

## **Regulatory Antenna Information**

**Project Name : Mckinley**  
**Host System : Notebook PC**  
**Antenna Vendor : Amphenol KAE**

**Intel Corporation**

# Antenna Information

## I. Antenna Assembly Specifications

Antenna assembly overview: Peak Gain including cable loss.

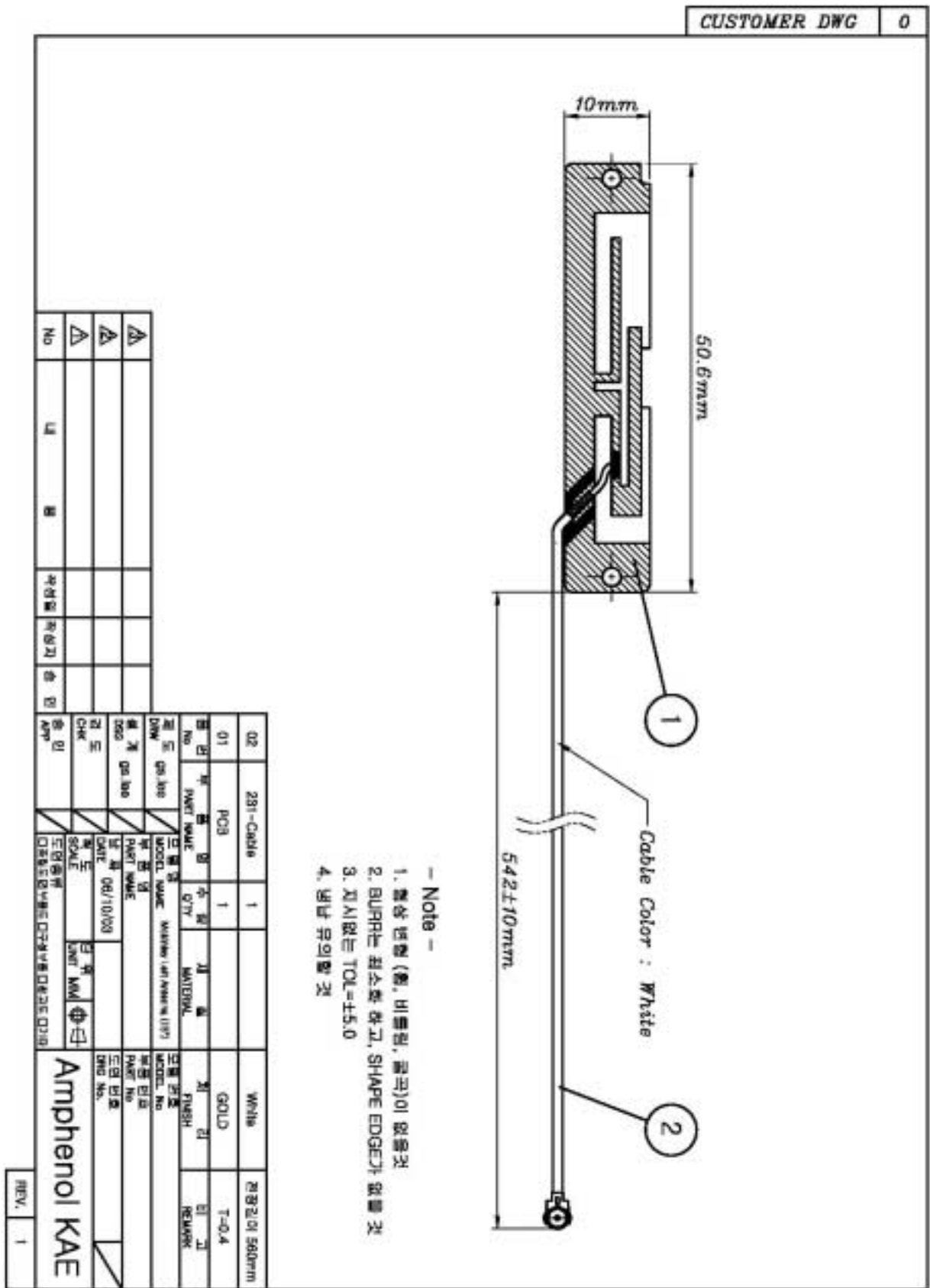
Designator	Manufacture	Antenna type	Cable Assembly Info.	Peak Gain W/ Cable loss (dBi)
(P/N: LG-03-05-012) Main antenna (Left Antenna)	Amphenol KAE Co., Ltd	PCB	(P/N: LG-03-05-012) 50 ohm Coaxial. length: 560mm diameter: 1.13mm Connector: MHC-231 (KAE)	2400-2500MHz 2.85 dBi (peak)
				5150-5350MHz 4.60 dBi (peak)
				5470-5725MHz 5.30 dBi (peak)
				5725-5850MHz 5.30 dBi (peak)
(P/N: LG-03-05-011) Auxiliary antenna (Right Antenna)	Amphenol KAE Co., Ltd	PCB	(P/N: LG-03-05-011) 50 ohm Coaxial. length: 740mm diameter: 1.13mm Connector: MHC-231 (KAE)	2400-2500MHz 2.12 dBi (peak)
				5150-5350MHz 3.46 dBi (peak)
				5470-5725MHz 4.35 dBi (peak)
				5725-5850MHz 4.35 dBi (peak)

Cable assembly overview: Cable loss (including connector).

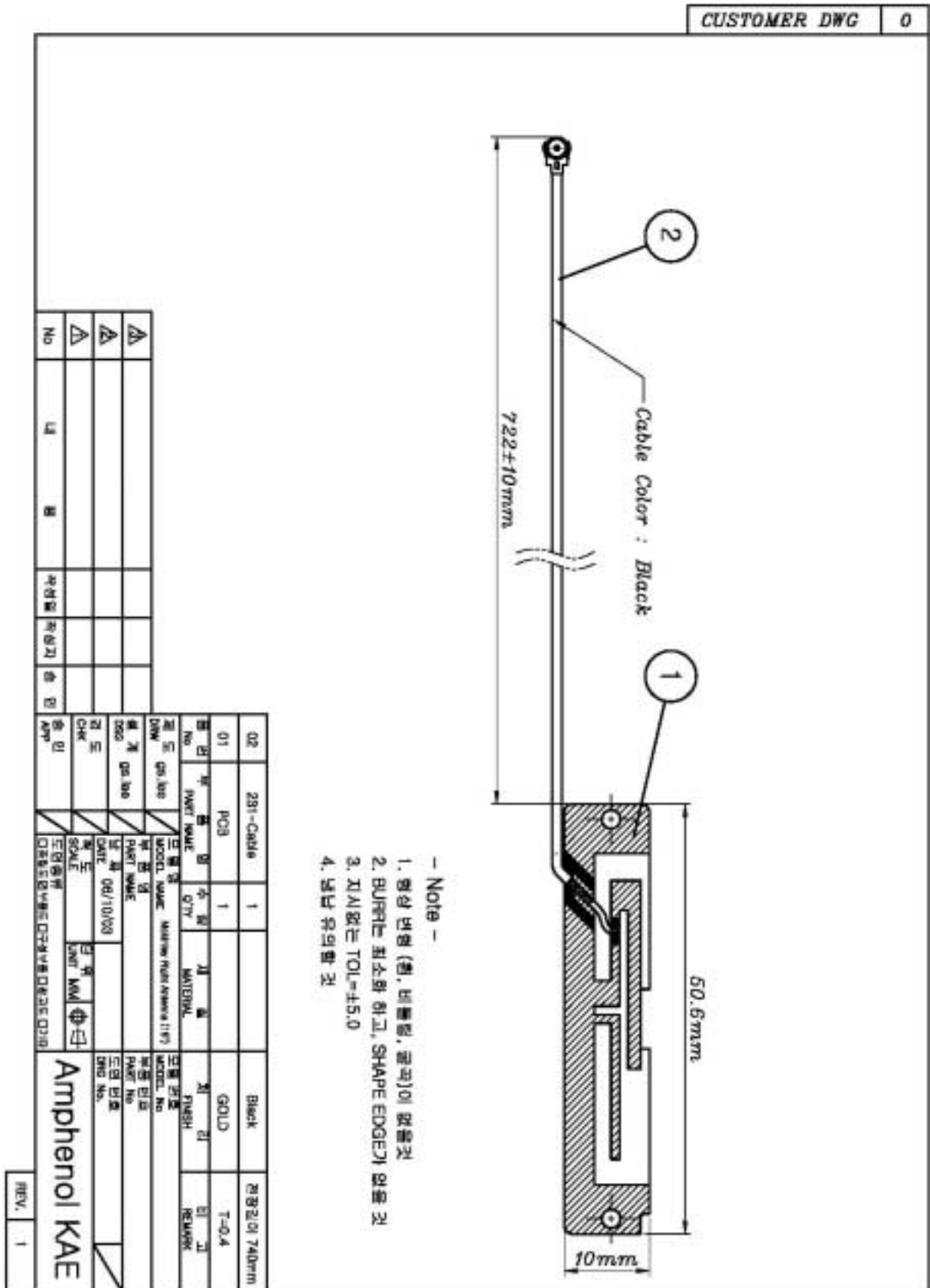
Designator	Manufacture	Cable type and length	VSWR	Cable Loss (dBi)
(P/N: LG-03-05-012) For use with the Main antenna	Amphenol KAE Co., Ltd	(P/N: LG-03-05-012) 50 ohm Coaxial. length: 560mm diameter: 1.13mm Connector: MHC-231 (KAE)	2400-2500MHz 1.10 max	2400-2500MHz -2.12 dBi (peak)
			5150-5350MHz 1.28 max	5150-5350MHz -2.90 dBi (peak)
			5470-5725MHz 1.32 max	5470-5725MHz -2.84 dBi (peak)
			5725-5850MHz 1.29 max	5725-5850MHz -2.93 dBi (peak)
(P/N: LG-03-05-011) For use with the Auxiliary antenna	Amphenol KAE Co., Ltd	(P/N: LG-03-05-011) 50 ohm Coaxial. length: 740mm diameter: 1.13mm Connector: MHC-231 (KAE)	2400-2500MHz 1.07 max	2400-2500MHz -2.59 dBi (peak)
			5150-5350MHz 1.22 max	5150-5350MHz -3.78 dBi (peak)
			5470-5725MHz 1.24 max	5470-5725MHz -3.85 dBi (peak)
			5725-5850MHz 1.27 max	5725-5850MHz -3.92 dBi (peak)

## Mechanical drawings of antenna

### Main Antenna



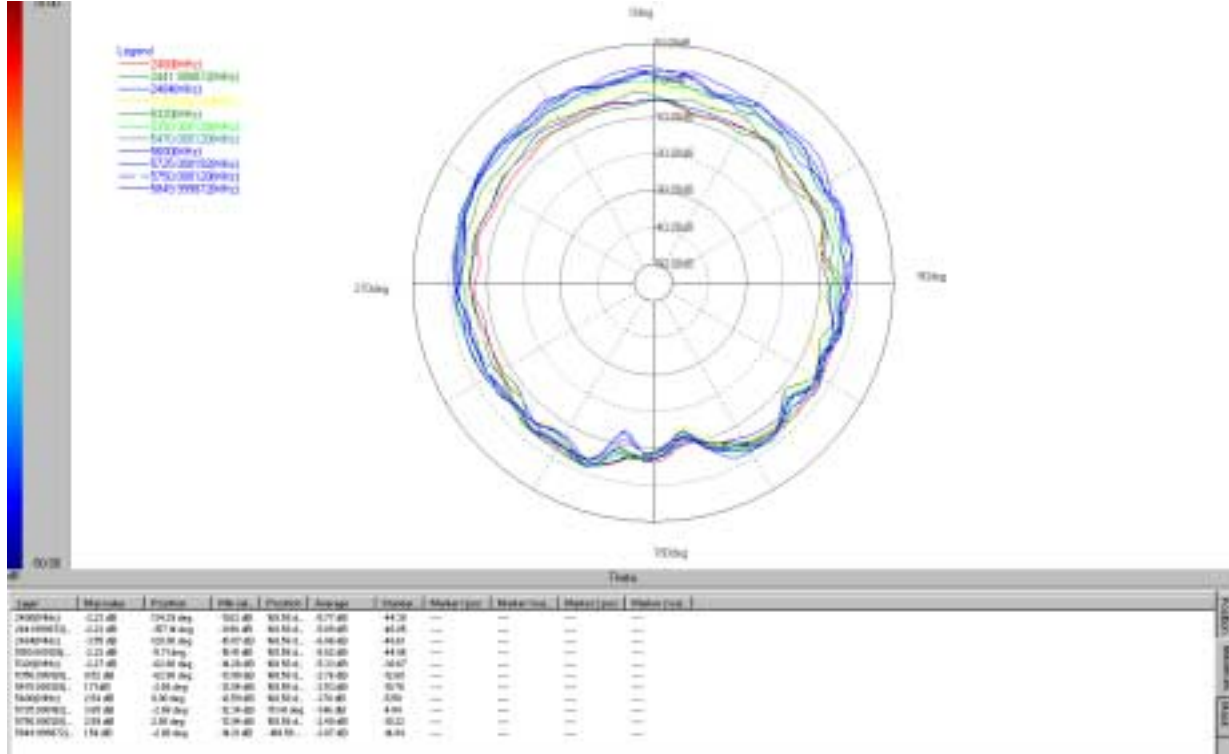
Aux antenna



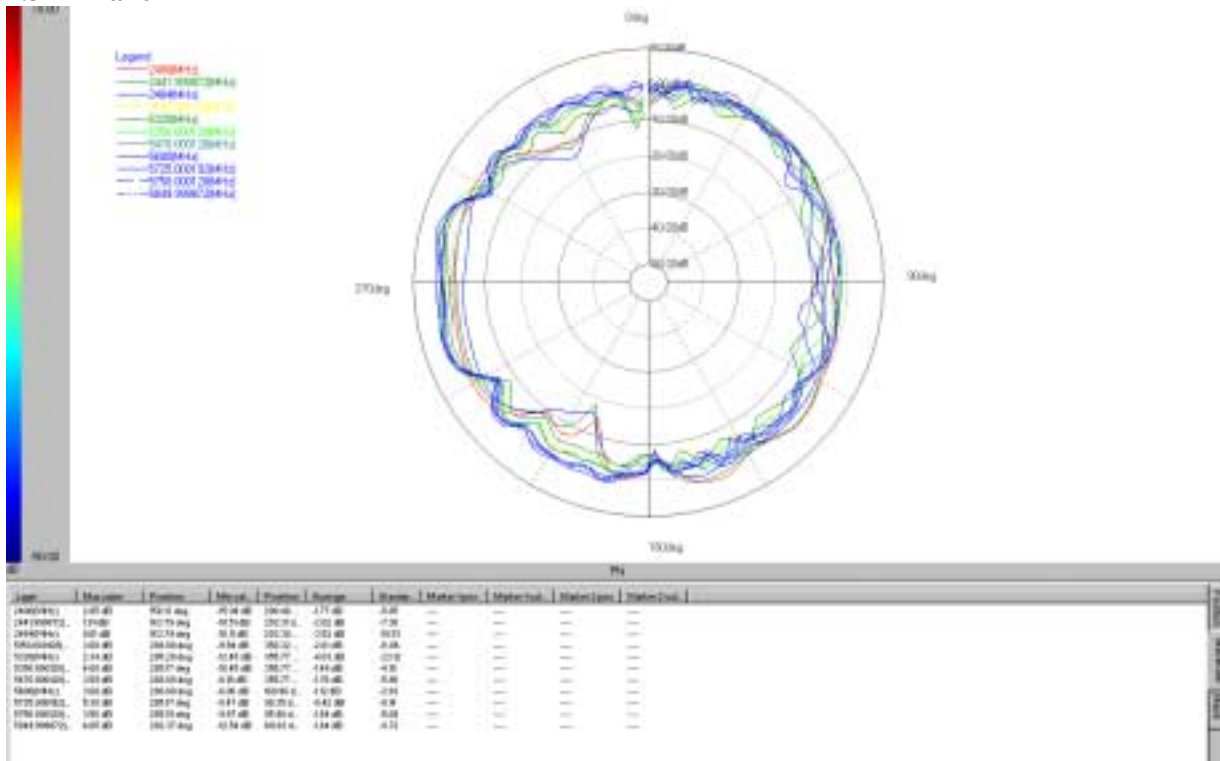
## Radiation characteristic of antennae Loaded (In Host System)

### 1 Main Antenna Radiation pattern and gain

#### 1.1 E1-Plane



### 1.3 H-Plane

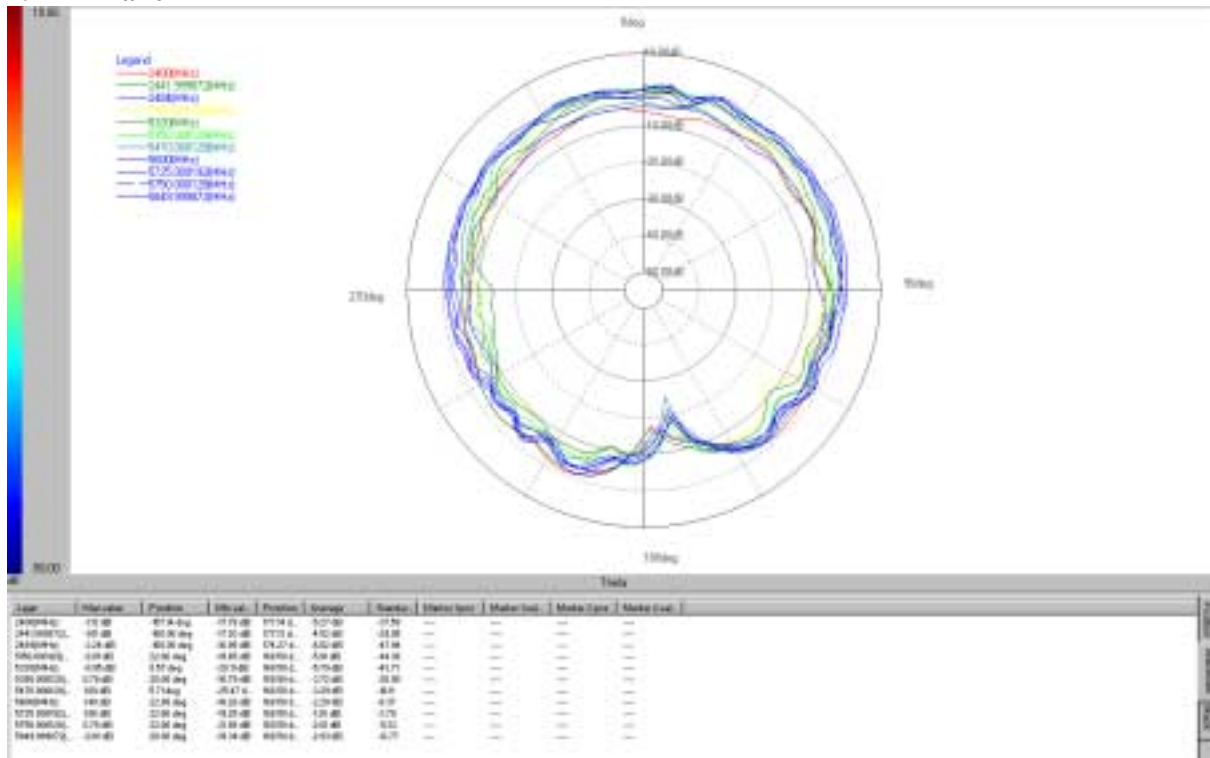


### 1.4 Average gain (dBi) summary

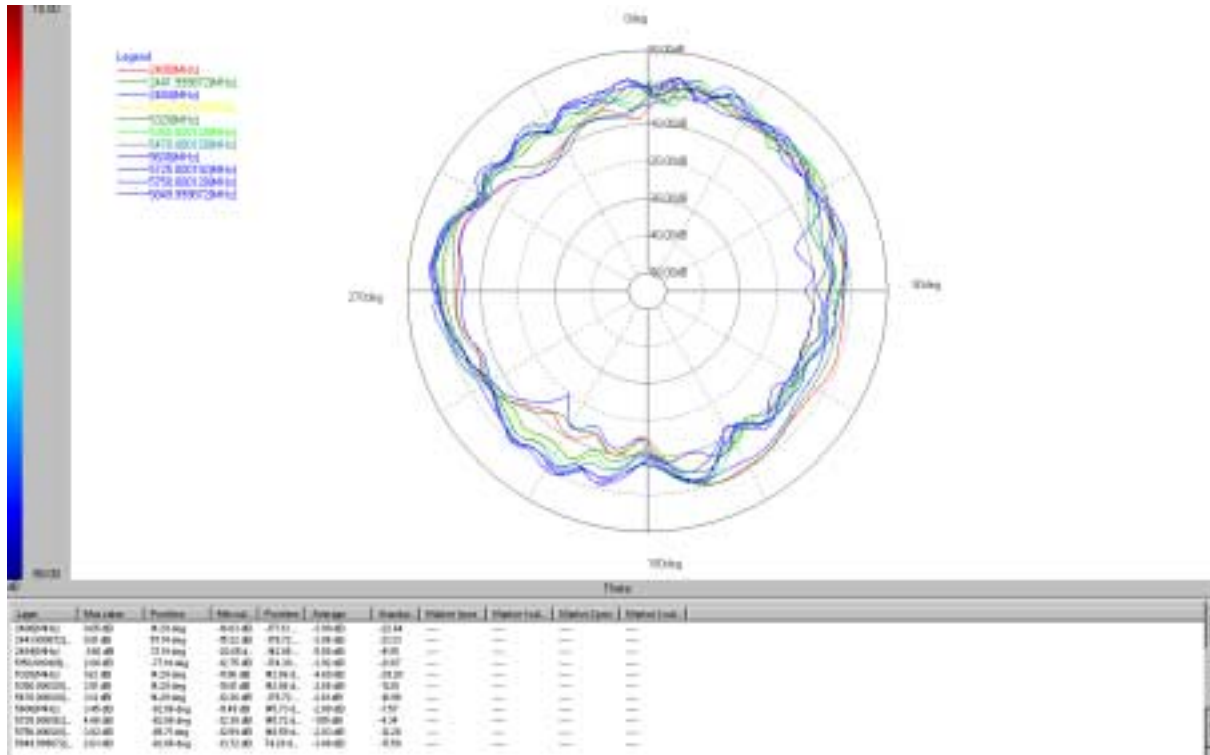
Frequency (MHz)	E1-plane	E2-plane	H-plane
2400	-5.77 dB	-3.15 dB	-1.77 dB
2484	-6.06 dB	-4.90 dB	-3.52 dB
5150	-5.82 dB	-2.82 dB	-2.61 dB
5350	-2.76 dB	-1.40 dB	-1.49 dB
5470	-2.53 dB	-1.71 dB	-1.76 dB
5725	-1.46 dB	-0.40 dB	-0.42 dB
5850	-3.07 dB	-1.82 dB	-1.64 dB

## 2. Aux Antenna Radiation pattern and gain

### 2.1 E1-Plane

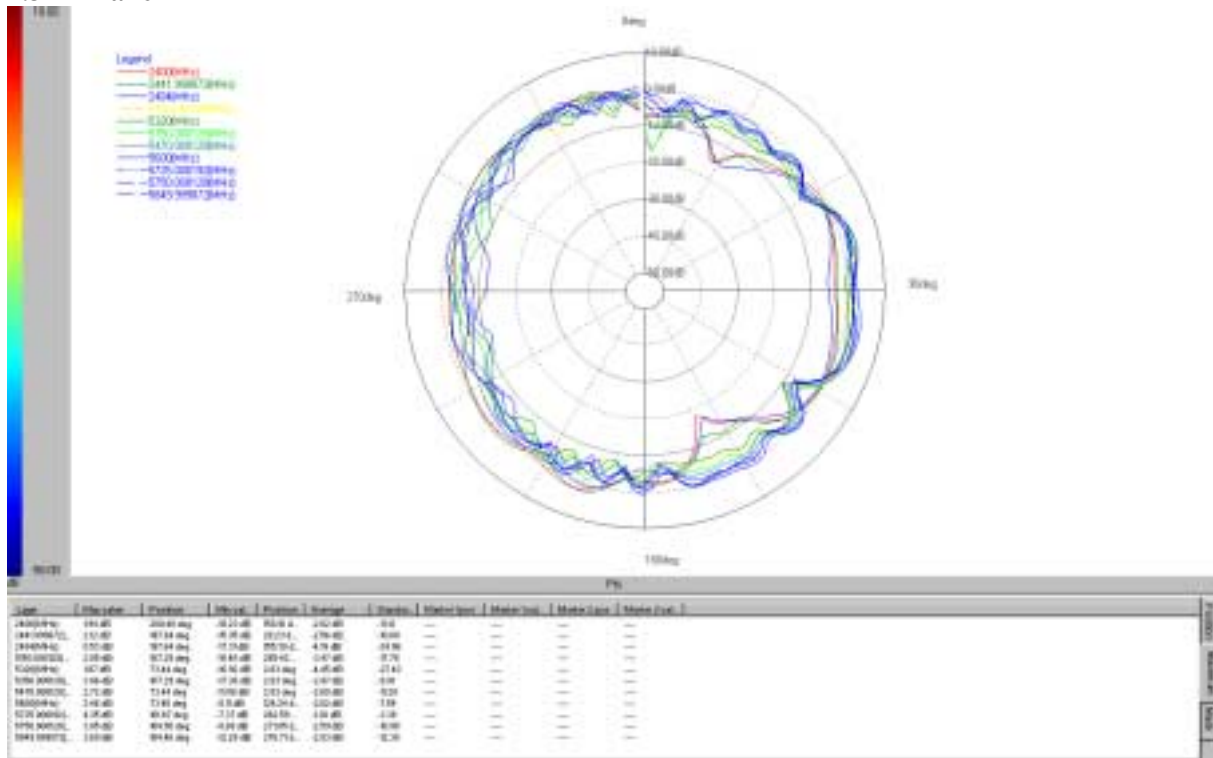


### 2.2 E2-Plane





### 2.3 H-Plane



### 2.4 Average gain (dBi) summary

Frequency (MHz)	E1-plane	E2-plane	H-plane
2400	-5.27 dB	-3.99 dB	-2.62 dB
2484	-6.02 dB	-5.58 dB	-4.19 dB
5150	-5.81 dB	-3.92 dB	-3.47 dB
5350	-3.72 dB	-2.66 dB	-2.47 dB
5470	-3.29 dB	-2.61 dB	-2.60 dB
5725	-1.36 dB	-1.55 dB	-1.30 dB
5850	-2.93 dB	-3.48 dB	-2.83 dB



## Host PC Information

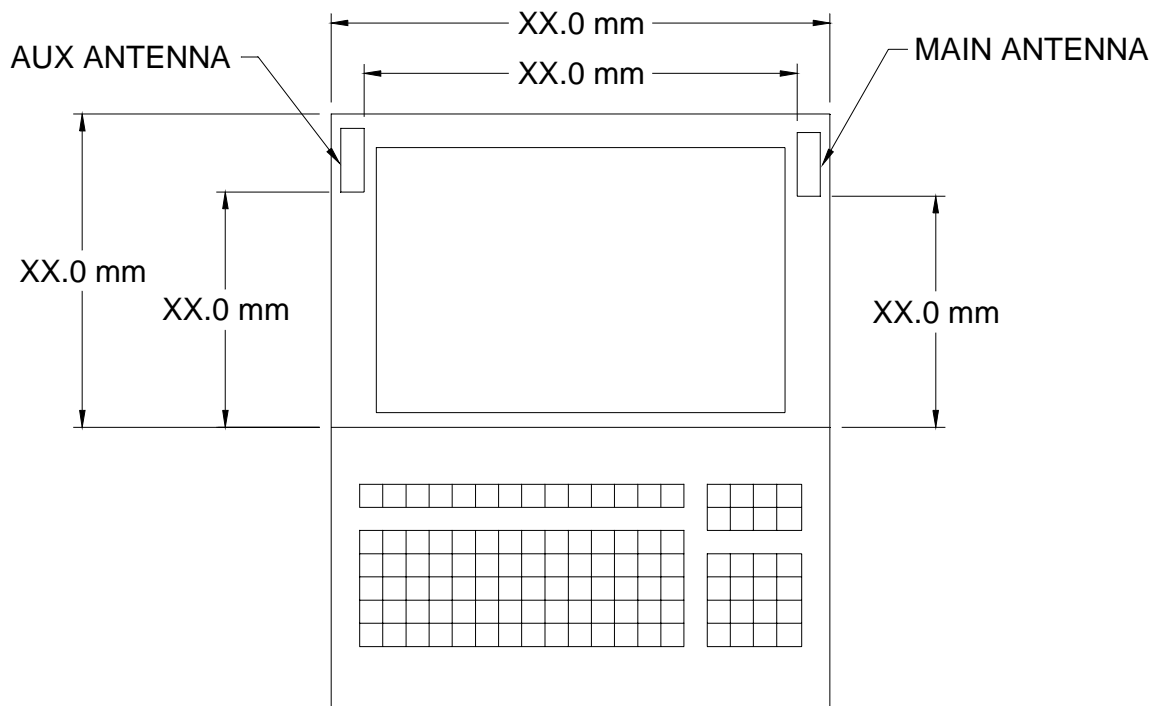
Host System : Notebook PC

(Project and Model Name : Mckinley)

Antenna location : Top of the LCD of Mckinley

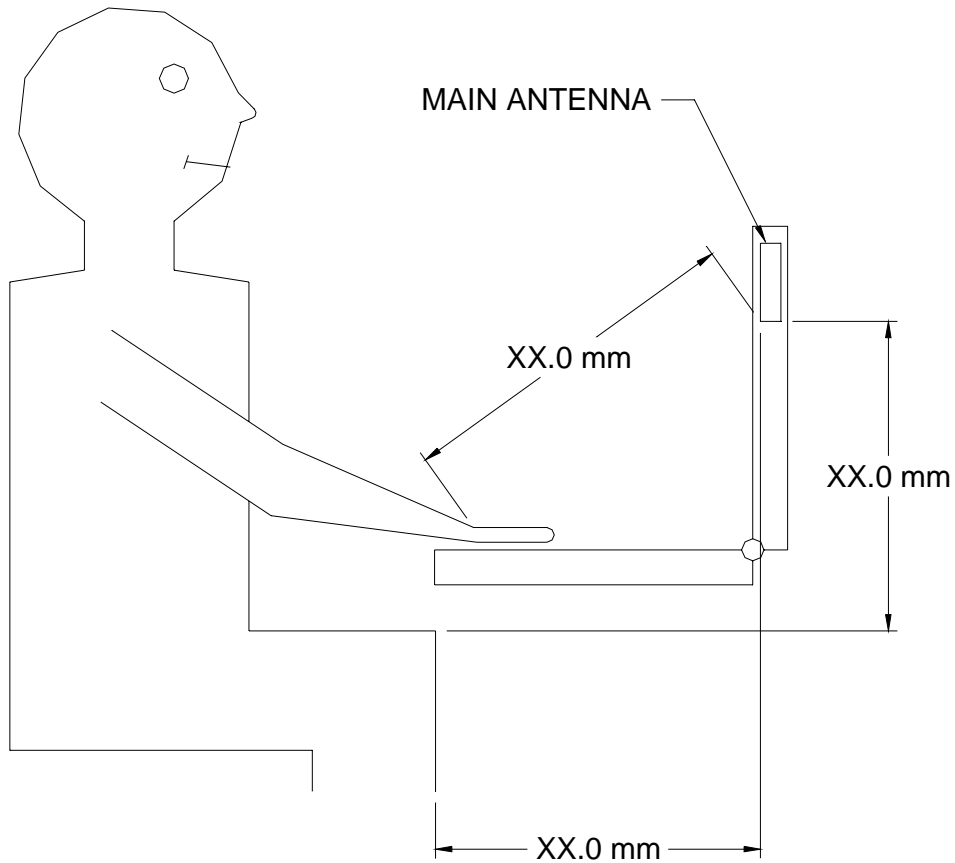
Antennas : Main = Left, Aux = Right

Photographs of the antenna location in the Mckinley





Please insert dimensioned photos or dimensioned drawings showing the distance (mm) between the transmit (main) antenna and the user (excluding hands, wrist, feet, and ankle)

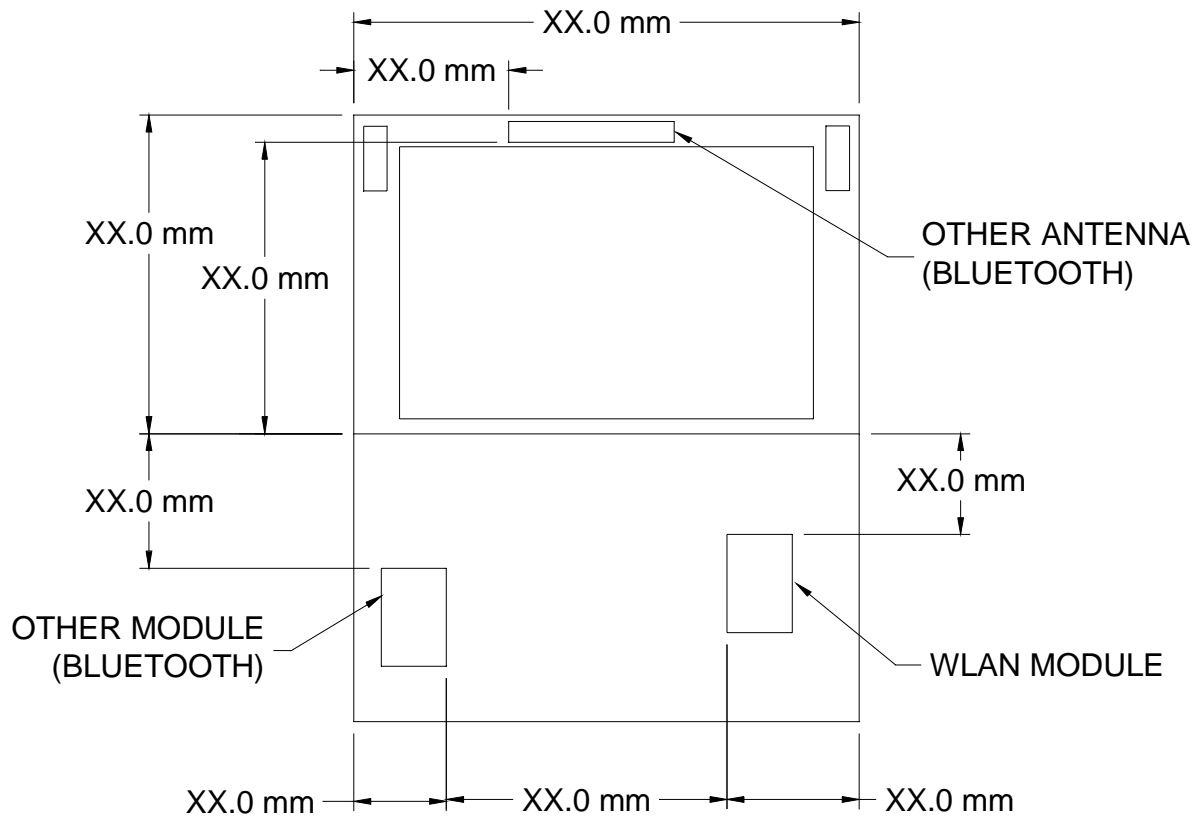


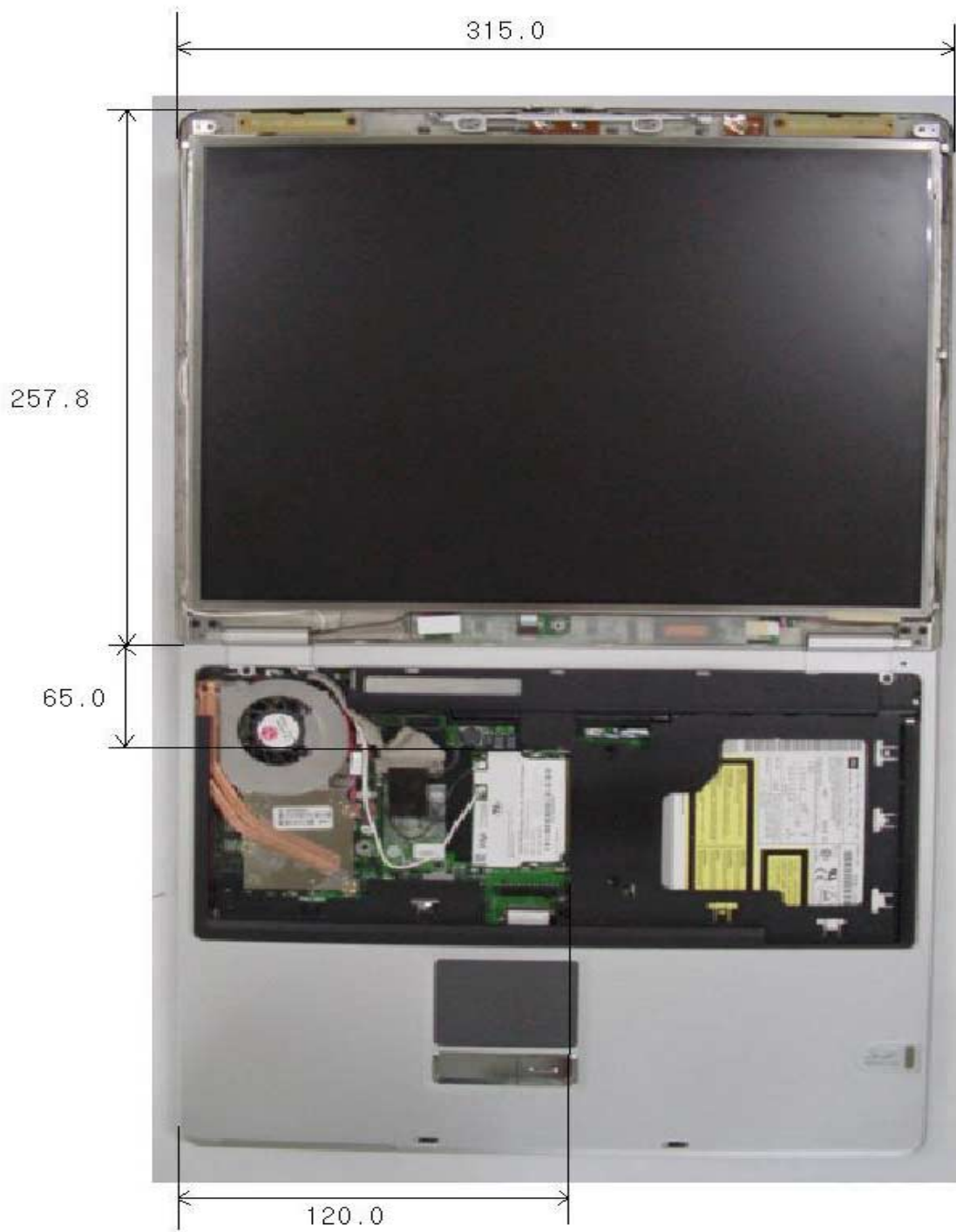


## Diagram Example of Co-Location Antenna Separation

Should indicate distance between WLAN module antennas and Bluetooth antenna element.

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





WITHOUT BLUETOOTH

## APPENDIX I

### Intel's Antenna review process:

1. Regulatory Program Manager receives OEM antenna information.
2. Regulatory Program Manager will arrange an, Antenna information review. Provide feedback and request information not provided.
3. Then assign the OEMs a time line.
4. Check for the following below:
  - VSWR
  - Main & Aux antenna (Peak Gain W/ cable loss)
  - Main & Aux antenna (Peak Gain only)
  - Main & Aux antenna (Cable loss W/ connector)
  - Mechanical Drawings of Main & Aux. antenna
  - Radiation Characteristic of antenna Loaded (In a host system)
  - Max allowable input power
  - Manufacturer Name
  - Manufacturer Type

The information above is what this document is!



**INTEL OEM / ODM, ANTENNA REGULATORY INFORMATION CHECKLIST**

Description of Information Received	Received	Date
VSWR of cable including connector		
Main & Aux antenna (Peak Gain W/ cable loss)		
Main & Aux antenna (Peak Gain only)		
Main & Aux antenna (Cable loss W/ connector)		
Mechanical Drawings of Main & Aux. antenna		
Radiation Characteristic of antenna Loaded (In a host system)		
Max allowable input power		
Designator / Part number of antenna assembly		
Designator for Antenna only		
Manufacturer Name		
Manufacturer Type		