

產品名稱: WHDI Rx board

廠牌: LITE-ON, 型號: WV301A

# LITE-ON TECH. CORP.

## PRODUCT SPEC

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## WHDI Receiver Board

### WV301A

### Amimon AMN2220 + AMN3210

Version 1.1

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**Liteon semi-P/N: B853HZ100G**

Change History:

Revision	Date	Author	Change List
Draft	2010/07/12	Kenny Su	Preliminary
Version 1.0	2011/05/18	Kenny Su	Add PCBA Mechanical
Version 1.1	2011/08/26	Kenny Su	Revise Product Feature

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## WHDI Receiver Board

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**Networking B.U.**

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(Please Sign Back by FAX. For Confirming the Spec Only, not an Official Agreement for OEM/ODM Business)

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## PRODUCT FEATURES

- World band frequency 5150~5250;5725~5850MHz operation
- Coexists with 802.11a/n and 5.8GHz cordless devices
- 128/256-bit AES based encryption
- Supports 20 and 40 MHz channels for supreme video quality and high rate video/audio Signals
- WHDI 1.0 compliance, including HDCP 2.0
- Support HDMI 1.4a video format and HDCP 1.2 with video encryption.
- Supports any uncompressed video resolutions with a pixel clock rate of up to 162 MHz, including:
  - **HD:** 480p, 576p, 720p, 1080i, 1080p
  - **PC:** VGA (640x480), SVGA (800x600), XGA (1024x768), UGA (1600x1200)
  - **Panel:** 854x800, 1280x768, 1366x768, 1920x1080
- Less than 1mSec latency between video source and video sink
- Static Video Recognition
- High Definition Interface:
  - 36-bit RGB or YCrCb (4:4:4)
  - Enables the support of non-standard resolutions
- Audio:
  - Up to 18 Mbps throughput of audio stream
  - I<sup>2</sup>S: Up to eight PCM channels
  - SPDIF: Including AC-3, DTS HD, Dolby 5.1, Digital
- RoHS

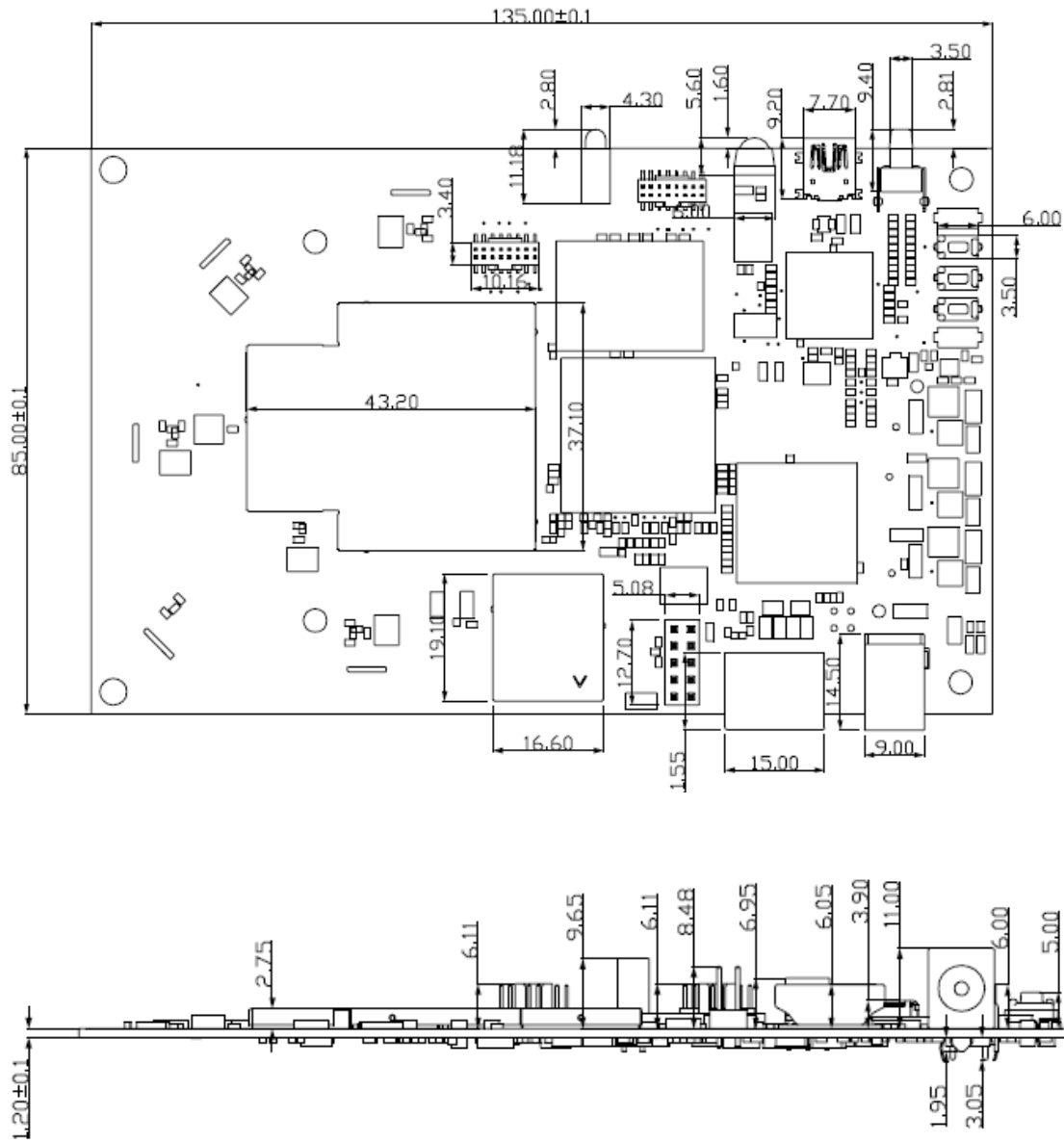
## MAIN CHIPSET

Amimon AMN2220 + AMN3210

## FUNCTIONAL SPECIFICATIONS

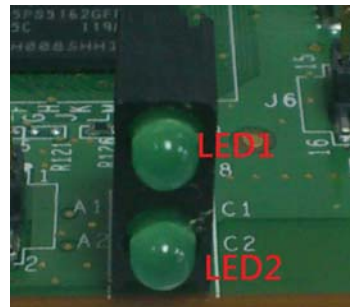
WHDI Function	
<b>Standard</b>	WHDI 1.0
<b>Bus Interface</b>	HDMI
<b>Data Rate</b>	20MHz UL (Rx to Tx): Up to 30.0 Kbps 40MHz UL (Rx to Tx): Up to 60.0 Kbps
<b>Modulation Scheme</b>	Uses 18MHz or 40MHz bandwidth and is carried over the 5GHz unlicensed band
<b>Frequency Range</b>	5150~5250;5725~5850MHz
<b>Operating Voltage</b>	5 V $\pm$ 5% supply voltage
<b>Security</b>	128/256-bit AES based encryption
<b>Power Consumption</b>	7.5Watt – 1080P
<b>Antenna Type</b>	Five PCB antennas

**PCBA MECHANICAL**

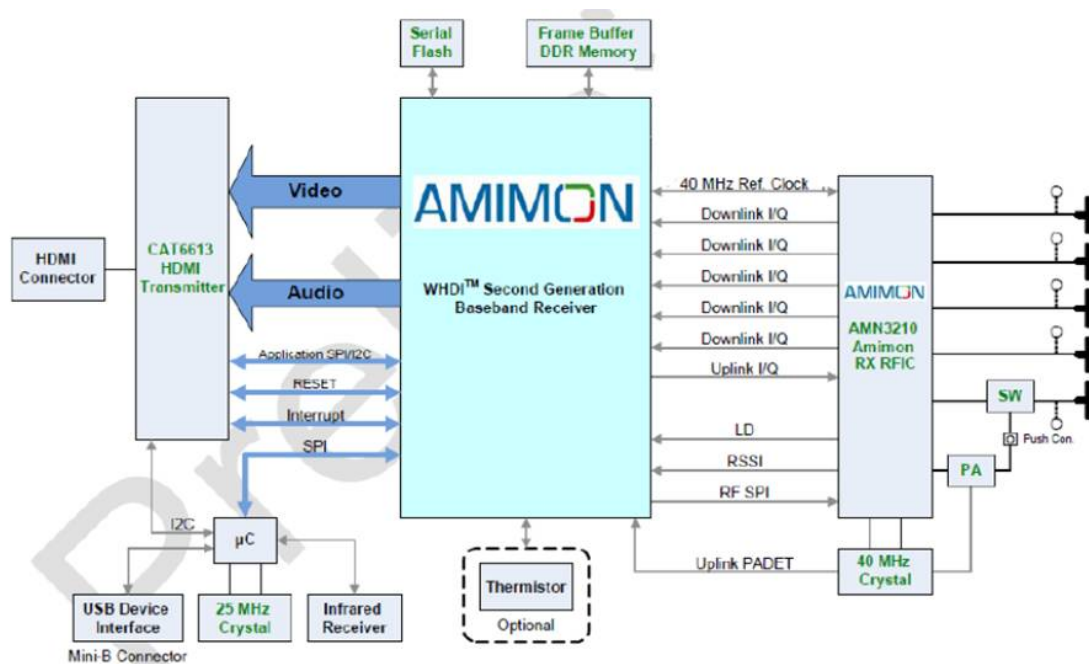


## LED BEHAVIOR

	Indication	Function
LED1	Link	On/Off
LED2	Power	On/Off



## BLOCK DIAGRAM



## ENVIRONMENTAL

### Operating

Operating Temperature: 10-35°C ambient in still air (outside of case)

Relative Humidity: 5-90% (non-condensing)

### Storage

Temperature: -20 to 70 °C

Relevant Humidity: 5-95% (non-condensing)



### **FEDERAL COMMUNICATIONS COMMISSION INTERFERENCE STATEMENT**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

### **CAUTION:**

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

### **RF exposure warning -**

This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

### **Canada, Industry Canada (IC) Notices**

This Class B digital apparatus complies with Canadian ICES-003 and RSS-210.

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

### **Radio Frequency (RF) Exposure Information**

The radiated output power of the Wireless Device is below the Industry Canada (IC) radio frequency exposure limits. The Wireless Device should be used in such a manner such that the potential for human contact during normal operation is minimized.

This device has also been evaluated and shown compliant with the IC RF Exposure limits under mobile exposure conditions. (antennas are greater than 20cm from a person's body).

This device has been certified for use in Canada. Status of the listing in the Industry Canada's REL (Radio Equipment List) can be found at the following web address:

<http://www.ic.gc.ca/app/sitt/reltel/srch/nwRdSrch.do?lang=eng>

Additional Canadian information on RF exposure also can be found at the following web address: <http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf08792.html>

### **Canada, avis d'Industry Canada (IC)**

Cet appareil numérique de classe B est conforme aux normes canadiennes ICES-003 et RSS-210.

Son fonctionnement est soumis aux deux conditions suivantes : (1) cet appareil ne doit pas causer d'interférence et (2) cet appareil doit accepter toute interférence, notamment les interférences qui peuvent affecter son fonctionnement.

### **Informations concernant l'exposition aux fréquences radio (RF)**

La puissance de sortie émise par l'appareil de sans fil Dell est inférieure à la limite d'exposition aux fréquences radio d'Industry Canada (IC). Utilisez l'appareil de sans fil de façon à minimiser les contacts humains lors du fonctionnement normal.

Ce périphérique a également été évalué et démontré conforme aux limites d'exposition aux RF d'IC dans des conditions d'exposition à des appareils mobiles (les antennes se situent à moins de 20 cm du corps d'une personne).

Ce périphérique est homologué pour l'utilisation au Canada. Pour consulter l'entrée correspondant à l'appareil dans la liste d'équipement radio (REL - Radio Equipment List) d'Industry Canada rendez-vous sur:

<http://www.ic.gc.ca/app/sitt/reltel/srch/nwRdSrch.do?lang=eng>

Pour des informations supplémentaires concernant l'exposition aux RF au Canada

rendez-vous sur : <http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf08792.html>

## Information for the OEMs and Integrators

The following statement must be included with all versions of this document supplied to an OEM or integrator, but should not be distributed to the end user.

This device is intended for OEM integrators only.

Please See the full Grant of Equipment document for other restrictions.

This device must be operated and used with a locally approved access point.

This device is operation in 5.15 – 5.25GHz frequency range, then restricted in indoor use only.

Outdoor operations in the 5150~5250MHz is prohibit.

## Information To Be Supplied to the End User by the OEM or Integrator

The following regulatory and safety notices must be published in documentation supplied to the end user of the product or system incorporating an adapter in compliance with local regulations. Host system must be labeled with "Contains FCC ID: PPQ-WV301A, IC: 4491A-WV301A" displayed on label.

依據國家通訊傳播委員會低功率電波輻射性電機管理辦法：

第十二條 經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

第十四條 低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前項合法通信，指依電信法規定作業之無線電通信。

低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

本模組於取得認證後將依規定於模組本體標示審合格籤，並要求平台上標示「本產品內含射頻模組：XXXXXXXXXX」