

ANTENNA INFORMATION

OEM	DELL
ODM	Compal Electronics, Inc.
Platform model name	P151G
Intel platform (ex: Yes, No or NA)	Yes
Platform type (ex: regular NB, convertible PC, AIO...etc)	Regular NB
SAR minimum separation (mm)	2.68mm (w/bumper) 0.9mm (w/o bumper)

Antenna manufacturer	Company name	Wistron NeWeb Corp.
	Address	20 Park Avenue II (or Yuanchiu 2nd Rd.), Hsinchu Science Park, Hsinchu 300, Taiwan
Test location	Company name	Wistron NeWeb Corp.
	Address	20 Park Avenue II (or Yuanchiu 2nd Rd.), Hsinchu Science Park, Hsinchu 300, Taiwan
Test Personnel	Name(Full name)	Wu, Meng-Kai
	E-mail	Kent.Wu@wnc.com.tw
	Tel/Mobile	(+886)3-6667799
Testing date		2021/10/29

Antenna Part number	Main: Antenna P/N: 81ELA115.G09 Compal P/N: DC33002L21L	Aux: Antenna P/N: 81ELA115.G09 Compal P/N: DC33002L21L
Antenna type (ex: PIFA, Dipole...etc)	Monopole	

Antenna Peak gain w/ cable loss (dBi)*										
	2.4GHz 2400-2483.5 MHz	5.2GHz 5150-5250MHz	5.3GHz 5250-5350MHz	5.6GHz 5470-5725MHz	5.8GHz 5725-5850MHz	5.9GHz 5850-5895MHz	6.2GHz 5925-6425MHz	6.5GHz 6425-6525MHz	6.7GHz 6525-6875MHz	7.0 GHz 6875-7125MHz
Main	2.86	1.82	1.22	0.66	1.51	1.51	2.2	0.01	0.75	2.93
Aux	1.17	0.94	0.11	0.49	1.18	1.18	2.2	-0.5	1.31	-1.12

Cable Assembly Part Number and Information					
	Cable PN	Cable length(cm)	Cable diameter(mm)	Impedance(ohm)	Connector type
Main	20565-001R-13	2.55	1.13	50	Ipex MHF4L
Aux	20565-001R-13	1.85	1.13	50	Ipex MHF4L

* 3D Antenna Peak Gain required being test in system basis.

Cable loss (dBi)										
	2.4GHz 2400-2483.5 MHz	5.2GHz 5150-5250MHz	5.3GHz 5250-5350MHz	5.6GHz 5470-5725MHz	5.8GHz 5725-5850MHz	5.9GHz 5850-5895MHz	6.2GHz 5925-6425MHz	6.5GHz 6425-6525MHz	6.7GHz 6525-6875MHz	7.0 GHz 6875-7125MHz
Main	0.15	0.23	0.23	0.23	0.24	0.24	0.25	0.25	0.26	0.27
Aux	0.70	1.03	1.04	1.07	1.09	1.09	1.13	1.16	1.19	1.22

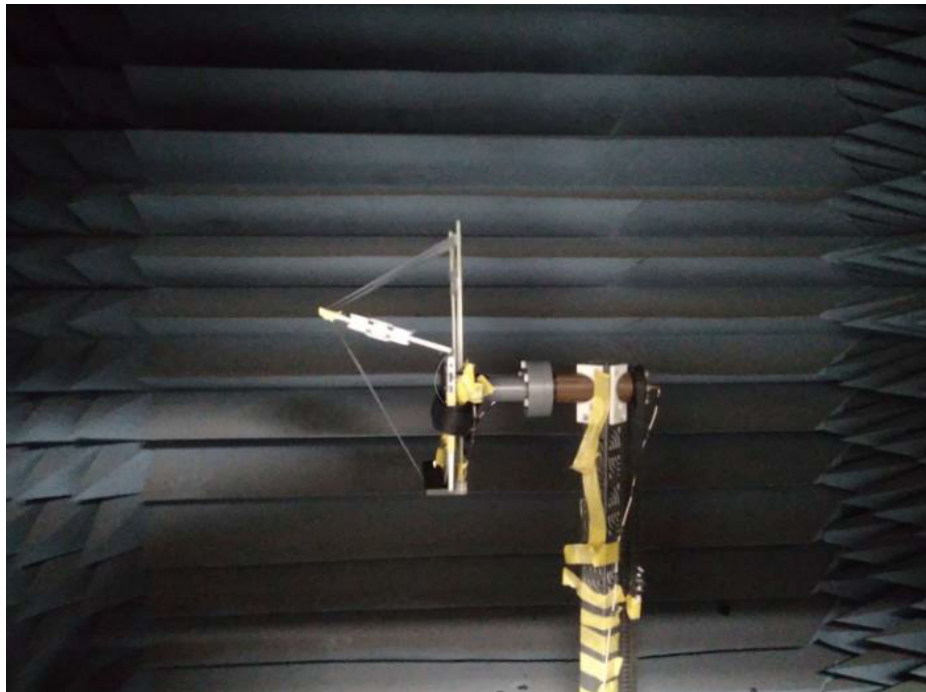
Table of Contents

Cover page.....	1
Annex A. Photographs	
A.1 Setup Photo.....	16
A.2 Test sample.....	17
Annex B. Antenna Location	
B.1 Antenna Host Platform Location Information.....	19
B.2 Antenna dimensional information for SAR evaluation.....	20

Annex A. Photographs

A.1 Setup Photo

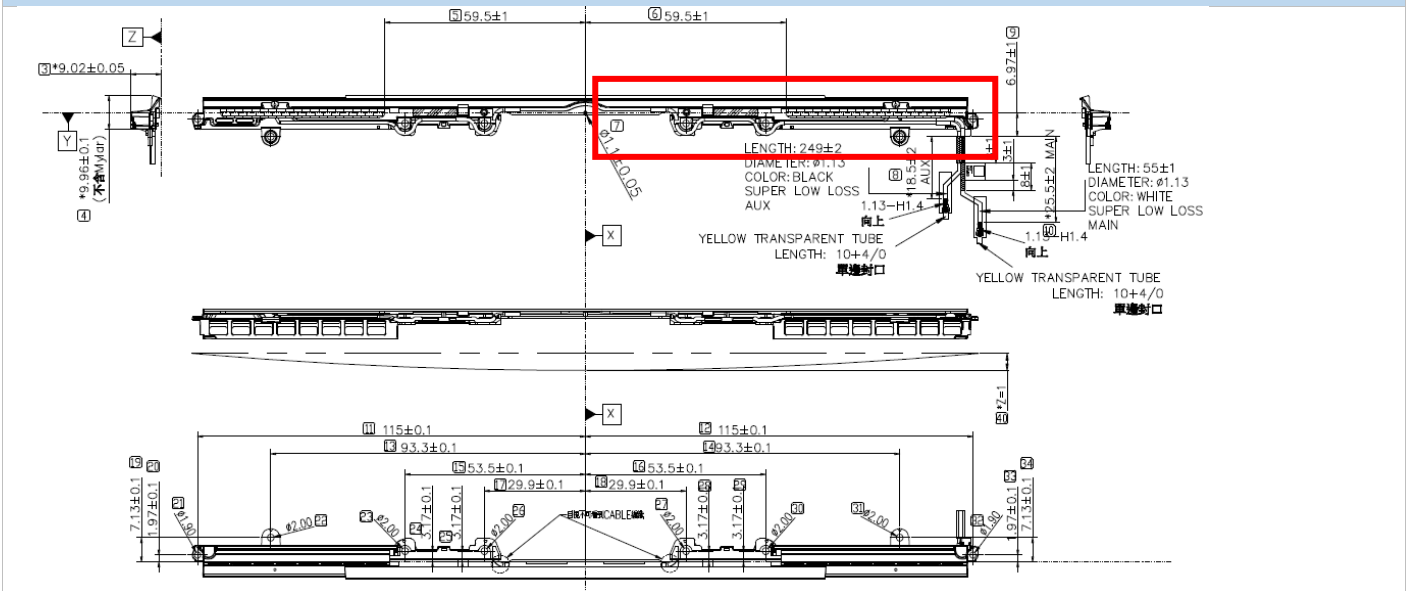
Test Conditions
NB under test placed on a non-conductive structure at sufficient height to be in the 'quiet zone' of the chamber
The NB under test must be fully populated with a power, motherboard, hard drive, disk drives, etc... The purpose is to characterize the antennas on a fully populated customer deliverable unit.
NB's panel should be parallel with XY-plane and face to Y-axle, see diagram below.



A.2 Test sample

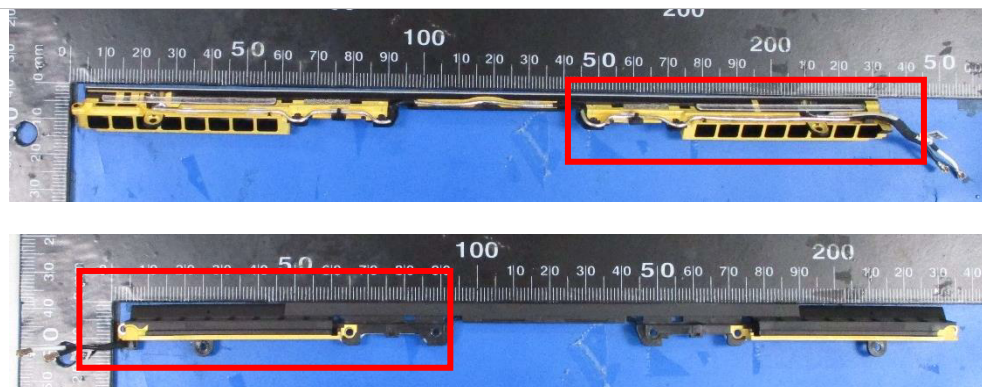
Main Antenna

Antenna Drawing



Antenna Photo

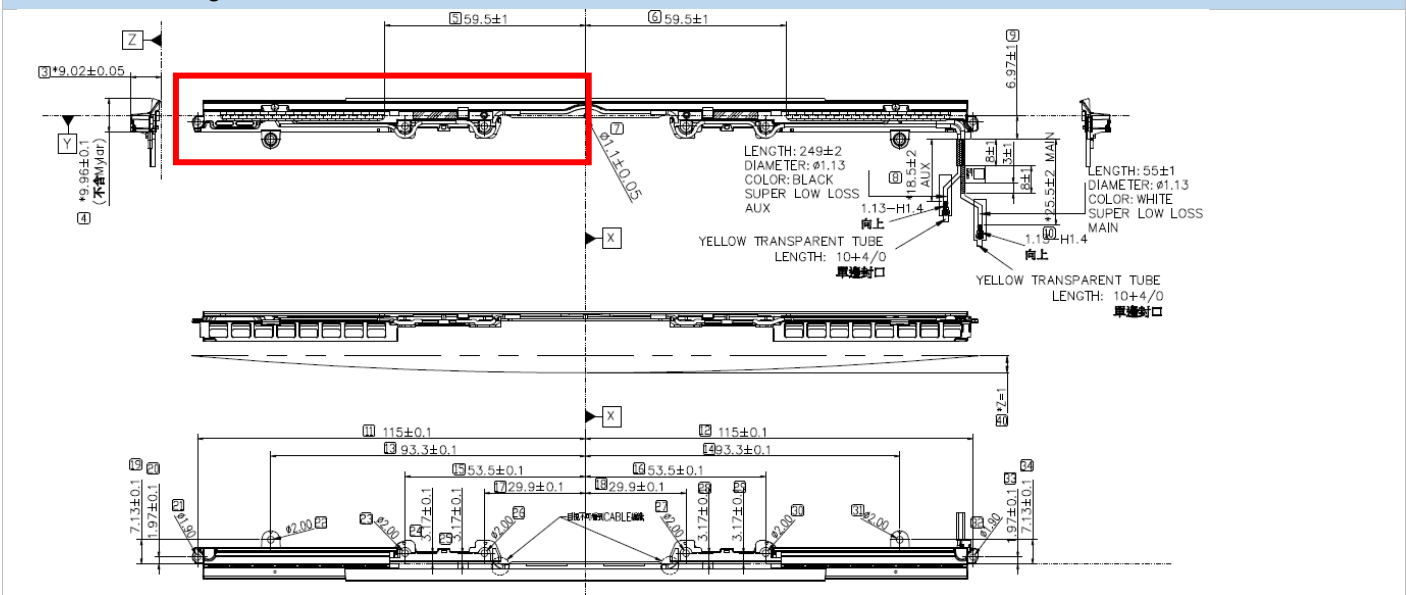
Front / Back



Note: antenna photo should include L type ruler

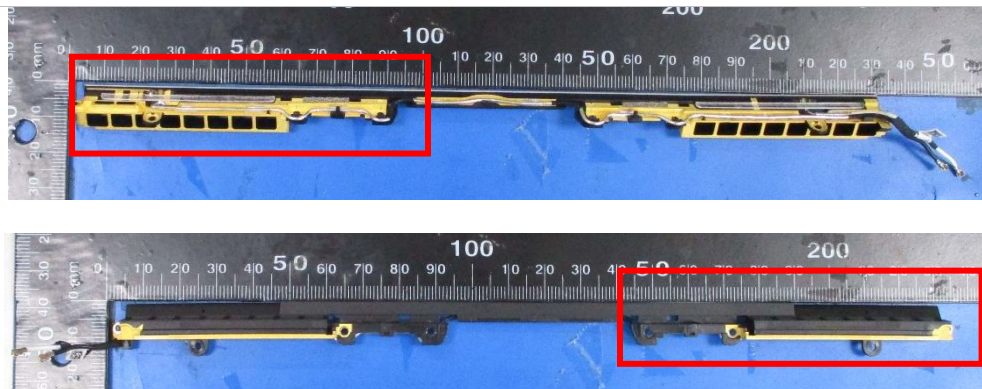
Aux Antenna

Antenna Drawing



Antenna Photo

Front / Back



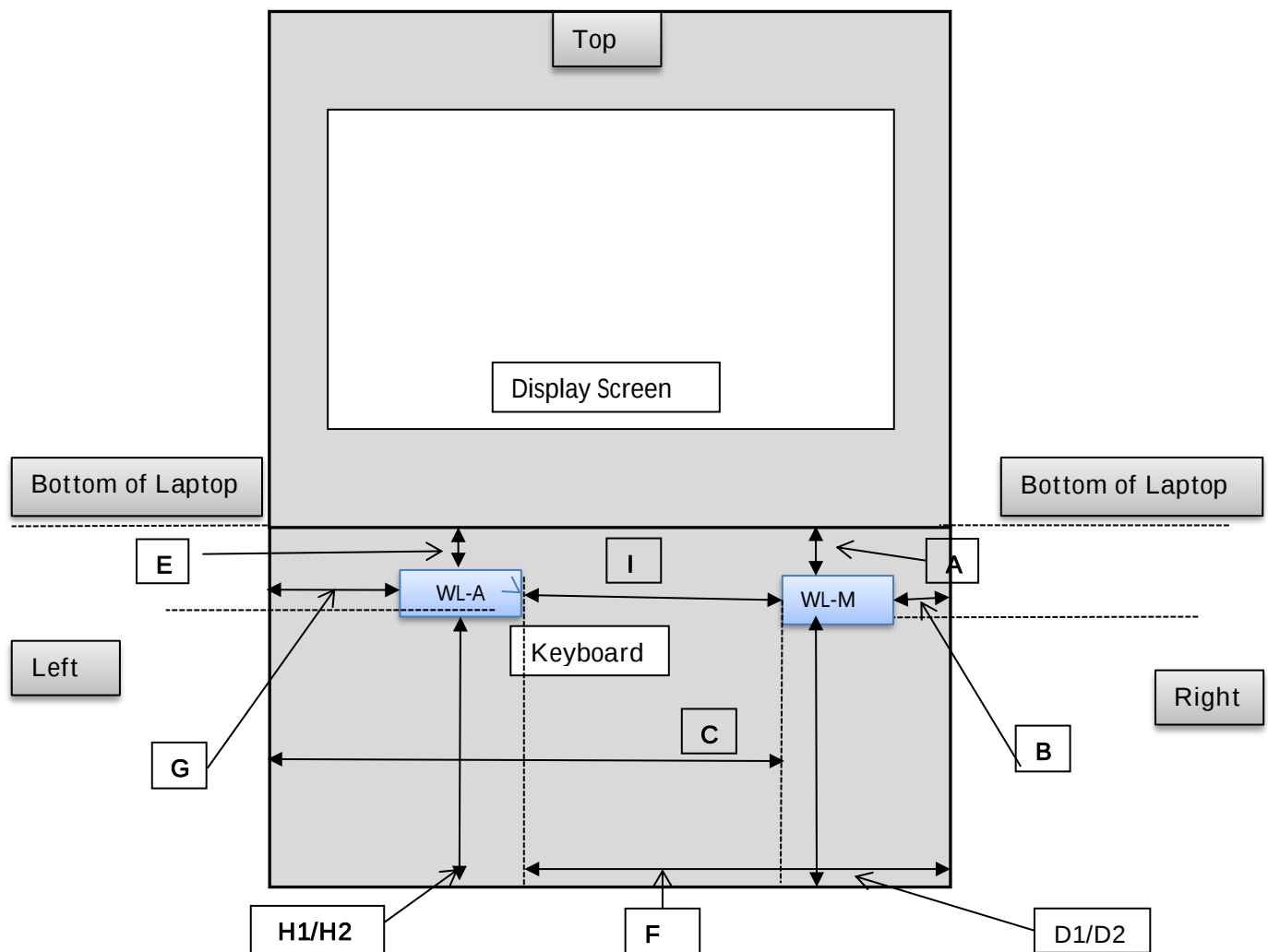
Note: antenna photo should include L type ruler

Annex B. Antenna Location

B.1 Antenna Host Platform Location Information

Include a dimensioned photo(s) or dimensioned drawing(s) of Main and Aux antenna placements (measurements are not required for receive-only antenna).

Any antenna that transmits must show dimensions to bottom of laptop. Provide a description of the materials that are used for supporting or surrounding transmit antennas; for example, non-conductive plastics vs. conductive coated plastic or metallic materials.



Minimum Separation Distance			
Item	Antenna	Position	Distance (mm)
A	WLAN-Main	to Top	4.53mm
B	WLAN-Main	to Right	31.07mm
C	WLAN-Main	to Left	205.67mm
D-1	WLAN-Main	to Bottom of Laptop (Include Bumper)	2.68mm
D-2	WLAN-Main	to Bottom of Laptop (NOT include Bumper)	0.9mm
E	WLAN-Aux	to Top	4.53mm
F	WLAN-Aux	to Right	205.67 mm
G	WLAN-Aux	to Left	31.07mm
H-1	WLAN-Aux	to Bottom of Laptop (Include Bumper)	2.68mm
H-1	WLAN-Aux	to Bottom of Laptop (NOT include Bumper)	0.9mm
I	WLAN Main	to WLAN Aux	116.04mm

B.2 Antenna dimensional information for SAR evaluation

Include a dimensioned photo(s) or dimensioned drawing(s) showing the distance (mm) between the transmit antennas and the user. For notebook/laptop hosts show lapheld position (example below). For tablet hosts show all orientations including lapheld, primary & secondary portrait, primary & secondary landscape positions. Include a description of any proximity sensors or power throttling implementations that limit or exclude use of any host orientation.

