

# Regulatory WLAN Antenna Information

|         | Vendor Name               | Project Code |
|---------|---------------------------|--------------|
| OEM     | Acer Incorporated         |              |
| ODM     | Quanta / Compal / Wistron |              |
| Antenna | Wistron Neweb Corporation | EBJ          |

| Provided By Wistron<br>NeWeb Corp | Reviewed By Wistron<br>NeWeb Corp |
|-----------------------------------|-----------------------------------|
| Yuan Li Chang                     | Weili Cheng                       |

Wistron NeWeb Corporation  
No.10-1, Li-hsin Road I,  
Hsinchu Science Park,  
Hsinchu 300, Taiwan, R.O.C.  
Telephone: 886-3-666-7799  
Facsimile: 886-3-666-7323  
[http: www.wneweb.com](http://www.wneweb.com)

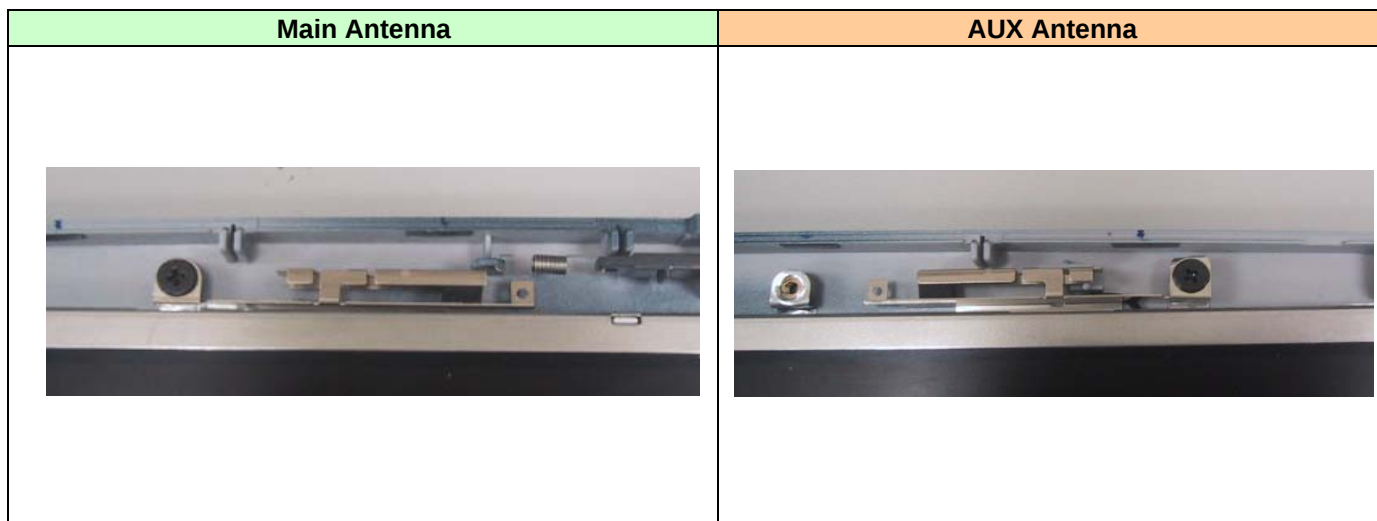
# Antenna Information

## Section 1. Antenna Assembly Specifications

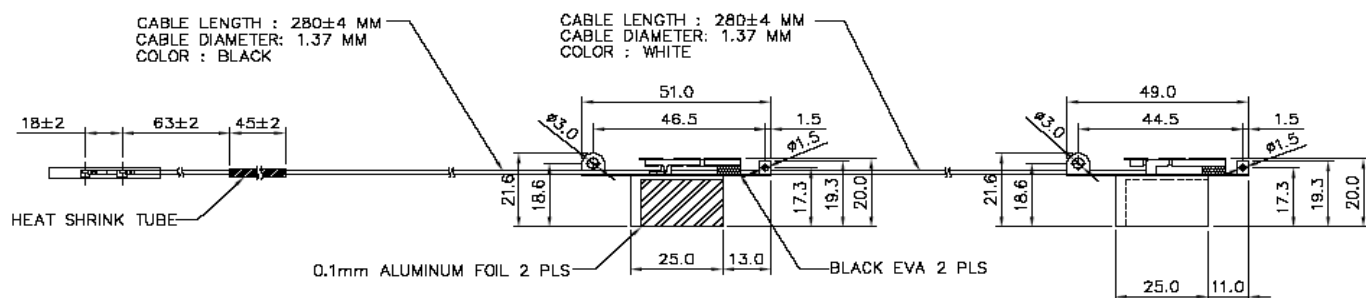
### Antenna Assembly Summary:

| 1A<br>Antenna Part Number                      | 1B<br>Manufacture          | 1C<br>Antenna Type | 1D<br>Cable Assembly Part Number and Information                                                                              | 1E<br>Peak Gain W/ Cable loss (dBi) | 1F<br>Peak Gain w/o Cable Loss (dBi) | 1G<br>VSWR              | 1H<br>Cable Loss (dBi)          |
|------------------------------------------------|----------------------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------------------|-------------------------|---------------------------------|
| <b>Main Antenna</b><br>(WNC P/N: 81.EBJ15.006) | Wistron Newweb Corporation | PIFA               | P/N: WN-S-1.37-280W-(2-2-1)&280B-(2-2-1)<br><br>50 ohm Coaxial.<br><br>length: 280 mm<br>diameter: 1.37 mm<br>Connector: IPEX | 2400-2500MHz<br>4.96 dBi (peak)     | 2400-2500MHz<br>5.87 dBi (peak)      | 2400-2500MHz<br>2.0 max | 2400-2500MHz<br>0.91 dBi (peak) |
|                                                |                            |                    |                                                                                                                               | 4900-5350MHz<br>4.86 dBi (peak)     | 4900-5350MHz<br>6.08 dBi (peak)      | 4900-5350MHz<br>2.5 max | 4900-5350MHz<br>1.22 dBi (peak) |
|                                                |                            |                    |                                                                                                                               | 5470-5725MHz<br>4.93 dBi (peak)     | 5470-5725MHz<br>6.21 dBi (peak)      | 5470-5725MHz<br>2.5 max | 5470-5725MHz<br>1.29 dBi (peak) |
|                                                |                            |                    |                                                                                                                               | 5725-5875MHz<br>3.87 dBi (peak)     | 5725-5875MHz<br>5.18 dBi (peak)      | 5725-5875MHz<br>2.5 max | 5725-5875MHz<br>1.30 dBi (peak) |
| <b>AUX Antenna</b><br>(WNC P/N: 81.EBJ15.006)  | Wistron Newweb Corporation | PIFA               | P/N: WN-S-1.37-280W-(2-2-1)&280B-(2-2-1)<br><br>50 ohm Coaxial.<br><br>length: 280 mm<br>diameter: 1.37 mm<br>Connector: IPEX | 2400-2500MHz<br>4.01 dBi (peak)     | 2400-2500MHz<br>4.92 dBi (peak)      | 2400-2500MHz<br>2.0 max | 2400-2500MHz<br>0.91 dBi (peak) |
|                                                |                            |                    |                                                                                                                               | 4900-5350MHz<br>4.87 dBi (peak)     | 4900-5350MHz<br>6.08 dBi (peak)      | 4900-5350MHz<br>2.5 max | 4900-5350MHz<br>1.22 dBi (peak) |
|                                                |                            |                    |                                                                                                                               | 5470-5725MHz<br>4.94 dBi (peak)     | 5470-5725MHz<br>6.23 dBi (peak)      | 5470-5725MHz<br>2.5 max | 5470-5725MHz<br>1.29 dBi (peak) |
|                                                |                            |                    |                                                                                                                               | 5725-5875MHz<br>3.66 dBi (peak)     | 5725-5875MHz<br>4.96 dBi (peak)      | 5725-5875MHz<br>2.5 max | 5725-5875MHz<br>1.30 dBi (peak) |

## Section 2.1 Antenna Photos

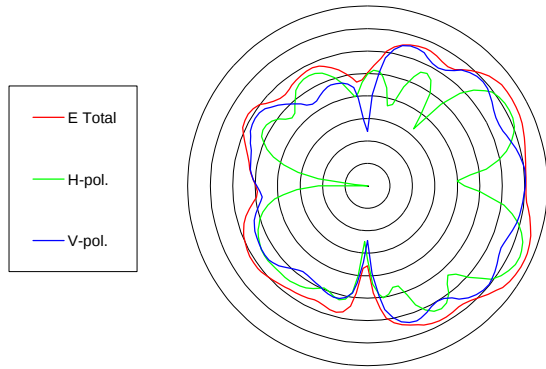


## Section 2.2 Dimensioned Drawings of Antennas



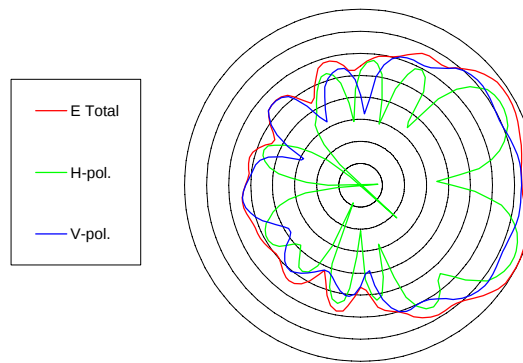
## 2G4 ISM (2.400 GHz - 2.4835 GHz) Antenna Radiation Patterns

**Main antenna @2.40 GHz**



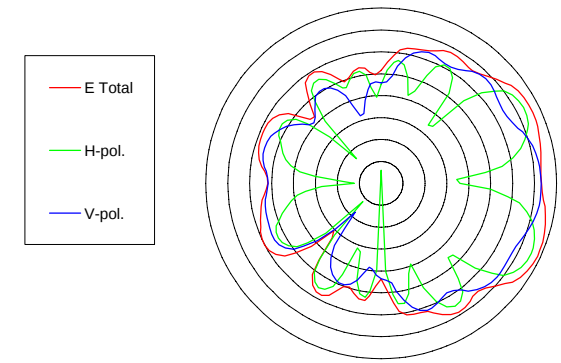
|              | Total | H-pol | V pol |
|--------------|-------|-------|-------|
| Peak Gain    | 3.67  | 2.39  | 0.16  |
| Average Gain | -2.87 | -7.05 | -5.41 |

**Main antenna @2.45 GHz**



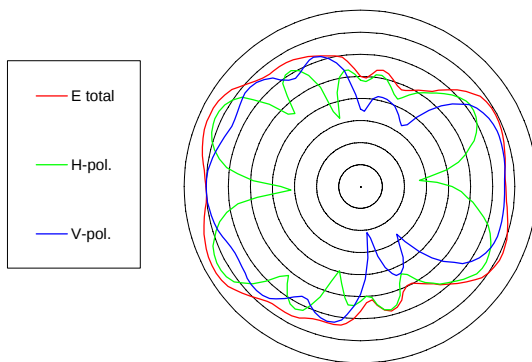
|              | Total | H-pol | V pol |
|--------------|-------|-------|-------|
| Peak Gain    | 4.96  | 3.57  | 1.61  |
| Average Gain | -2.78 | -7.39 | -5.07 |

**Main antenna @2.50 GHz**



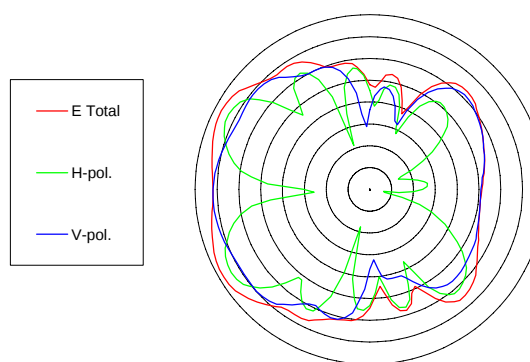
|              | Total | H-pol | V pol |
|--------------|-------|-------|-------|
| Peak Gain    | 4.31  | 2.83  | 1.51  |
| Average Gain | -2.95 | -7.05 | -5.64 |

**Aux antenna @2.40 GHz**



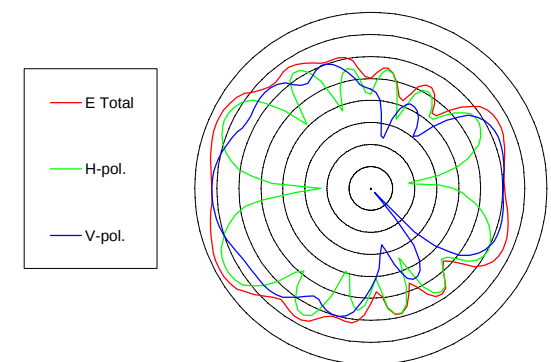
|              | Total | H-pol | V pol |
|--------------|-------|-------|-------|
| Peak Gain    | 3.20  | 1.94  | 0.00  |
| Average Gain | -1.90 | -5.75 | -4.92 |

**Aux antenna @2.45 GHz**



|              | Total | H-pol | V pol |
|--------------|-------|-------|-------|
| Peak Gain    | 4.01  | 1.99  | 0.99  |
| Average Gain | -2.71 | -7.58 | -4.96 |

**Aux antenna @2.50 GHz**

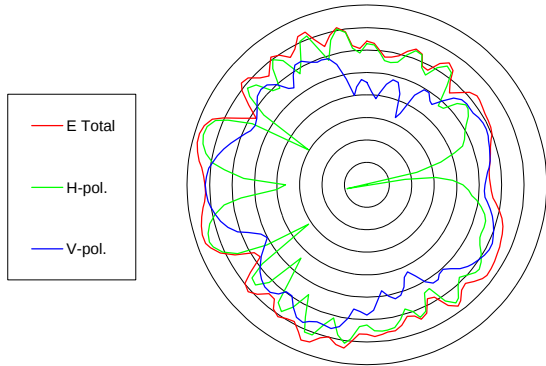


|              | Total | H-pol | V pol |
|--------------|-------|-------|-------|
| Peak Gain    | 3.98  | 2.60  | 1.13  |
| Average Gain | -2.65 | -6.42 | -5.74 |

Note: The outer circle approximately represents the 5 dBi gain circle.  
Each circle with 5 dBi difference (Max=5 dBi and Min=-35 dBi)

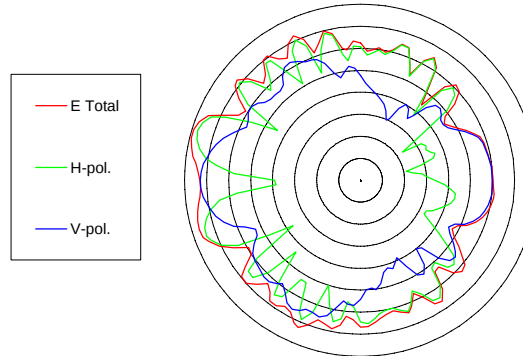
## UII Band (4.900 GHz - 5.350 GHz) Antenna Radiation Patterns

**Main antenna @4.90 GHz**



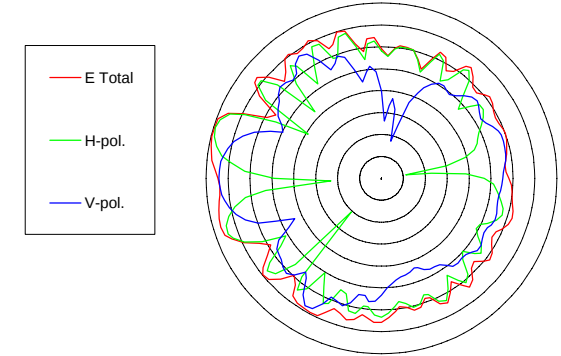
|              | Total | H-pol | V pol |
|--------------|-------|-------|-------|
| Peak Gain    | 3.93  | 3.04  | 0.92  |
| Average Gain | -1.62 | -4.22 | -5.95 |

**Main antenna @5.25 GHz**



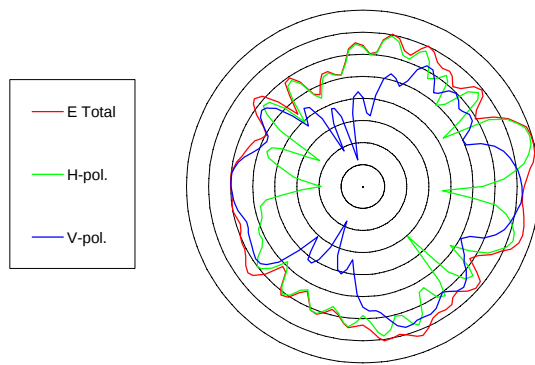
|              | Total | H-pol | V pol |
|--------------|-------|-------|-------|
| Peak Gain    | 4.63  | 3.66  | 1.43  |
| Average Gain | -2.36 | -5.26 | -6.59 |

**Main antenna @5.35 GHz**



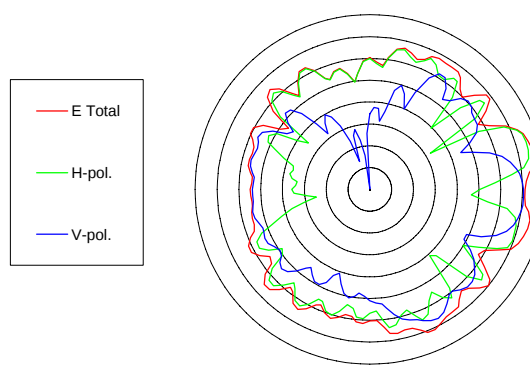
|              | Total | H-pol | V pol |
|--------------|-------|-------|-------|
| Peak Gain    | 4.86  | 4.62  | 2.06  |
| Average Gain | -2.19 | -4.85 | -6.40 |

**Aux antenna @4.90 GHz**



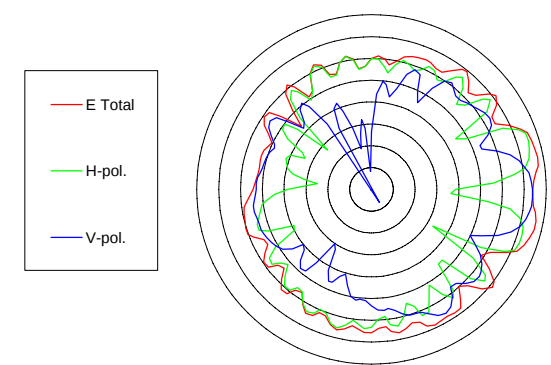
|              | Total | H-pol | V pol |
|--------------|-------|-------|-------|
| Peak Gain    | 4.87  | 4.56  | 1.25  |
| Average Gain | -2.48 | -5.18 | -6.96 |

**Aux antenna @5.25 GHz**



|              | Total | H-pol | V pol |
|--------------|-------|-------|-------|
| Peak Gain    | 3.39  | 2.36  | 0.24  |
| Average Gain | -3.08 | -5.71 | -7.57 |

**Aux antenna @5.35 GHz**

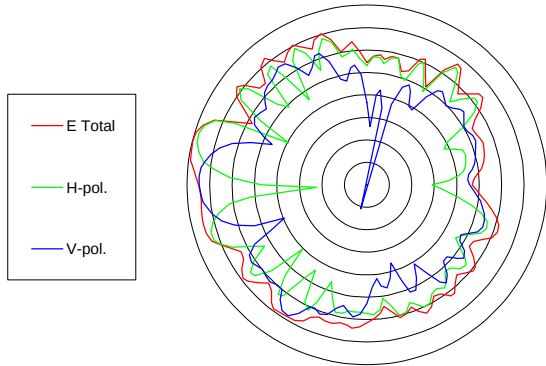


|              | Total | H-pol | V pol |
|--------------|-------|-------|-------|
| Peak Gain    | 3.74  | 2.58  | 1.96  |
| Average Gain | -2.86 | -5.62 | -7.14 |

Note: The outer circle approximately represents the 5 dBi gain circle.  
Each circle with 5 dBi difference (Max=5 dBi and Min=-35 dBi)

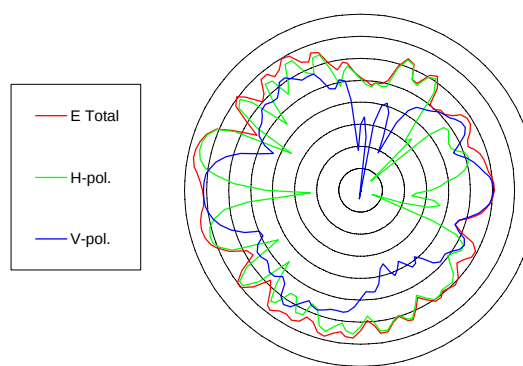
## HyperLAN (5.470 GHz - 5.875 GHz) Antenna Radiation Patterns

**Main antenna @5.47 GHz**



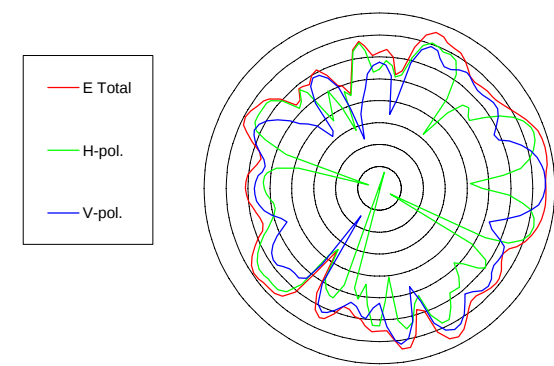
|              | Total | H-pol | V pol |
|--------------|-------|-------|-------|
| Peak Gain    | 4.93  | 4.07  | 2.34  |
| Average Gain | -2.72 | -5.53 | -6.78 |

**Main antenna @5.6475 GHz**



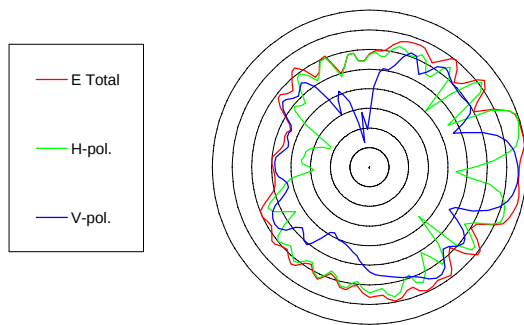
|              | Total | H-pol | V pol |
|--------------|-------|-------|-------|
| Peak Gain    | 3.67  | 2.68  | 0.73  |
| Average Gain | -3.35 | -5.91 | -8.07 |

**Main antenna @5.875 GHz**



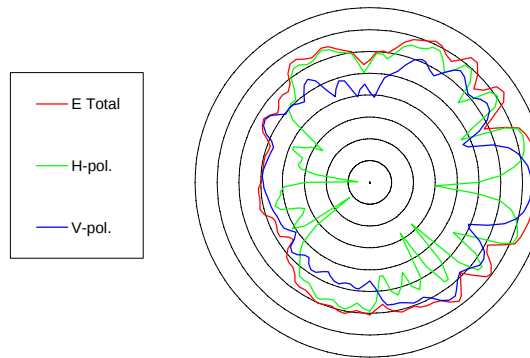
|              | Total | H-pol | V pol |
|--------------|-------|-------|-------|
| Peak Gain    | 3.87  | 2.45  | 2.88  |
| Average Gain | -1.65 | -5.43 | -4.71 |

**Aux antenna @5.47 GHz**



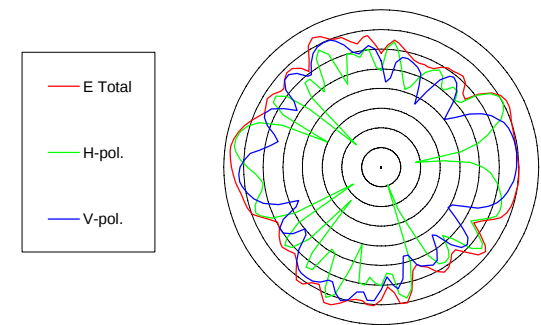
|              | Total | H-pol | V pol |
|--------------|-------|-------|-------|
| Peak Gain    | 4.94  | 4.61  | 2.98  |
| Average Gain | -2.66 | -5.27 | -7.01 |

**Aux antenna @5.6475 GHz**



|              | Total | H-pol | V pol |
|--------------|-------|-------|-------|
| Peak Gain    | 3.31  | 1.60  | 1.99  |
| Average Gain | -3.32 | -6.61 | -6.92 |

**Aux antenna @5.875 GHz**



|              | Total | H-pol | V pol |
|--------------|-------|-------|-------|
| Peak Gain    | 3.66  | 2.71  | 1.24  |
| Average Gain | -1.52 | -5.44 | -4.53 |

Note: The outer circle approximately represents the 5 dBi gain circle.  
Each circle with 5 dBi difference (Max=5 dBi and Min=-35 dBi)