



## **RADIO FREQUENCY EXPOSURE**

### **LIMIT**

According to §15.247(i), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines. See § 1.1307(b)(1) of this chapter.

### **EUT Specification**

<b>EUT</b>	HD Multimedia Home Server
<b>Frequency band (Operating)</b>	<input checked="" type="checkbox"/> WLAN: 2.412GHz ~ 2.462GHz <input type="checkbox"/> WLAN: 5.18GHz ~ 5.32GHz / 5.50GHz ~ 5.70GHz <input type="checkbox"/> WLAN: 5.745GHz ~ 5.825GHz <input type="checkbox"/> Others
<b>Device category</b>	<input type="checkbox"/> Portable (<20cm separation) <input checked="" type="checkbox"/> Mobile (>20cm separation) <input type="checkbox"/> Others
<b>Exposure classification</b>	<input type="checkbox"/> Occupational/Controlled exposure (S = 5mW/cm <sup>2</sup> ) <input checked="" type="checkbox"/> General Population/Uncontrolled exposure (S=1mW/cm <sup>2</sup> )
<b>Antenna diversity</b>	<input checked="" type="checkbox"/> Single antenna <input type="checkbox"/> Multiple antennas <input type="checkbox"/> Tx diversity <input type="checkbox"/> Rx diversity <input type="checkbox"/> Tx/Rx diversity
<b>Max. output power</b>	IEEE 802.11b mode: 18.61 dBm IEEE 802.11g mode: 24.17 dBm draft 802.11n 20 MHz Channel mode: 24.49 dBm draft 802.11n 40 MHz Channel mode: 23.90 dBm
<b>Antenna gain (Max)</b>	0.32 dBi (Numeric gain: 1.08)
<b>Evaluation applied</b>	<input checked="" type="checkbox"/> MPE Evaluation <input type="checkbox"/> SAR Evaluation <input type="checkbox"/> N/A

### **Remark:**

1. The maximum output power is 24.49dBm (281.19mW) at 2462MHz (with 1.08 numeric antenna gain.)
2. DTS device is not subject to routine RF evaluation; MPE estimate is used to justify the compliance.
3. For mobile or fixed location transmitters, no SAR consideration applied. The maximum power density is 1.0 mW/cm<sup>2</sup> even if the calculation indicates that the power density would be larger.

## **TEST RESULTS**

No non-compliance noted.

(According to **RF Exposure Procedures and Equipment Authorization Policies**, SAR evaluation is not required for the PORTABLE device while its maximum average output power is lower than 60/f (GHz)=60/2.441=24.58mW)



程智科技股份有限公司

Compliance Certification Services Inc.

**Remark:**

*802.11b maximum average power is 13.63dBm = 23.07mW <(60/f); Individual SAR is not required.*

*802.11g maximum average power is 13.47dBm = 22.23mW <(60/f); Individual SAR is not required.*

*802.11n 20 MHz maximum average power is 13.49dBm = 22.34mW <(60/f); Individual SAR is not required.*

*802.11n 40 MHz maximum average power is 13.17dBm = 20.75mW <(60/f); Individual SAR is not required.*

**For Wify Module Antenna Gain is 0.32dBi or 1.08 (numeric)**

**For BT Module Antenna Gain is 1dBi or 1.26 (numeric)**

**Output power into Antenna & RF Exposure value at distance 20cm:**

Wify Max out power: 0.0429(W) (0.0092mW/cm<sup>2</sup>)

BT Max out power: 0.00056(W) (0.000139mW/cm<sup>2</sup>)

**Test mode: draft 802.11n 40 MHz Channel mode**

**CONCULSION:**

Both of eh modules can transmit simultaneously, the formula of calculated the MIP is

**CPD1/LPD1+CPD2/LPD2+ etc.<1**

**CPD= Caleulation Power density**

**LPD= limit of power density**

Therefore, the worst-cast situationis  $0.0092/1+0.000139/1= 0.009339$ , which is less than “1”. This confirmed that the device comply with FCC 1.1310 MPE limit.