

# Regulatory WLAN Antenna Information

(English Language Required for Intel Regulatory Review / Approval)

**(OEM/ODM or antenna vendor is required to complete this document with platform antenna information.  
Remove Intel references and make this your own document)**

Brand Name	
Model Name	Davos 2.0
Antenna Vendor	Wistron NeWeb Corp.
Antenna Part Number	<input checked="" type="checkbox"/> Main Antenna: 6036B0002701
	<input checked="" type="checkbox"/> Aux Antenna: 6036B0002801
With WLAN Module	<input type="checkbox"/> WM3B2100
(Check Box)	<input type="checkbox"/> WM3B2200BG
	<input checked="" type="checkbox"/> WM3B2915ABG
	<input type="checkbox"/> 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 <b>and</b> 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. <b>(S. Korea requires photographs of antennas for approval submission). Taiwan requires pictures of each antenna type shown in the system.</b>	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, BT, 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 (dBi)
<b>Main Antenna</b> (WIIC P/II: 81.EBC15.007)  (customer P/II: 6036B0002701)	Wistron Newweb Corporation	PIFA	<b>P/II: WH-S-1.13B-580MM-(2-1-1)</b>  <b>50 ohm Coaxial.</b>  <b>length: 580 mm</b> <b>diameter: 1.13 mm</b> <b>Connector: IPEX</b>	2400-2500MHz <b>1.71</b> dBi (peak)	2400-2500MHz <b>3.75</b> dBi (peak)	2400-2500MHz <b>2.0</b> max	2400-2500MHz <b>2.04</b> dBi (peak)
				5150-5350MHz <b>-0.34</b> dBi (peak)	5150-5350MHz <b>2.72</b> dBi (peak)	5150-5350MHz <b>2.5</b> max	5150-5350MHz <b>3.06</b> dBi (peak)
				5470-5725MHz <b>-0.72</b> dBi (peak)	5470-5725MHz <b>2.41</b> dBi (peak)	5470-5725MHz <b>2.5</b> max	5470-5725MHz <b>3.13</b> dBi (peak)
				5725-5825MHz <b>1.13</b> dBi (peak)	5725-5825MHz <b>4.36</b> dBi (peak)	5725-5825MHz <b>2.5</b> max	5725-5825MHz <b>3.23</b> dBi (peak)
<b>AUX Antenna</b> (WIIC P/II: 81.EBC15.007)  (customer P/II: 6036B0002801)	Wistron Newweb Corporation	PIFA	<b>P/II: WH-S-1.13W-620MM-(2-1-1)</b>  <b>50 ohm Coaxial.</b>  <b>length: 620 mm</b> <b>diameter: 1.13 mm</b> <b>Connector: IPEX</b>	2400-2500MHz <b>0.56</b> dBi (peak)	2400-2500MHz <b>2.73</b> dBi (peak)	2400-2500MHz <b>2.0</b> max	2400-2500MHz <b>2.17</b> dBi (peak)
				5150-5350MHz <b>0.46</b> dBi (peak)	5150-5350MHz <b>3.72</b> dBi (peak)	5150-5350MHz <b>2.5</b> max	5150-5350MHz <b>3.25</b> dBi (peak)
				5470-5725MHz <b>-0.93</b> dBi (peak)	5470-5725MHz <b>2.39</b> dBi (peak)	5470-5725MHz <b>2.5</b> max	5470-5725MHz <b>3.33</b> dBi (peak)
				5725-5825MHz <b>-0.34</b> dBi (peak)	5725-5825MHz <b>3.09</b> dBi (peak)	5725-5825MHz <b>2.5</b> max	5725-5825MHz <b>3.44</b> dBi (peak)

### Antenna Peak Gain Table:

Frequency (MHz)	Main antenna			Aux Antenna		
	Horizontal (dBi)	Vertical (dBi)	Hori+Ver (dBi)	Horizontal (dBi)	Vertical (dBi)	Hori+Ver (dBi)
2400	0.70	0.32	1.49	0.38	-1.51	0.90
2450	1.07	-0.28	1.38	0.13	0.27	0.78
2500	1.71	-0.54	2.47	0.56	-0.55	0.83
5150	-1.33	-2.55	0.00	0.46	-1.67	1.07
5250	-0.34	-0.46	1.54	-0.75	-1.72	0.33
5350	-0.52	-0.62	1.00	-1.32	-1.10	0.52
5470	-0.92	-0.72	0.99	-2.14	-0.93	0.36
5647.5	-1.51	-0.94	0.23	-1.79	-1.00	-0.17
5825	-0.50	1.13	1.66	-0.76	-0.34	0.80

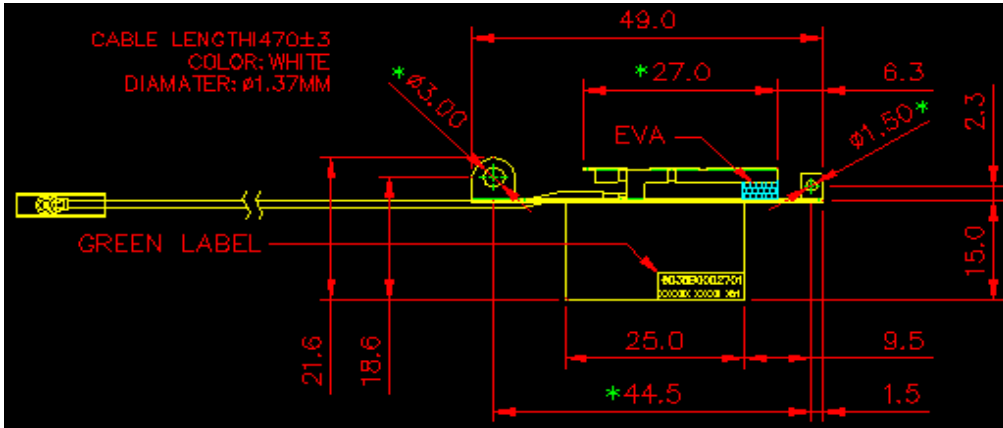
- Antenna Peak Gain required being test in system basis.
- 1E frame contend absolutely peak antenna gain include H/ V/ H+V.

## Section 2. Dimensioned Photos or Drawings of Antennas

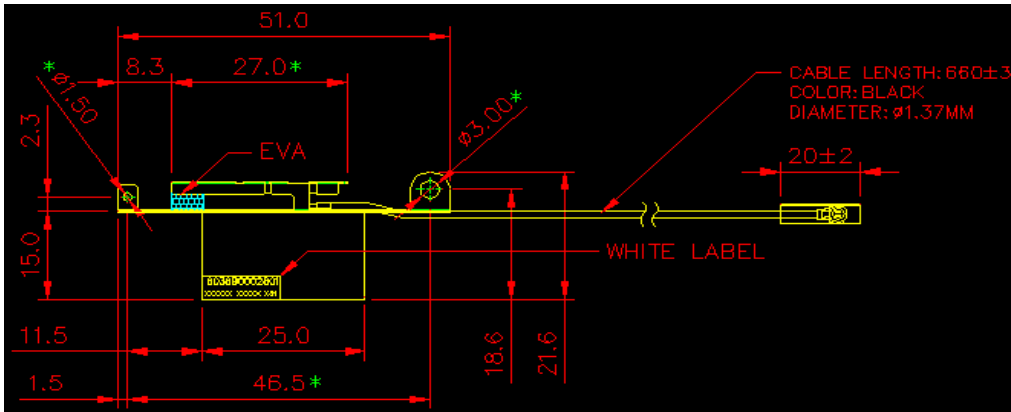
Include a dimensioned photo and dimensioned drawing of main antenna here.

### Main Antenna Dimensioned Drawing:

Main antenna



Aux antenna

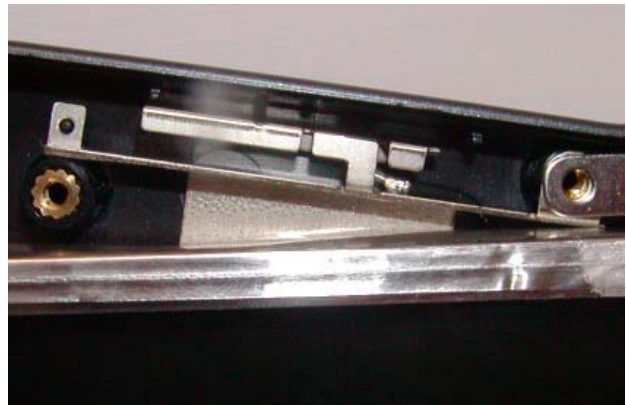


### Main and Aux Antenna Photo:

Main antenna



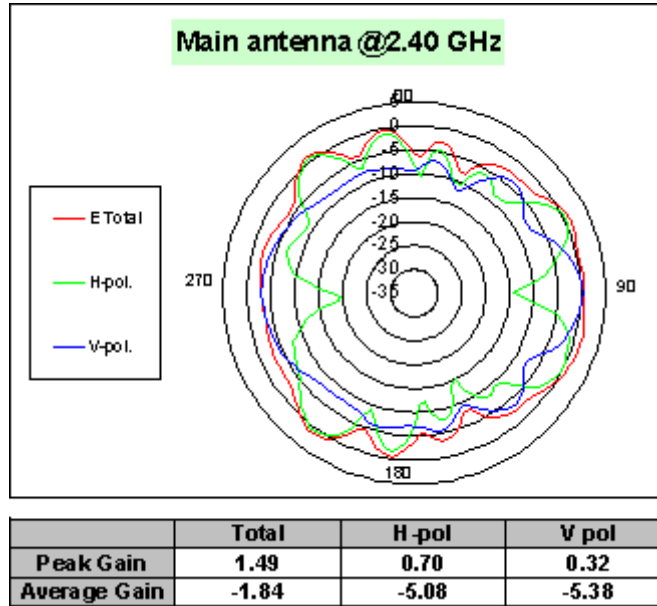
Aux antenna



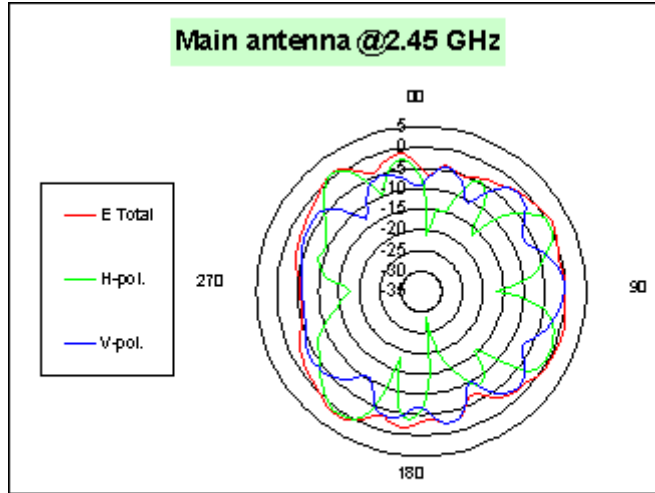
## Section 3. Radiation characteristics of antennae Loaded in Host Platform

### 2400-2500MHz radiation characteristic

Main antenna: 2400 MHz

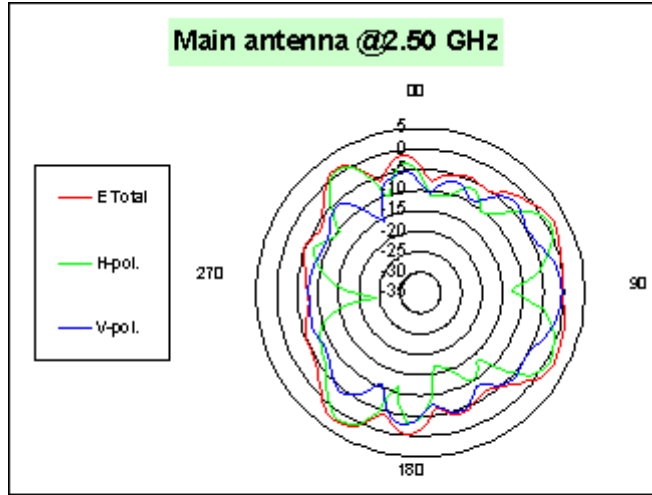


**Main antenna: 2450 MHz**



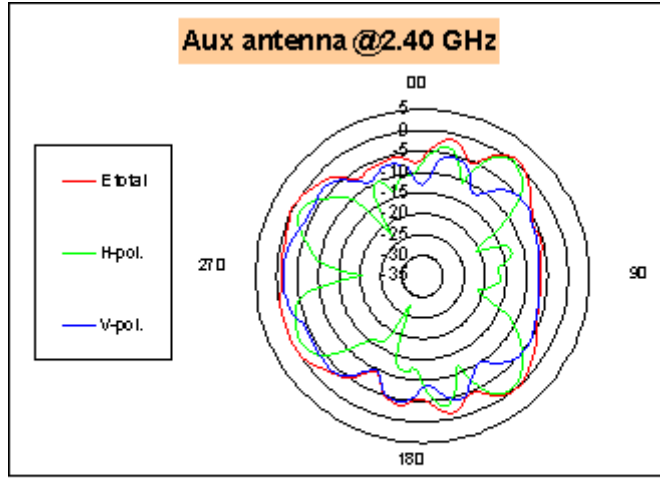
	<b>Total</b>	<b>H-pol</b>	<b>V pol</b>
<b>Peak Gain</b>	<b>1.38</b>	<b>1.07</b>	<b>-0.28</b>
<b>Average Gain</b>	<b>-1.81</b>	<b>-5.91</b>	<b>-4.85</b>

**Main antenna: 2500 MHz**



	Total	H-pol	V pol
<b>Peak Gain</b>	<b>2.47</b>	<b>1.71</b>	<b>-0.54</b>
<b>Average Gain</b>	<b>-2.19</b>	<b>-5.44</b>	<b>-5.67</b>

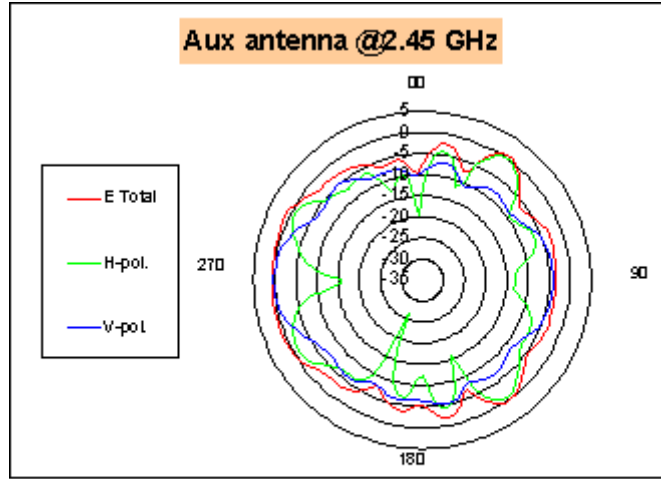
**Auxiliary antenna: 2400 MHz**



	Total	H-pol	V-pol
<b>Peak Gain</b>	<b>0.90</b>	<b>0.38</b>	<b>-1.51</b>
<b>Average Gain</b>	<b>-2.95</b>	<b>-7.34</b>	<b>-5.61</b>

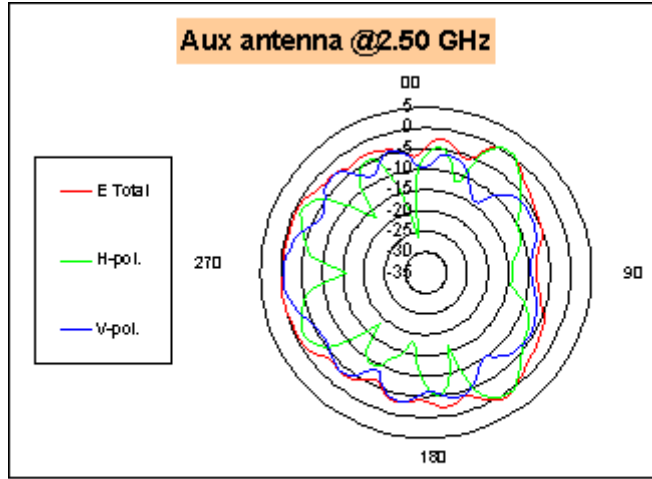


Auxiliary antenna: 2450 MHz



	Total	H-pol	V pol
Peak Gain	0.78	0.13	0.27
Average Gain	-2.59	-6.18	-5.63

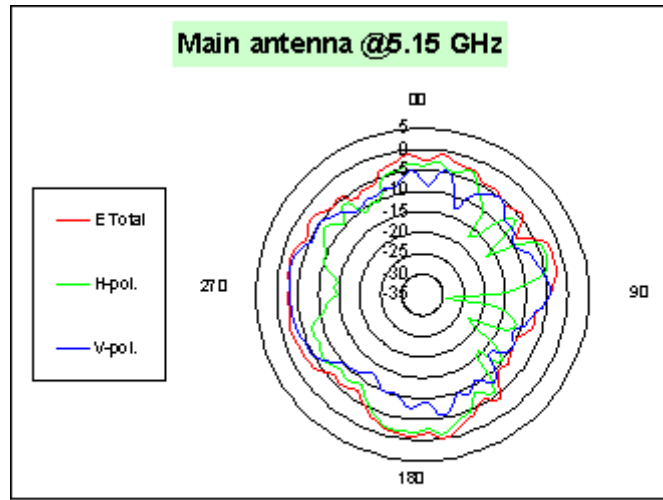
**Auxiliary antenna: 2500 MHz**



	Total	H-pol	V pol
<b>Peak Gain</b>	<b>0.83</b>	<b>0.56</b>	<b>-0.55</b>
<b>Average Gain</b>	<b>-2.68</b>	<b>-6.70</b>	<b>-5.66</b>

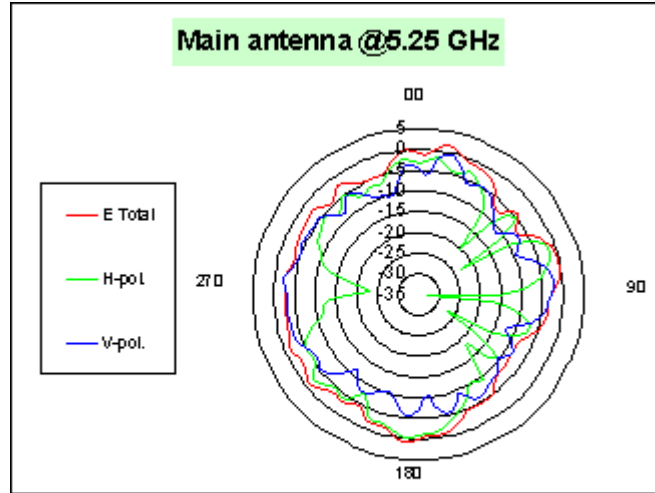
## 5150-5350 MHz radiation characteristic

### Main antenna: 5150 MHz



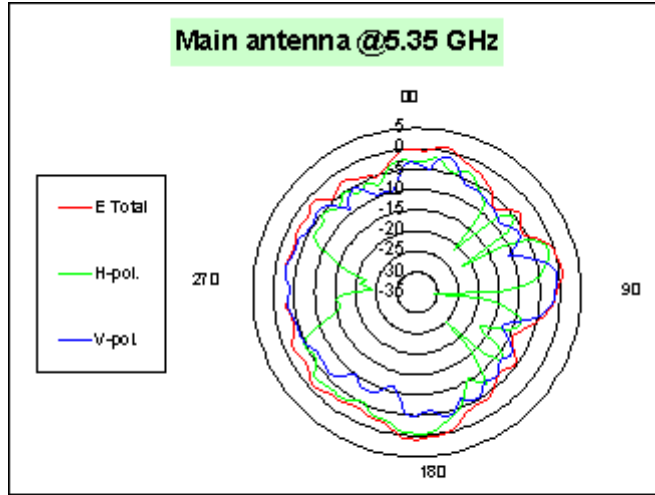
	Total	H-pol	V pol
<b>Peak Gain</b>	<b>0.00</b>	<b>-1.33</b>	<b>-2.55</b>
<b>Average Gain</b>	<b>-3.81</b>	<b>-7.22</b>	<b>-7.12</b>

**Main antenna: 5250 MHz**



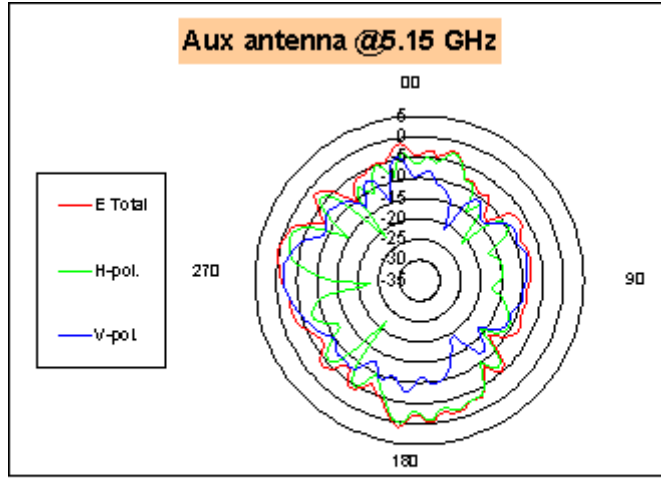
	<b>Total</b>	<b>H-pol</b>	<b>V pol</b>
<b>Peak Gain</b>	<b>1.54</b>	<b>-0.34</b>	<b>-0.46</b>
<b>Average Gain</b>	<b>-2.80</b>	<b>-6.29</b>	<b>-6.06</b>

**Main antenna: 5350 MHz**



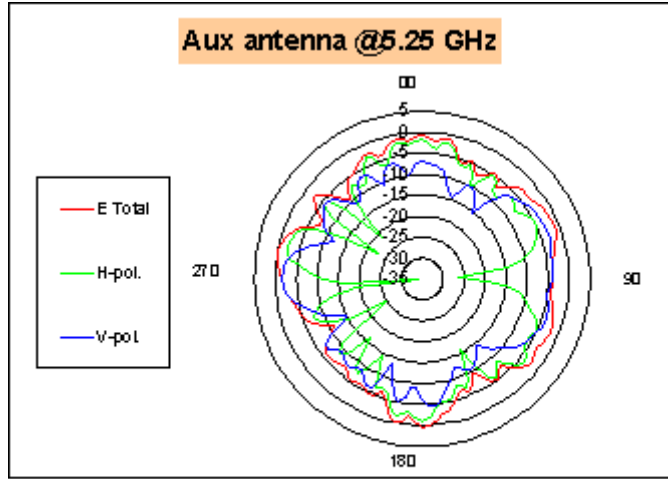
	Total	H-pol	V pol
<b>Peak Gain</b>	<b>1.00</b>	<b>-0.52</b>	<b>-0.62</b>
<b>Average Gain</b>	<b>-2.56</b>	<b>-6.33</b>	<b>-5.63</b>

**Auxiliary antenna: 5150 MHz**



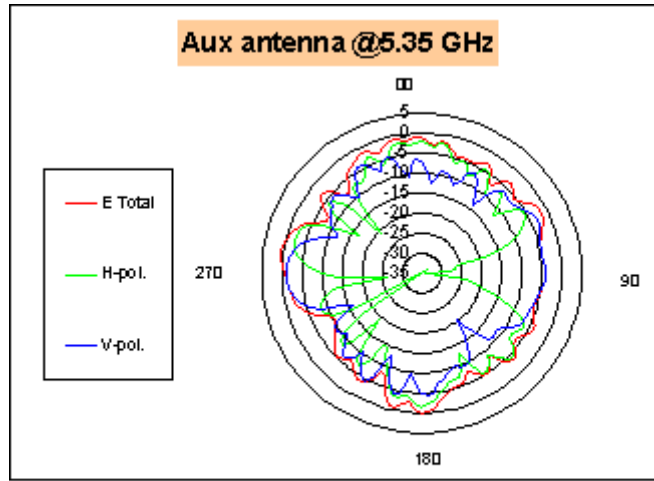
	<b>Total</b>	<b>H-pol</b>	<b>V-pol</b>
<b>Peak Gain</b>	<b>1.07</b>	<b>0.46</b>	<b>-1.67</b>
<b>Average Gain</b>	<b>-4.77</b>	<b>-7.51</b>	<b>-9.03</b>

**Auxiliary antenna: 5250 MHz**



	Total	H-pol	V pol
<b>Peak Gain</b>	<b>0.33</b>	<b>-0.75</b>	<b>-1.72</b>
<b>Average Gain</b>	<b>-3.59</b>	<b>-6.91</b>	<b>-7.06</b>

**Auxiliary antenna: 5350 MHz**

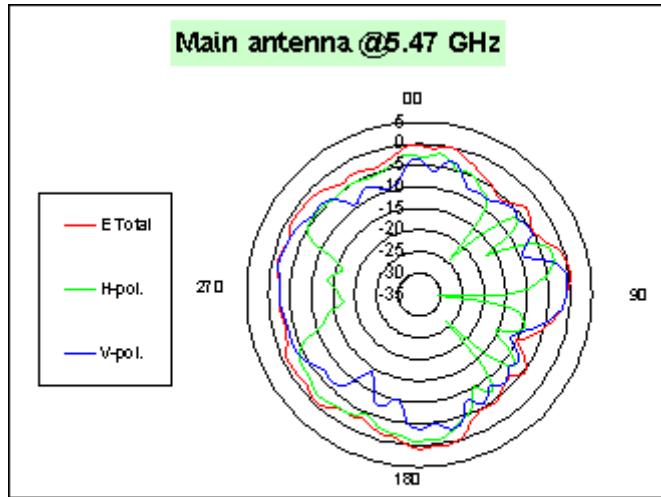


	Total	H-pol	V pol
<b>Peak Gain</b>	<b>0.52</b>	<b>-1.32</b>	<b>-1.10</b>
<b>Average Gain</b>	<b>-3.71</b>	<b>-7.51</b>	<b>-6.91</b>



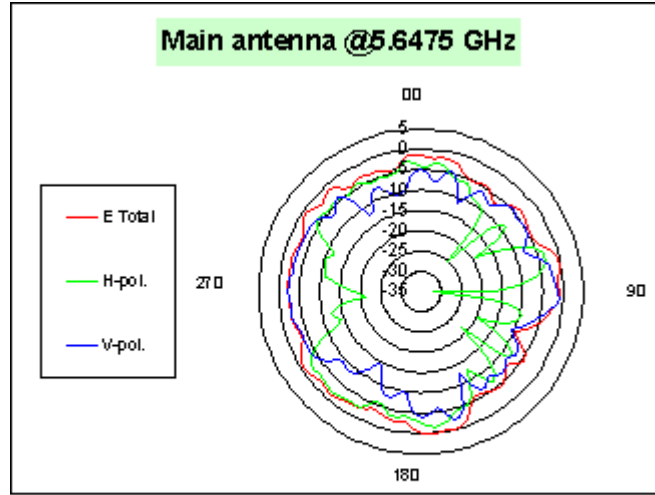
**5470-5725MHz radiation characteristic**

**Main antenna: 5470 MHz**



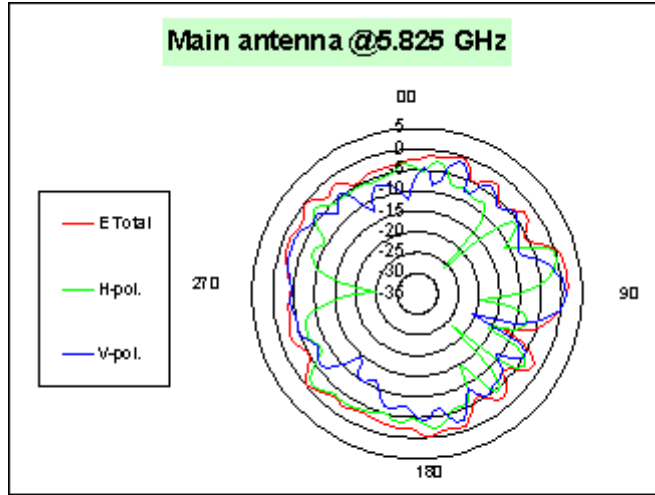
	Total	H-pol	V-pol
<b>Peak Gain</b>	<b>0.99</b>	<b>-0.92</b>	<b>-0.72</b>
<b>Average Gain</b>	<b>-2.33</b>	<b>-6.14</b>	<b>-5.38</b>

**Main antenna: 5647.5 MHz**



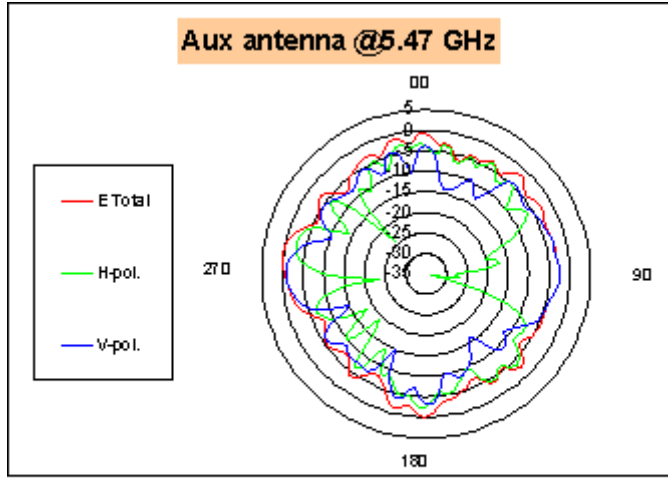
	<b>Total</b>	<b>H-pol</b>	<b>V pol</b>
<b>Peak Gain</b>	<b>0.23</b>	<b>-1.51</b>	<b>-0.94</b>
<b>Average Gain</b>	<b>-2.80</b>	<b>-6.75</b>	<b>-5.78</b>

**Main antenna: 5825 MHz**



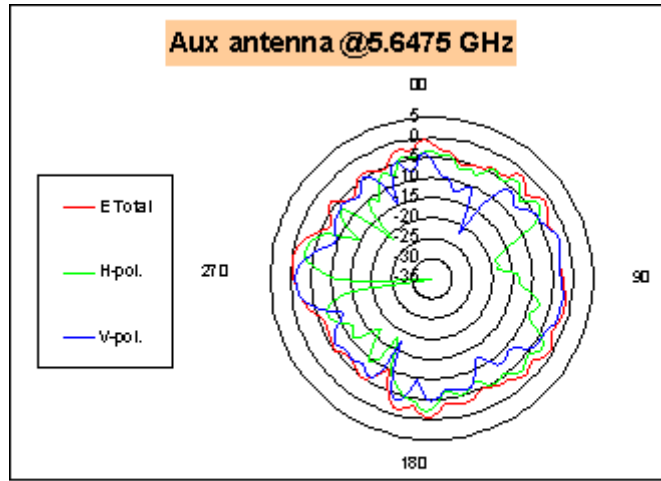
	Total	H-pol	V pol
<b>Peak Gain</b>	<b>1.66</b>	<b>-0.50</b>	<b>1.13</b>
<b>Average Gain</b>	<b>-2.48</b>	<b>-6.17</b>	<b>-5.56</b>

Auxiliary antenna: 5470 MHz



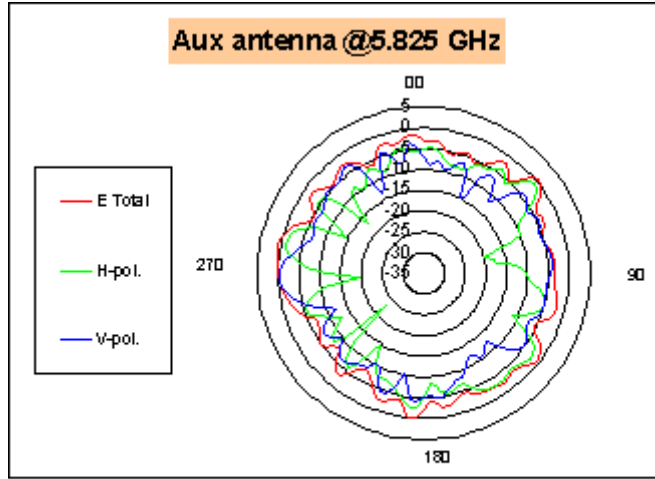
	Total	H-pol	V-pol
Peak Gain	0.36	-2.14	-0.93
Average Gain	-3.56	-7.77	-6.44

**Auxiliary antenna: 5647.5 MHz**



	Total	H-pol	V pol
<b>Peak Gain</b>	<b>-0.17</b>	<b>-1.79</b>	<b>-1.00</b>
<b>Average Gain</b>	<b>-3.17</b>	<b>-7.14</b>	<b>-6.08</b>

**Auxiliary antenna: 5825 MHz**



	Total	H-pol	V pol
<b>Peak Gain</b>	<b>0.80</b>	<b>-0.76</b>	<b>-0.34</b>
<b>Average Gain</b>	<b>-3.11</b>	<b>-6.59</b>	<b>-6.27</b>

## Section 4. Host Platform Information

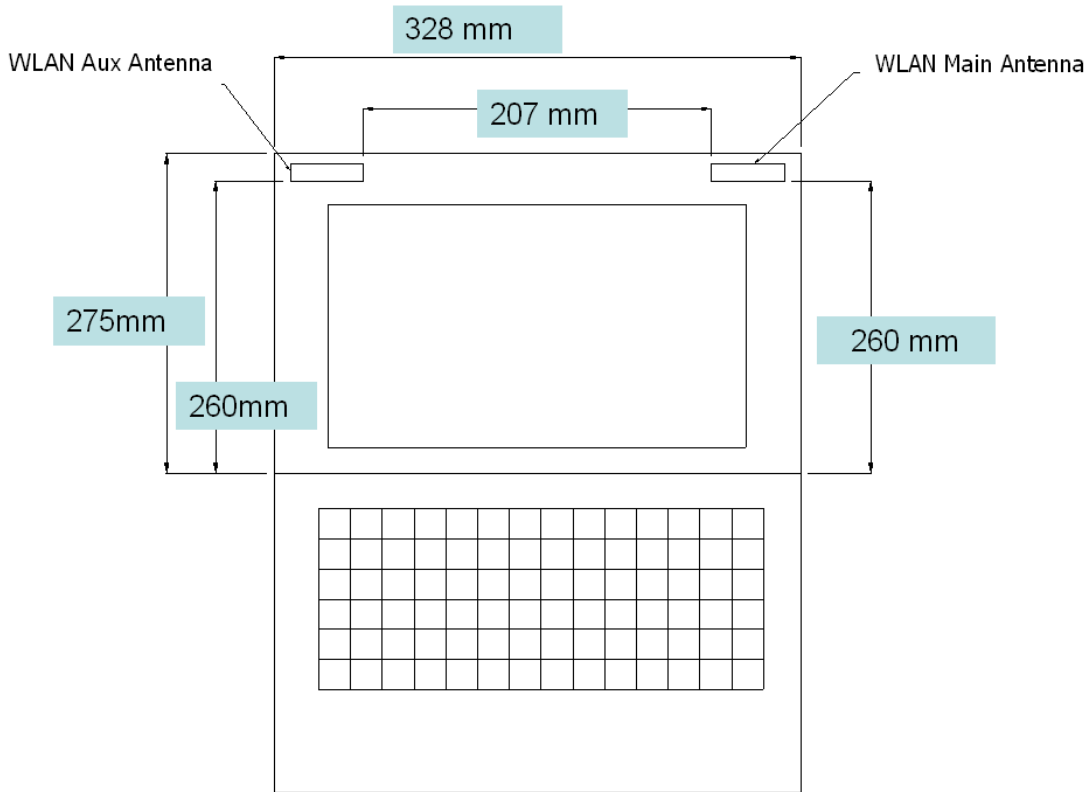
OEM / ODM Host platform: (XXXXXXX) platform correlated to antenna data

Rating Label Photo:

Module Location Photo: (if Singapore required)

## Section 5. Antenna Host Platform Location Information

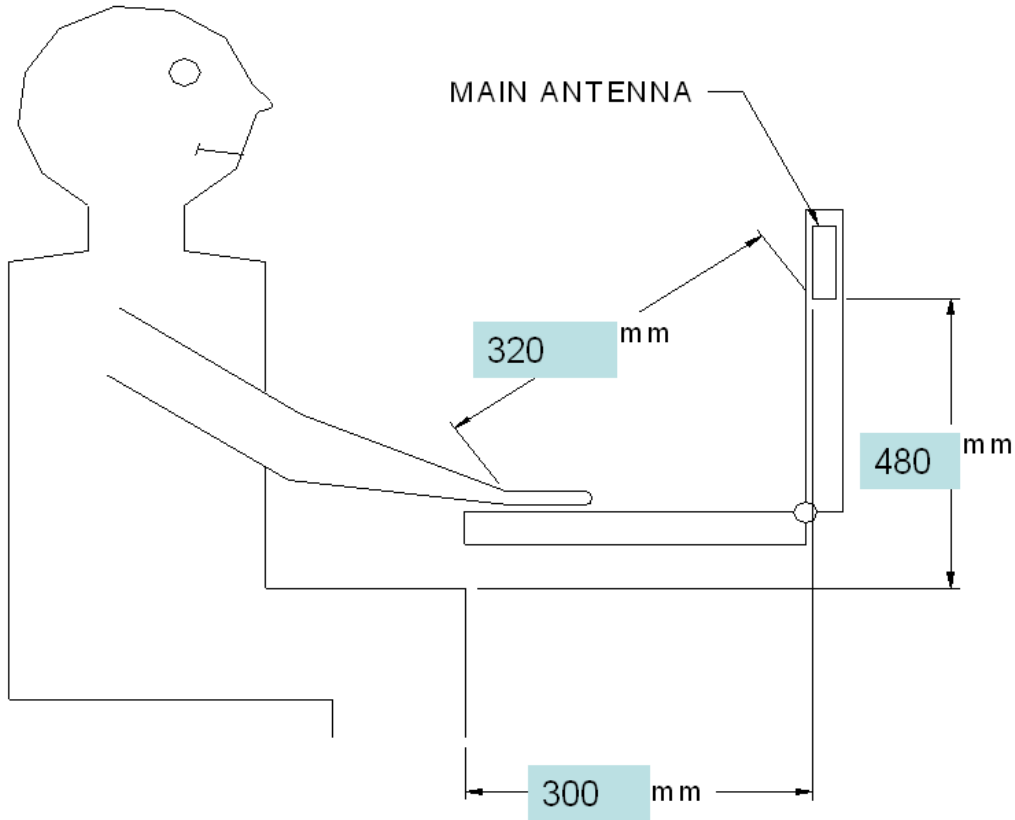
Include a **dimensioned photo or dimensioned drawing** of main and auxiliary antenna placements.





## Section 6. Antenna dimensional information for SAR evaluation

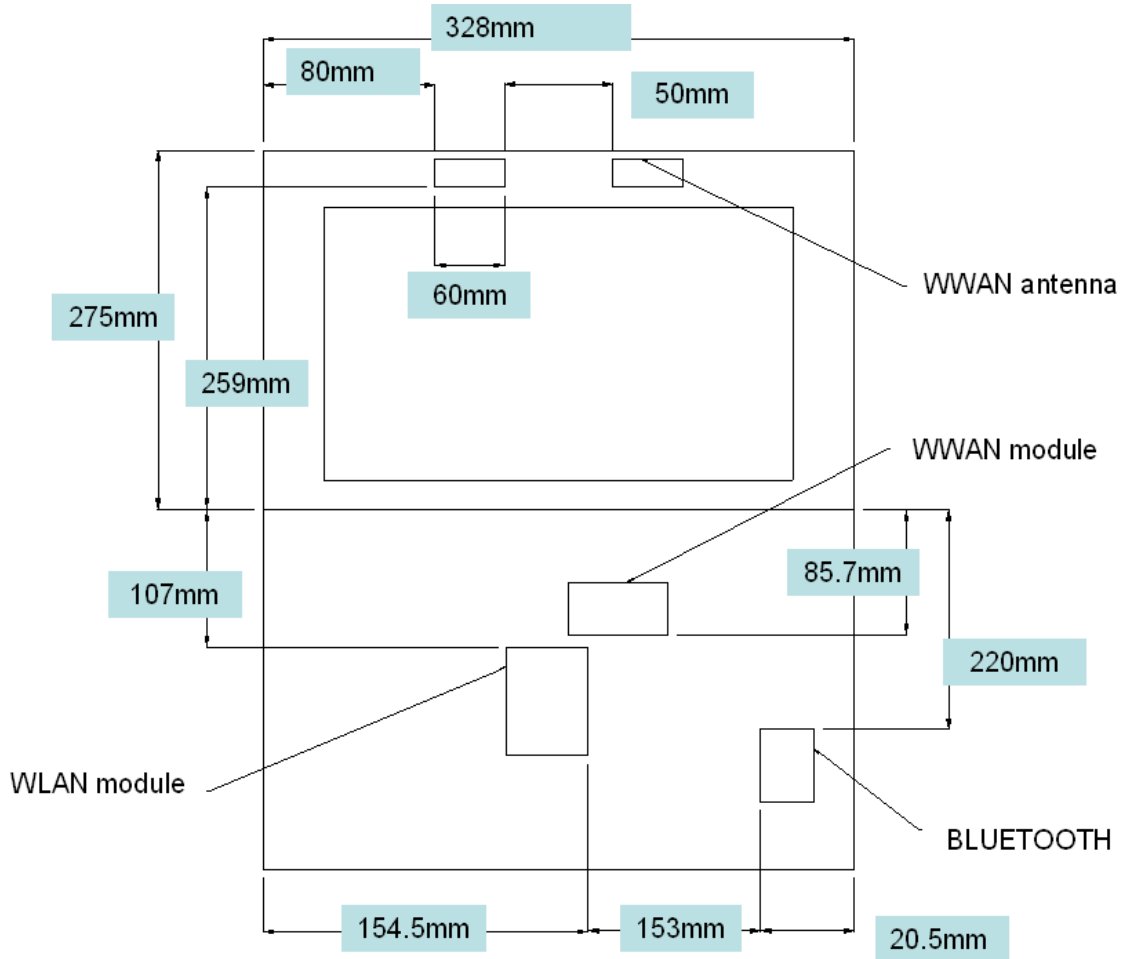
Include a **dimensioned photo or dimensioned drawing** showing the distance (mm) between the transmit (main) antenna and the user (excluding hands, wrist, feet, and ankle)



## Section 7. Diagram Example of Co-Location Antenna Separation

Include a **dimensioned photo or dimensioned drawing** showing the distance (mm) between WLAN antenna and 2<sup>nd</sup> 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)



## Section 8. Local representative contact information

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

	Local company name	Contact name	Phone number	FAX Number	e-Mail Address	Notes
Argentina						
Brazil						
Indonesia						
Israel						
Malaysia						
Mexico						
Singapore						Telecommunication Equipment Dealer License Required
South Africa						
USA, Canada						