

# Antenna Regulatory Information

|                           |                     |
|---------------------------|---------------------|
| • Product type            | • Main WLAN antenna |
| • Model number            | • Hepburn           |
| • Revision                | • X02               |
| • Manufacturer Part No. : | • QT0932-11-001-R   |
| • Dell Part No. :         | •                   |

|                           |                     |
|---------------------------|---------------------|
| • Product type            | • MIMO WLAN antenna |
| • Model number            | • Hepburn           |
| • Revision                | • X02               |
| • Manufacturer Part No. : | • QT0932-11-004-R   |
| • Dell Part No. :         | •                   |

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Template Revision 052107

## 1. Specifications

### Antenna Specifications-Main WLAN/WiMax

|                                         |                                                           |
|-----------------------------------------|-----------------------------------------------------------|
| Antenna Type (Material, Technology)     | PIFA/ Metal stamping, Foil                                |
| Antenna Model Number                    | Hepburn                                                   |
| Operating Frequency Range(s)            | 2G: 2.412~2.7 GHz<br>5G: 5.15~5.85 GHz                    |
| Peak Gain (dBi)                         | 2G: 1.12dBi                                               |
|                                         | 5G: -1.23dBi                                              |
| Radio Connector Type                    | IPEX 20308-111R-32/ 20363-111R-37 or equivalent connector |
| Mid-Line Connector Type (If Applicable) | N/A                                                       |

**Remark:** Peak Gains include all system losses (connector, cable, etc)

### Cable Specifications

| Cable Parameters                            | WLAN antenna                             |           |         |
|---------------------------------------------|------------------------------------------|-----------|---------|
|                                             | LCD Side                                 | Base Side | Total   |
| Length (mm)                                 | N/A                                      | N/A       | 655     |
| Loss (Including Connectors) (dB, 2GHz)      |                                          |           | 1.63 dB |
| Loss (Including Connectors) (dB, 5GHz)      |                                          |           | 2.75 dB |
| Description (Color, Diameter, Manufacturer) | Color: white<br>OD: 1.13 low loss<br>GBE |           |         |

## Antenna Specifications-Aux WLAN/WiMax

|                                         |                                                           |
|-----------------------------------------|-----------------------------------------------------------|
| Antenna Type (Material, Technology)     | PIFA/ Metal stamping, Foil                                |
| Antenna Model Number                    | Hepburn                                                   |
| Operating Frequency Range(s)            | 2G: 2.412~2.7 GHz<br>5G: 5.15~5.85 GHz                    |
| Peak Gain (dBi)                         | 2G: -1.92dBi                                              |
|                                         | 5G: 2.36dBi                                               |
| Radio Connector Type                    | IPEX 20308-111R-32/ 20363-111R-37 or equivalent connector |
| Mid-Line Connector Type (If Applicable) | N/A                                                       |

**Remark:** Peak Gains include all system losses (connector, cable, etc)

## Cable Specifications

| Cable Parameters                            | WLAN antenna                             |           |         |
|---------------------------------------------|------------------------------------------|-----------|---------|
|                                             | LCD Side                                 | Base Side | Total   |
| Length (mm)                                 | N/A                                      | N/A       | 667     |
| Loss (Including Connectors) (dB, 2GHz)      |                                          |           | 1.66 dB |
| Loss (Including Connectors) (dB, 5GHz)      |                                          |           | 2.8 dB  |
| Description (Color, Diameter, Manufacturer) | Color: black<br>OD: 1.13 low loss<br>GBE |           |         |

## Antenna Specifications-WLAN MIMO

|                                         |                                                           |
|-----------------------------------------|-----------------------------------------------------------|
| Antenna Type (Material, Technology)     | PIFA/ Metal stamping, Foil                                |
| Antenna Model Number                    | Hepburn                                                   |
| Operating Frequency Range(s)            | 2G: 2.412~2.462 GHz<br>5G: 5.15~5.85 GHz                  |
| Peak Gain (dBi)                         | 2G: -0.49dBi                                              |
|                                         | 5G: -0.28dBi                                              |
| Radio Connector Type                    | IPEX 20308-111R-32/ 20363-111R-37 or equivalent connector |
| Mid-Line Connector Type (If Applicable) | N/A                                                       |

**Remark:** Peak Gains include all system losses (connector, cable, etc)

## Cable Specifications

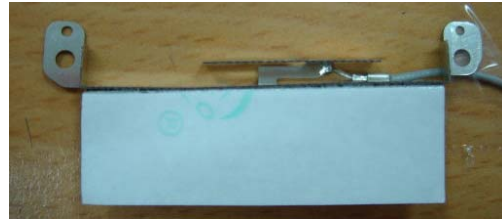
| Cable Parameters                            | WLAN antenna                            |           |         |
|---------------------------------------------|-----------------------------------------|-----------|---------|
|                                             | LCD Side                                | Base Side | Total   |
| Length (mm)                                 | N/A                                     | N/A       | 663     |
| Loss (Including Connectors) (dB, 2GHz)      |                                         |           | 1.63 dB |
| Loss (Including Connectors) (dB, 5GHz)      |                                         |           | 2.75 dB |
| Description (Color, Diameter, Manufacturer) | Color: gray<br>OD: 1.13 low loss<br>GBE |           |         |

## **2. Antenna Assembly**

### **WLAN/WiMax Main & AUX**



### **WLAN MIMO**

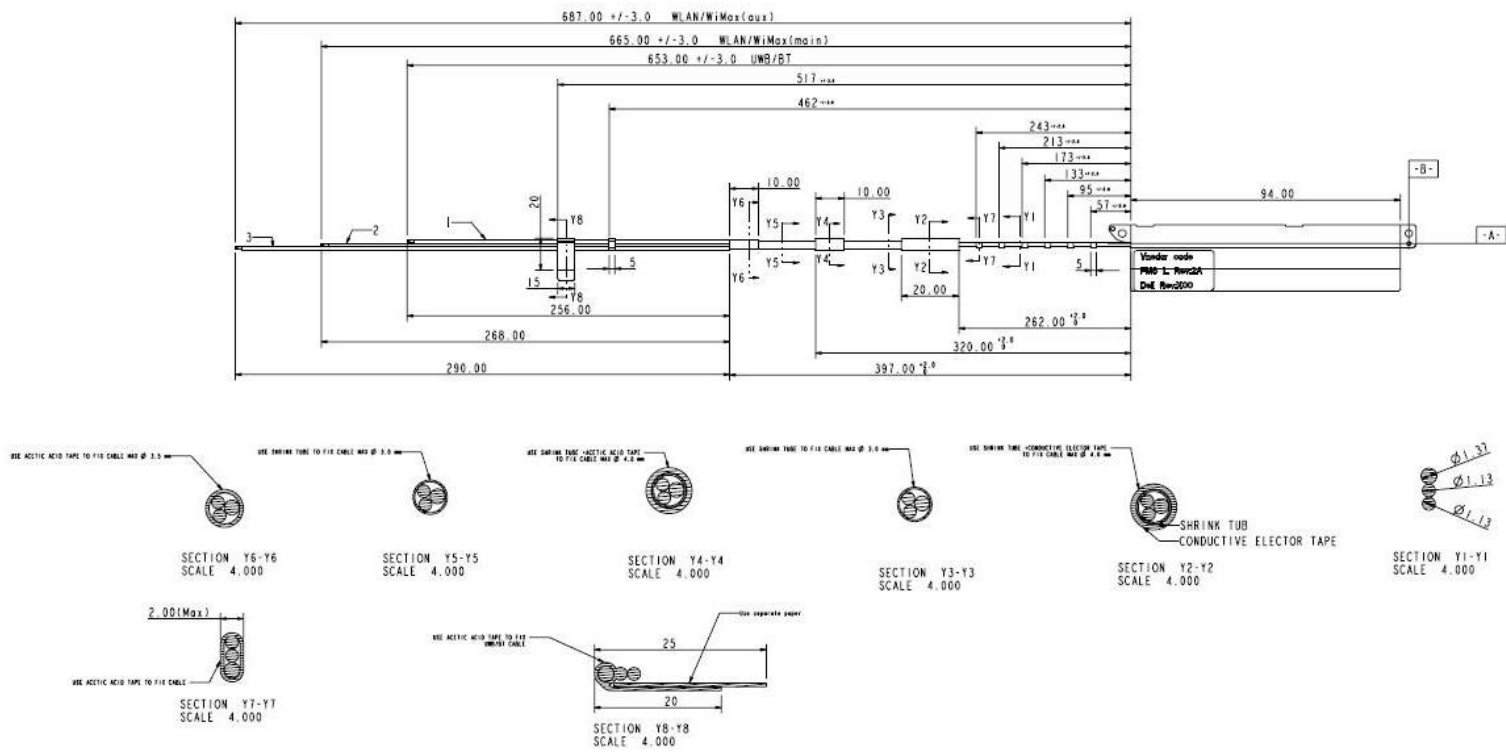


## **3. Antenna Assembly Installed in The Notebook**

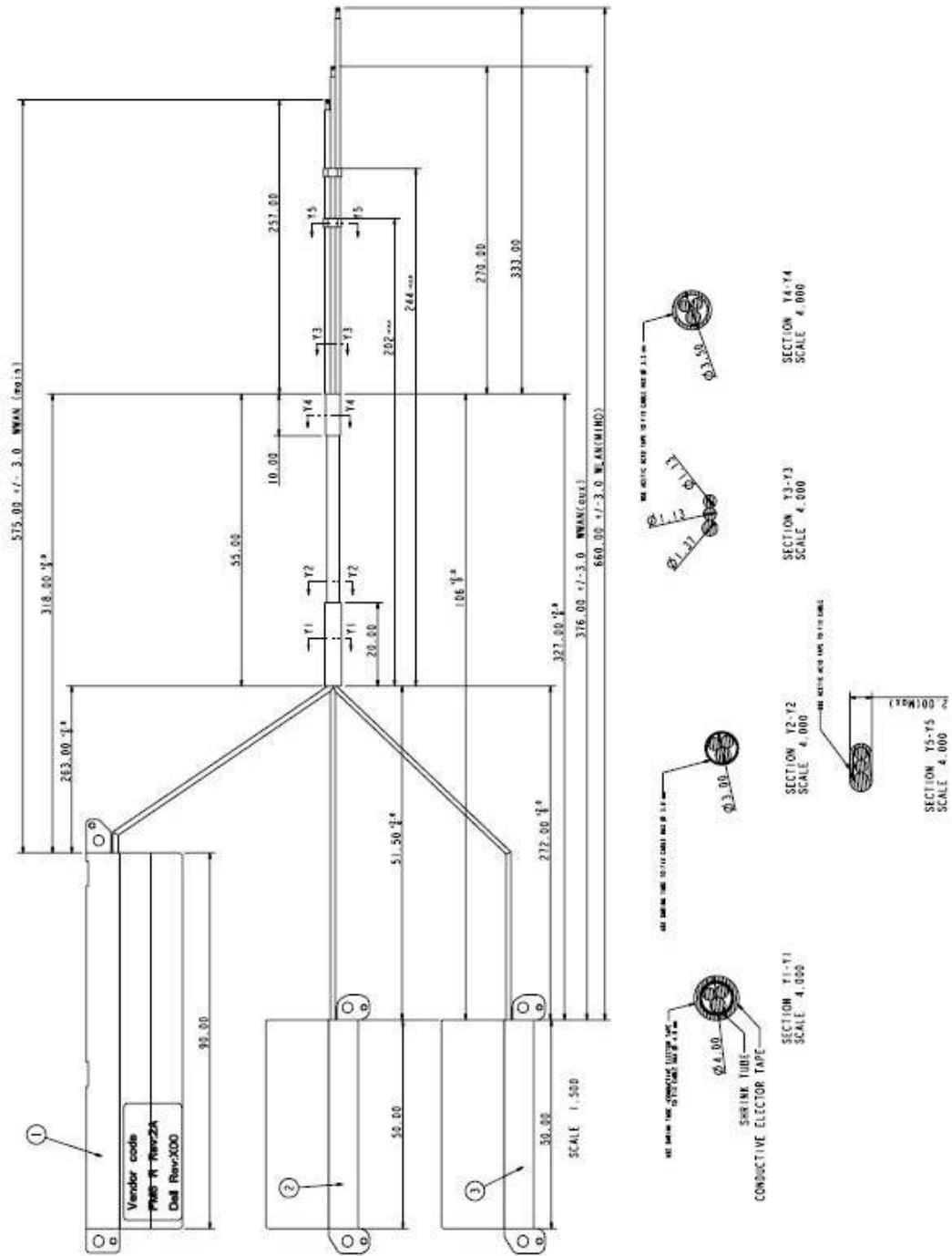


## 4. Mechanical Drawing of Antennas

### WLAN/WiMax Main & AUX

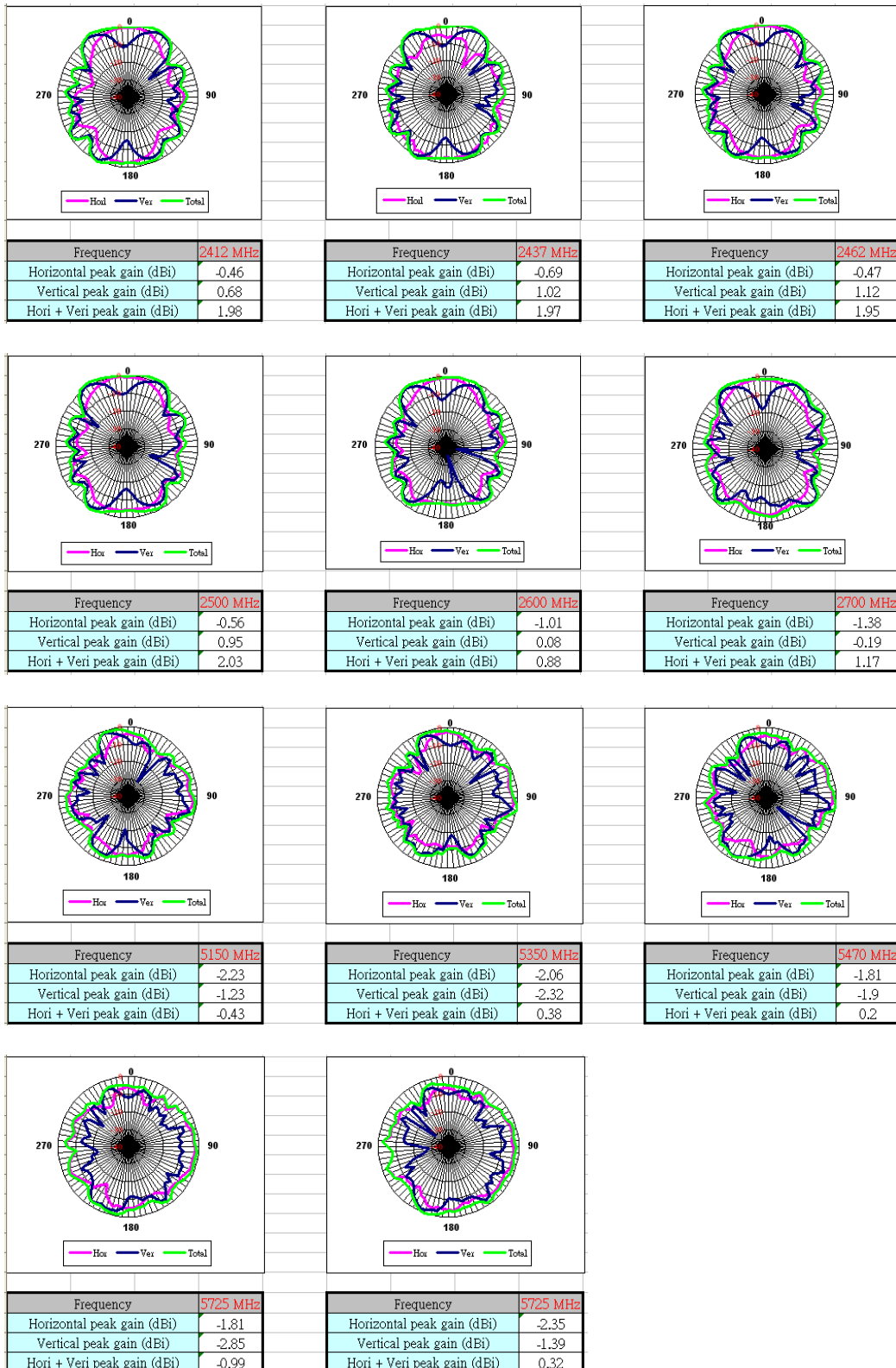


# WLAN MIMO



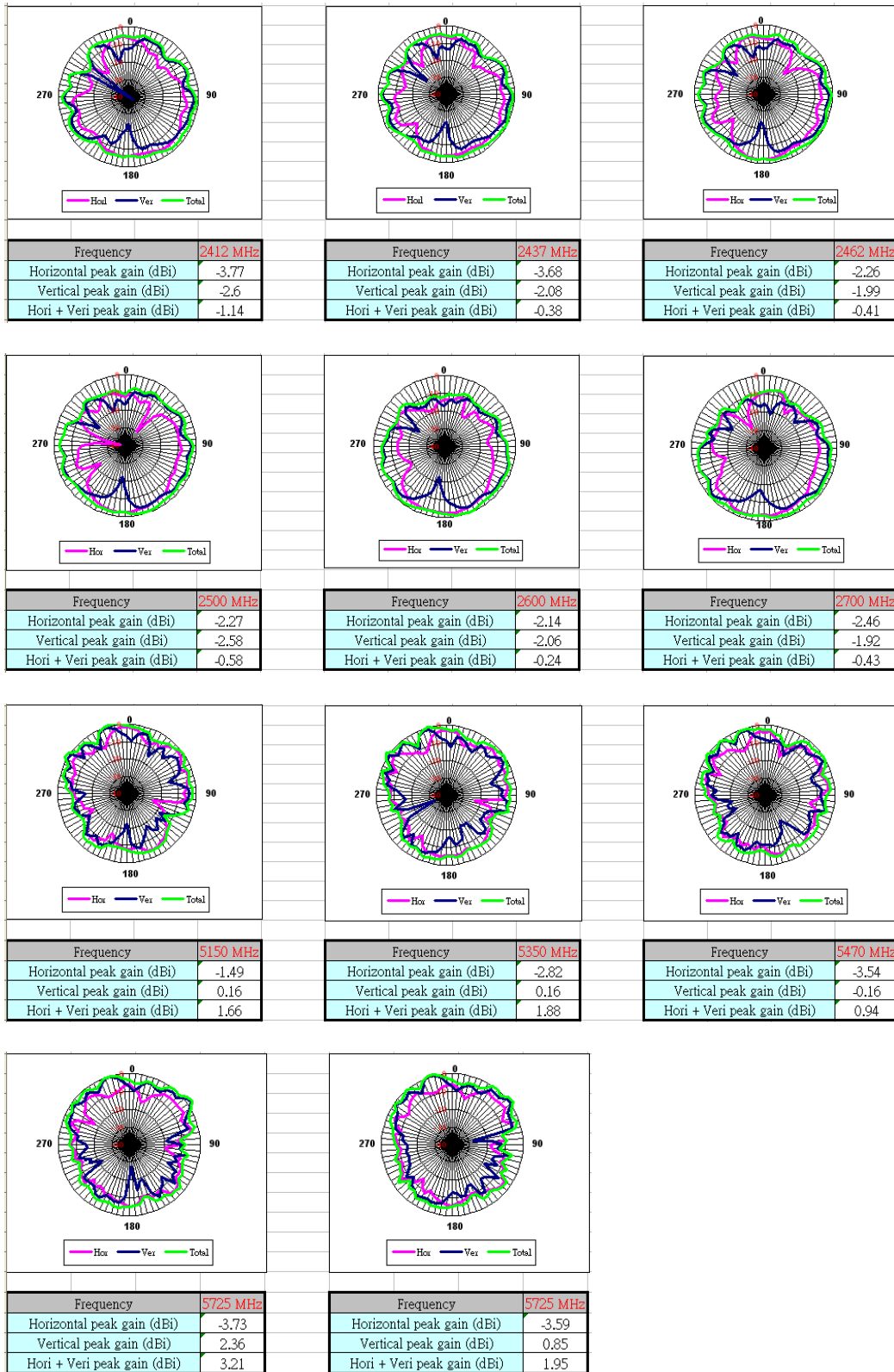
## 5. Gain Patterns

- WLAN + WiMax (MAIN):





- **WLAN + WiMax (AUX):**



- WLAN MIMO

