Antenna PERFORMANCE TEST REPORT

Product Name	VFC01
Applicant	Innocomm
Manufacturer	Innocomm
Test site	Innocomm
Model	Yeti_console_ANT1/ Yeti_console_ANT2/ Yeti_console_BT
Antenna type	ANT1_PIFA / ANT2_PIFA / BT_PIFA
Address	1F, No.6, Hsin Ann Rd., Hsinchu Science Park, Hsinchu 30078, Taiwan

Approved by	Reviewed by	Issued by
Taka Wei		Ella Lin

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1. INTRODUCTION

1.1 TEST EQUIPMENT

Passive Test:

Network Analyzer: Keysight E507C (100KHz ~ 8.5GHz)

Passive Chamber: AMS-8500

1.2 TEST CONDITION

Support Band:

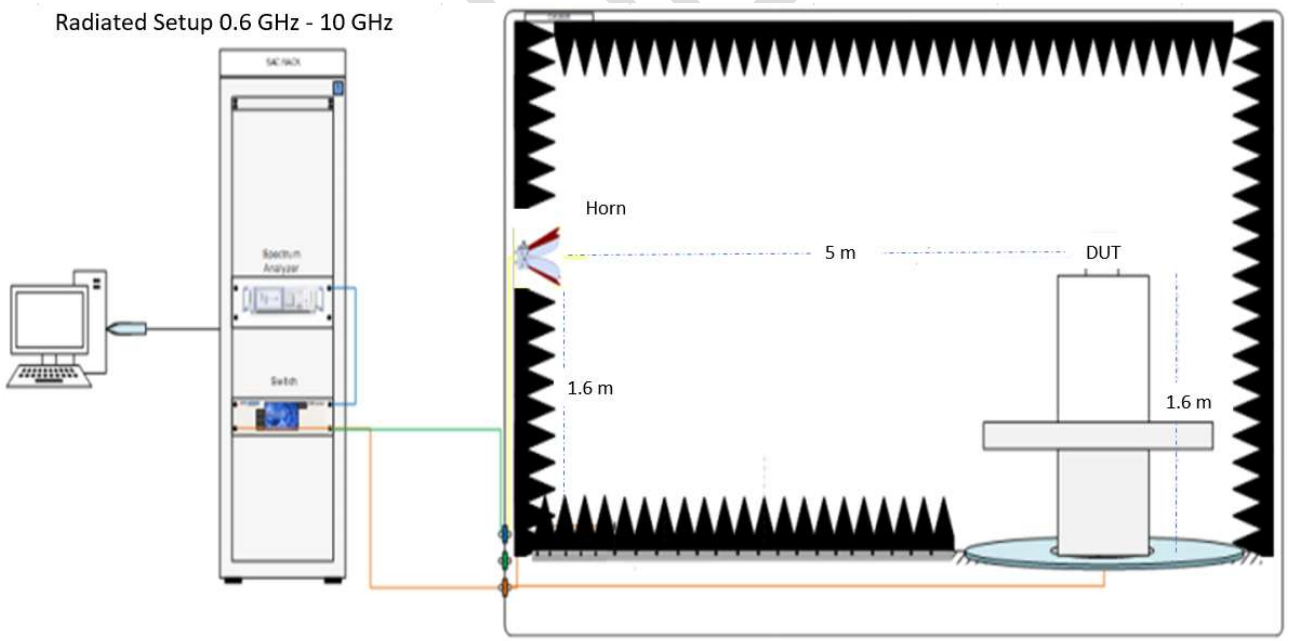
Yeti_console_ANT1 / ANT2 2402MHz~2480MHz, 4910MHz~5850MHz

Yeti_console_BT 2402MHz~2480MHz

Temperature: 25°C

1.3 TEST SETUP AND ENVIRONMENTS

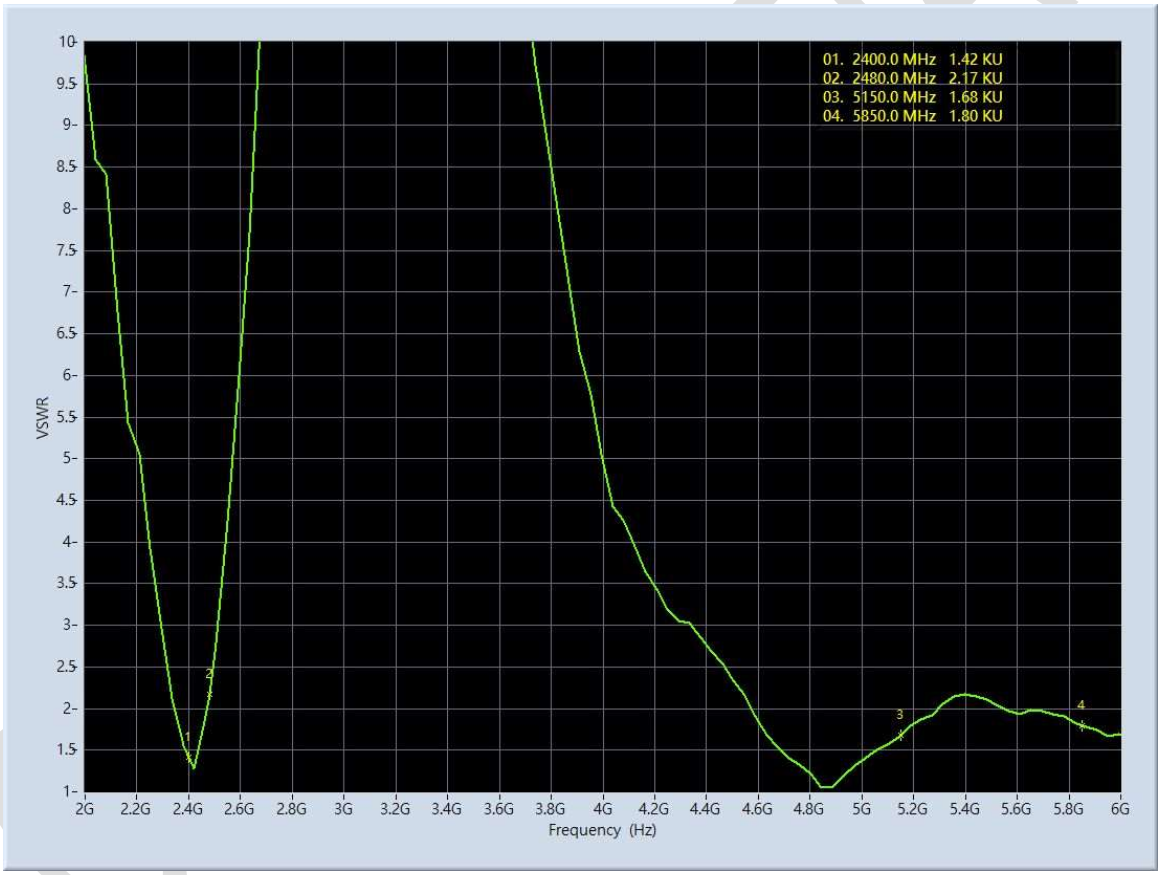
The testing of antenna gain should be made at a ETS qualified lab with an RF anechoic chamber with at least 5-meter separation from the receive antenna to the antenna under test. The antenna gain report from unqualified lab can't be referenced a passing. Besides, all test equipment including horn antennas, adapters, cables, network analyzers, and receivers shall be calibrated per manufacturer's minimum calibration requirements.



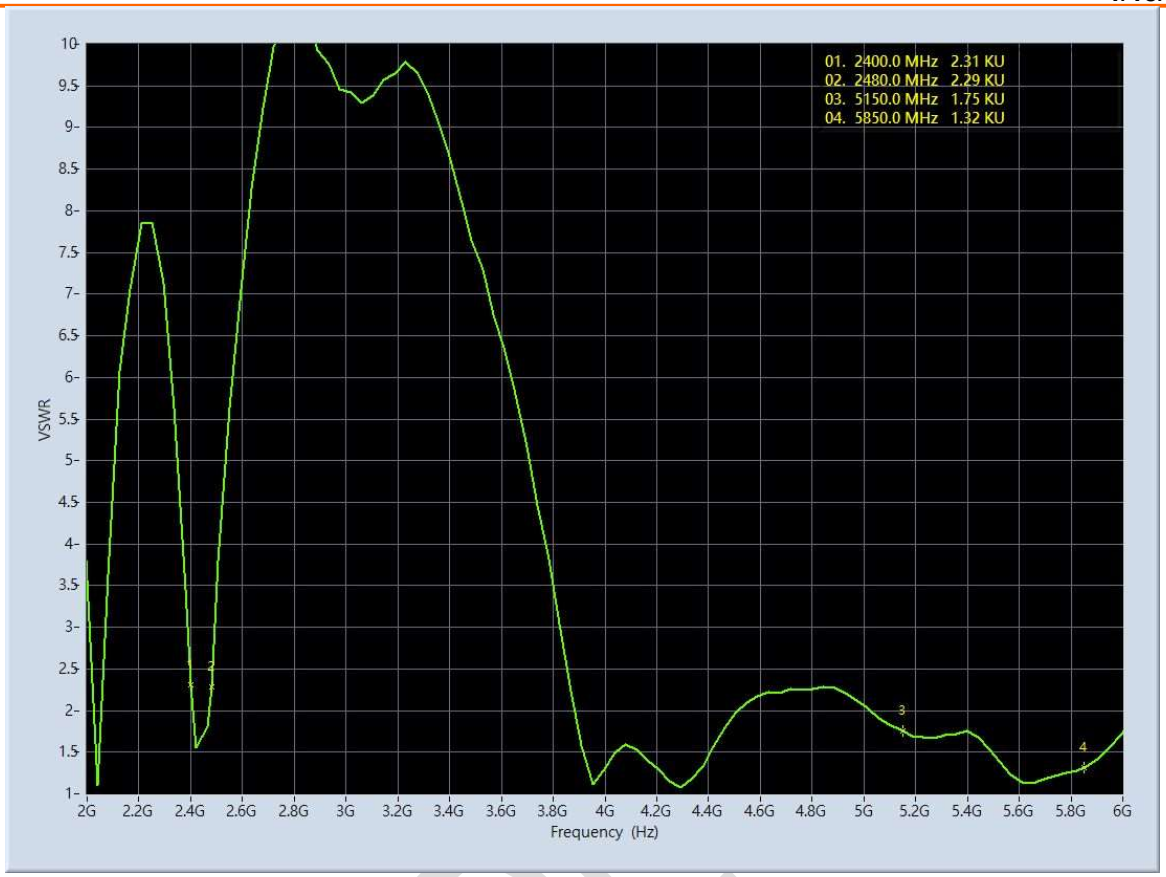
Device	Type/Module	Serial#	Manufacturer	Cal. Date	Cal. Due Date
Anechoic Chamber	AMS-8500	1047	ETS-Lindgren	2023/2/21	2024/8/21
Turn Table	ETS	-	ETS-Lindgren	N/A	N/A
Rotate controller	2090	SN 00035073	ETS-Lindgren	N/A	N/A
Horn Antenna	HAD-0710	111025-02	Bwant	2023/3/16	2025/3/16
Vector Network Analyzer	E5071C	MY46733781	Keysight	2022/1/21	2025/1/21
Cable 40cm 18 GHz	201EH012010400	201EH012010400#1	Jmtt	2023/3/27	2024/3/27
Cable 6m 18 GHz	201EH012016000	201EH012016000#3	Jmtt	2023/3/27	2024/3/27
Cable 6m 18 GHz	201EH012016000	201EH012016000#5	Jmtt	2023/3/27	2024/3/27
Cable 3.5m 18 GHz	201EH012013500	201EH012013500#3	Jmtt	2023/3/27	2024/3/27
Cable 1.5m 18 GHz	201EH012011500	201EH012011500#2	Jmtt	2023/3/27	2024/3/27

2. PASSIVE PERFORMANCE TEST

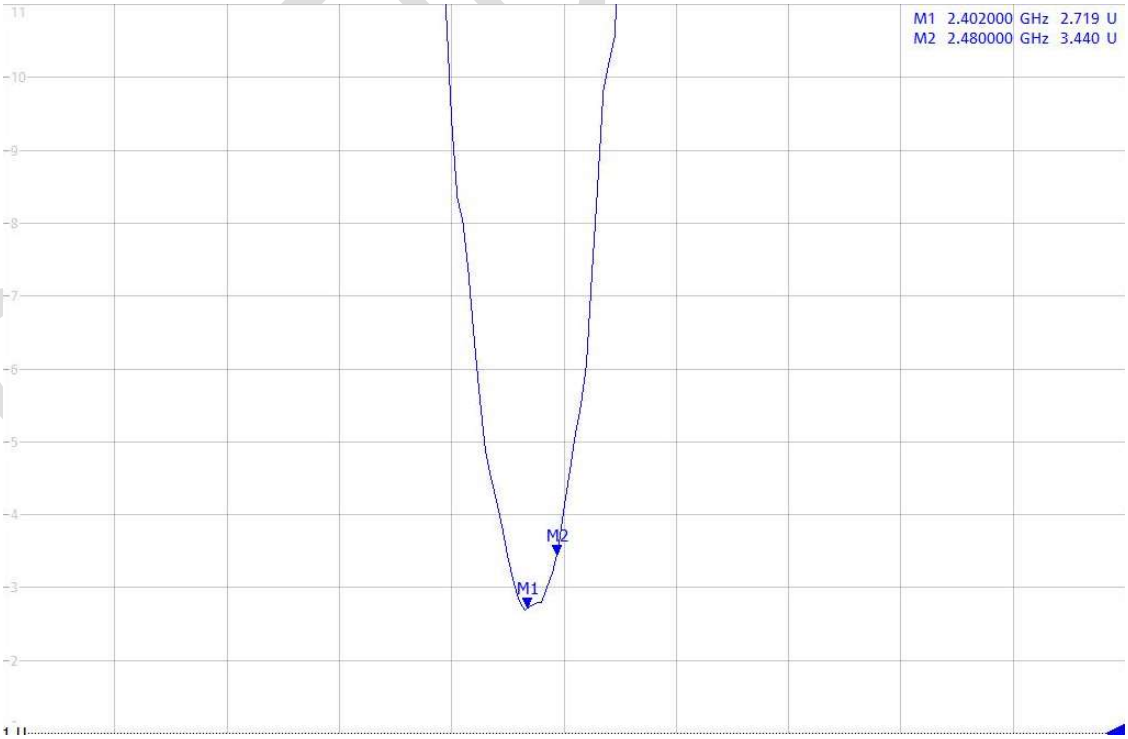
2.1 VSWR MEASUREMENT



ANT1_2402MHz~2480MHz, 4910MHz~5850MHz



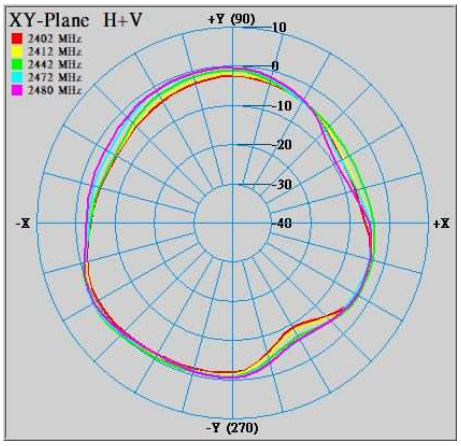
ANT2_2402MHz~2480MHz, 4910MHz~5850MH

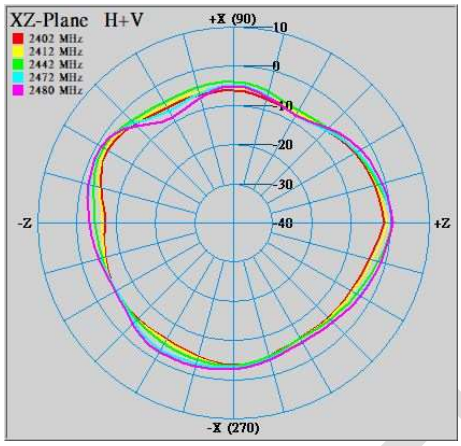


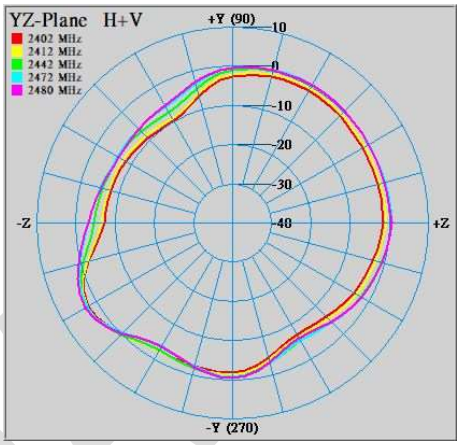
BT_2402MHz~2480MHz

2.2 RADIATION PATTERN

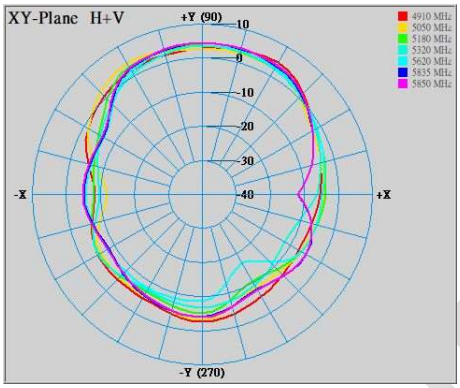
Yeti_console_ANT1

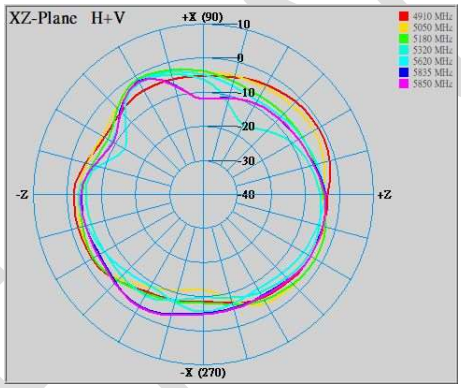


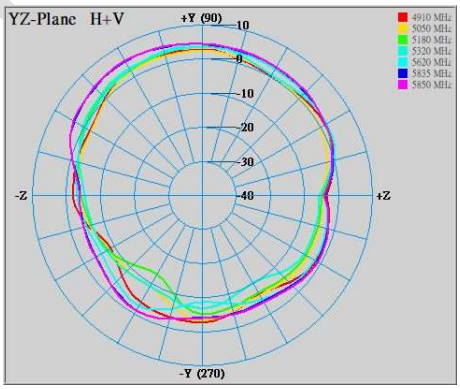




2402MHz~2480MHz

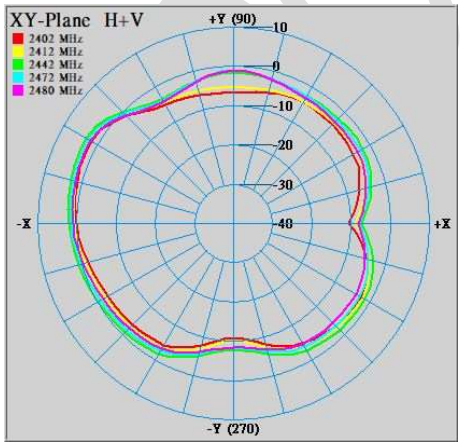


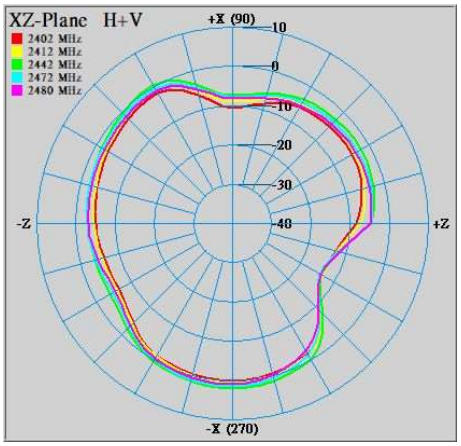


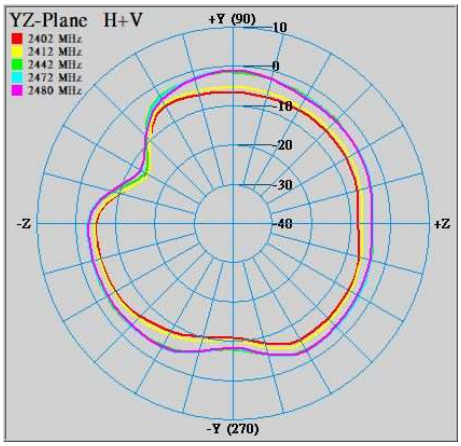


4910MHz~5850MHz

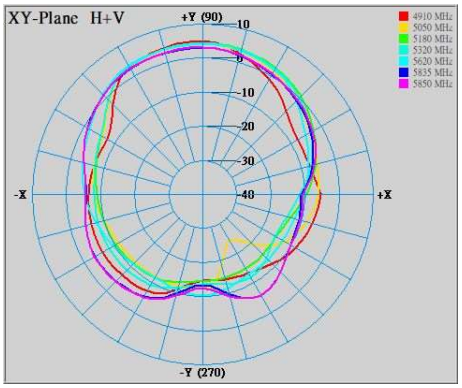
Yeti_console_ANT2

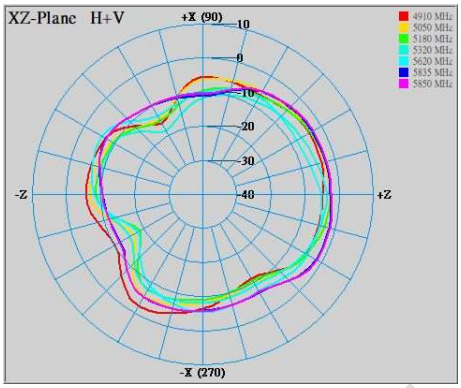


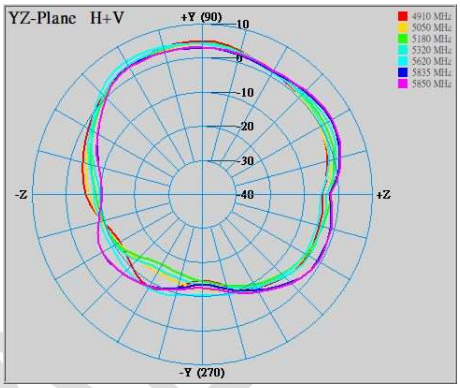




2402MHz~2480MHz

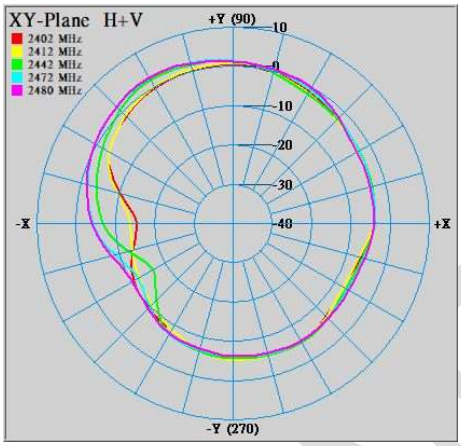


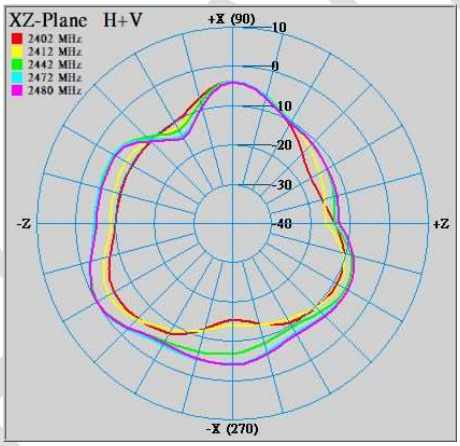


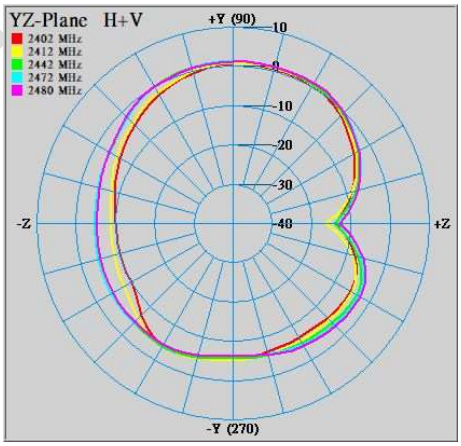


4910MHz~5850MHz

Yeti_console_BT







BT_2402MHz~2480MHz

2.3 AVERAGE EFFICIENCY PEAK GAIN

Yeti_console_ANT1

Frequency (MHz)	Average efficiency (%)	Average Gain (dBi)	Peak Gain (dBi)
2402MHz~2480MHz	53.6	-2.73	2.97
4910MHz~5850MHz	64.9	-1.90	4.51

Yeti_console_ANT2

Frequency (MHz)	Average efficiency (%)	Average Gain (dBi)	Peak Gain (dBi)
2402MHz~2480MHz	52.0	-2.88	2.58
4910MHz~5850MHz	56.5	-2.54	4.76

Yeti_console_BT

Frequency (MHz)	Average efficiency (%)	Average Gain (dBi)	Peak Gain (dBi)
2402MHz~2480MHz	48.8	-3.13	1.87

2.4 3D GAIN OF FREE SPACE(AVERAGE)

Yeti_console_ANT1

Frequency (MHz)	Yeti_ANT1		
	Frequency (MHz)	Gain (dBi)	Efficiency %
2402MHz~2480MHz	2402	-2.59	55.1
	2412	-2.44	57.0
	2442	-2.15	60.9
	2472	-3.25	47.3
	2480	-3.21	47.7
4910MHz~5850MHz	4910	-1.80	66.1
	5050	-1.98	63.3
	5180	-2.28	59.2
	5320	-2.37	57.9
	5620	-2.16	60.9
	5835	-1.39	72.6
	5850	-1.29	74.3

Yeti_console_ANT2

Frequency (MHz)	Yeti_ANT2		
	Frequency (MHz)	Gain (dBi)	Efficiency %
2402MHz~2480MHz	2402	-3.43	45.3
	2412	-3.28	47.0
	2442	-1.78	66.4
	2472	-2.63	54.6
	2480	-3.30	46.8
4910MHz~5850MHz	4910	-3.21	47.8
	5050	-3.10	49.0
	5180	-2.88	51.5
	5320	-3.08	49.3
	5620	-2.51	56.1
	5835	-1.55	70.0
	5850	-1.45	71.6

Yeti_console_BT

Frequency (MHz	Yeti_BT		
	Frequency (MHz)	Gain (dBi)	Efficiency %
2402MHz~2480MHz	2402	-3.27	47.1
	2412	-3.22	47.7
	2442	-2.65	54.4
	2472	-3.22	47.6
	2480	-3.28	47.0