

Wireless Audio Module
User's Manual

Federal Communication Commission Interference Statement

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.

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 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.

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

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

This device is intended only for OEM integrators under the following conditions:

- 1) The antenna must be installed such that 20 cm is maintained between the antenna and users, and
- 2) The transmitter module may not be co-located with any other transmitter or antenna.

As long as 2 conditions above are met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed

IMPORTANT NOTE: In the event that these conditions can not be met (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID can not be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

End Product Labeling

This transmitter module is authorized only for use in device where the antenna may be installed such that 20 cm may be maintained between the antenna and users. The final end product must be labeled in a visible area with the following: “Contains FCC ID: [2AAEFMOLUWA2013XXV1](#)”. The grantee's FCC ID can be used only when all FCC compliance requirements are met.

Manual Information To the End User

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user’s manual of the end product which integrates this module.

The end user manual shall include all required regulatory information/warning as show in this manual.

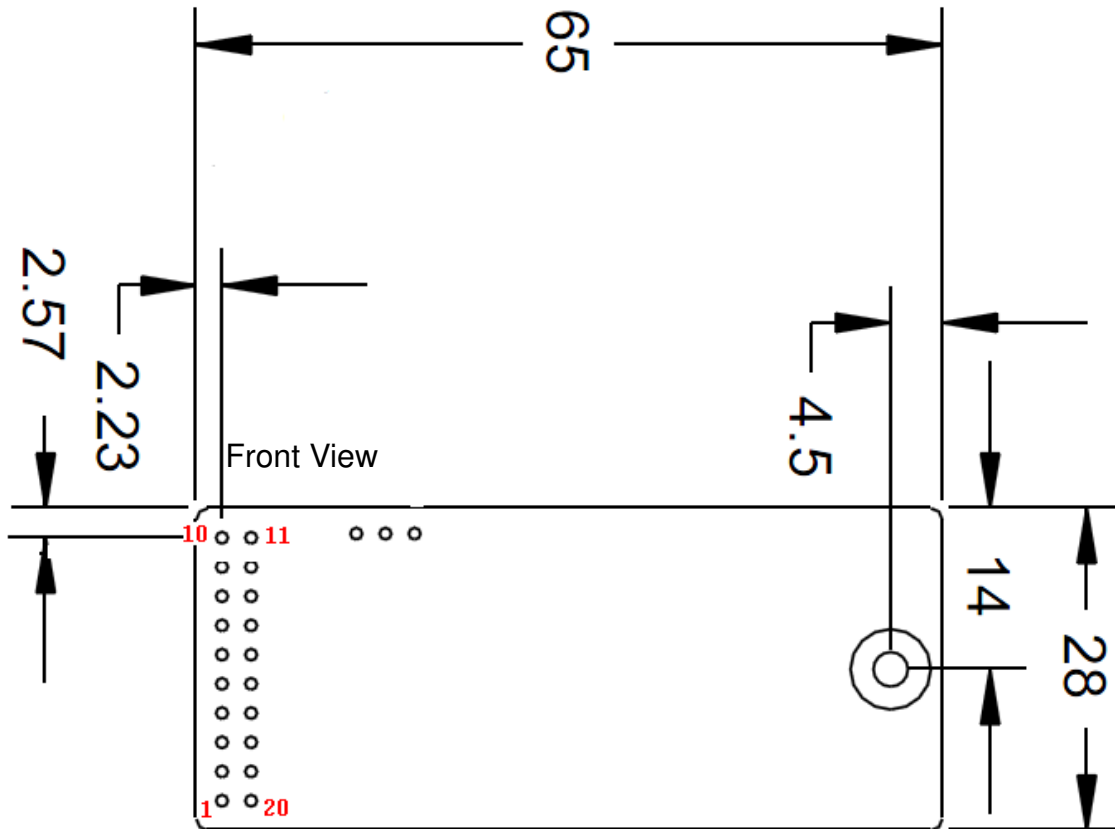
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1 Introduction

AW-WS067 is a 2.4G WiFi 1T1R Wireless Audio module. It is design for transmit audio via WiFi signal.

1.1 Product Layout



1.2 Features

- Wireless Audio Receiver Module
- 802.11n 1x1 module with built-in processor for specific audio protocol.
- Sampling Rate: 44.1K / 48K Samples/sec.
- Sample Size: 16 bits/sample
- Latency: 200-3000 ms (depends on customer request)
- Digital Audio Output Interface: I2S and S/PDIF
- Support DLNA - Audio format : MP3, AAC WMA
- Support embedded PCB antenna or antenna connector
- Support Wi-Fi Station / AP mode network connections
- Application:
 - Wireless Speaker
 - Wireless Subwoofer
 - Wireless Sound Device
 - Wireless Audio Receiver Box

1.3 Package Content

The package include the below package content:

- One set of AW-WS067 and AW-WS067C
- User's Manual

1.4 Specification Table

Model Name	WA-2013
Main Chip	
Processor	11 b/g/n single chip
I/O Interface	
UART	For debug
I2S	Stereo digital audio output interface
S/PDIF	Optical audio output interface
LED	Green color : Blinking for configuration mode (AP mode) Solid for Wi-Fi connected
	Red color: Blinking for Wi-Fi disconnect.
Reset Button	Press 5 sec to enter configuration mode (AP mode)
GPIO	General purpose I/O

Wireless	
Standard	IEEE 802.11 b/g/n 1x1
Operation Modes	Station and Access point for configuration only
Range	Outdoor: 100m (may vary according to the environment)
Encryptions	WEP 64-bit and 128-bit WPA-PSK / WPA2-PSK
Frequency	2.4 GHz
Antenna	I-PEX connector or embedded PCB antenna
Supply Power	
Input Voltage	3.3V (RF board)
Input Current	Max 800 mA @ 5V (Codec board)
Input Ripple & Noise	150mV
Operating Temperature	0 °C ~ +70 °C
Storage Temperature	-40 °C ~ +85 °C
Dimension	
RF Board	65x28x1.0(H) mm
Codec Board	65x63x1.0(H) mm

2 Installation Steps

1. Connect WS067 audio module with WS067C audio daughter board
2. Power on with micro usb input 5V / 800mA
3. Press reset button
4. Connect phone or PC's WiFi with WS067 AP mode
5. Configure WS067 WiFi setting and reboot it
6. Playback audio with DLAN app
7. Listen audio from phone jet or S/PDIF output

3 Important Notice