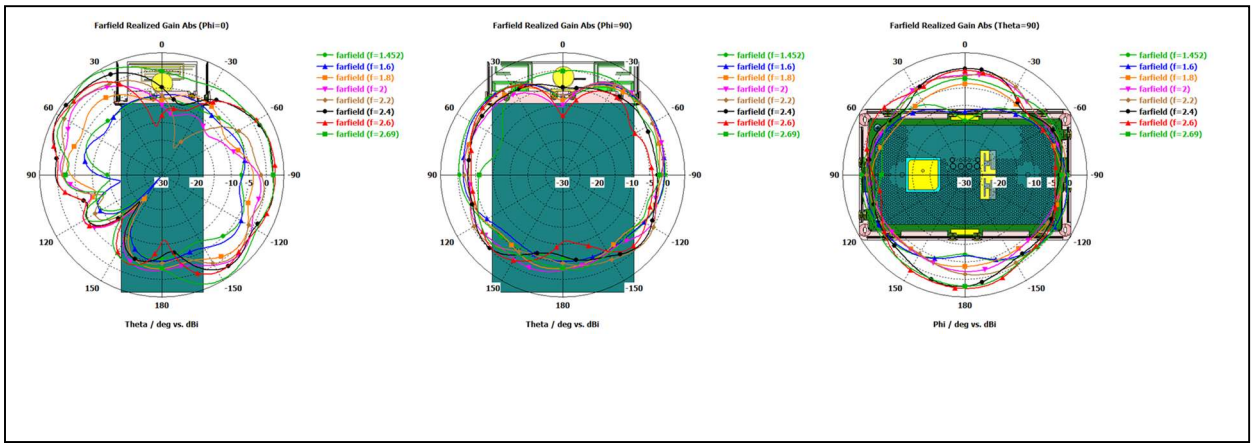


MIMO1

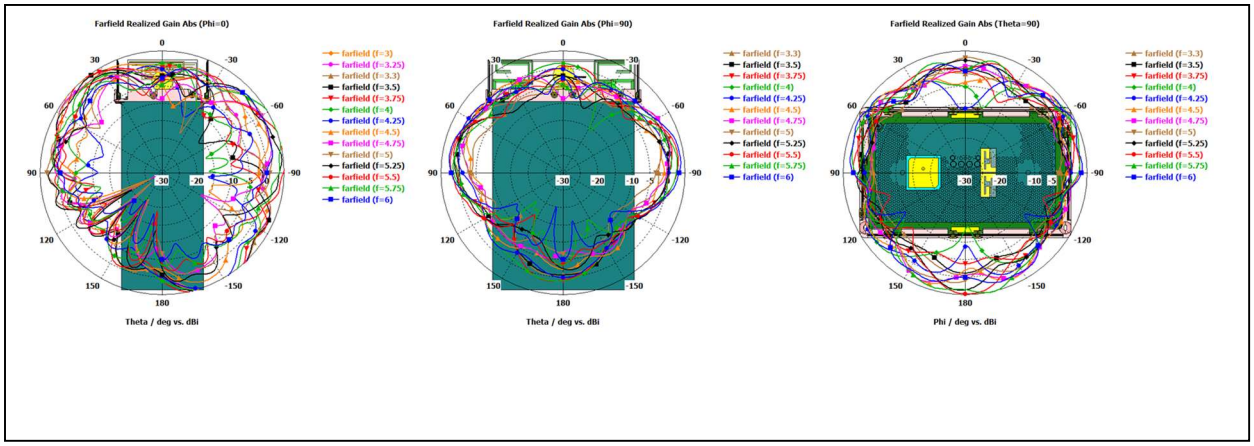
3D Patterns



2D Patterns – Mid Band

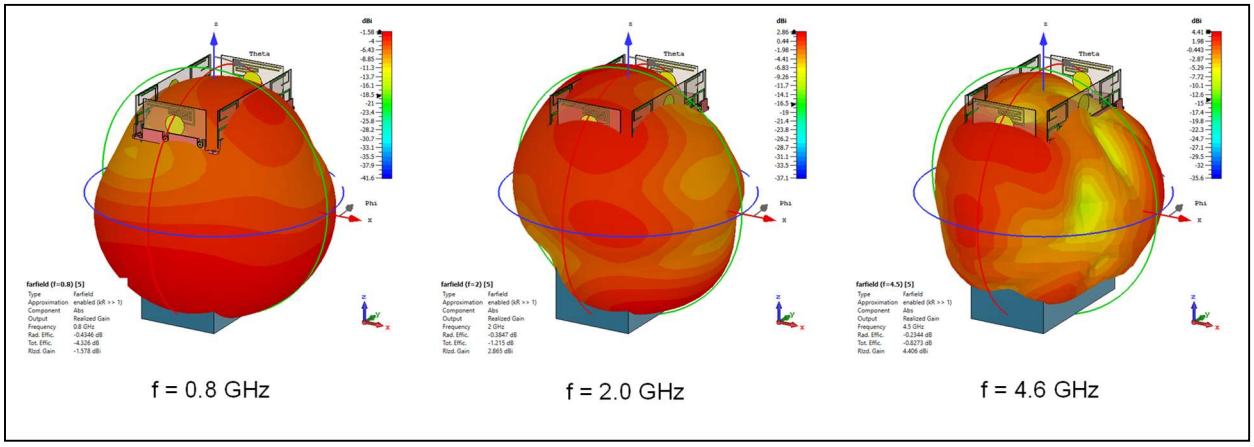


2D Patterns – High Band

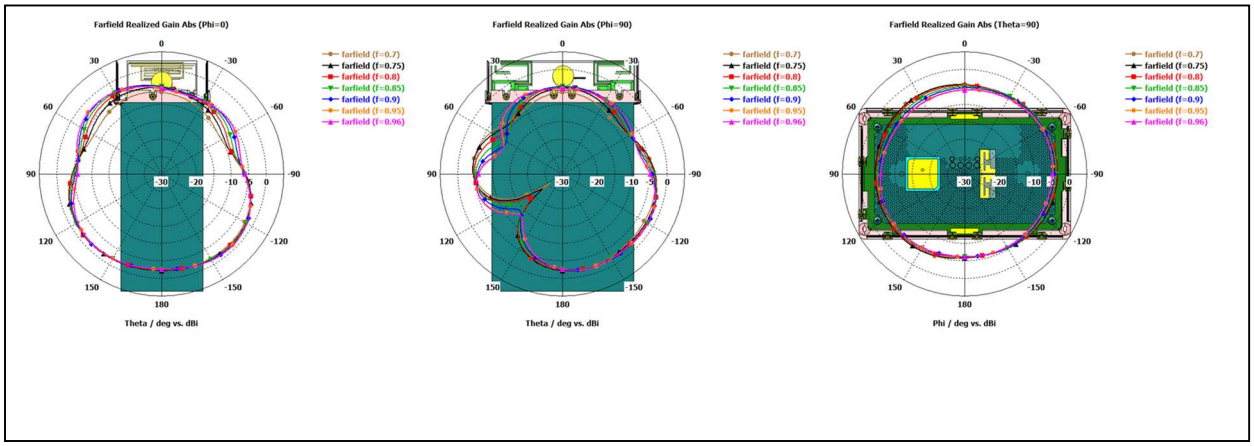


MIMIO2

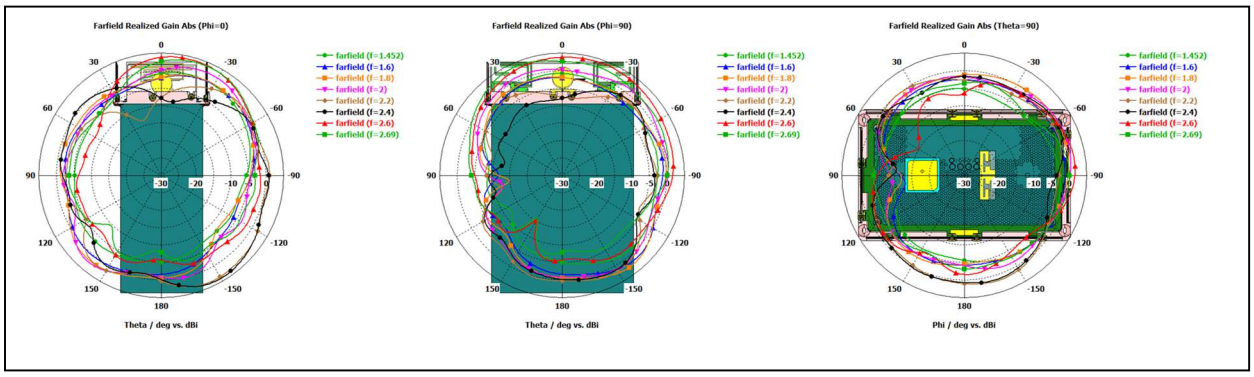
3D Patterns



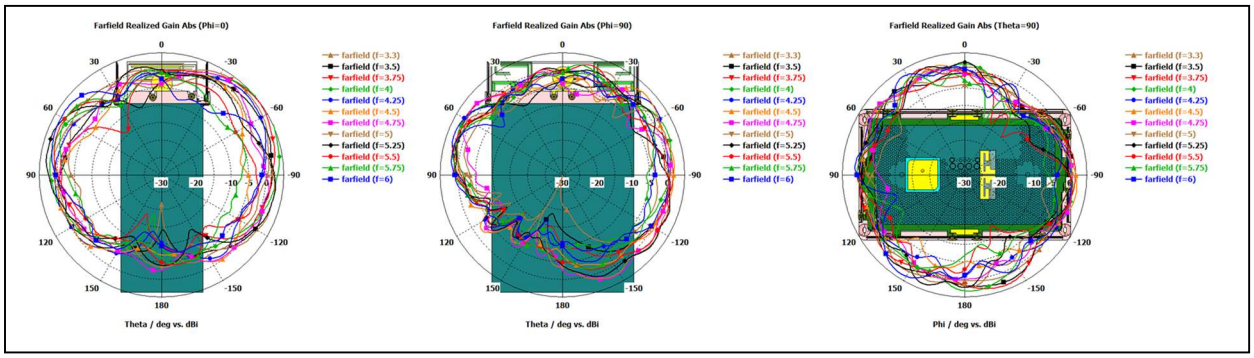
2D Patterns – Low Band



2D Patterns – Mid Band



2D Patterns – High Band



Antenna Specification Breakdown

	Main		Aux		MIMO1		MIMO2	
Frequency (MHz)	Gain (dBi)	Efficiency	Gain (dBi)	Efficiency	Gain (dBi)	Efficiency	Gain (dBi)	Efficiency
500	-24.12	0.00	-24.39	0.00	-21.01	0.01	-7.85	0.10
550	-11.75	0.04	-11.90	0.04	-20.90	0.01	-6.60	0.14
600	-2.71	0.30	-2.63	0.29	-21.49	0.00	-7.20	0.12
617	-1.59	0.39	-1.66	0.38	-20.32	0.01	-5.66	0.17
650	-1.35	0.41	-1.61	0.38	-17.99	0.01	-3.74	0.25
700	-1.62	0.41	-1.72	0.38	-15.84	0.02	-2.52	0.34
750	-1.68	0.41	-1.45	0.39	-14.25	0.03	-2.22	0.36
800	-1.45	0.43	-0.99	0.41	-12.59	0.04	-2.19	0.37
850	-1.18	0.45	-0.51	0.43	-10.49	0.06	-2.12	0.37
900	-1.01	0.44	-0.14	0.44	-7.94	0.10	-1.92	0.38
950	-1.07	0.41	-0.07	0.43	-5.33	0.17	-1.81	0.37
960	-1.13	0.40	-0.10	0.43	-4.84	0.18	-1.82	0.37
1000	-1.58	0.35	-0.47	0.39	-3.10	0.27	-1.98	0.35
1200	-13.50	0.03	-13.44	0.03	0.87	0.71	-5.45	0.13
1400	0.68	0.60	1.92	0.61	0.54	0.49	-0.99	0.32
1452	0.79	0.56	1.78	0.64	0.46	0.49	-0.61	0.42
1600	0.35	0.55	0.80	0.68	0.60	0.46	1.43	0.60
1800	2.29	0.66	3.17	0.78	-0.49	0.45	2.39	0.70
2000	3.40	0.66	4.34	0.77	1.36	0.62	2.25	0.76
2200	3.91	0.73	3.56	0.69	1.87	0.67	2.85	0.78
2400	4.61	0.78	4.42	0.76	3.50	0.74	3.63	0.78
2600	2.98	0.67	2.84	0.72	3.14	0.77	3.55	0.74
2690	2.44	0.63	3.14	0.63	4.15	0.84	4.59	0.65
2800	0.28	0.40	1.01	0.38	5.82	0.82	2.39	0.62
3000	-1.31	0.33	-1.28	0.26	5.83	0.81	2.76	0.74
3250	2.15	0.63	0.81	0.50	5.72	0.83	4.18	0.81
3300	2.74	0.67	1.68	0.59	5.73	0.84	4.15	0.81
3500	4.14	0.69	3.98	0.74	5.90	0.85	3.37	0.84
3750	2.58	0.56	3.62	0.61	6.07	0.85	5.24	0.89
4000	4.73	0.75	4.90	0.75	5.73	0.83	4.80	0.87
4250	4.81	0.81	4.61	0.82	5.10	0.80	4.51	0.84
4500	3.34	0.76	3.58	0.74	4.43	0.78	3.79	0.83

4750	4.63	0.75	4.61	0.72	3.93	0.73	4.98	0.83
5000	4.07	0.63	4.16	0.61	3.50	0.69	3.27	0.83
5250	4.42	0.70	3.00	0.69	3.74	0.72	2.87	0.73
5500	4.45	0.79	3.25	0.77	4.80	0.74	3.40	0.57
5750	4.99	0.79	4.62	0.80	5.33	0.83	2.87	0.50
6000	5.45	0.79	4.90	0.79	4.37	0.82	3.93	0.61