

Antenna Regulatory Information

• Product type	• WWAN antenna
• Model number	• Qiao Hong Platforms
• Revision	• A00
• Part No.	• Left / CAN4313764022501B • Right / CAN4313764012501B
• Dell Part No.	•

Yageo (Taiwan) Ltd.

16, West 3rd Street, N.E.P.Z Kaohsiung, 811 Taiwan, R.O.C

Yageo Electronics (China) Co, Ltd.

No. 10, Zhu Yuan Road, Suzhou New District, Suzhou, PRC

1. Specifications

Antenna Specifications

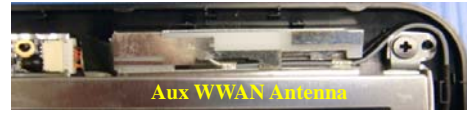
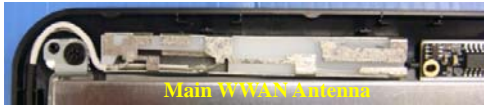
Antenna Type (Material, Technology)	Inverted-F Antenna. Metal Stamping Based.
Antenna Model Number	DELL- Qiao Hong Platforms
Operating Frequency Range(s)	Main: 824~960MHz ; Aux: 869~894MHz Main: 1710~2170MHz ; Aux: 1930~2170MHz
Peak Gain (824MHz ~ 960MHz) (dBi)	Main -1.84dBi / Aux -2.87dBi
Peak Gain (1710MHz ~ 2170MHz) (dBi)	Main 1.60dBi / Aux -3.13dBi
Radio Connector Type	Hirose U.FL-LP-066 or IPEX 20278-111R-13 or equivalent Hirose U.FL-LP-088 or IPEX 20351-111R-37 or equivalent
Mid-Line Connector Type (If Applicable)	N/A

Remark: Peak Gains include all system losses (connector, cable, etc)

Cable Specifications

Cable Parameters	Main			Aux		
	LCD Side	Base Side	Total	LCD Side	Base Side	Total
Length (mm)	N/A	N/A	621mm	N/A	N/A	421mm
Loss (Including Connectors) (dB, 0.9GHz / 2GHz)			0.99dBi / 1.40dBi			0.67dBi / 0.95dBi
Description (Color, Diameter, Manufacturer)	Color: White/Gray Stripe OD: 1.37 mm Kurabe, GBE, Nissei, Sumitomo or equivalent			Color: Black/Gray Stripe OD: 1.37 mm Kurabe, GBE, Nissei, Sumitomo or equivalent		

2. Antenna Assembly

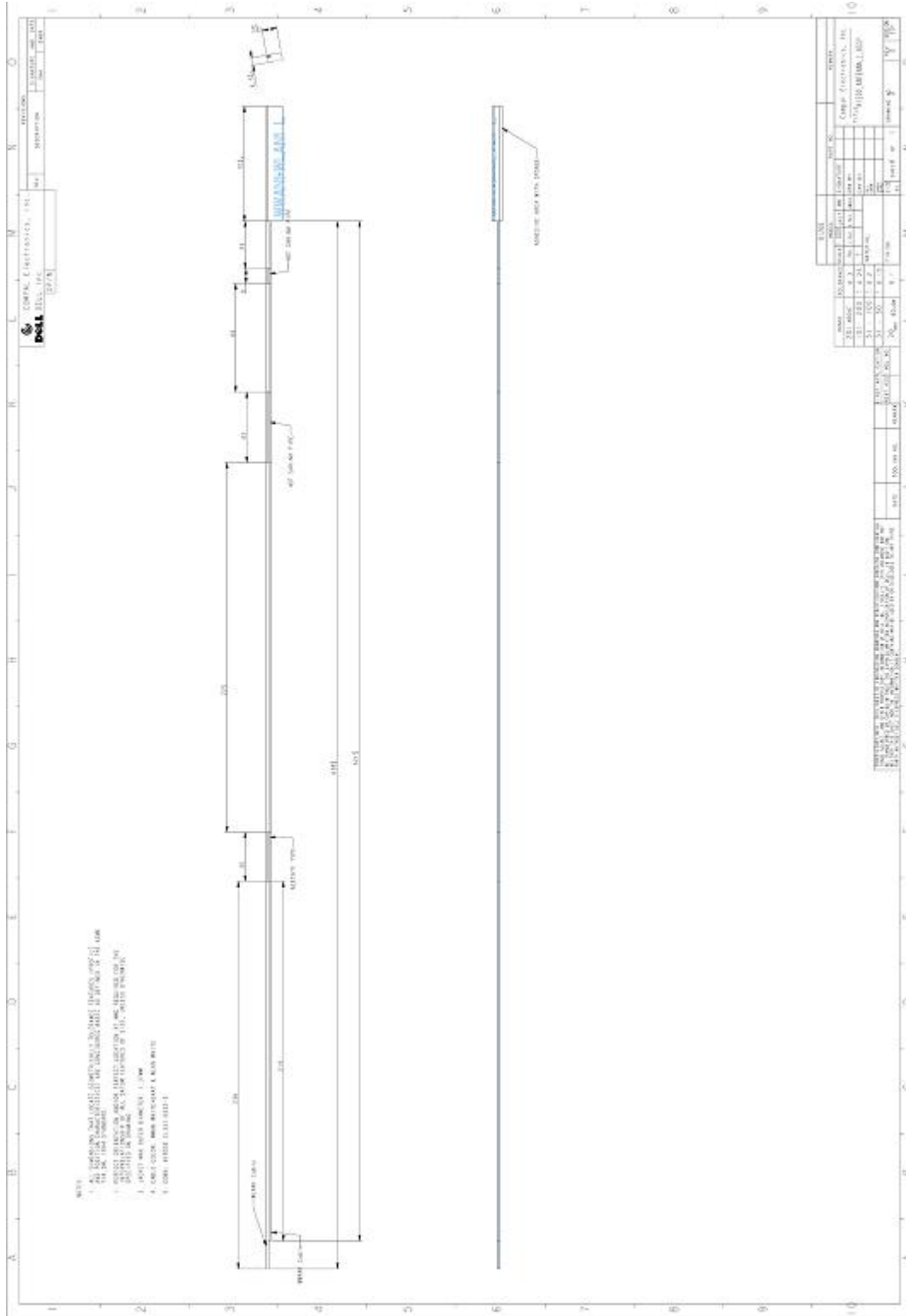


3. Antenna Assembly Installed in The Notebook

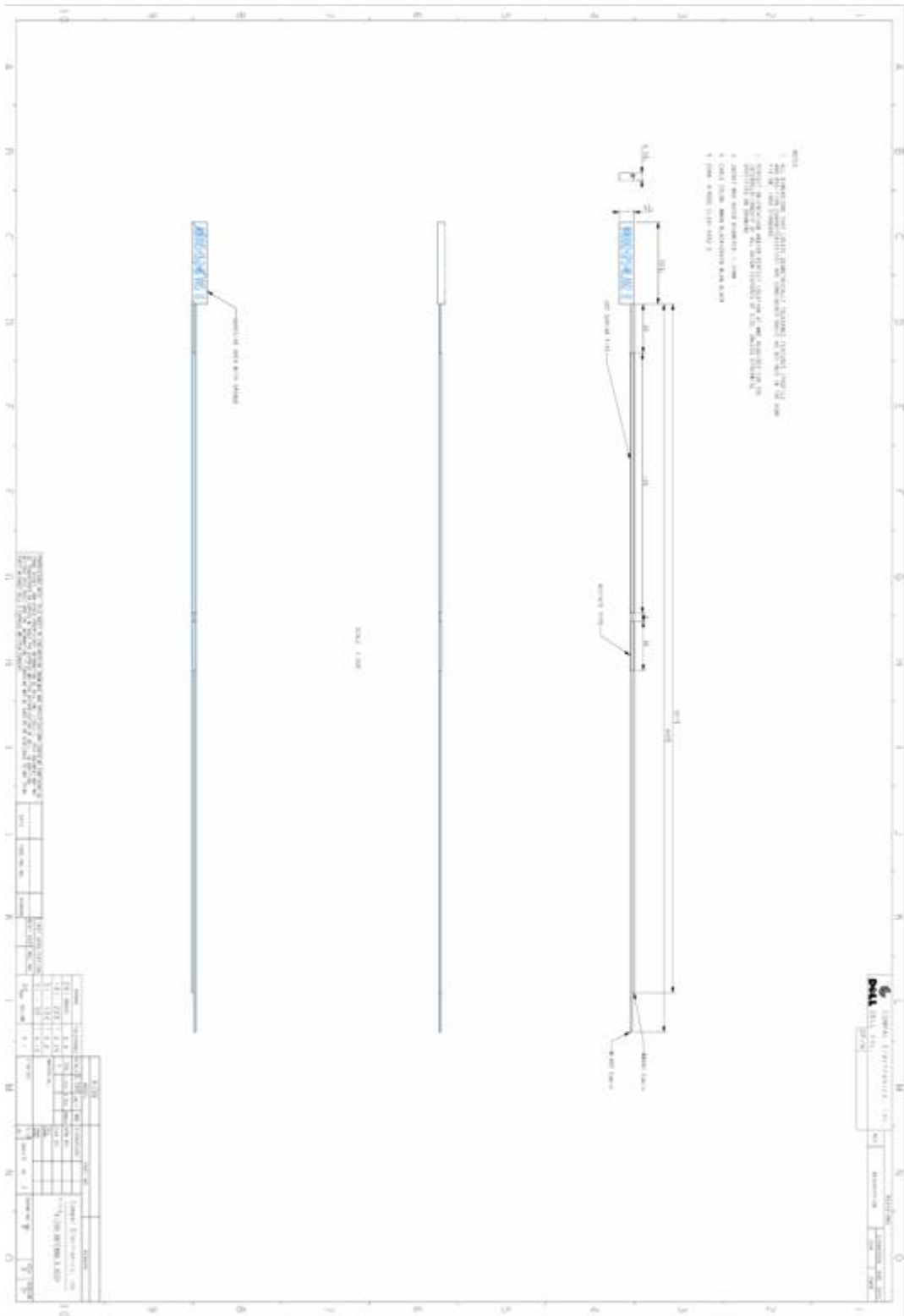


4. Mechanical Drawing of Antennas

Drawing Main WWAN Antenna:

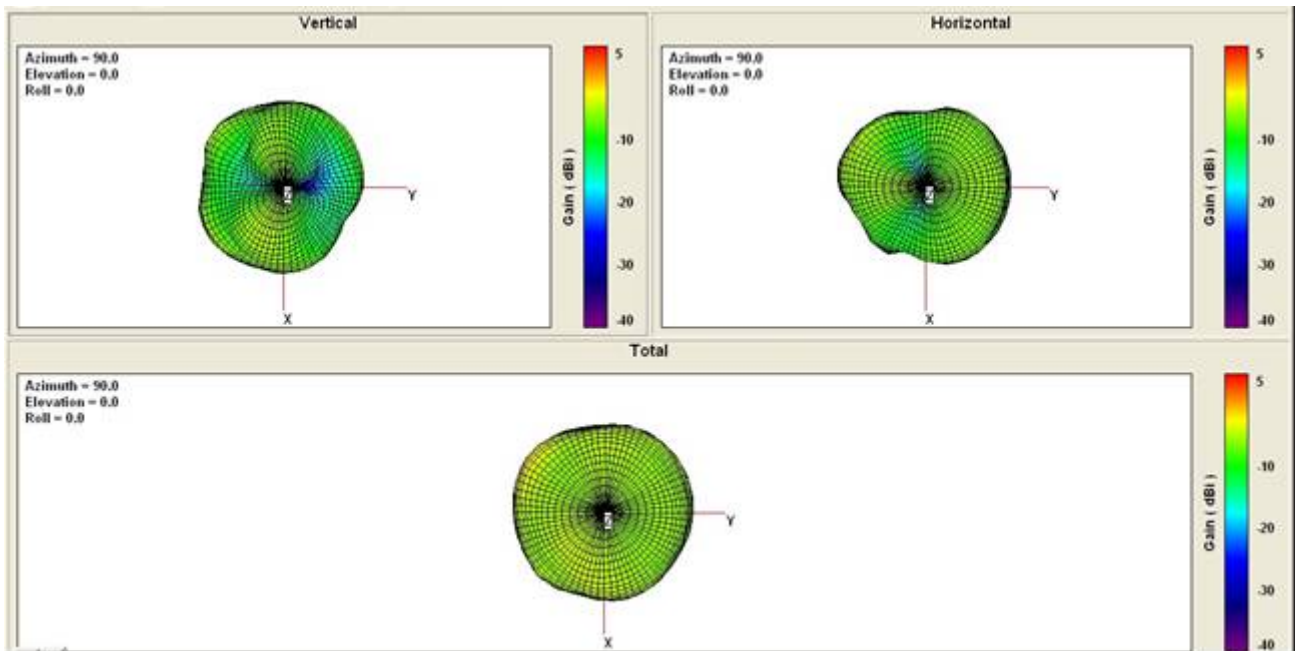


Drawing of Aux WWAN Antenna:



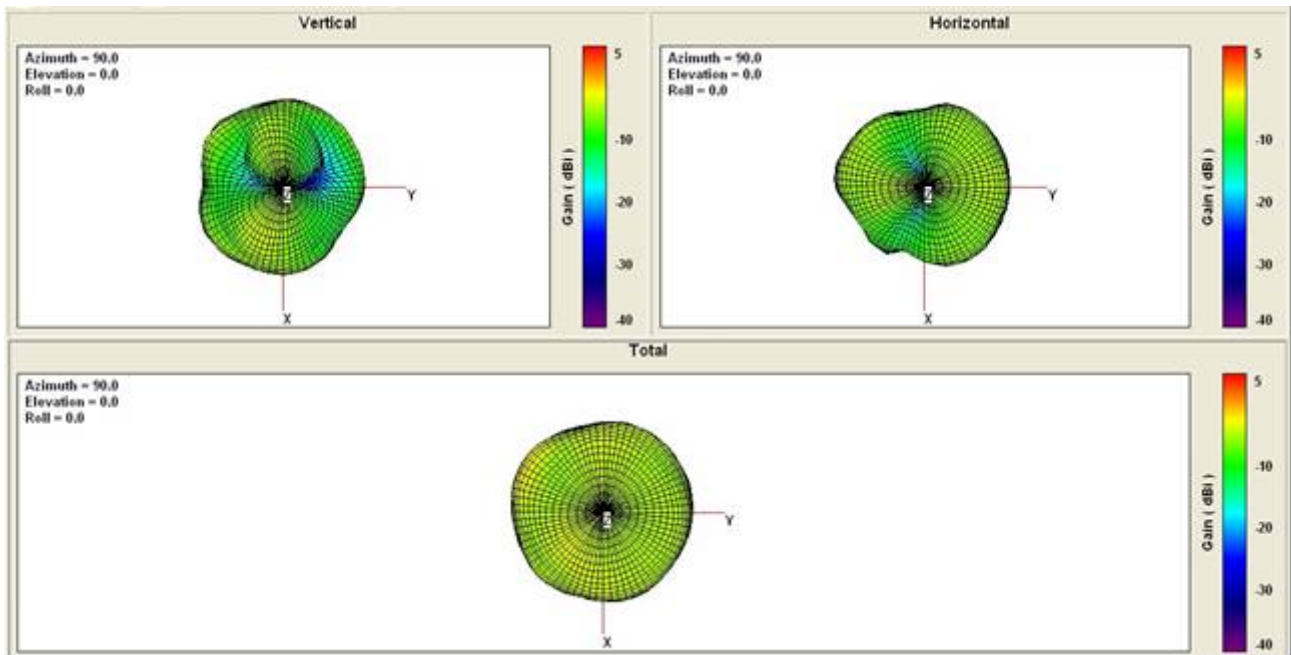
5. Gain Patterns

Main WWAN Antenna (824MHz)



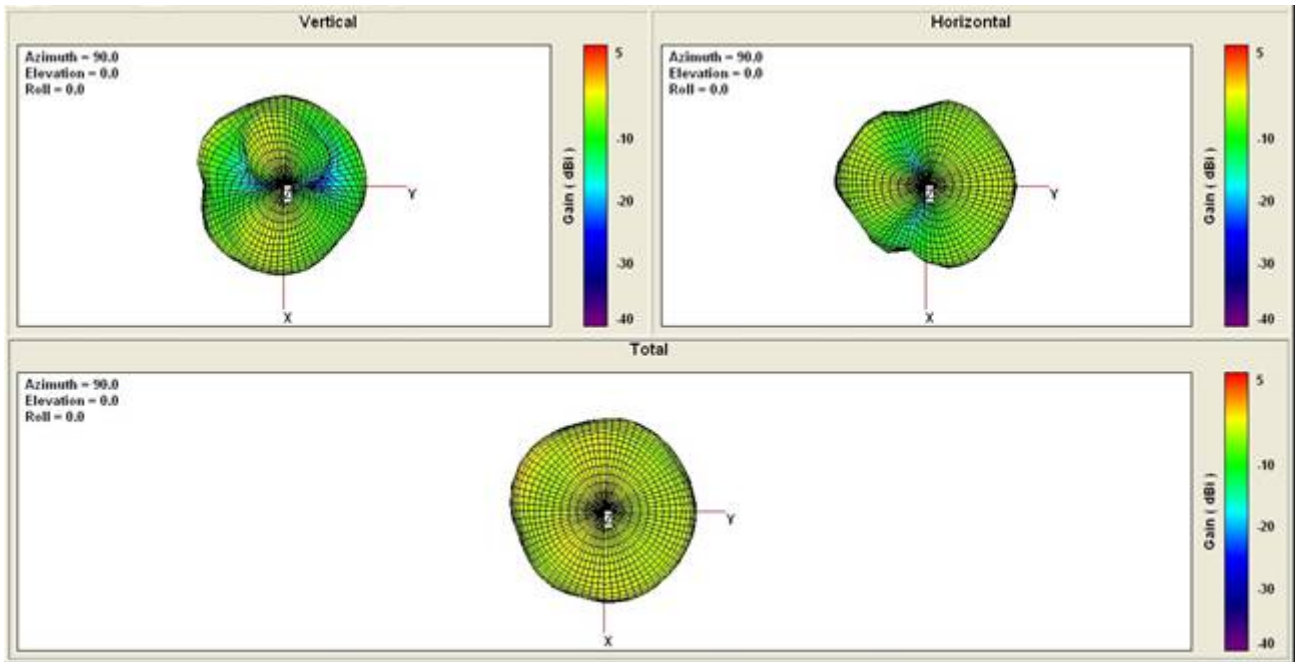
Frequency (MHz)	824
Horizontal Peak Gain (dBi)	-3.21
Vertical Peak Gain (dBi)	-3.92
Total Average Gain (dBi)	-4.87

Main WWAN Antenna (836MHz)



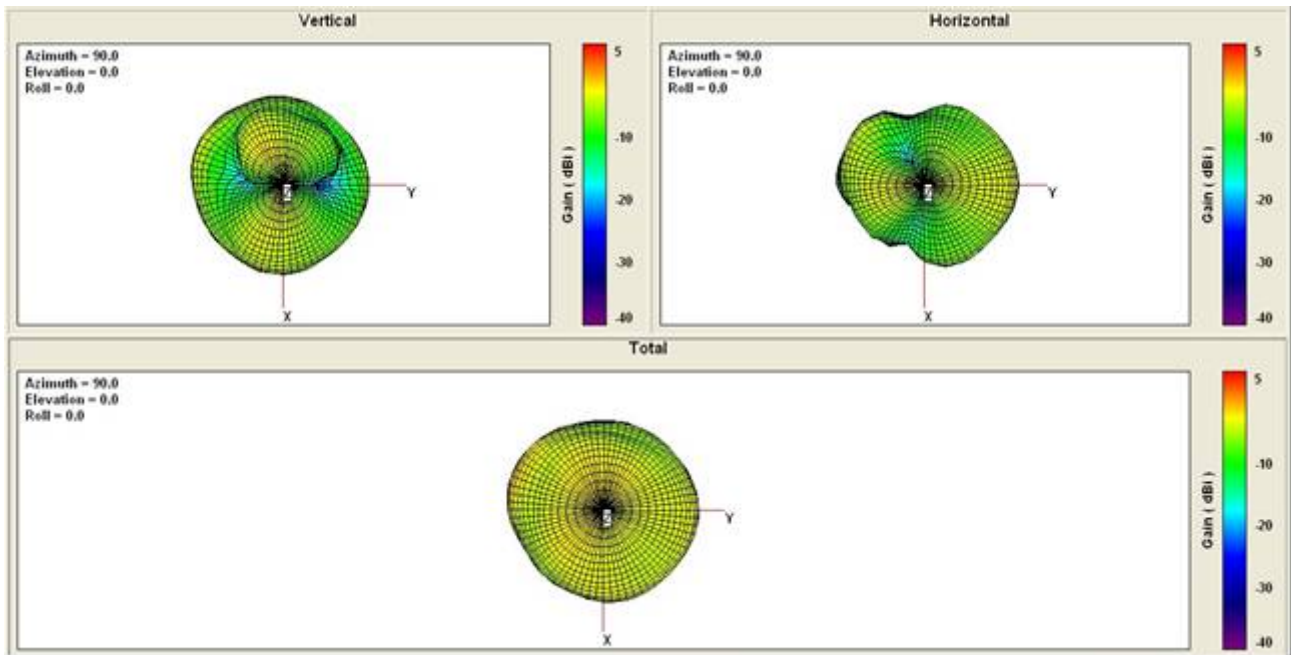
Frequency (MHz)	836
Horizontal Peak Gain (dBi)	-2.57
Vertical Peak Gain (dBi)	-3.57
Total Average Gain (dBi)	-4.41

Main WWAN Antenna (849MHz)



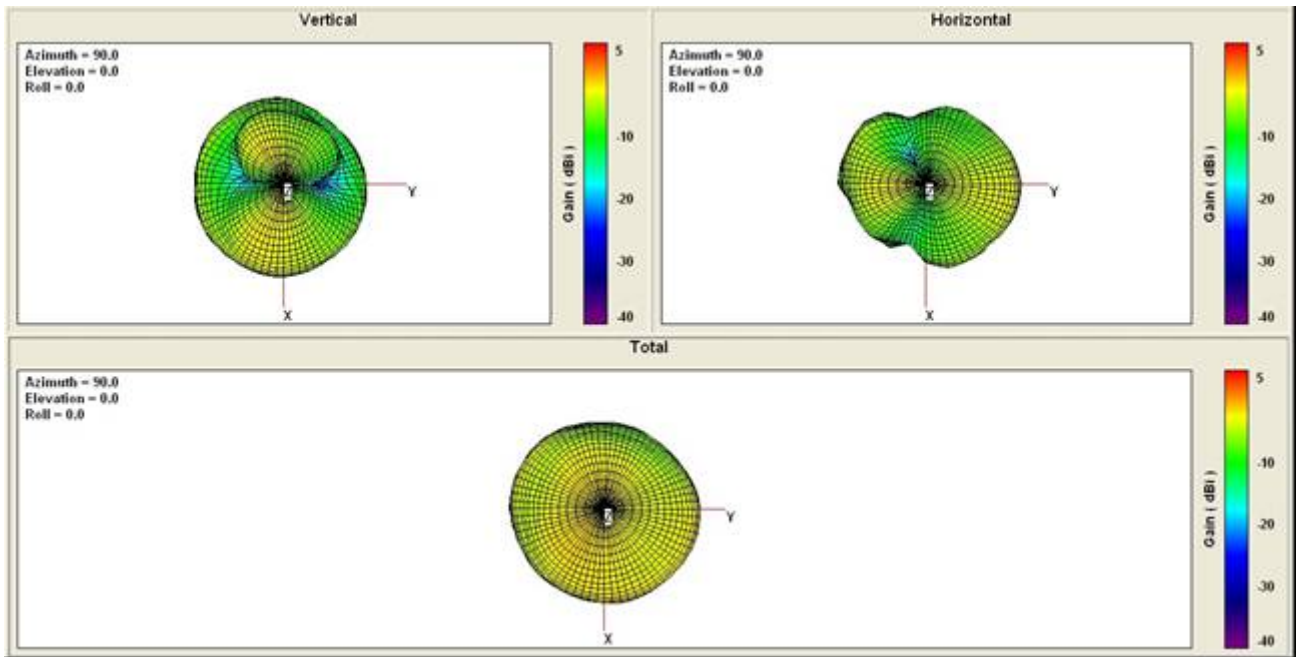
Frequency (MHz)	849
Horizontal Peak Gain (dBi)	-2.21
Vertical Peak Gain (dBi)	-2.65
Total Average Gain (dBi)	-3.86

Main WWAN Antenna (869MHz)



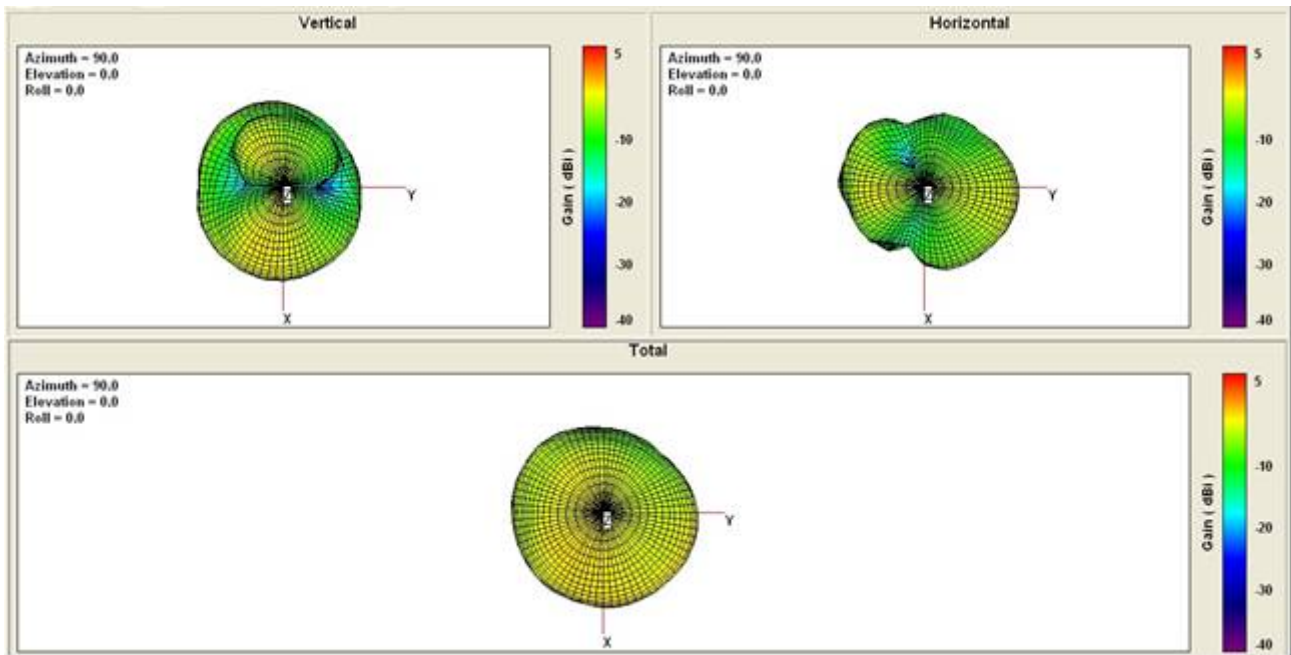
Frequency (MHz)	869
Horizontal Peak Gain (dBi)	-2.21
Vertical Peak Gain (dBi)	-1.84
Total Average Gain (dBi)	-3.60

Main WWAN Antenna (880MHz)



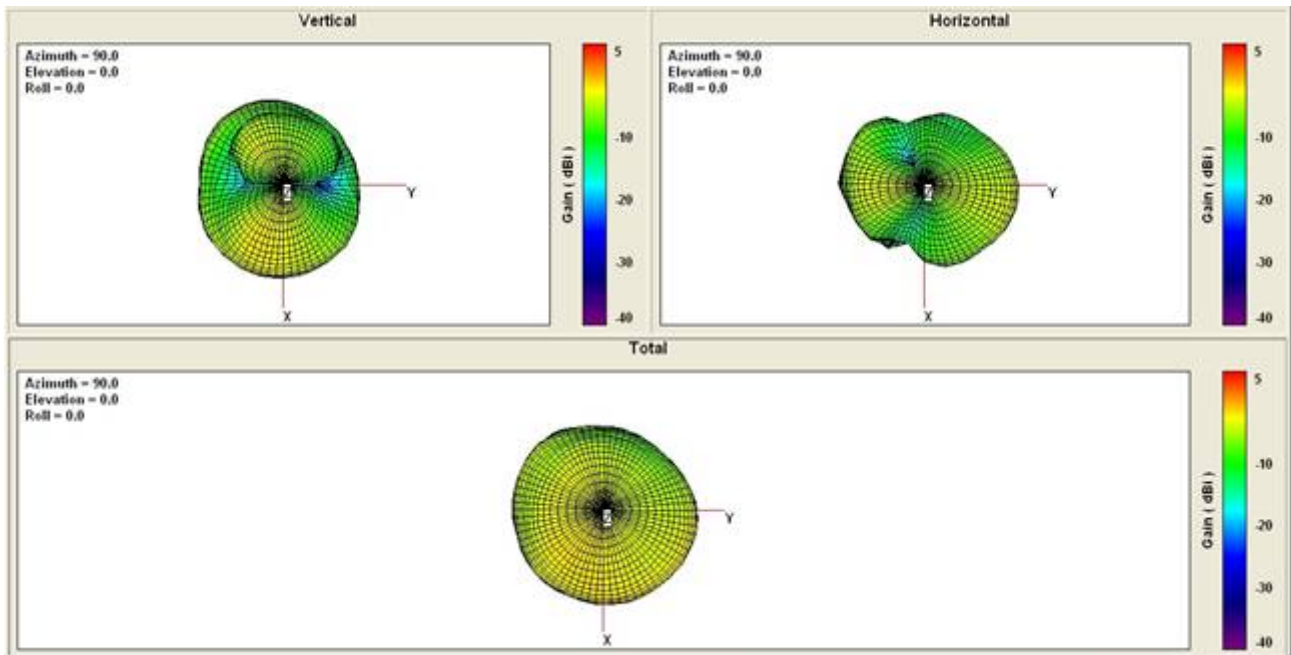
Frequency (MHz)	880
Horizontal Peak Gain (dBi)	-2.11
Vertical Peak Gain (dBi)	-1.91
Total Average Gain (dBi)	-3.67

Main WWAN Antenna (894MHz)



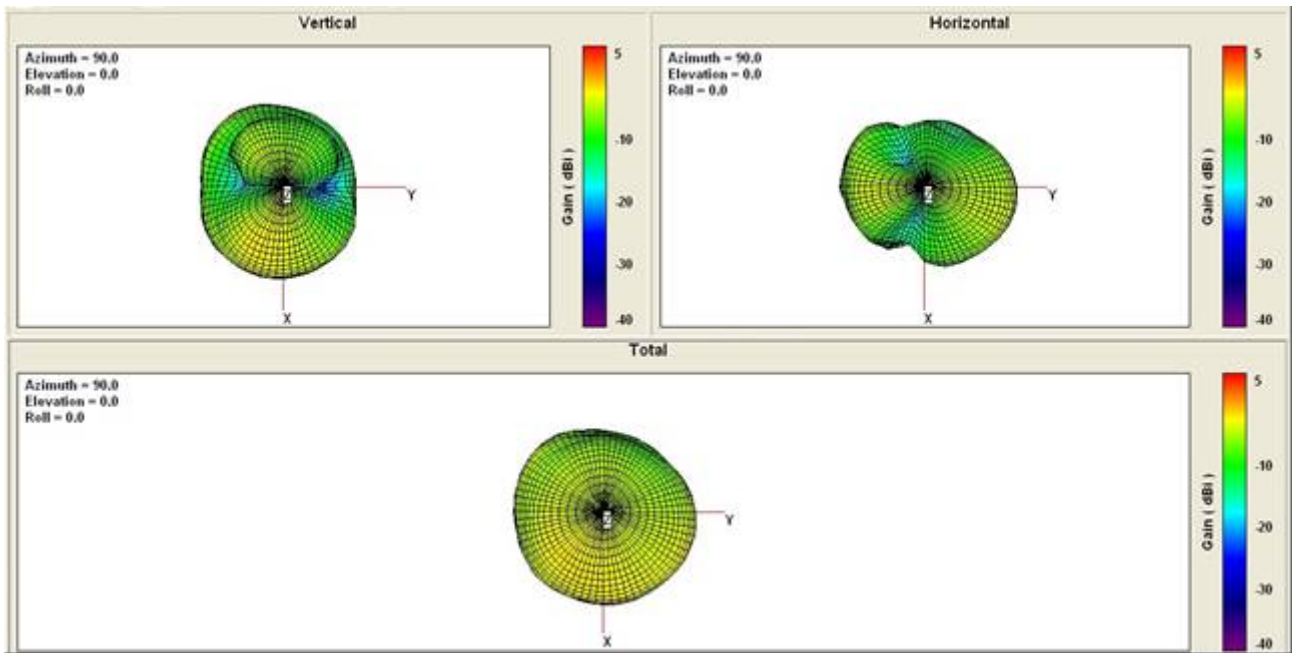
Frequency (MHz)	894
Horizontal Peak Gain (dBi)	-2.52
Vertical Peak Gain (dBi)	-2.09
Total Average Gain (dBi)	-4.02

Main WWAN Antenna (900MHz)



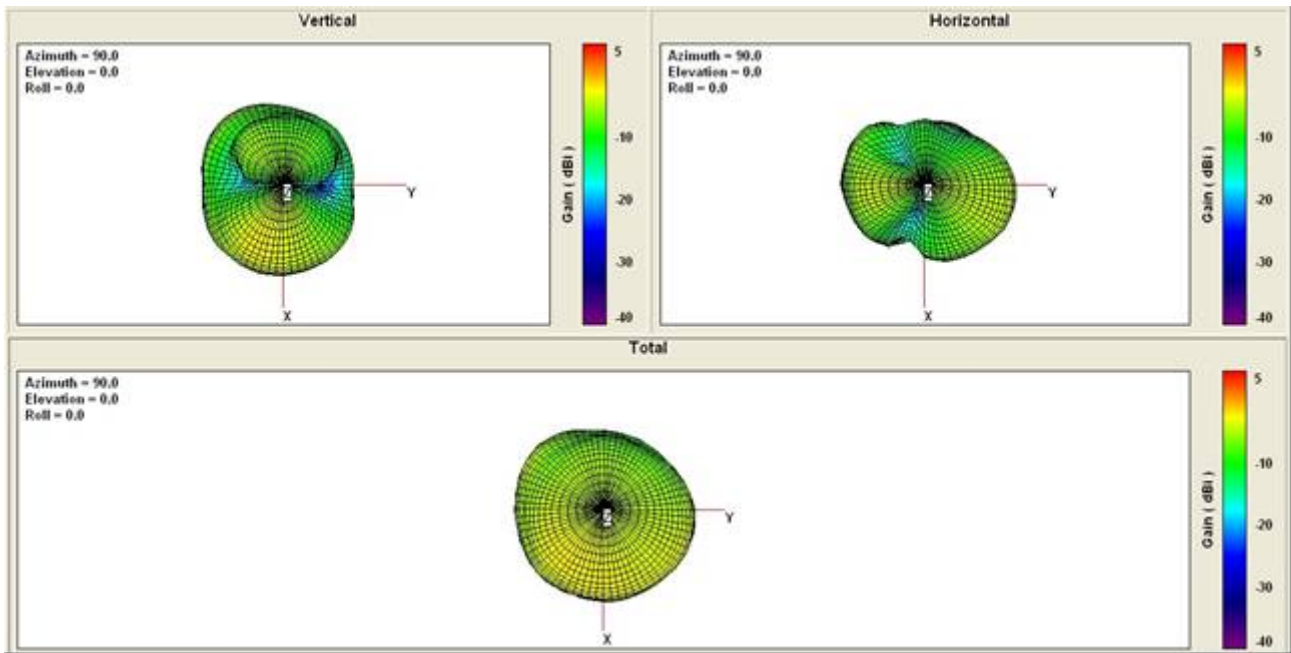
Frequency (MHz)	900
Horizontal Peak Gain (dBi)	-2.64
Vertical Peak Gain (dBi)	-2.17
Total Average Gain (dBi)	-4.22

Main WWAN Antenna (915MHz)



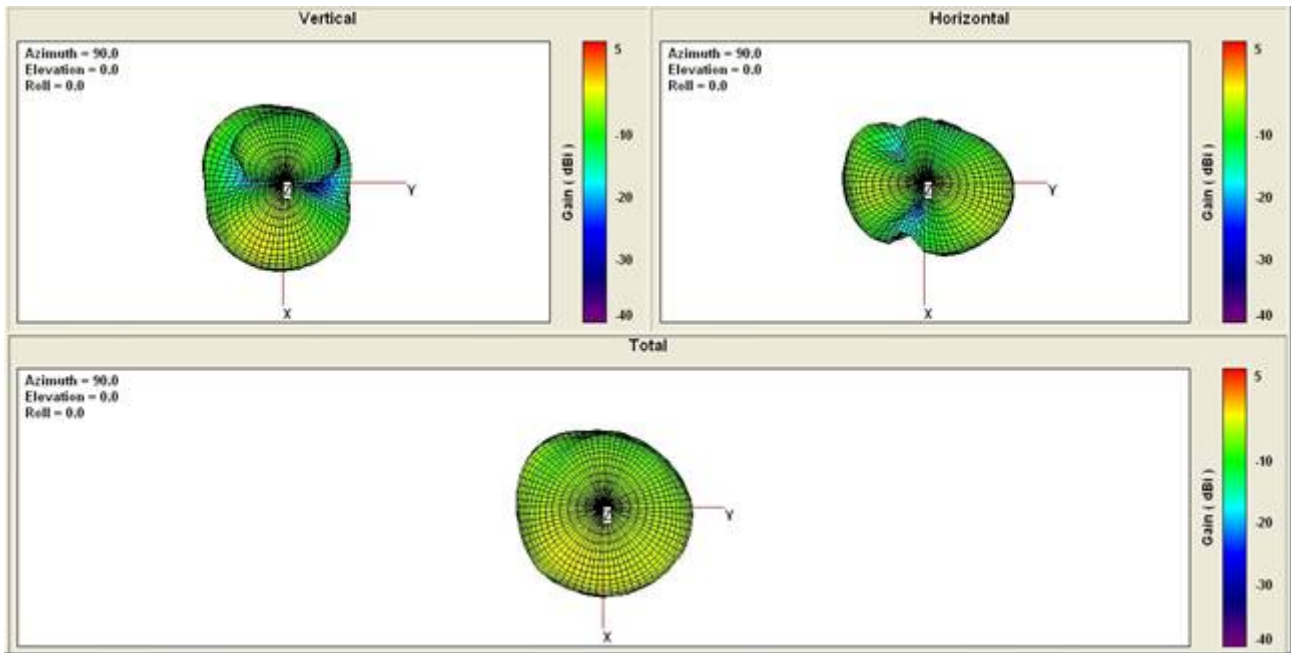
Frequency (MHz)	915
Horizontal Peak Gain (dBi)	-2.95
Vertical Peak Gain (dBi)	-2.30
Total Average Gain (dBi)	-4.66

Main WWAN Antenna (925MHz)



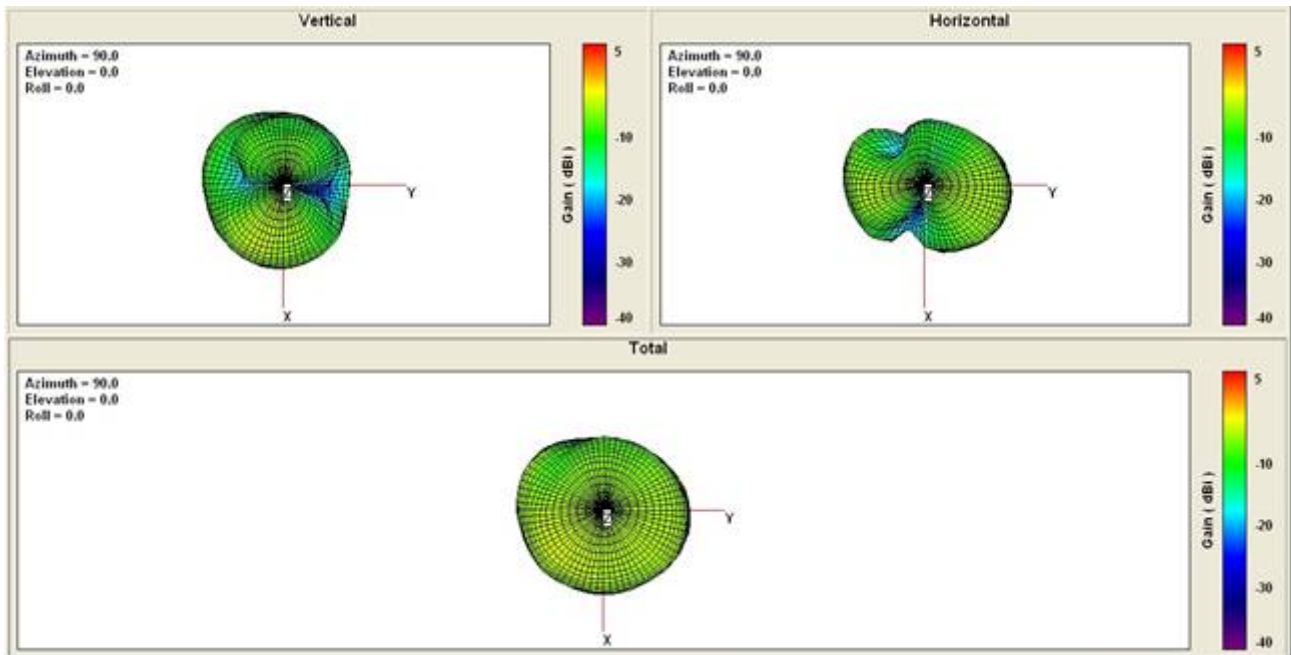
Frequency (MHz)	925
Horizontal Peak Gain (dBi)	-3.34
Vertical Peak Gain (dBi)	-2.53
Total Average Gain (dBi)	-5.07

Main WWAN Antenna (940MHz)



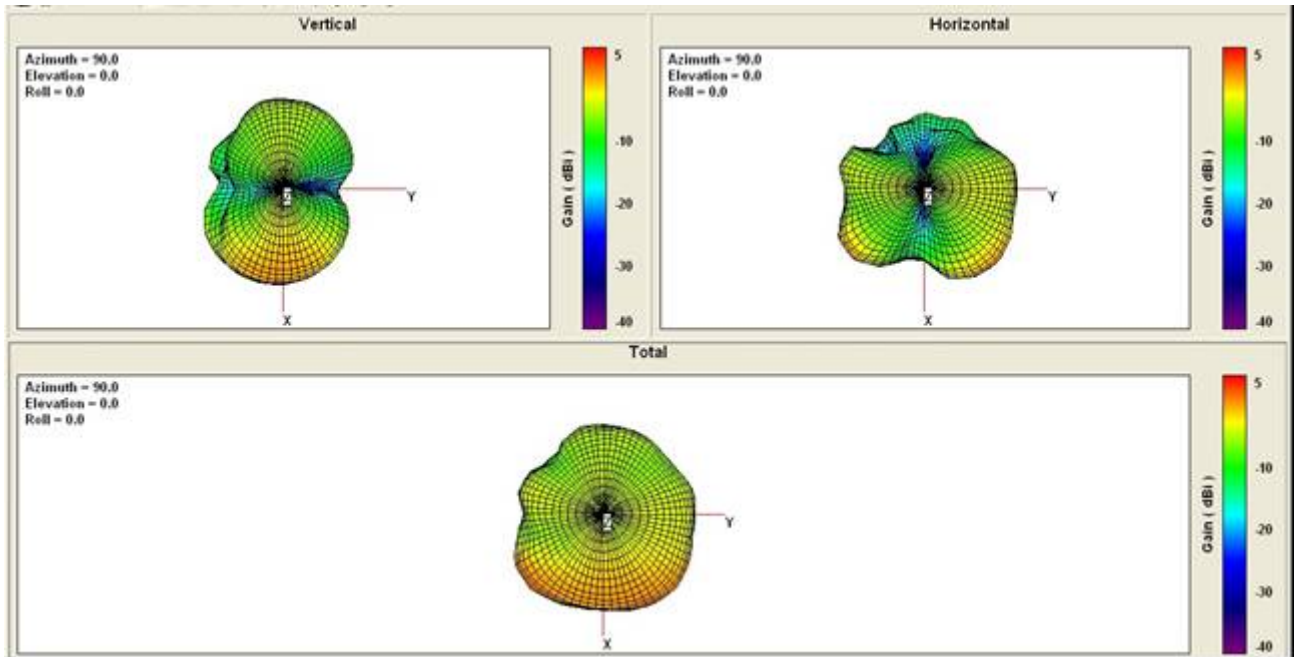
Frequency (MHz)	940
Horizontal Peak Gain (dBi)	-4.07
Vertical Peak Gain (dBi)	-2.94
Total Average Gain (dBi)	-5.73

Main WWAN Antenna (960MHz)



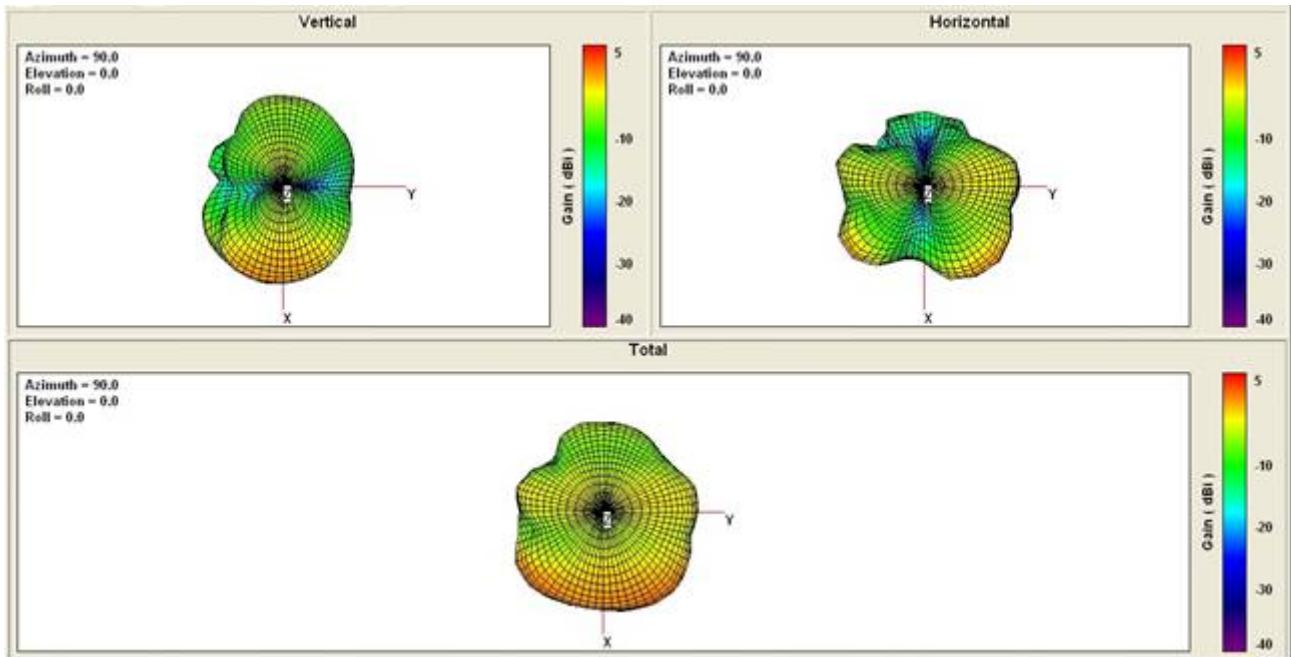
Frequency (MHz)	960
Horizontal Peak Gain (dBi)	-4.50
Vertical Peak Gain (dBi)	-4.00
Total Average Gain (dBi)	-6.84

Main WWAN Antenna (1710MHz)



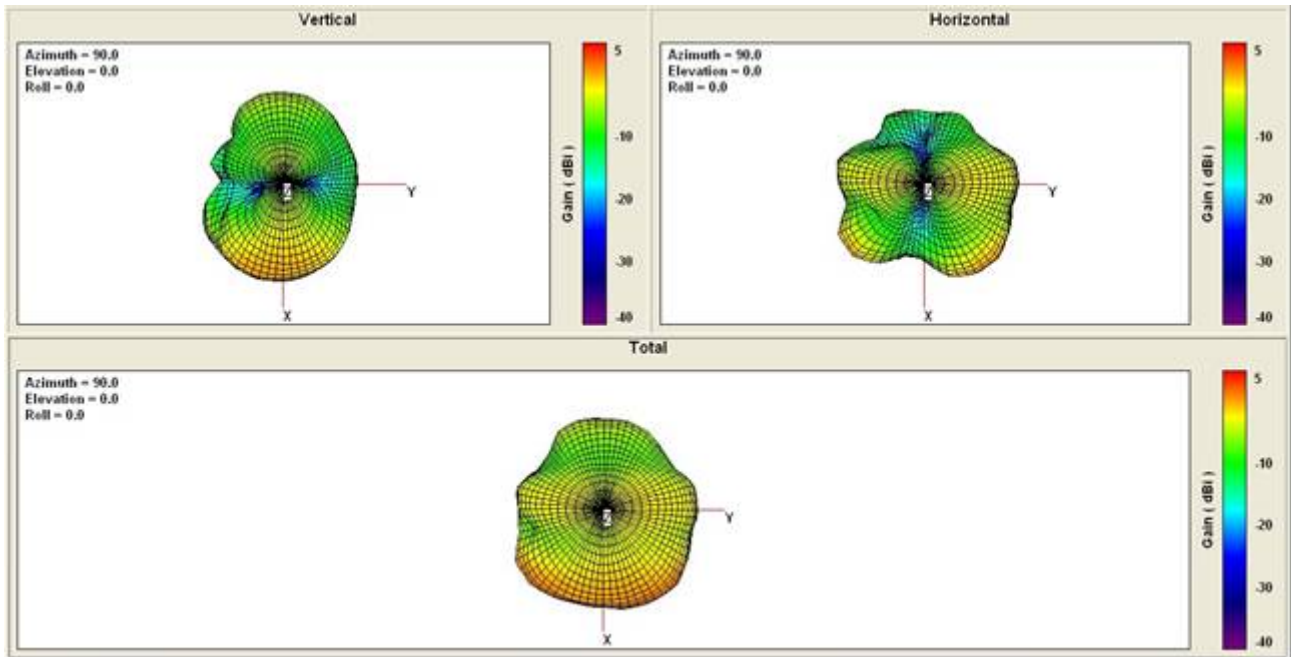
Frequency (MHz)	1710
Horizontal Peak Gain (dBi)	0.64
Vertical Peak Gain (dBi)	0.11
Total Average Gain (dBi)	-3.60

Main WWAN Antenna (1750MHz)



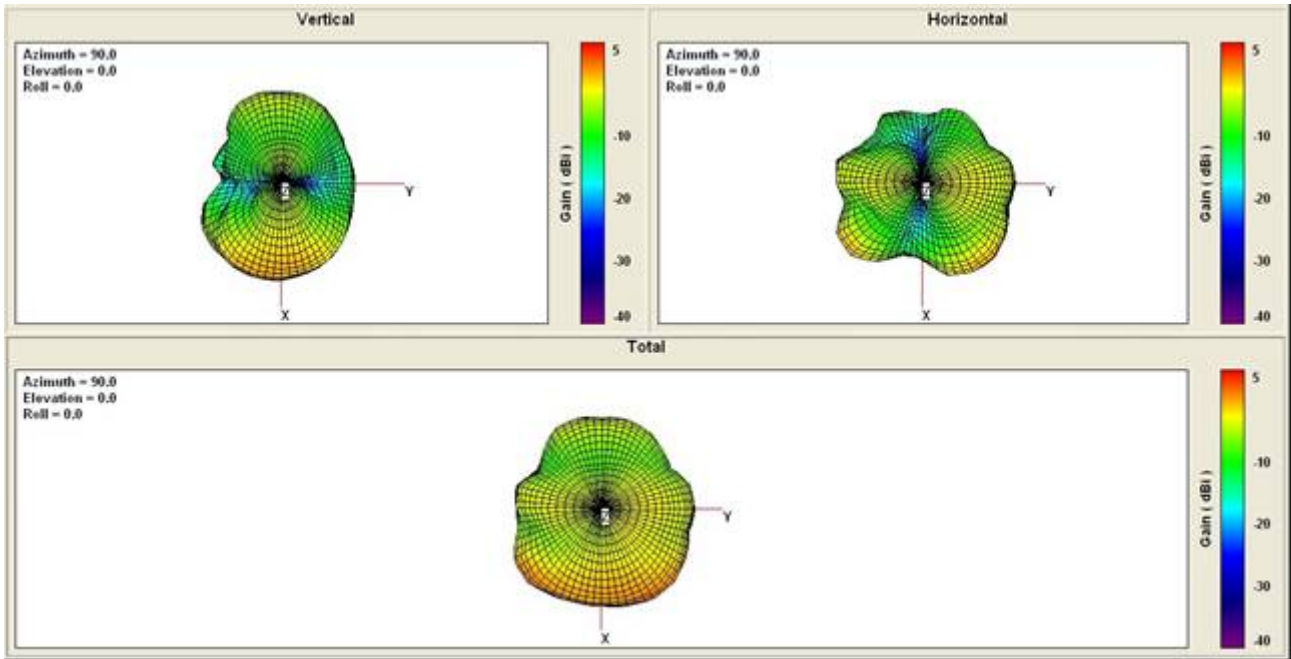
Frequency (MHz)	1750
Horizontal Peak Gain (dBi)	1.60
Vertical Peak Gain (dBi)	0.53
Total Average Gain (dBi)	-3.27

Main WWAN Antenna (1785MHz)



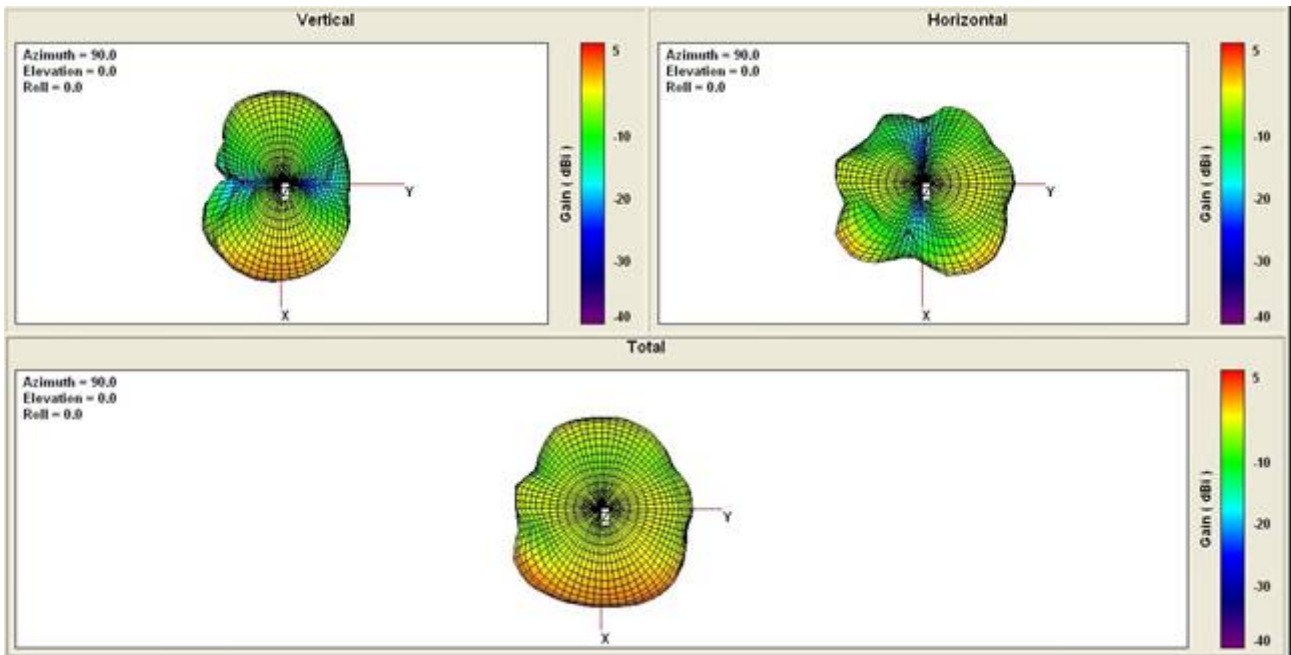
Frequency (MHz)	1785
Horizontal Peak Gain (dBi)	1.21
Vertical Peak Gain (dBi)	0.35
Total Average Gain (dBi)	-3.50

Main WWAN Antenna (1805MHz)



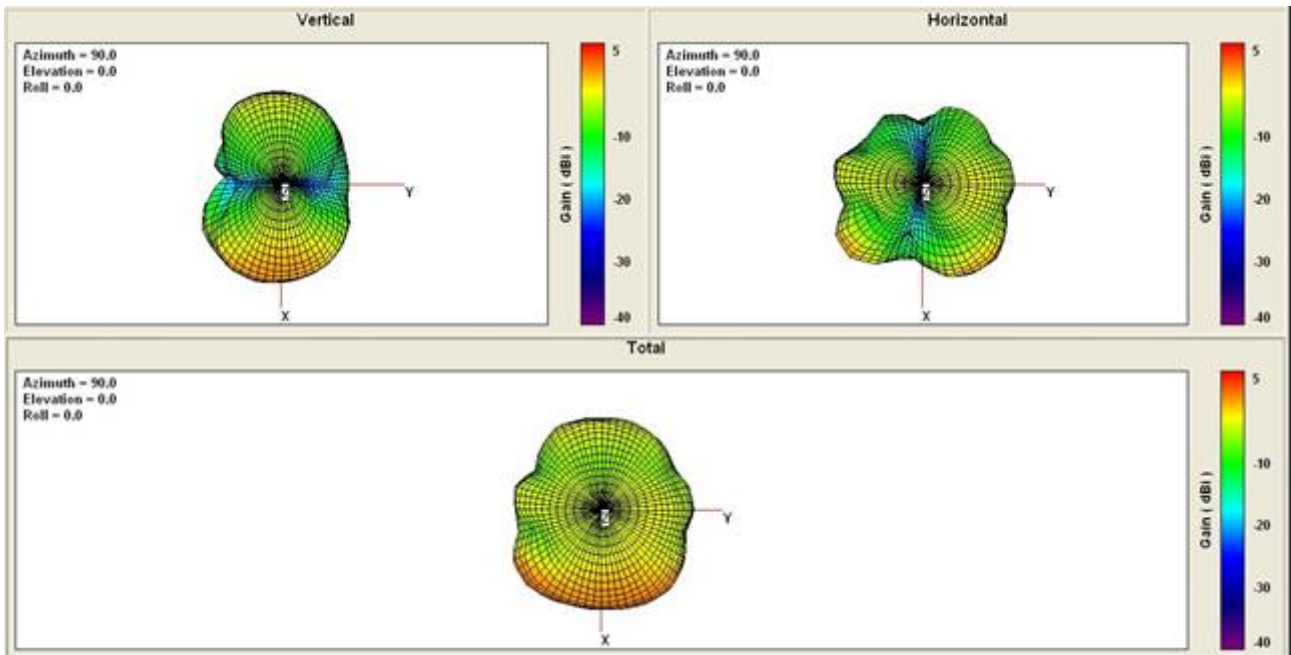
Frequency (MHz)	1805
Horizontal Peak Gain (dBi)	0.93
Vertical Peak Gain (dBi)	0.16
Total Average Gain (dBi)	-3.70

Main WWAN Antenna (1840MHz)



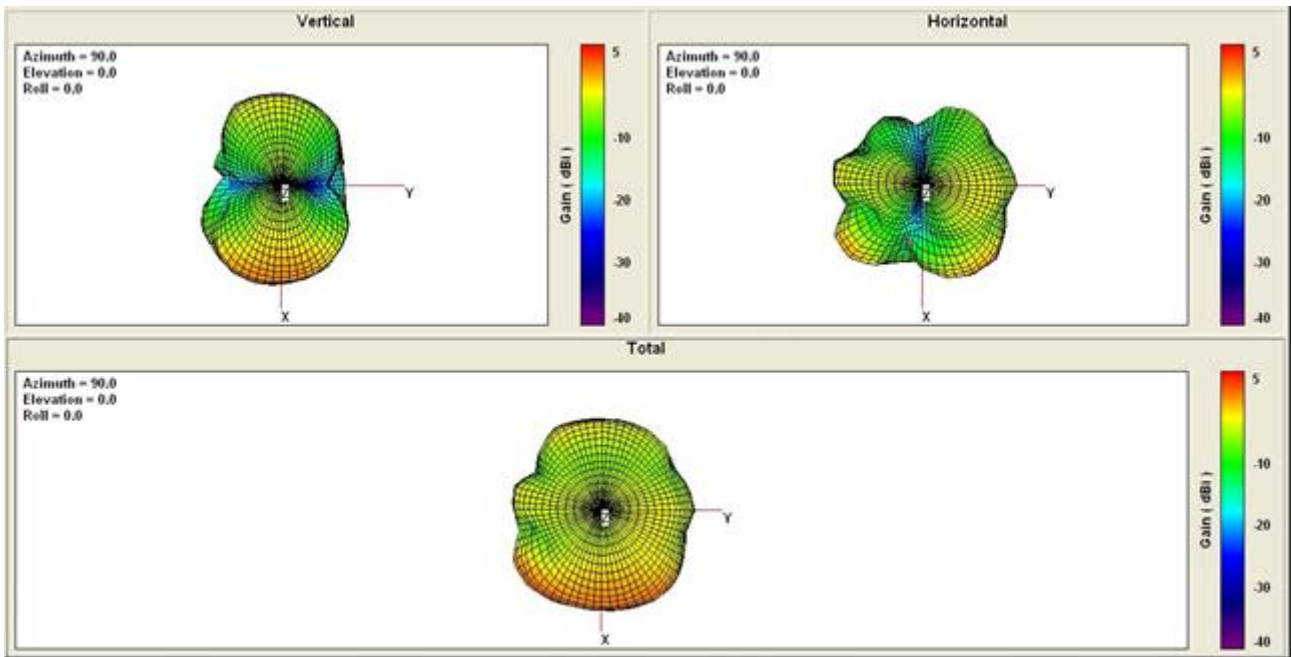
Frequency (MHz)	1840
Horizontal Peak Gain (dBi)	1.26
Vertical Peak Gain (dBi)	0.46
Total Average Gain (dBi)	-3.50

Main WWAN Antenna (1850MHz)



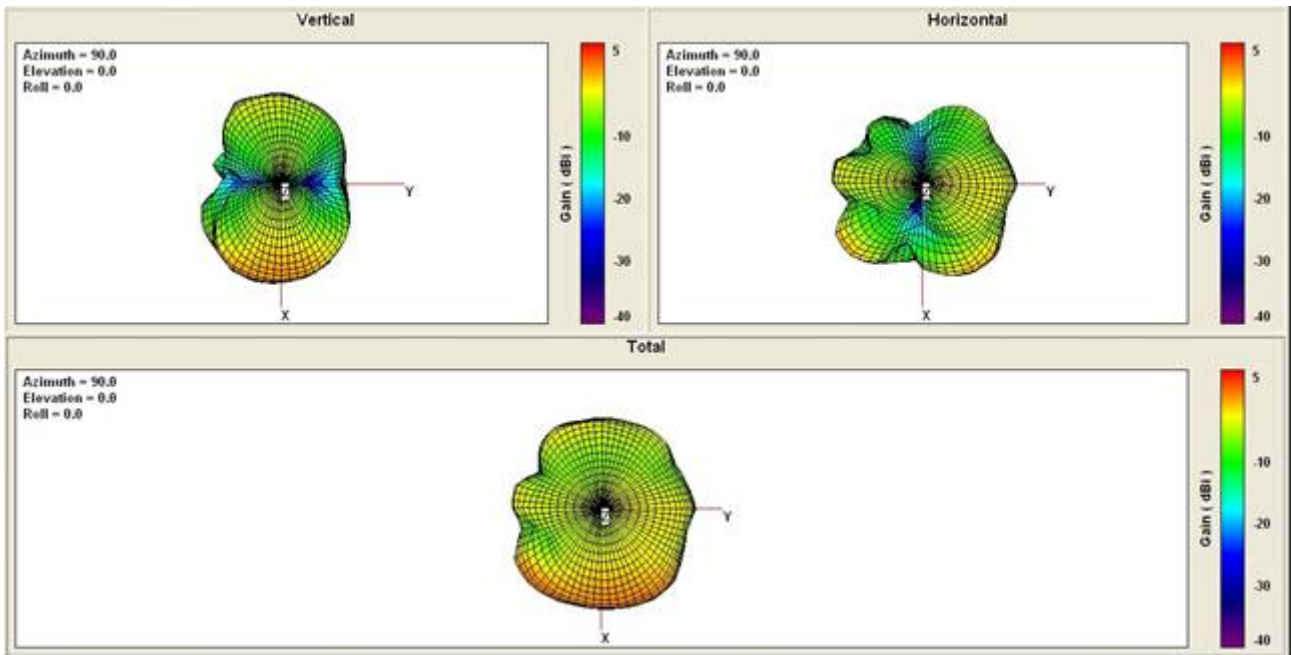
Frequency (MHz)	1850
Horizontal Peak Gain (dBi)	1.48
Vertical Peak Gain (dBi)	0.73
Total Average Gain (dBi)	-3.31

Main WWAN Antenna (1880MHz)



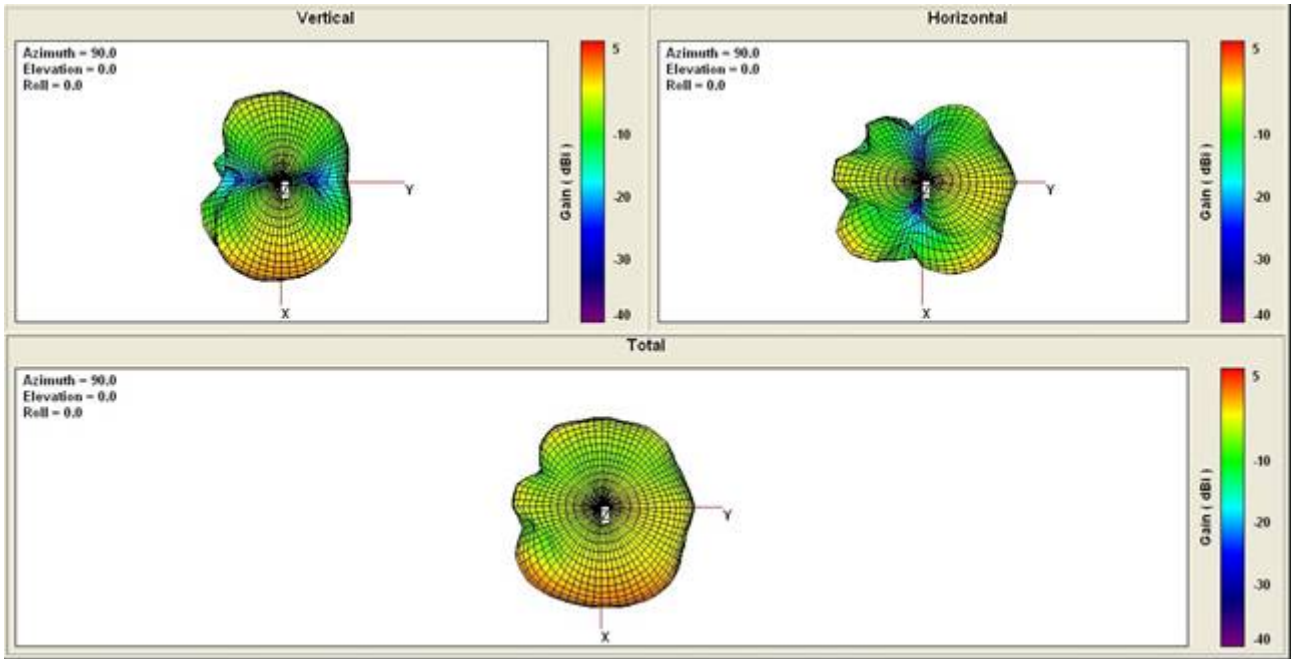
Frequency (MHz)	1880
Horizontal Peak Gain (dBi)	1.56
Vertical Peak Gain (dBi)	0.98
Total Average Gain (dBi)	-3.15

Main WWAN Antenna (1910MHz)



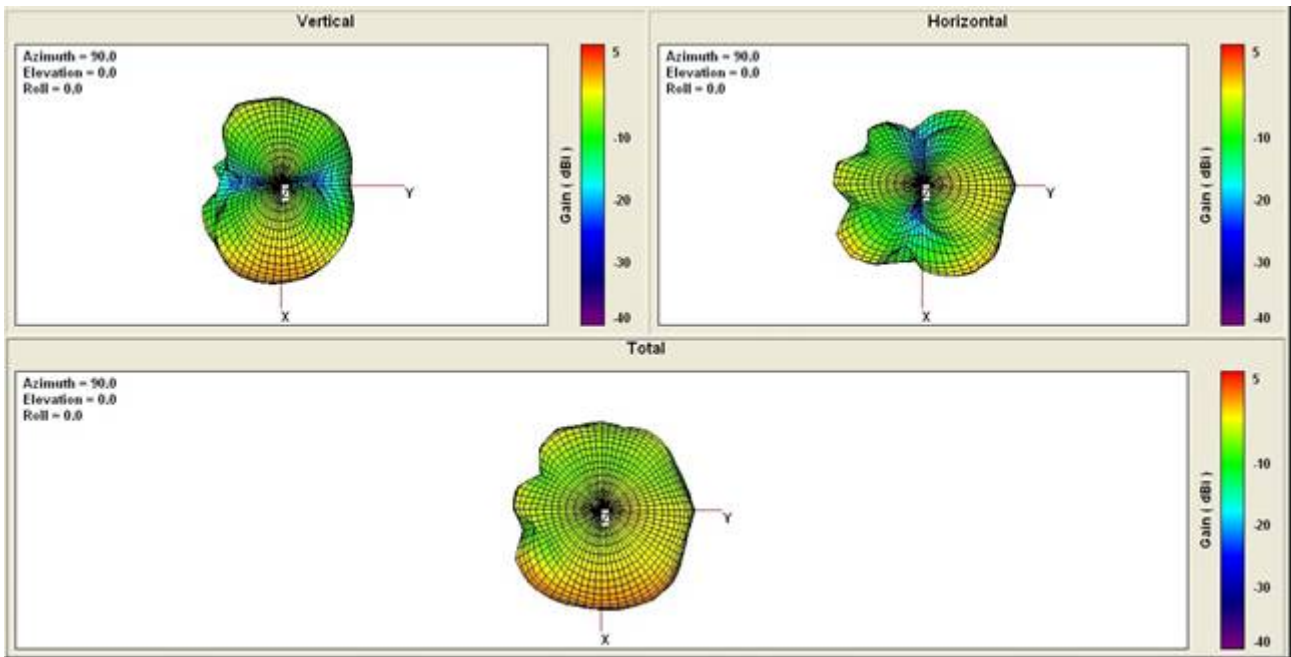
Frequency (MHz)	1910
Horizontal Peak Gain (dBi)	1.41
Vertical Peak Gain (dBi)	0.49
Total Average Gain (dBi)	-3.18

Main WWAN Antenna (1920MHz)



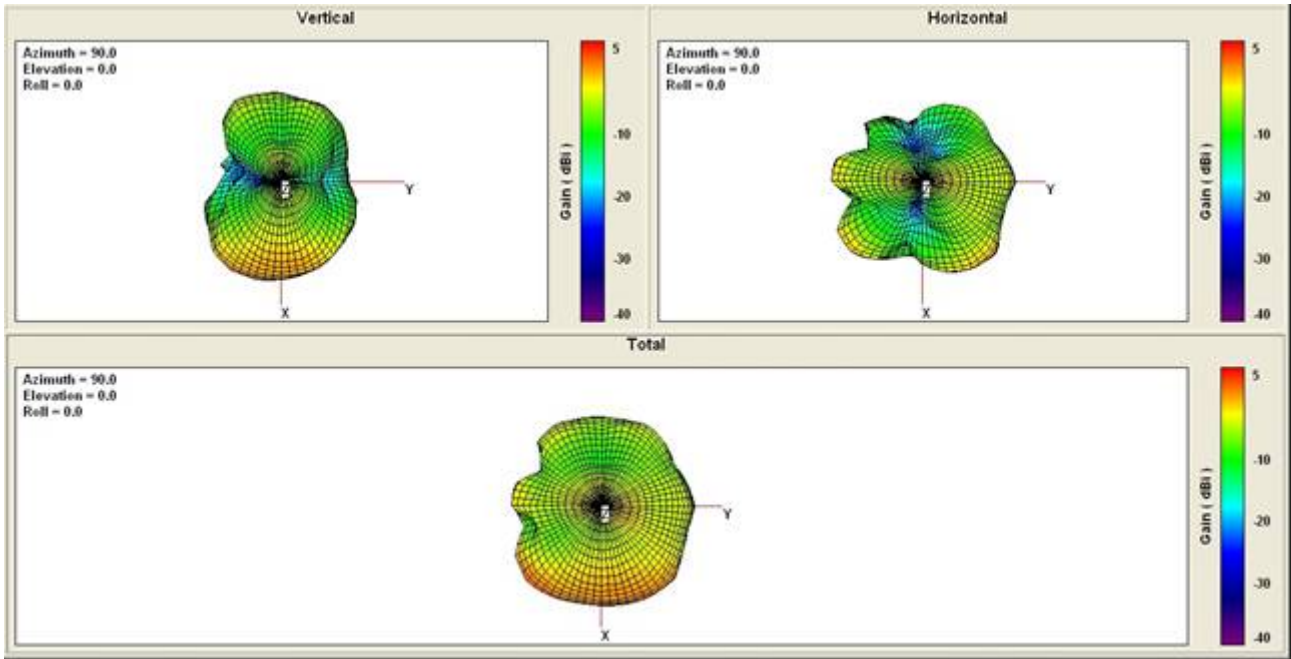
Frequency (MHz)	1920
Horizontal Peak Gain (dBi)	1.15
Vertical Peak Gain (dBi)	0.11
Total Average Gain (dBi)	-3.36

Main WWAN Antenna (1930MHz)



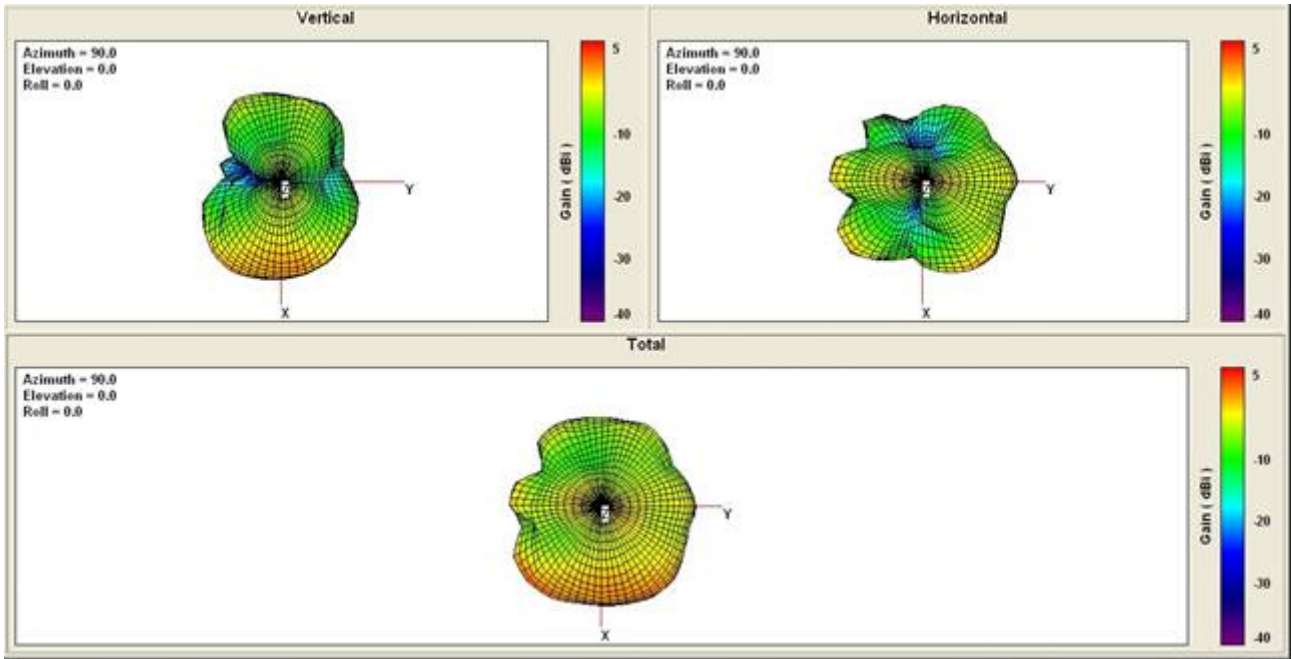
Frequency (MHz)	1930
Horizontal Peak Gain (dBi)	0.87
Vertical Peak Gain (dBi)	-0.12
Total Average Gain (dBi)	-3.61

Main WWAN Antenna (1950MHz)



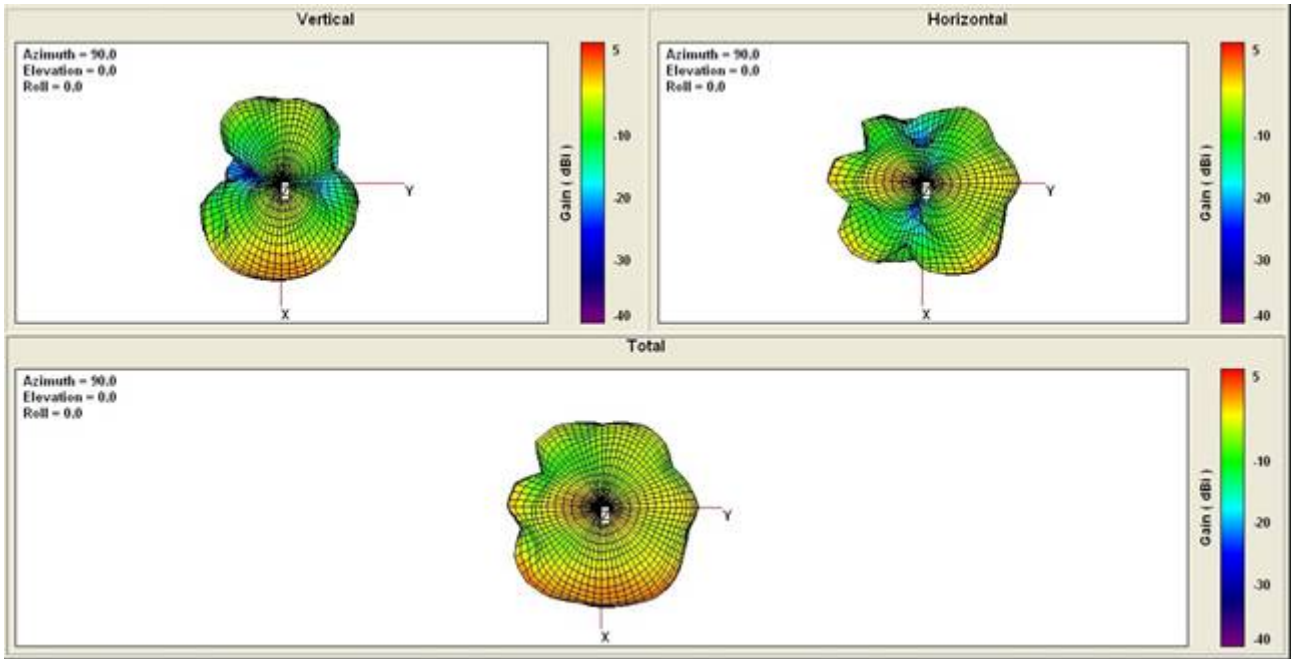
Frequency (MHz)	1950
Horizontal Peak Gain (dBi)	1.06
Vertical Peak Gain (dBi)	0.47
Total Average Gain (dBi)	-3.68

Main WWAN Antenna (1960MHz)



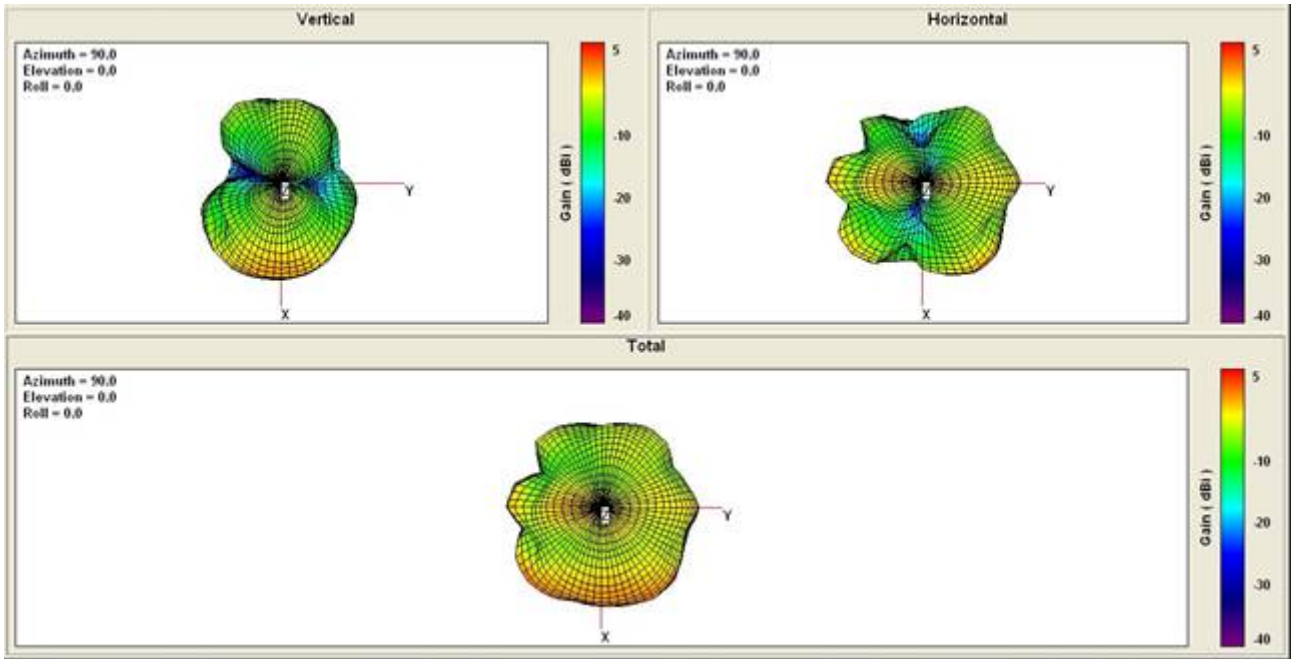
Frequency (MHz)	1960
Horizontal Peak Gain (dBi)	1.27
Vertical Peak Gain (dBi)	0.74
Total Average Gain (dBi)	-3.44

Main WWAN Antenna (1980MHz)



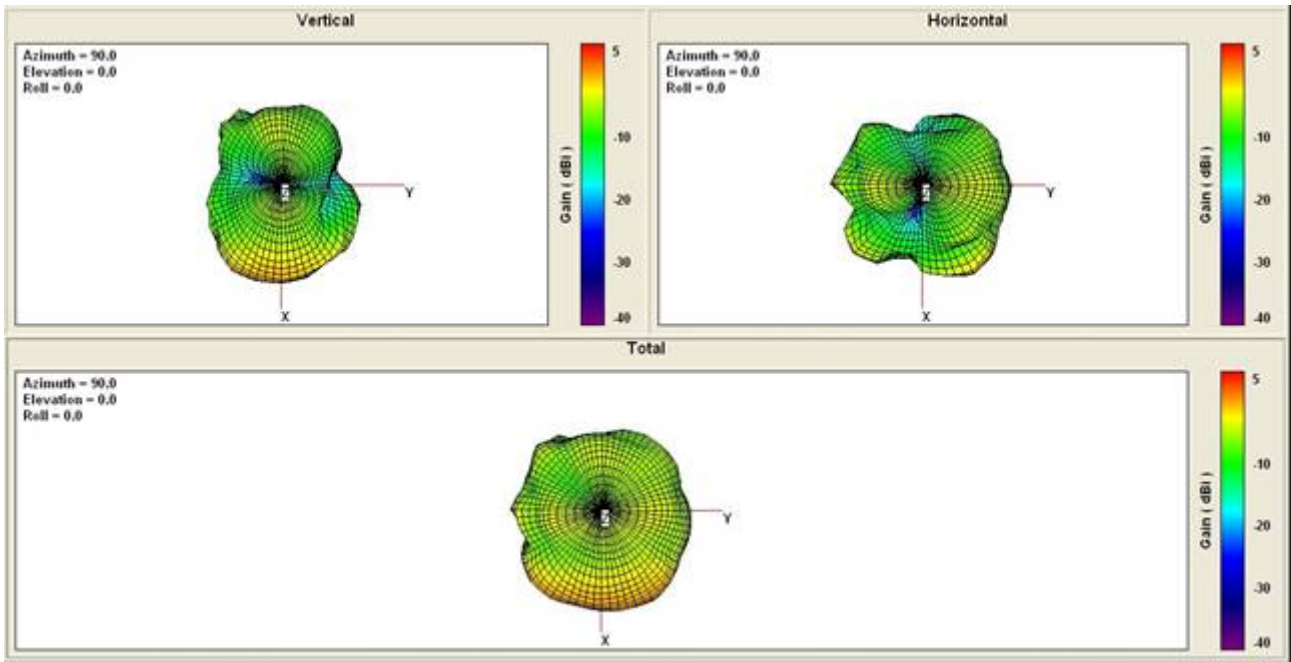
Frequency (MHz)	1980
Horizontal Peak Gain (dBi)	1.58
Vertical Peak Gain (dBi)	0.34
Total Average Gain (dBi)	-3.32

Main WWAN Antenna (1990MHz)



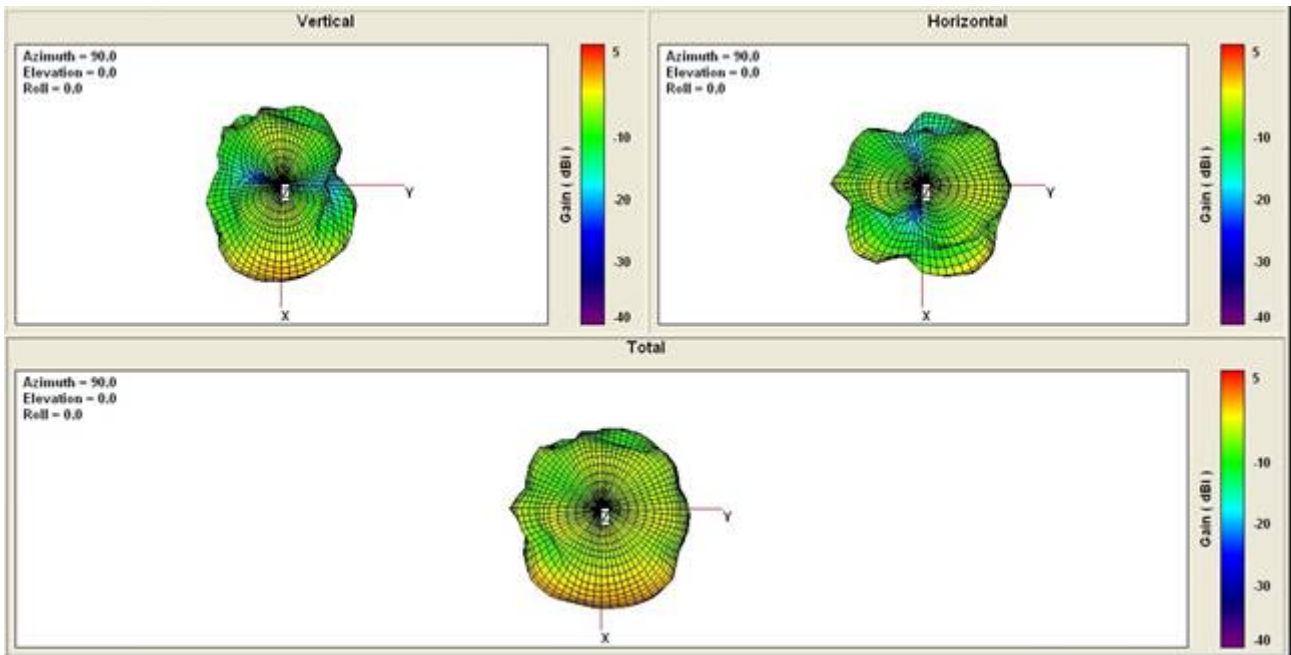
Frequency (MHz)	1990
Horizontal Peak Gain (dBi)	1.51
Vertical Peak Gain (dBi)	0.05
Total Average Gain (dBi)	-3.46

Main WWAN Antenna (2110MHz)



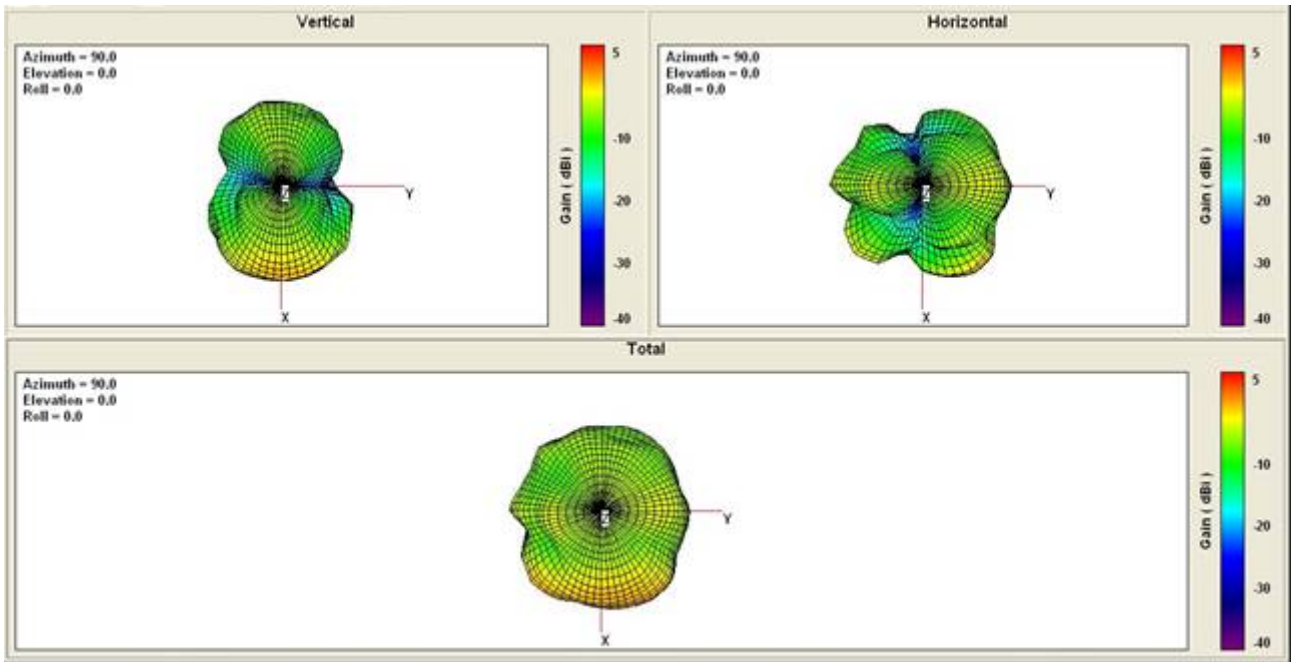
Frequency (MHz)	2110
Horizontal Peak Gain (dBi)	1.24
Vertical Peak Gain (dBi)	-0.06
Total Average Gain (dBi)	-4.35

Main WWAN Antenna (2140MHz)



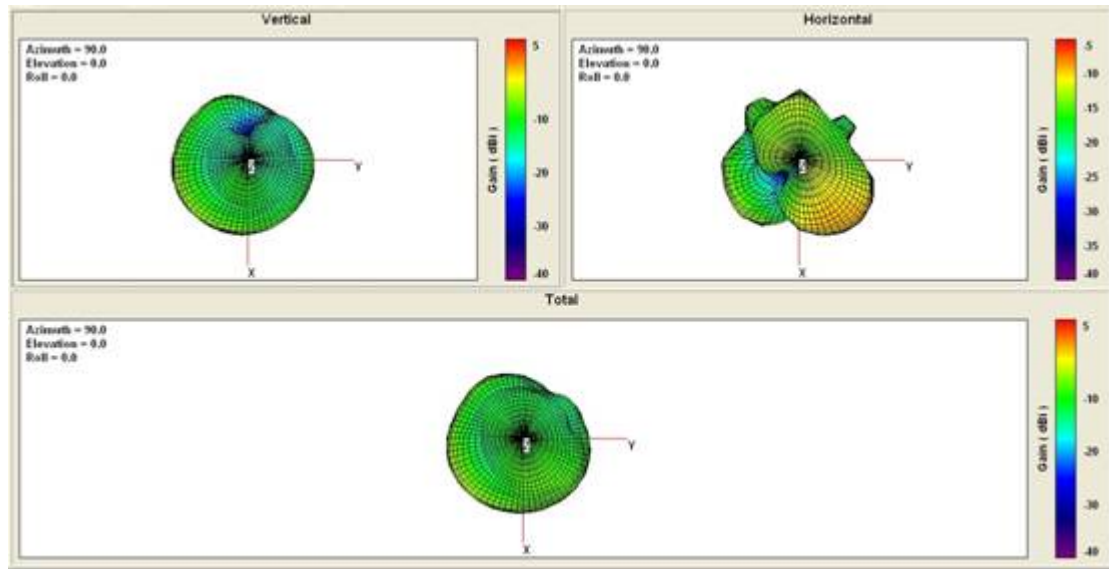
Frequency (MHz)	2140
Horizontal Peak Gain (dBi)	0.94
Vertical Peak Gain (dBi)	-0.37
Total Average Gain (dBi)	-4.66

Main WWAN Antenna (2170MHz)



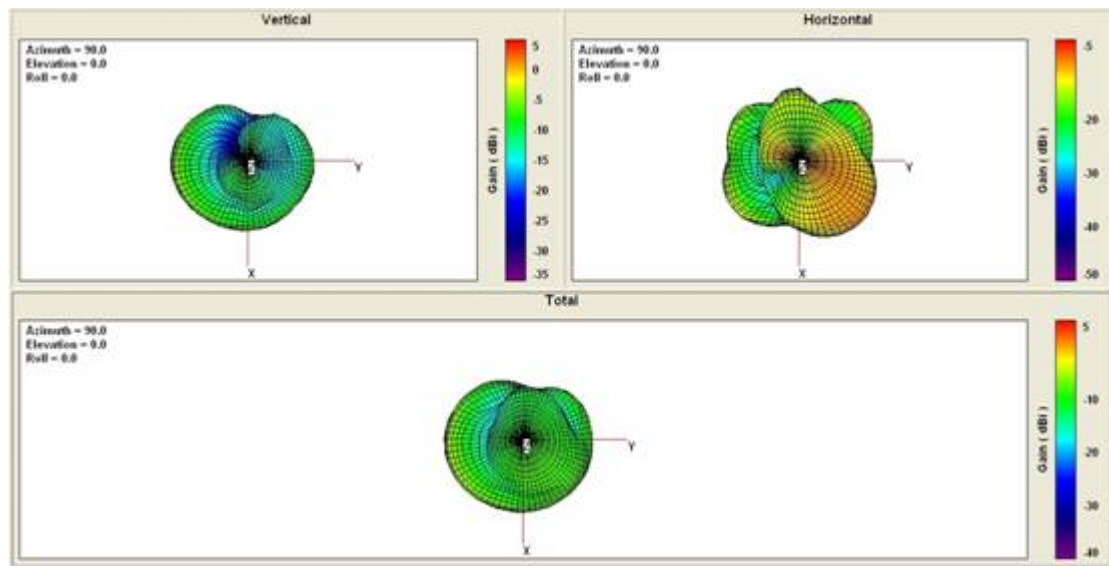
Frequency (MHz)	2170
Horizontal Peak Gain (dBi)	0.83
Vertical Peak Gain (dBi)	-0.19
Total Average Gain (dBi)	-4.82

Aux WWAN Antenna (869MHz)



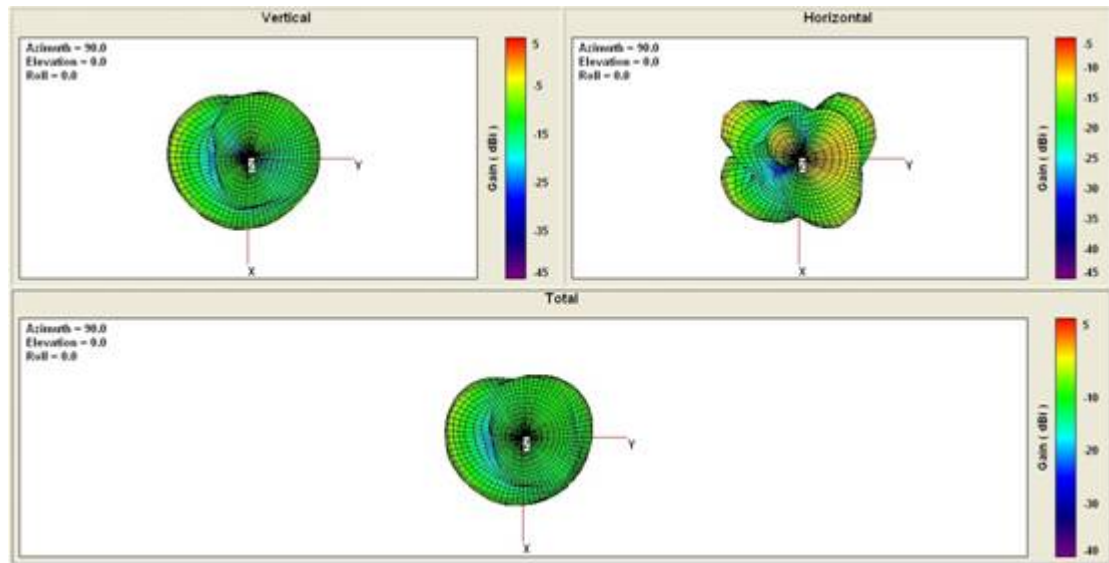
Frequency (MHz)	869
Horizontal Peak Gain (dBi)	-7.02
Vertical Peak Gain (dBi)	-3.55
Total Average Gain (dBi)	-7.72

Aux WWAN Antenna (880MHz)



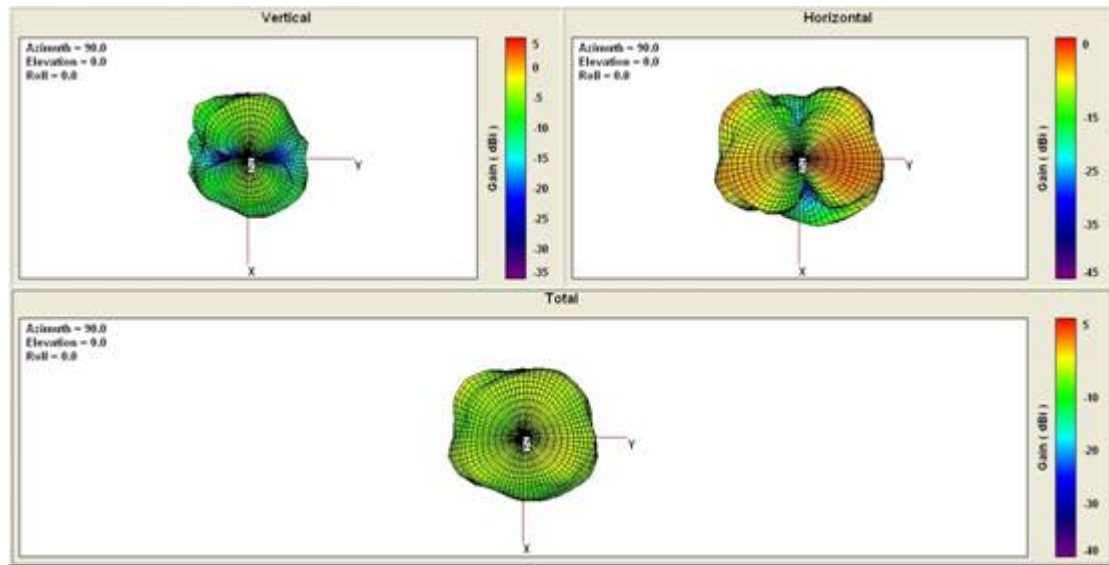
Frequency (MHz)	880
Horizontal Peak Gain (dBi)	-6.82
Vertical Peak Gain (dBi)	-2.94
Total Average Gain (dBi)	-7.56

Aux WWAN Antenna (894MHz)



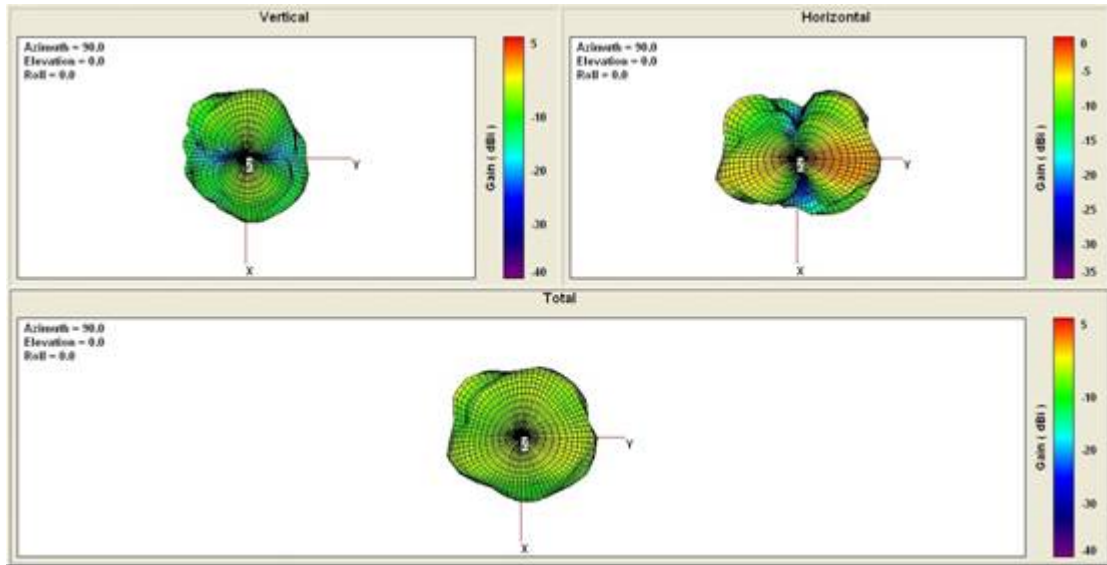
Frequency (MHz)	894
Horizontal Peak Gain (dBi)	-6.32
Vertical Peak Gain (dBi)	-2.87
Total Average Gain (dBi)	-7.47

Aux WWAN Antenna (1930MHz)



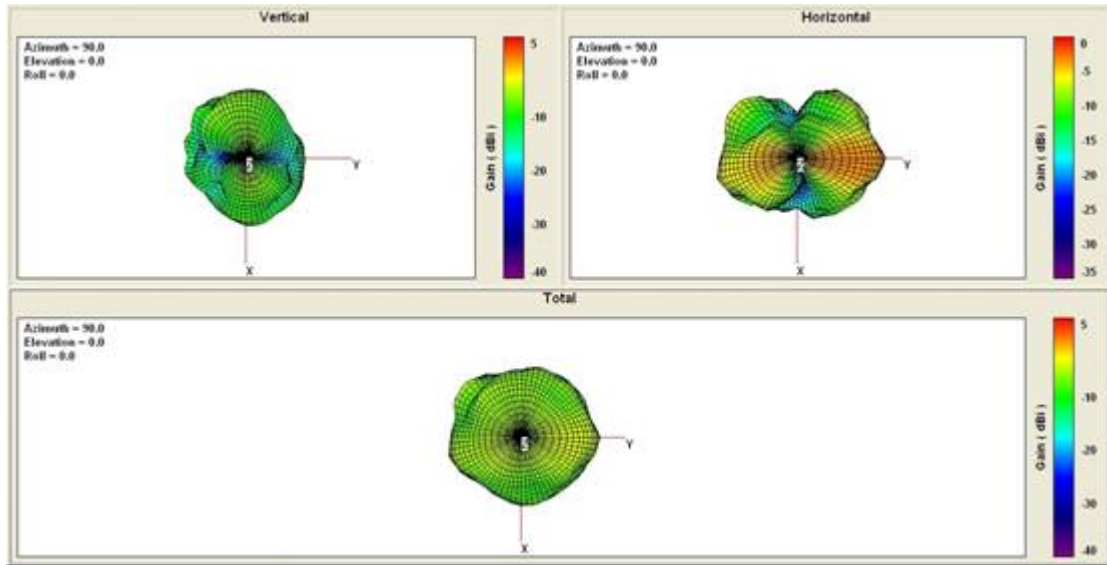
Frequency (MHz)	1930
Horizontal Peak Gain (dBi)	-3.36
Vertical Peak Gain (dBi)	-3.85
Total Average Gain (dBi)	-6.45

Aux WWAN Antenna (1960MHz)



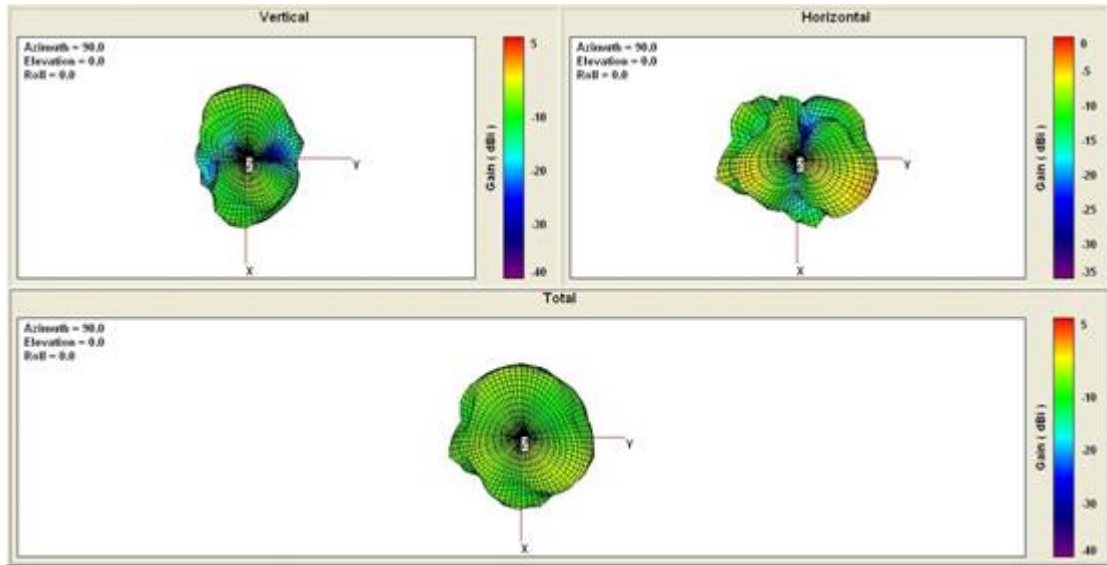
Frequency (MHz)	1960
Horizontal Peak Gain (dBi)	-3.52
Vertical Peak Gain (dBi)	-3.67
Total Average Gain (dBi)	-6.87

Aux WWAN Antenna (1990MHz)



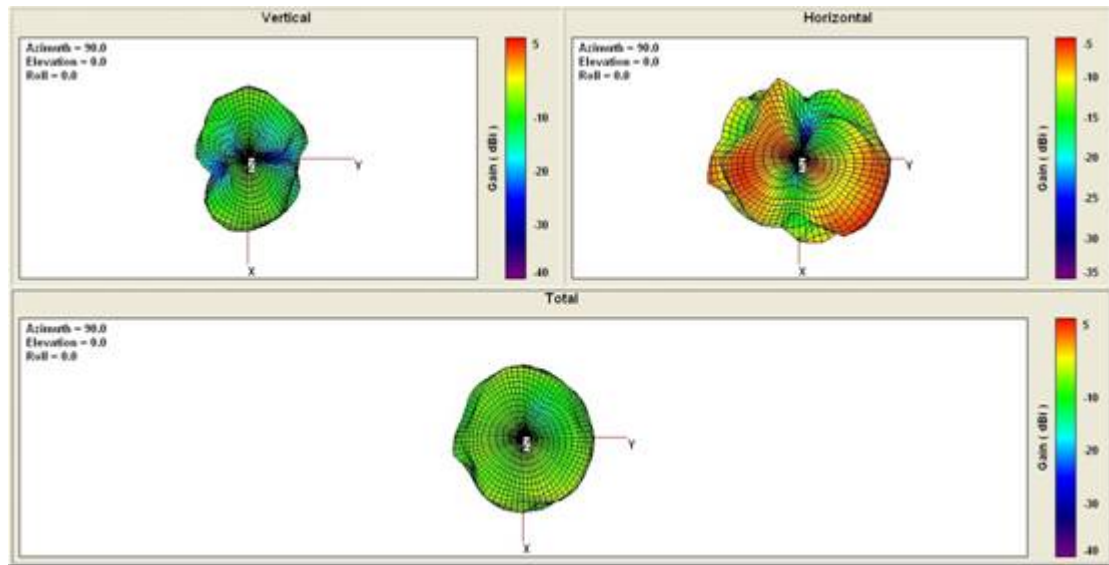
Frequency (MHz)	1990
Horizontal Peak Gain (dBi)	-3.13
Vertical Peak Gain (dBi)	-4.26
Total Average Gain (dBi)	-7.09

Aux WWAN Antenna (2110MHz)



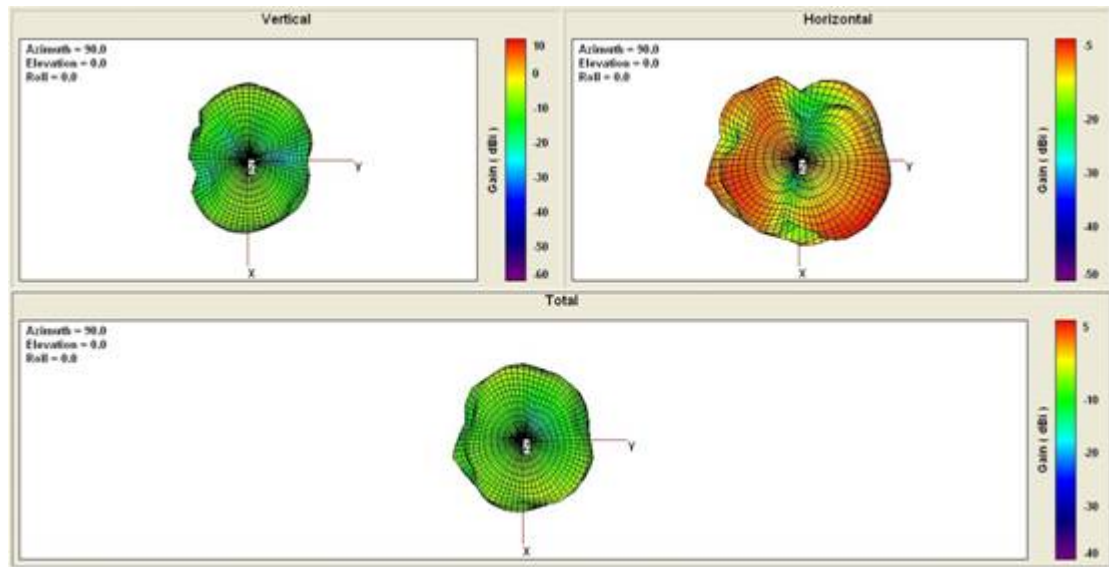
Frequency (MHz)	2110
Horizontal Peak Gain (dBi)	-4.37
Vertical Peak Gain (dBi)	-4.76
Total Average Gain (dBi)	-8.09

Aux WWAN Antenna (2140MHz)



Frequency (MHz)	2140
Horizontal Peak Gain (dBi)	-5.29
Vertical Peak Gain (dBi)	-5.54
Total Average Gain (dBi)	-8.13

Aux WWAN Antenna (2170MHz)



Frequency (MHz)	2170
Horizontal Peak Gain (dBi)	-5.16
Vertical Peak Gain (dBi)	-4.73
Total Average Gain (dBi)	-8.01