Regulatory WLAN Antenna Information

Travis ATG – Amphenol – 2006/09/29

Platform	Travis ATG
Platform Owner	
Brand Name	Latitude
Model Name	D620 ATG
ODM	Quanta
Target Launch Date	(2007/ 01/ 16)
Antenna	
Brand Name	Amphenol
Part Number	☑ Main Antenna:S03030 - FPCB
	☑ Aux Antenna:S03030 - FPCB
Module	
With WLAN Module	☐ WM3B2200BG
(Check Box)	☐ WM3B2915ABG
	☑ WM3945ABG

Antenna Sample / Antenna Data

Requirements for worldwide regulatory approval

Section	Description of Required OEM / ODM Antenna Information	US / IC	EU	Japan	Taiwan	S.Korea
1A	Part Number for Antenna only	Required	Required	Required	Required	Required
1B	Antenna Manufacturer Name	Required	Required	Required	Required	Required
1C	Description of Antenna Type	Required	N/A	N/A	N/A	N/A
1D	Part number of Antenna Assembly / cable impedance, length & diameter.	Required	Desired	Desired	Desired	Desired
1E	Main & Aux antenna (Peak Gain W/ cable loss)	Required	Required	Required	Required	Required
	1E OR 1F, 1G, 1H					
1F	Main & Aux antenna (Peak Gain only)	Required	Required	Required	Required	Required
1G	VSWR of cable including connector	Required	Required	Required	Required	Required
1H	Main & Aux antenna (Cable loss W/ connector)	Required	Required	Required	Required	Required
2	Dimensioned Photographs and Drawings of main & auxiliary antennas	Required	Required	Required	Required	Required
3	Radiation patterns of antennas loaded in the host platform.	Required	Desired	Required	N/A	Required
4	Platform model name / number - correlated to antenna manufacturer and antenna part number	Required	Required	Desired	Required	Desired
5	Photograph(s) or Drawings showing location of antennas in platform. (S. Korea requires photographs of antennas for approval submission). Taiwan requires pictures of each antenna type shown in the system.	Required	Required	Desired	Required (Photos)	Required (Photos)
6	Mech. drawings / photos with dimensions of antenna locations and distance from end-user (For evaluation of SAR testing requirement).	Required	N/A	N/A	N/A	N/A
7	Photograph(s) or Drawings showing the location of all antennas (WLAN, other) and distance between those transmitting antennas. Information will be used to evaluate whether co-location testing is required.	Required	N/A	N/A	N/A	N/A
8	Local representative contact information for LMA/ PARS process.	Required	N/A	N/A	N/A	N/A

Antenna Information

Section 1. Antenna Assembly Specifications

Antenna Assembly Summary:

1A Antenna Part Number	1B Manufacture	1C Antenna Type	1D Cable Assembly Part Number and Information	1E *Peak Gain W/ Cable loss (dBi)	1F Peak Gain w/o Cable Loss (dBi)	1G VSWR	1H Cable Loss (dB)
(P/N: S03030 - FPCB) Main antenna	Amphenol	Flex Inverted-F Antenna (IFA)	Length: 522mm OD:1.32-1.37mm Color: White Vendor: GBE	2400-2500MHz 3.12 dBi (peak)	2400-2500MHz 4.51 dBi (peak)	2400-2500MHz 2.0 max	2400-2500MHz 1.39 dB (peak)
				5150-5350MHz 1.15 dBi (peak)	5150-5350MHz 3.38 dBi (peak)	5150-5350MHz 2.0 max	5150-5350MHz 2.23 dB (peak)
				5470-5725MHz 2.64 dBi (peak)	5470-5725MHz 4.87 dBi (peak)	5470-5725MHz 2.0 max	5470-5725MHz 2.23 dB (peak)
				5725-5850MHz 0.23 dBi (peak)	5725-5850MHz 2.46 dBi (peak)	5725-5850MHz 2.0 max	5725-5850MHz 2.23 dB (peak)
(P/N: S03030 - FPCB) Auxiliary antenna	Amphenol	Flex Inverted-F Antenna (IFA)	Length: 467mm OD:1.32-1.37mm Color: Black Vendor: GBE	2400-2500MHz 3.80 dBi (peak)	2400-2500MHz 5.07 dBi (peak)	2400-2500MHz 2.0 max	2400-2500MHz 1.27 dB (peak)
				5150-5350MHz 1.80 dBi (peak)	5150-5350MHz 3.90 dBi (peak)	5150-5350MHz 2.0 max	5150-5350MHz 2.10 dB (peak)
				5470-5725MHz 0.63 dBi (peak)	5470-5725MHz 2.73 dBi (peak)	5470-5725MHz 2.0 max	5470-5725MHz 2.10 dB (peak)
				5725-5850MHz 1.98 dBi (peak)	5725-5850MHz 4.08 dBi (peak)	5725-5850MHz 2.0 max	5725-5850MHz 2.10 dB (peak)

Antenna Peak Gain Table:

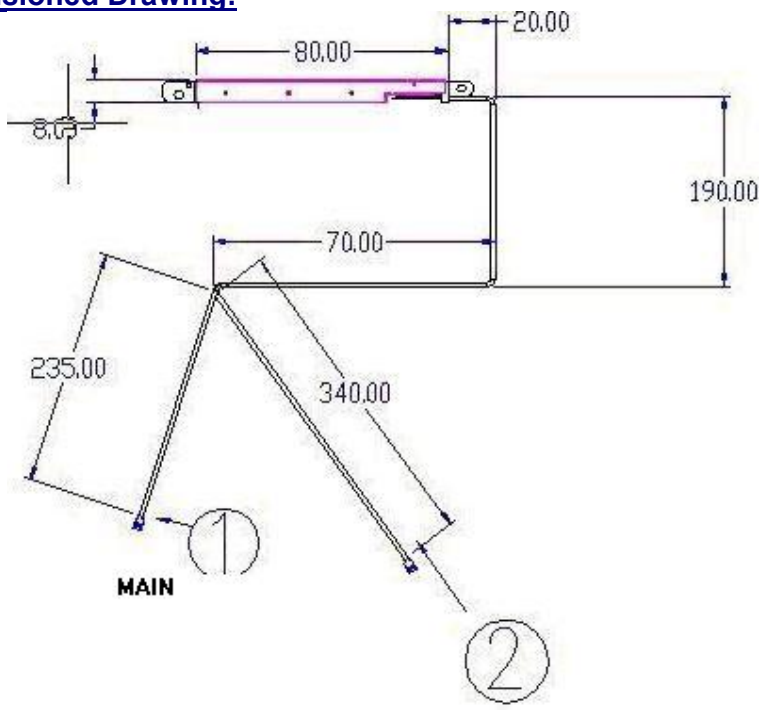
	Main antenna			Aux Antenna		
Frequency (MHz)	Horizontal (dBi)	Vertical (dBi)	Hori+Ver (dBi)	Horizontal (dBi)	Vertical (dBi)	Hori+Ver (dBi)
2412	-0.14	0.69	1.36	1.65	0.16	2.88
2437	0.24	-0.87	3.12	2.05	1.84	3.80
2462	1.83	-1.74	3.12	1.38	1.07	3.36
4900	-3.11	-5.08	-2.35	-3.02	-3.2	-2.07
5150	-1.97	-0.43	-0.04	-1.23	-0.17	1.8
5350	0.94	-1.57	1.15	-1.56	-0.06	0.97
5470	1.45	0.35	2.64	-0.30	-0.22	0.11
5725	-1.28	-1.99	0.23	-1.77	0.12	0.63
5875	-2.93	-2.36	-0.38	-0.67	0.85	1.98

- **Antenna Peak Gain required being test in system basis.**
- **1E frame contend absolutely peak antenna gain include H/ V/ H+V.**

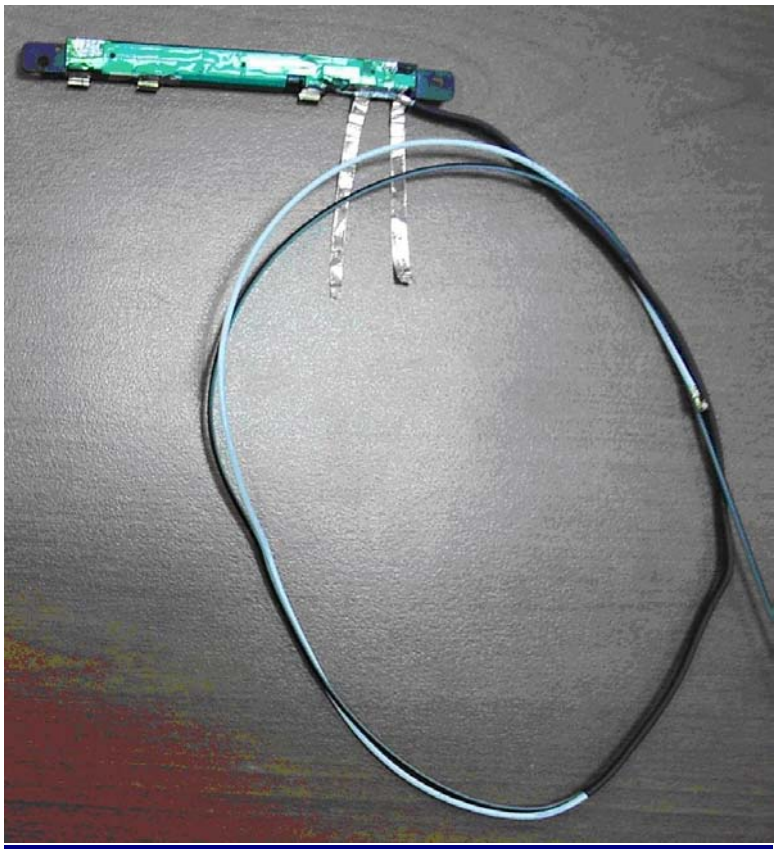
Section 2. Dimensioned Photos or Drawings of Antennas

Include a dimensioned photo and dimensioned drawing of main antenna here.

Main Antenna Dimensioned Drawing:

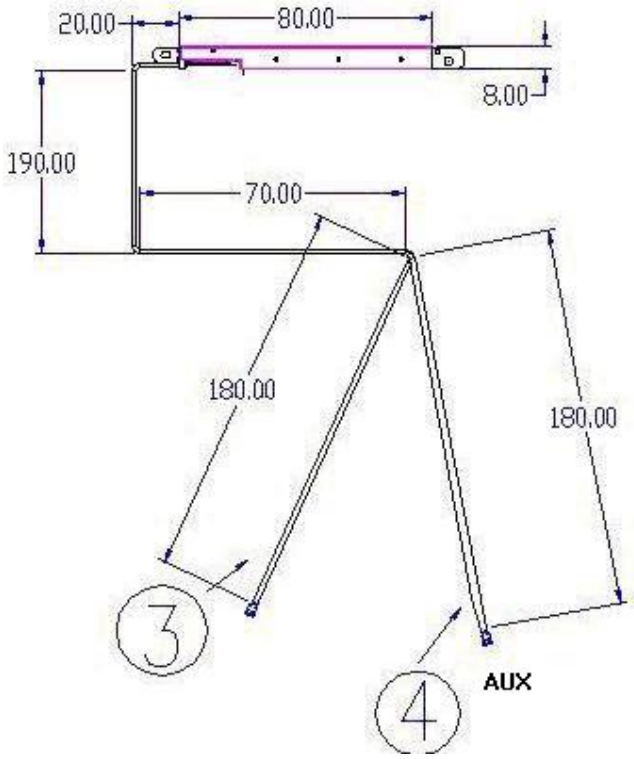


Main Antenna Photo:

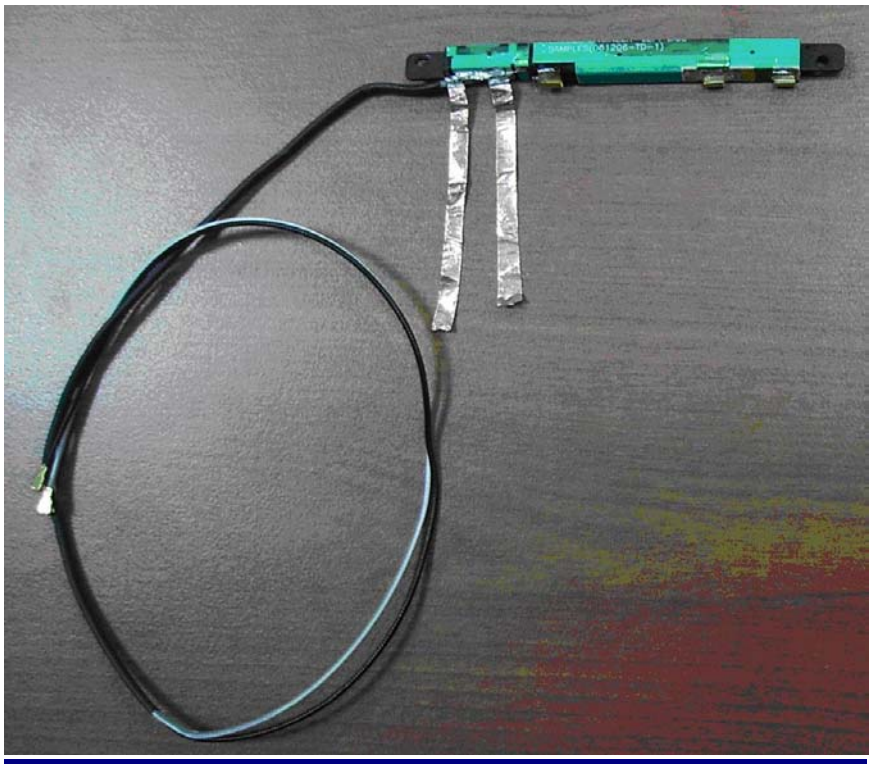


Include a dimensioned photo and dimensioned drawing of aux antenna here.

Aux Antenna Dimensioned Drawing:



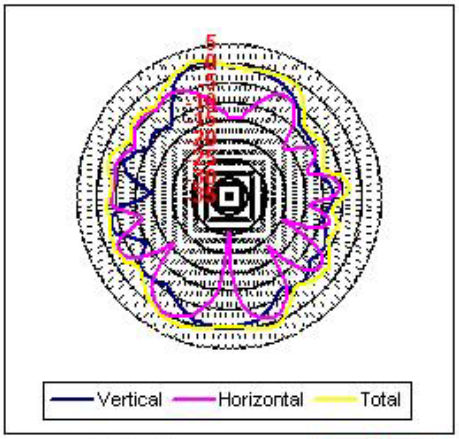
Aux Antenna Photo:



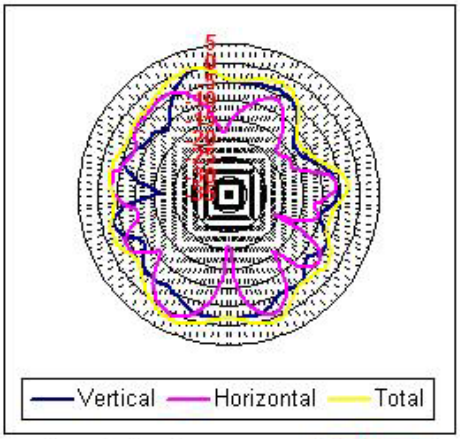
Section 3. Radiation characteristics of antennae Loaded in Host Platform

2400-2500MHz radiation characteristic

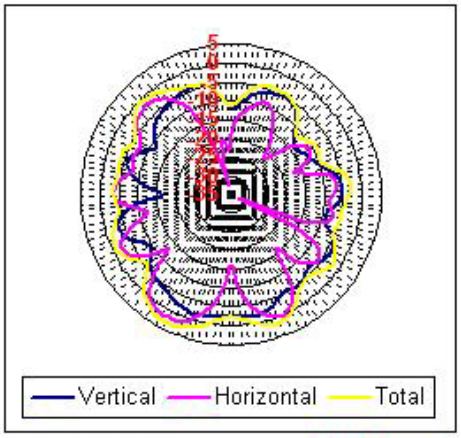
Main antenna:



Centre Frequency	2412 MHz
Horizontal peak gain (dBi)	-0.14
Vertical peak gain (dBi)	0.69
Hor + Ver peak gain (dBi)	1.36
Hor + Ver avg gain (dBi)	-2.40

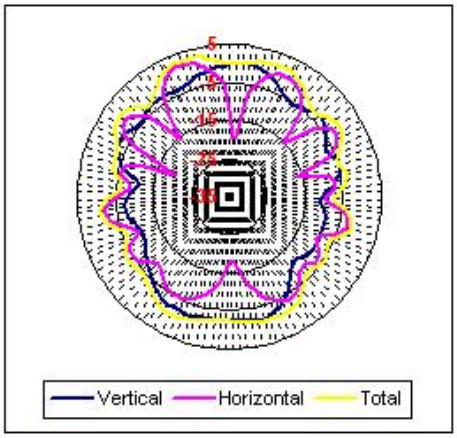


Centre Frequency	2437 MHz
Horizontal peak gain (dBi)	0.24
Vertical peak gain (dBi)	-0.87
Hor + Ver peak gain (dBi)	3.12
Hor + Ver avg gain (dBi)	-3.09

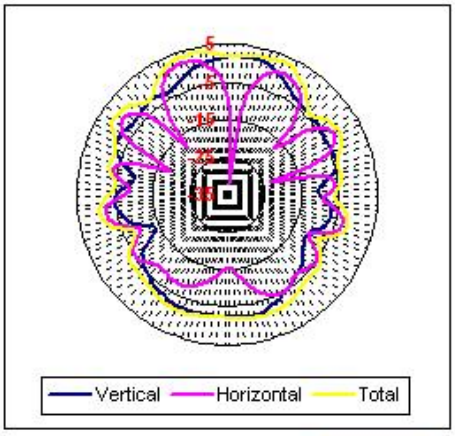


Centre Frequency	2462 MHz
Horizontal peak gain (dBi)	1.83
Vertical peak gain (dBi)	-1.74
Hor + Ver peak gain (dBi)	3.12
Hor + Ver avg gain (dBi)	-3.30

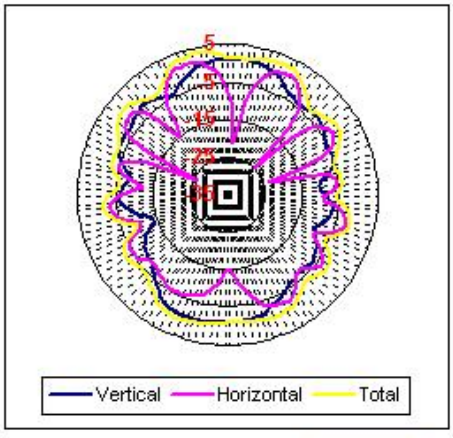
Auxiliary antenna:



Centre Frequency	2412 MHz
Horizontal peak gain (dBi)	1.65
Vertical peak gain (dBi)	0.16
Hor + Ver peak gain (dBi)	2.88
Hor + Ver avg gain (dBi)	-1.82



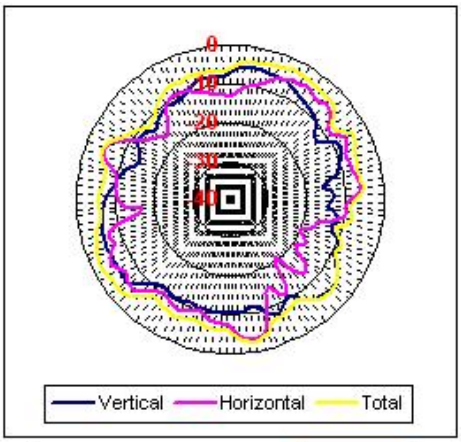
Centre Frequency	2437 MHz
Horizontal peak gain (dBi)	2.05
Vertical peak gain (dBi)	1.84
Hor + Ver peak gain (dBi)	3.8
Hor + Ver avg gain (dBi)	-1.41



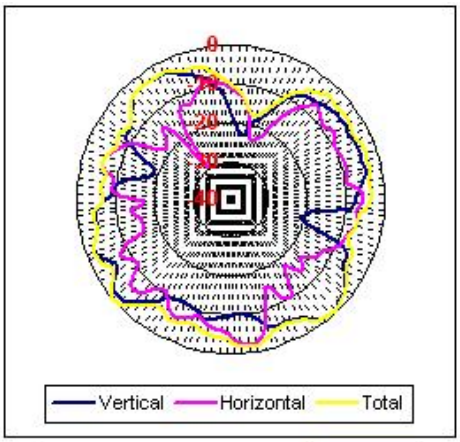
Centre Frequency	2462 MHz
Horizontal peak gain (dBi)	1.38
Vertical peak gain (dBi)	1.07
Hor + Ver peak gain (dBi)	3.36
Hor + Ver avg gain (dBi)	-1.33

4900 - 5900 MHz radiation characteristic

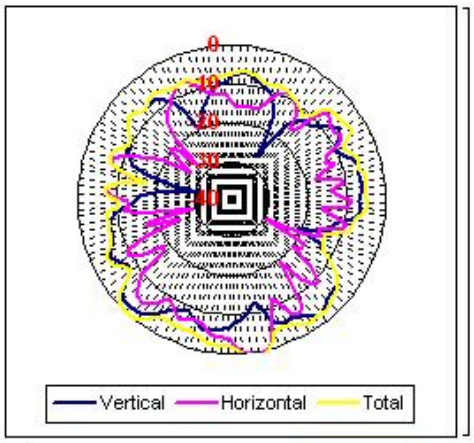
Main antenna:



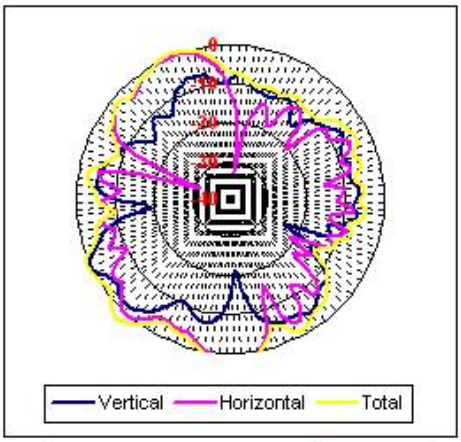
Centre Frequency	4900 MHz
Horizontal peak gain (dBi)	-3.11
Vertical peak gain (dBi)	-5.08
Hor + Ver peak gain (dBi)	-2.35
Hor + Ver avg gain (dBi)	-5.73



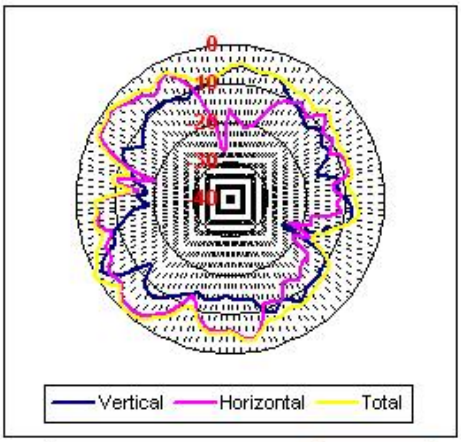
Centre Frequency	5150 MHz
Horizontal peak gain (dBi)	-1.97
Vertical peak gain (dBi)	-0.43
Hor + Ver peak gain (dBi)	-0.04
Hor + Ver avg gain (dBi)	-4.56



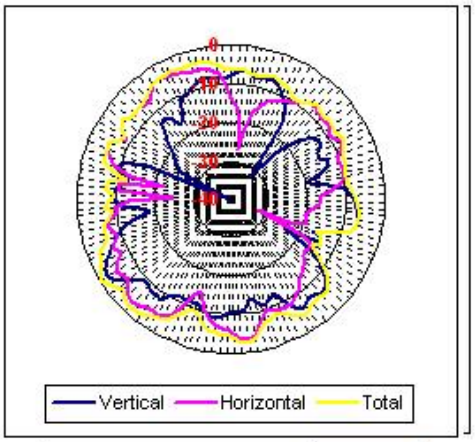
Centre Frequency	5350 MHz
Horizontal peak gain (dBi)	0.94
Vertical peak gain (dBi)	-1.57
Hor + Ver peak gain (dBi)	1.15
Hor + Ver avg gain (dBi)	-5.56



Centre Frequency	5470 MHz
Horizontal peak gain (dBi)	1.45
Vertical peak gain (dBi)	0.35
Hor + Ver peak gain (dBi)	2.64
Hor + Ver avg gain (dBi)	-3.51

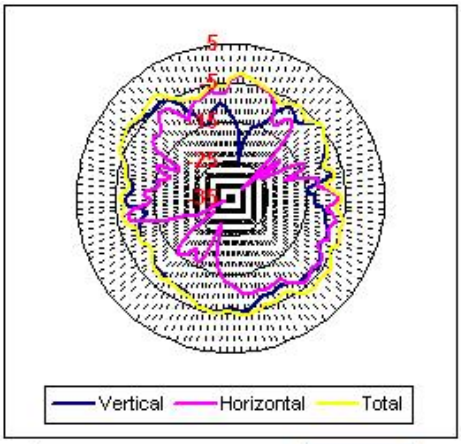


Centre Frequency	5725 MHz
Horizontal peak gain (dBi)	-1.28
Vertical peak gain (dBi)	-1.99
Hor + Ver peak gain (dBi)	0.23
Hor + Ver avg gain (dBi)	-5.76

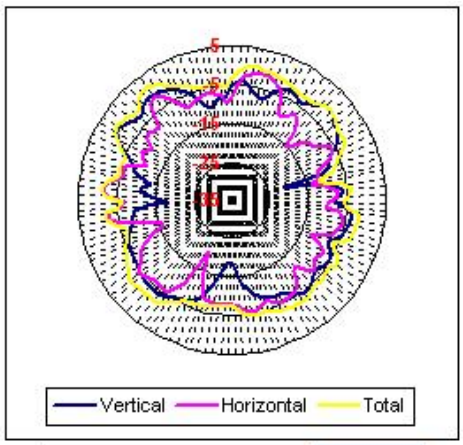


Centre Frequency	5875 MHz
Horizontal peak gain (dBi)	-2.93
Vertical peak gain (dBi)	-2.36
Hor + Ver peak gain (dBi)	-0.38
Hor + Ver avg gain (dBi)	-6.10

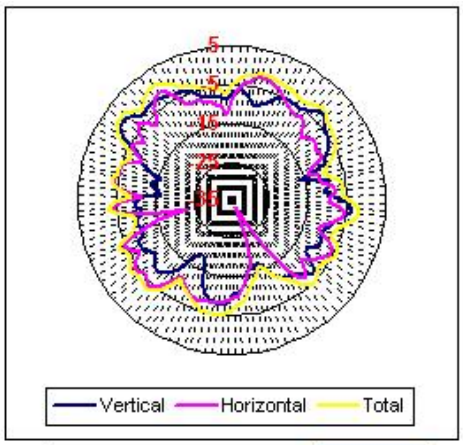
Auxiliary antenna:



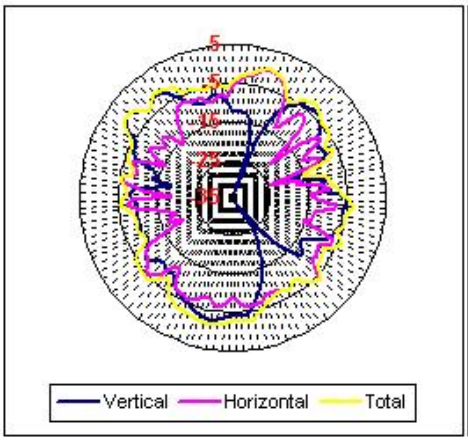
Centre Frequency	4900 MHz
Horizontal peak gain (dBi)	-3.02
Vertical peak gain (dBi)	-3.2
Hor + Ver peak gain (dBi)	-2.07
Hor + Ver avg gain (dBi)	-5.78



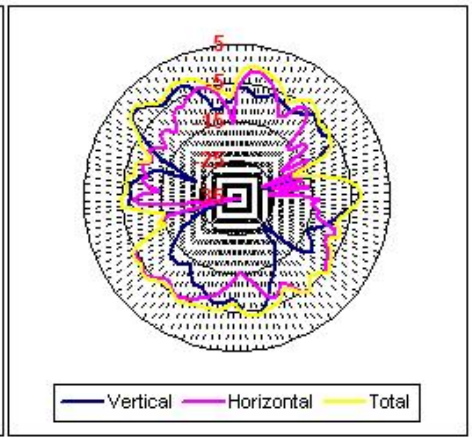
Centre Frequency	5150 MHz
Horizontal peak gain (dBi)	-1.23
Vertical peak gain (dBi)	-0.17
Hor + Ver peak gain (dBi)	1.8
Hor + Ver avg gain (dBi)	-3.11



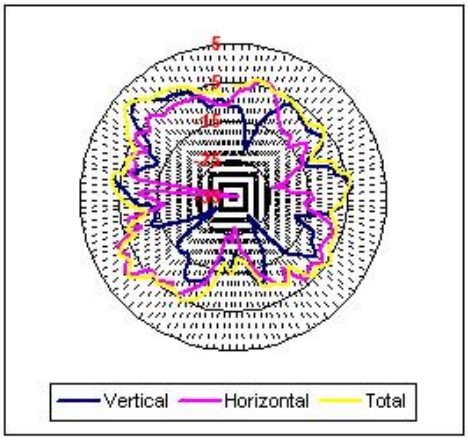
Centre Frequency	5350 MHz
Horizontal peak gain (dBi)	-1.56
Vertical peak gain (dBi)	-0.06
Hor + Ver peak gain (dBi)	0.97
Hor + Ver avg gain (dBi)	-4.62



Centre Frequency	5470 MHz
Horizontal peak gain (dBi)	-0.3
Vertical peak gain (dBi)	-0.22
Hor + Ver peak gain (dBi)	0.11
Hor + Ver avg gain (dBi)	-4.67



Centre Frequency	5725 MHz
Horizontal peak gain (dBi)	-1.77
Vertical peak gain (dBi)	0.12
Hor + Ver peak gain (dBi)	0.63
Hor + Ver avg gain (dBi)	-5.1



Centre Frequency	5875 MHz
Horizontal peak gain (dBi)	-0.67
Vertical peak gain (dBi)	0.85
Hor + Ver peak gain (dBi)	1.98
Hor + Ver avg gain (dBi)	-5.95

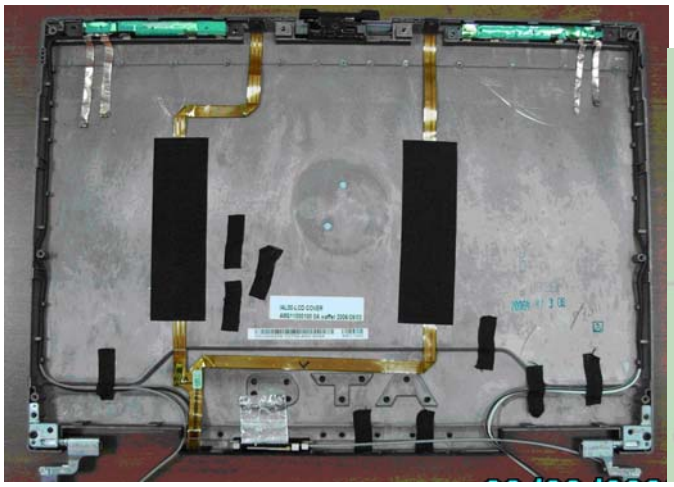
Section 4. Host Platform Information

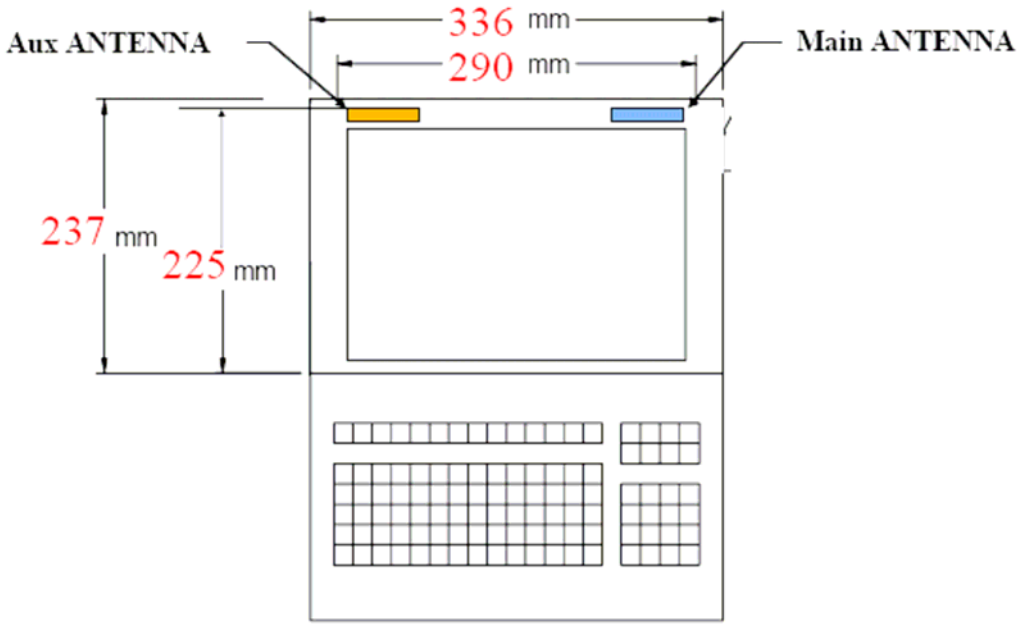
OEM / ODM Host platform: (XXXXXXX) platform correlated to antenna data

Rating Label Photo:

<Not sure what this is required>

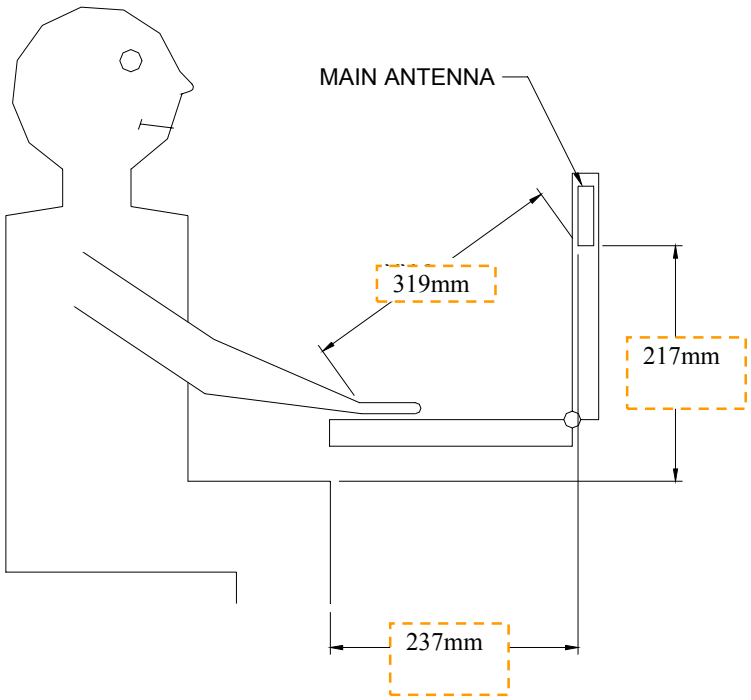
Section 5. Antenna Host Platform Location Information





Section 6. Antenna dimensional information for SAR evaluation

Include a **dimensioned photo or dimensioned drawing** showing the distance (mm) between the transmit (main) antenna and the user (excluding hands, wrist, feet, lap/ thigh, and ankle)



Section 7. Diagram Example of Co-Location Antenna Separation

Include a **dimensioned photo or dimensioned drawing** showing the distance (mm) between WLAN antenna and 2nd radiator transmit antenna.

(Note: Due to the evolving rules regarding co-location, each platform will need to be reviewed on a case by case basis)

No co-location

Section 8. Local representative contact information

Local representative contact information is required for regulatory support for target countries below.

No Change