

# WiiM



## WiiM Ultra Hi-Res Music Streamer

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## 1. INTRODUCTION

At WiiM, our mission is to provide the simplest and most affordable Hi-Fi, lossless audio systems. Each product we design features top-tier craftsmanship and an intuitive user interface.

The WiiM Ultra, our flagship music streamer, serves as the central digital hub for your audio ecosystem. Boasting audiophile-grade components, rich audio connections, and a vibrant 3.5" full-color touchscreen, it delivers Hi-Res streaming, advanced room correction, and smart home integration. The WiiM Ultra seamlessly connects to a variety of devices, including turntables, TVs, headphones, AV receivers, subwoofers, smart speakers, wired or wireless headphone, and more, offering a comprehensive and versatile audio solution.

Equipped with the ESS Sabra ES9038 Q2M premium DAC, it delivers industry-leading low distortion and wide dynamic range, featuring a Signal-to-Noise Ratio (SNR) of 121 dB (A-wt) and a Total Harmonic Distortion plus Noise (THD+N) of -116 dB across sample rates from 44.1k to 192k, courtesy of its ultra-low noise clock and optimized power and circuit design. Additionally, it features a cutting-edge TI Burr-Brown PCM1861 ADC, which achieves a 110 dB SNR for analog-to-digital conversion, ideal for input sources like turntables, MP3 players, and TVs. The high-fidelity headphone amplifier TPA6120A2 supports a wide range of headphones.

Simply connect the WiiM Ultra to your stereo receiver, amplifier, or powered speakers, and control it using the user-friendly WiiM Home App or popular platforms like Spotify, TIDAL, Amazon Music, or any Chromecast-enabled apps. Voice control is also a breeze through compatible Echo and Google Home devices, as well as the Alexa App, and Google Home App.

Create synchronized groups with Echo, Google Home, other Alexa-compatible devices, or additional WiiM streamers or amplifiers, and stream music throughout your home or playing different tracks in separate rooms.

Elevate your audio gear with the smart capabilities of the WiiM Ultra, and enjoy unmatched convenience and fidelity.

## TYPICAL USE CASES

The WiiM Ultra is designed to enhance your existing audio setup by adding wireless streaming capabilities and smart features. Here are a few common use cases for the WiiM Ultra:

- I. **Upgrade your Favorite Legacy Audio Systems:** If you have a traditional stereo system or speakers that you want to integrate into your Spotify, TIDAL, local Music library, Google Chromecast, Amazon Alexa, DLNA, Roon, or LinkPlay ecosystem, the WiiM Ultra allows you to wirelessly stream music to those speakers. It bridges the gap between your older audio equipment and the modern world of streaming music.
- II. **High-Quality Audio:** It supports bit-perfect, high-resolution audio formats and delivers rich, detailed sound, enhancing the listening experience of your existing audio system.
- III. **Streaming Services and Music Libraries:** The WiiM Ultra allows you to access various streaming services such as Spotify, Amazon Music, or Tidal, bringing a wide range of music to your existing audio setup. You can also connect it to your personal music library stored on a computer, network-attached storage device, or USB disk for seamless playback.
- IV. **Podcasts and Internet Radio:** In addition to streaming music, the WiiM Ultra provides access to a wide range of podcasts and internet radio stations. You can browse through different genres, podcasts, or specific radio stations to enjoy on your existing audio system.
- V. **Multi-Room Audio:** The WiiM Ultra seamlessly integrates with other 3<sup>rd</sup> party popular smart speakers and components, or another WiiM/Linkplay device, allowing you to create a whole-home audio system with synchronized music playback in multiple rooms.
- VI. **Smart Home Integration:** The WiiM Ultra supports voice control through platforms like Amazon Alexa or Google Assistant, allowing you to control your music hands-free and integrate with other smart home devices.
- VII. **Vinyl or CD Integration:** If you have a turntable or CD player that you want to incorporate into your WiiM system, the WiiM Ultra can connect to the analog or digital outputs of these devices. This enables wireless audio streaming to other speakers via another WiiM compatible device, allowing you to relish the sound throughout your entire home, all in sync.
- VIII. **Home Theater Integration:** The WiiM Ultra can be used as a bridge between your home theater system and the WiiM ecosystem. By connecting the Ultra to your AV receiver or soundbar, you can stream music wirelessly to your home theater

speakers and synchronize audio playback with other WiiM devices for a cohesive audio experience.

## OTHER DEVICES NEEDED TO USE WIIM ULTRA

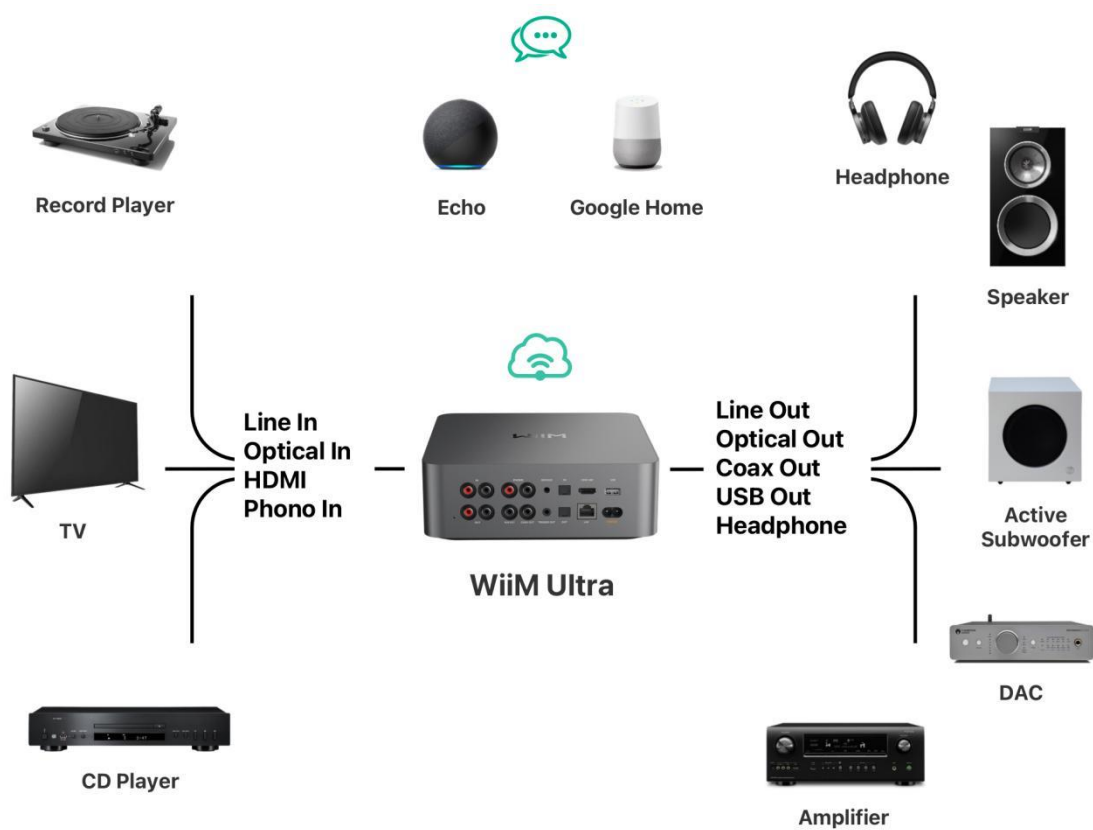
To use the WiiM Ultra, you will need a few essential devices and components. Here's a list of what you'll need:

- **Audio System:** The WiiM Ultra is designed to connect to an existing audio system. This can be a stereo system, powered speakers, passive speakers with an amplifier/receiver, or a home theater setup with an AV receiver, or soundbar. Make sure you have the appropriate audio system in place.
- **Wi-Fi Network:** The WiiM Ultra requires a stable Wi-Fi network connection to function. Ensure that you have a reliable Wi-Fi network available in the area where you plan to set up the WiiM Ultra. You'll need the Wi-Fi network credentials during the setup process.
- **Smartphone or Tablet:** You'll need a compatible smartphone or tablet (iOS or Android) with the WiiM Home app installed. The WiiM Home app is used for initial setup, configuration, and control of the WiiM Ultra.
- **Power Source:** The WiiM Ultra needs to be connected to a power source using the included power cable. Ensure that you have an electrical outlet nearby to power the device.
- **Ethernet Cable (optional):** While the WiiM Ultra primarily connects to your Wi-Fi network, it also has an Ethernet port. If you prefer a wired connection for added stability, you can use an Ethernet cable to connect the WiiM Ultra directly to your router or network switch.

These are the core components required to use the WiiM Ultra. It's important to have an audio system that you want to integrate with the Ultra, a stable Wi-Fi or wired network, and a compatible device with the WiiM Home app for setup and control.

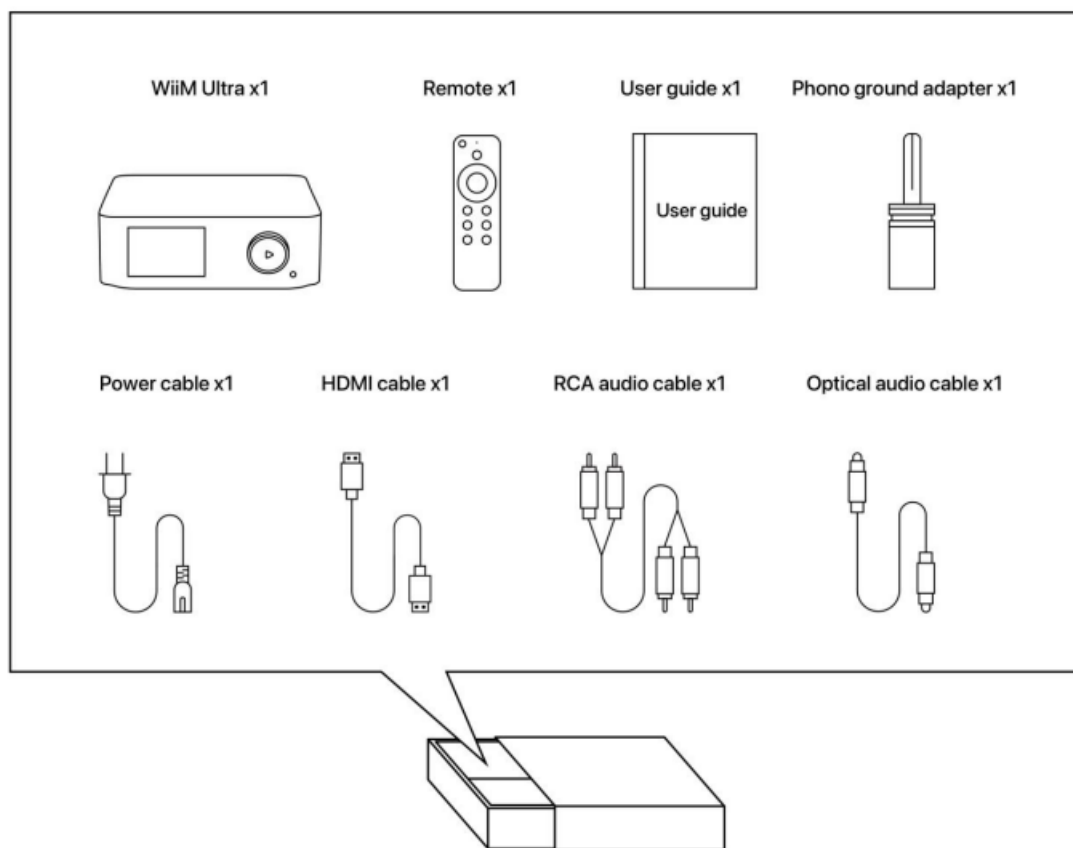
## AUDIO DEVICES WORK WITH WIIM ULTRA

The WiiM Ultra can work with your audio source devices, smart speakers, and other legacy stereo systems, DAC, amplifier, speakers, or soundbars etc. The audio source device includes TV, record player and MP3 player. The block diagram below shows how you can connect your audio system with the WiiM Ultra.



## 2. WHAT'S IN BOX

- WiiM Ultra
- Bluetooth voice remote
- Quick start guide
- 100~240V AC power cable
- HDMI cable
- RCA audio cable
- Optical audio cable
- Phono ground adapter



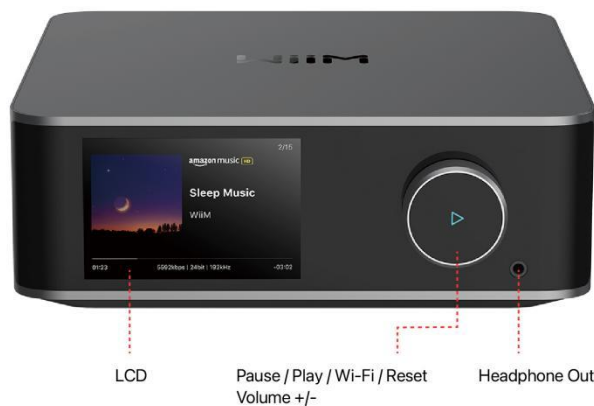


### 3. TECHNICAL SPECIFICATIONS

Feature	Description
<b>Power Input</b>	100-240V AC input, 50/60 Hz, 0.5A Max
<b>Audio</b>	<p>Digital Audio Output: Bit-perfect output, up to 192 kHz, 24-bit with digital optical, coaxial, and USB audio output.</p> <p>Analog Audio Output: Supports up to 384 kHz, 32-bit with its internal DAC. Audio precision is kept when using volume control with analog output for 16-bit or 24-bit audio.</p>
<b>Network</b>	<p>Wi-Fi 6E, 802.11 b/g/n/ax 2.4 GHz, 5 GHz, and 6 GHz triple bands.</p> <p>10/100M Ethernet.</p>
<b>Bluetooth</b>	<p>Bluetooth 5.3, A2DP, AVRCP</p> <p>Support SBC, AAC, LC3 Codec</p>
<b>Audio Input</b>	<p>1 x Analog RCA Line IN, 2 Vrms, up to 192kHz/24-bit</p> <p>1 x Analog Phono IN, MM/MC</p> <p>1 x Optical IN, up to 192kHz/24-bit</p> <p>1 x HDMI ARC, up to 192kHz/24-bit</p>
<b>Audio Output</b>	<p>1 x Analog RCA Line OUT, up to 2 Vrms</p> <p>1 x Digital Optical OUT, up to 192kHz/24-bit</p>

	<p>1 x Digital Coaxial OUT, up to 192kHz/24-bit</p> <p>1 x Digital USB OUT, up to 192kHz/24-bit</p> <p>1 x Analog Headphone (HP) OUT</p>
<b>SNR (built-in DAC)</b>	<p>Line Out: 121 dB</p> <p>HP Out: 119 dB</p>
<b>THD+N (built-in DAC)</b>	Line Out: 0.00018%, -115 dB
<b>Audio Codec</b>	MP3, AAC, ALAC, APE, FLAC, WAV, WMA, OGG, AIFF
<b>Streaming Protocol</b>	Chromecast Audio, DLNA, Spotify Connect, TIDAL Connect, Amazon Music Casting, Qplay 2.0, Squeezelite, Roon Ready (TBA)
<b>Streaming Services in App</b>	Spotify, Amazon Music, Deezer, TuneIn, Tidal, Qobuz, SoundCloud, Pandora, iHeartRadio, vTuner, Napster, Sound machine, etc.
<b>LED</b>	Four-color status LED - Red, Green, Blue, and White
<b>Control</b>	Volume knob, play/pause, setup, and more
<b>Weight</b>	3.13 lbs (1.42 kg)
<b>Dimension</b>	8.3 x 7.87 x 2.83 in (211 x 200 x 72 mm)

## 4. CONTROLS, PORTS, AND LIGHTS



## BUTTONS AND INPUT/OUT INTERFACE

Control / IO Interface	Functions
<b>Power</b>	100-240V 50/60Hz AC Power
<b>Volume Knob</b>	<p>Push down to Play/Pause, network or Bluetooth pairing, or restore to the factory setting</p> <p>Turn clockwise: Increase volume</p> <p>Turn anti-clockwise: Decrease volume</p>
<b>Line In</b>	Standard RCA
<b>Phono In</b>	<p>Gain: 41dB MM / 59dB MC</p> <p>MM: THD+N -75dB, SNR 76dB@5mV;</p> <p>MC: THD+N -58dB, SNR 56dB@0.5mV</p> <p>RIAA accuracy: &lt; <math>\pm 0.5</math>dB / 20Hz - 20kHz</p>
<b>Optical In</b>	Optical audio input up to 192 kHz/24-bit
<b>HDMI ARC</b>	Stereo PCM, Dolby Digital (DTS is not supported)
<b>Line Out</b>	<p>Maximum output: 2.1V RMS</p> <p>SNR: 121 dB (A-wt)</p> <p>THD+N (1 kHz): 0.00018% (-115 dB) for 44.1k to 192k</p> <p>FR curve: +/- 0.05 dB</p>
<b>Optical Out</b>	Up to 192 kHz/24-bit, low jitter
<b>Coax Out</b>	Up to 192 kHz/24-bit, low jitter

<b>Headphone Out</b>	300 ohms: SNR (119 dB), THD+N (-99 dB)  32 ohms: SNR (119 dB), THD+N (-92 dB)
<b>USB Audio Out</b>	UAC 2.0
<b>Sub Out</b>	Connect to the powered subwoofer, 2.0 Vrms
<b>12 V Trigger Out</b>	3.5 mm port for cable connection to your amplifier for automated power control.  Note: Consult your amplifier's user guide for specifics on utilizing its 12V trigger input.
<b>MIC</b>	Activated solely for the purpose of automatically calculating audio latency to ensure seamless multiroom synchronization. This includes compatibility with various platforms like Alexa MRM, Chromecast MRM, and Linkplay MRM. The MIC is engaged only during latency measurement.
<b>LAN</b>	10/100Mbps Ethernet port

## LIGHTS

<b>State</b>	<b>Color</b>	<b>Flashing/Solid</b>
<b>Boot-up</b>	White	Flashing (fast)
<b>OObE/Ready to Setup</b>	White	Flashing (slow)
<b>BT ready to pair</b>	Green	Flashing (slow)
<b>Connecting to Wi-Fi</b>	White, Green	Flashing (fast)
<b>Connected to network</b>	White	Solid
<b>BT mode, paired</b>	Green	Solid

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<b>Aux-in mode</b>	Green	Solid
<b>OTA</b>	White, Green	Flashing (slow)
<b>Restore to factory setting</b>	White, Red	Flashing (slow)
<b>Not connected to the network (and not in setup mode)</b>	Red	Solid
<b>Faulty Error</b>	Red	Flashing (slow)

**NOTES:**

WRGB: Four-color LED, no color mix

W: Wi-Fi as the audio source (product default mode)

G: Audio source from Analog, digital audio input, or BT

R: Error (Not connected to a network or faulty error)

Three modes: Solid, flashing slow, flashing fast

## 5. HOW TO SET UP

### GETTING STARTED WITH WIIM ULTRA

Before using your WiiM Ultra, follow these steps to set it up:

1. **Connect to Audio Device:** Attach the WiiM Ultra to your audio device.
2. **Power On:** Turn on the WiiM Ultra.
3. **Download the App:** Install the WiiM Home App on your mobile device.
4. **Network Connection:** Use the companion app to connect the WiiM Ultra to your network.
5. **Configure Settings:** Adjust the settings within the app to suit your preferences.

By completing these steps, your WiiM Ultra will be ready for use.

### CONNECT WIIM ULTRA'S AUDIO OUT PORT

The WiiM Ultra offers six distinct audio output interfaces to connect your DAC, amplifier, headphones, stereo receiver, and powered speakers. These include:

- Analog LINE Out
- Digital Optical (TOSLINK)
- Coaxial
- USB
- Headphone Out
- Sub Out

Please note that the WiiM Ultra outputs audio to only one of these interfaces at a time, aside from the optional Sub Out.

Setting Up WiiM Ultra's Audio Output:

(Note: Perform steps 3, 4, and 5 after installing the WiiM Home App)

1. Depending on your preferred audio equipment, select the appropriate connection method: RCA cable, optical cable (TOSLINK), COAX, USB, or headphone.
  - a. For RCA cable, plug it into the LINE OUT port on the back of the WiiM Ultra.
  - b. For optical cable (TOSLINK), plug it into the OPTICAL OUT port.
  - c. For Coaxial cable, plug it into the COAX OUT port.

- d. For Sub OUT port, please connect 75-ohm impedance cable.
2. Connect the other end of the cable to your audio equipment (DAC, amplifier, Subwoofer, or powered speaker).
3. Within the WiiM Home App on your iOS or Android device, designate the desired output port. Remember that the WiiM Ultra only outputs audio through one of these options. If subwoofer is connected, please turn on the subwoofer in the device setting.
4. Enhance sound quality with customized sound equipment connection:
  - a. EQ settings
  - b. Calibration (latency from the WiiM Ultra to speaker)
  - c. Test music playback to see the maximal audio resolution your downstream audio device supports.
5. You're now ready to begin playing audio on your selected output devices.

**Notes:**

- *Selecting the appropriate audio output port is crucial to ensure sound output. Incorrect selection may result in no audio.*
- *For bit-perfect audio output, opt for the digital audio output and activate the fixed volume output, disable EQ and mono audio in the WiiM Home App's device settings.*
- *You have two ways to control the volume of your system:*
  - *Utilize your AVR or amplifier for volume control (When the 'Fixed Volume Output is set on the WiiM Ultra).*
  - *Control volume through the WiiM Home App, but remember to disable fixed volume output for this option. This is recommended way to control the volume of your system.*

## CONNECT TO WIIM ULTRA'S AUDIO INPUT

This step is optional. The WiiM Ultra features four distinct audio input interfaces: analog LINE IN, Phono IN, digital optical (TOSLINK) IN, and HDMI ARC.

This versatile device acts as both a preamplifier and a network audio transmitter via Wi-Fi or Ethernet. You can stream analog audio inputs from sources such as CD players, vinyl players, TVs, or computers to other WiiM devices (including Ultra, Amp, Pro Plus, Pro, or Mini), either individually or in multiple combinations.



**Scenario 1: Analog Audio Source Input (CD Player, Vinyl Player, or Computer)**

Connect your source device to the WiiM Ultra’s LINE IN port using a line-in cable. One of two types’ cable as the follows might be used, i.e., RCA to RCA or Aux to RCA.

Connect to WiiM Ultra’s Line IN port



Connect to CD player, vinyl player, TV or computer

### Setting Up WiiM Ultra with Line-In Input

- 1. Connect the Cable:**
  - Insert the line-in cable into the LINE IN port on the back of the WiiM Ultra.
  - Connect the other end to the AUX or LINE OUT port on your audio source (CD player, vinyl player, TV, or computer).
- 2. Configure in WiiM Home App:**
  - Open the WiiM Home app and navigate to the 'Browse' tab.
  - Select 'Select source on device,' then choose 'LINE IN' as your audio source.
- 3. Create Multiroom Group (Optional):**
  - Go to the Devices section in the app.
  - Select the WiiM Ultra linked to your LINE-IN device.
  - Tap the group button (link icon in a box) in the upper-right corner and select the WiiM devices to transmit audio.
- 4. Play Music:**
  - The music from your connected device will now play across your multiroom music group.

### Scenario 2: Setting Up WiiM Ultra with Optical IN or HDMI ARC (TV or PC)





**1. Connect the Source Device:**

- Use an optical cable to connect your source device to the WiiM Ultra's Optical IN (TOSLINK) port, or an HDMI cable for HDMI ARC.

**2. Configure in WiiM Home App:**

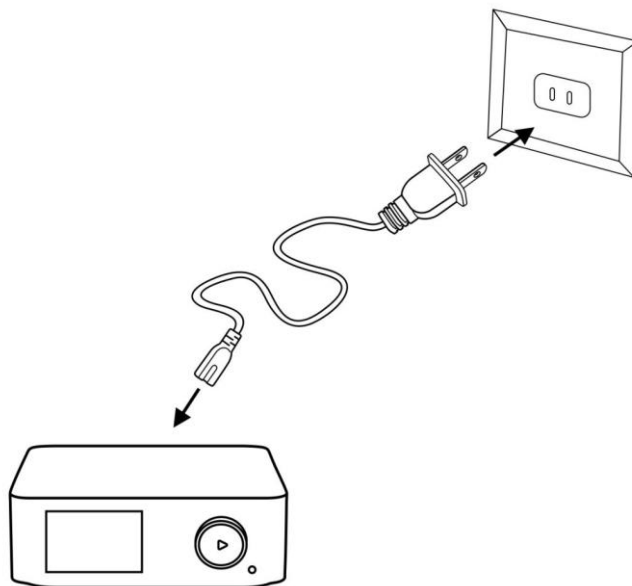
- Follow the same steps as for Line-In, replacing 'Line-In' with 'Optical IN' or 'HDMI.'

**Notes:**

- **Enable Autosense:**
  - Automatically play your Line-In, Optical-In, or HDMI source when a signal is detected. Enable this feature in the WiiM Home App.
- **Built-in EQ:**
  - Adjust audio input to your taste with the built-in EQ. Control audio volume remotely via the app without adjusting the input device.

## POWERING YOUR WIIM ULTRA

Please use the provided power adapter to power your WiiM Ultra. It supports a voltage range of 100~240V, 50/60 Hz, with a current up to 0.5A. This ensures your device operates safely and efficiently.



## CONNECT TO YOUR NETWORK WITH THE WIIM HOME APP

You can connect your WiiM Ultra to your network using either Ethernet or Wi-Fi. Before beginning the setup, please download the WiiM Home App. If you choose to connect via Wi-Fi, make sure you have your network password ready. This will ensure a smooth and efficient setup process.

- **DOWNLOAD THE WIIM HOME APP**



- **WI-FI OR ETHERNET SETUP**

1. **Power On Devices:**

- Turn on your speaker, audio/video receiver (AVR), amplifier, or DAC.
- Power on the WiiM Ultra streamer and wait 30 seconds for it to boot up.

2. **App Configuration:**

- Open the WiiM Home App.
- Select the device you want to configure.

3. **Network Connection:**

- Choose your network and enter the password (Wi-Fi only).

4. **Audio Settings:**

- Set the maximum bit depth and sample rate for your downstream audio device if using digital audio output. Note that some legacy DACs, amplifiers, or speakers may not support 24-bit/192kHz audio. Refer to your device manuals for details.

## FILL YOUR HOME WITH SOUND

Immerse yourself in your favorite music and radio stations with seamless Wi-Fi or Bluetooth streaming. Connect multiple WiiM devices to enjoy music throughout your home. Alternatively, link stereo components like an amplified turntable, CD player, or MP3 player and cast music to multiple WiiM devices including WiiM Ultra, Amp, Pro Plus, Pro, or Mini connected speakers.

Expand your audio experience by grouping with Alexa or Chromecast-enabled devices, Amazon Echo, or Google Home for synchronized multi-room audio. Note that grouping with non-WiiM or LinkPlay devices requires their respective apps such as Alexa or Google Home App.

Please note that when using Amazon Echo or Google Home devices, the WiiM Ultra functions as the audio receiver and cannot transmit its physical audio input (via Line-In or Optical-In) to non-WiiM devices over Wi-Fi.

## USE 12 V TRIGGER OUT

The WiiM Ultra activates the 12V trigger rail as soon as music playback starts or the device exits standby mode. It deactivates the trigger when the device enters standby. The response of the connected amplifier to this voltage change may vary depending on the manufacturer's specifications and timeout settings.

For external DACs or amplifiers, the 12V trigger can be used to automatically wake the device from standby. Please refer to your device's manual for specific details on using the trigger input.

## AUDIO OUTPUT VIA BLUETOOTH OUT

You can use the WiiM Ultra as a Bluetooth source device, enabling seamless pairing with your Bluetooth speakers.

Bluetooth Pairing Procedure for Audio Output:

- 1) Launch the WiiM Home App on your iOS or Android device.
- 2) Select '**Device**' Tab and tap the gear icon for device settings.
- 3) Select the '**Audio Output**' setting and opt for '**Bluetooth**' to establish a connection with an external Bluetooth receiver, such as an amplifier or speaker.
- 4) Start playing music.



## 6. VOICE CONTROL

Navigate and interact with your WiiM Ultra using voice commands to search, play, stop, or skip music and more.

Before using the voice control, please ensure voice control is properly configured.

### WORKS WITH ALEXA

#### Setting Up Alexa with WiiM Ultra:

1. Setup Your Amazon Account:
  - If your WiiM device isn't logged in, open the WiiM Home App.
  - Navigate to "Browse > Amazon Alexa > Sign in to Amazon" and log in.
2. Pair the included WiiM Voice Remote and use Alexa by pressing and holding the MIC button on the remote.

Optionally, you can use the voice control of WiiM Ultra with Alexa App and other Alexa built-in devices.

3. Download the Amazon Alexa App:
  - Ensure your Amazon or 3rd party Alexa-enabled devices are turned on.
4. Configure Multi-Room Music:
  - Open the Amazon Alexa app and tap "Devices" at the bottom.
  - Tap the "+" in the top right corner.
  - Select "Combine speakers," then "Multi-room music."
  - Choose your Echo and WiiM devices, click "Next," and assign a group name (e.g., Bedroom).
5. Voice Commands:
  - Say, "Alexa, play some music in the Bedroom" to enjoy multi-room audio.
  - Set your WiiM device as the preferred speaker to simplify commands.

### WORKS WITH GOOGLE VOICE ASSISTANT

To enable Chromecast Audio functionality on the WiiM Ultra, follow these steps:

1. **Enable Chromecast:**
  - Open the WiiM Home App.



- Navigate to “Device Tab > Tap the device setting gear icon > Chromecast Audio” and enable Chromecast Audio.
- 2. Link to Google Home:**
- Open the Google Home app.
  - Locate the WiiM Ultra under “Local devices.”
  - Tap the WiiM Ultra's name to enter the control interface.
  - Tap “Add to a room” under the volume circle to assign the WiiM Ultra to a room.
- 3. Voice Control:**
- Use voice commands with your Google Home or Android devices to control the WiiM Ultra.



## 7. DIRECT CONTROL VIA YOUR FAVORITE APP

You can stream from your favorite apps directly to your WiiM Ultra with the following approaches.

### SPOTIFY CONNECT

Spotify Connect allows you to stream Spotify on your WiiM Ultra over Wi-Fi or Ethernet, eliminating the need for Bluetooth pairing. It works with smartphones, tablets, or PCs as remote controls and supports both free and premium accounts. For more information, visit [Spotify Connect](#).

Using Spotify Connect ensures the best audio quality and streaming experience on your WiiM device.



#### **Multiroom and Stereo Pairing**

To use Spotify Connect for multiroom or stereo pairing:

1. Group multiple WiiM devices in the WiiM Home App.
2. Stream Spotify to the grouped devices. The group name will match the group master device.

#### **License Information**

The Spotify software is subject to third-party licenses, which can be found [here](#).

### TIDAL CONNECT

TIDAL is a global music streaming platform that brings fans closer to artists through unique experiences and the highest sound quality. Stream your favorite music seamlessly from the TIDAL App directly to your devices, up to 192 kHz, 24-bit.

TIDAL Connect allows you to stream music from the TIDAL App to compatible devices, similar to Apple AirPlay and Spotify Connect. Use your smartphone or computer to control playback on your WiiM device.

### How to Use TIDAL Connect

1. Launch the TIDAL App on your mobile device.
2. Play a song and go to the 'Now Playing' screen.
3. Tap the 'cast' icon at the top right.
4. Select your WiiM device from the list.

## AMAZON MUSIC CAST (ALEXA CAST)

Alexa Cast lets you play and control music on any Alexa device from the Amazon Music app on iOS or Android. You can discover and target any Alexa device from your app, regardless of the Wi-Fi network, allowing you to play music on any chosen device. Your app functions as a remote control, enabling you to follow along, skip tracks, and more.

### WiiM Ultra and Alexa Cast

The WiiM Ultra supports Alexa Cast with bit-perfect output up to 192 kHz/24-bit, ensuring the highest quality for Amazon Music Ultra HD.

### How to Use Alexa Cast

1. **Log In:** Ensure you are logged into your Amazon account for Alexa on the WiiM Home App.
2. **Update:** Have the latest version of the Amazon Music app.
3. **Cast Music:** On the "Now Playing" screen, tap the casting icon in the top right.
4. **Select Device:** Choose an Alexa device from the list.

### Control Options

- **Voice Control:** Use voice commands to control music on the device.
- **App Control:** Switch between voice and app control for convenience.
- **Stop Casting:** To stop casting and resume playing on your phone, open the device list and tap the disconnect button.

## CHROMECAST AUDIO

Chromecast audio allows you to instantly stream your favorite music, radio, or podcasts from Chromecast-enabled apps on your mobile device to your speakers over Wi-Fi.

### **Setting Up Chromecast**

1. **Enable Chromecast:**
  - Once you have set up the WiiM Ultra, enable Chromecast from the WiiM Home companion app.
2. **Stream Music:**
  - Open a compatible app (e.g., Spotify, Apple Music, TIDAL, Amazon Music, YouTube Music, Deezer) on your smartphone or tablet and tap the Cast button.
  - Select your WiiM Ultra and start streaming audio.
3. **Using Chrome Browser:**
  - Cast any audio from your Chrome browser by selecting Menu > Cast.

### **Multi-Room Audio**

Chromecast can also be used for multi-room audio, allowing you to play music in sync on multiple speakers from compatible brands and WiiM Ultra using the Google Home app.

## **DLNA**

DLNA (Digital Living Network Alliance) sets standards for home networking devices to communicate and share media files seamlessly. The WiiM Ultra is a DLNA-compatible digital media renderer (DMR).

### **How It Works**

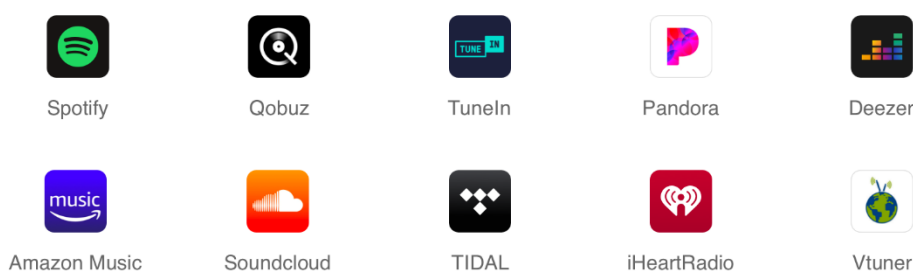
When connected to the same network as your other DLNA devices or apps, the WiiM Ultra automatically appears in the menus of these networked components. Your computer and other media devices will discover and recognize the WiiM Ultra without any additional setup.

### **Controlling and Streaming**

You can control the WiiM Ultra from other DLNA digital media players or controllers. Additionally, you can stream content from DLNA digital media servers directly to the WiiM Ultra, all without any extra configuration.

## 8. ALL MUSIC IN ONE APP

With the free WiiM Home App, you can control your content and devices from one place. The app supports many popular music streaming services such as Spotify, iHeartRadio, Tidal, Amazon Music, SoundCloud, Qobuz, Pandora, Deezer, TuneIn, and more.



### Versatile Music Sources

- **Streaming Services:** Access a wide range of music streaming services.
- **Local and Network Storage:** Play music stored on your mobile device, local network media servers, or personal cloud server.
- **Unified Search:** Search across multiple music services and your local network for artists, tracks, stations, playlists, and more.

### Customizable Audio Experience

- **Equalization (EQ):** Choose from 24 EQ presets, a 10-band graphical EQ, or a 10-band parametric EQ. Assign EQ settings to different sources like AUX in, online music, or Bluetooth streaming.
- **Music Presets:** Save up to twelve music presets, including favorite stations, playlists, and albums. Access them easily with one tap on the Pro Plus, remote, or app.

The WiiM Home App is a powerful tool for discovering and enjoying your favorite content from both online and local libraries.

## 9. MULTIROOM AND STEREO PAIRING

With the WiiM Ultra, it's easy to build your wireless multiroom sound system with Amazon Echo (or Alexa built-in devices) or Google Home. You can create an even more flexible multiroom sound system with multiple WiiM devices for your existing audio devices.


### LINKPLAY MULTIROOM/STEREO PAIRING

With our proprietary multiroom technology, WiiM Ultra allows all types of audio inputs - including Wi-Fi/Ethernet, Bluetooth, analog Line-In, Phono-In, digital optical, or HDMI ARC - to be used as sources for your multiroom system.

In addition, you can group two speakers connected to WiiM devices as a stereo pair for a wider, more immersive sound stage. This feature supports all input options, ensuring compatibility with virtually every music listening preference.

To use this, please follow the steps below.



- Configure two or more devices.
- Open WiiM Home App.
- Select the device and click the plus sign in the upper right corner “ + ”
- Select the other WiiM device, click “Done”
- Click the LR icon “  ” and set the device to "L/R/LR"
- Select Browse tab, choose your music to play.

## AMAZON ALEXA MULTIROOM

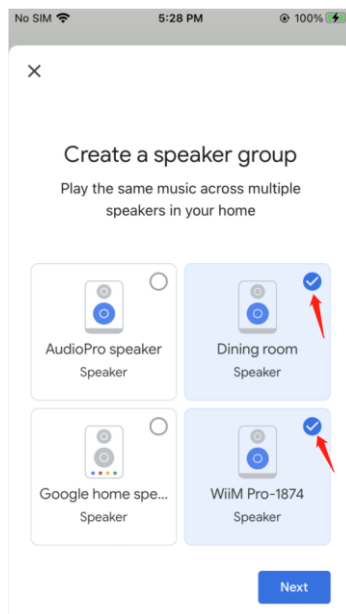
Download Amazon Alexa App and get ready with Echo or other Amazon devices. For detailed steps please refer to 6.1.

Since the WiiM Ultra is an Alexa Cast audio receiver, not a transmitter, it can't transmit the Line-in or Optical-in audio to other Alexa-enabled devices such as Echo.

## MULTIROOM WITH CHROMECAST AUDIO DEVICES

You can group WiiM Ultra with other Google Home or Chromecast audio enabled devices to play the same music on all devices via the Google Home App.

- Enter Google Home App, tap the “+” in the top left corner
- Tap “Create speaker group” to create a speaker group
- Select the devices that are in the same network
- Give a group name
- Stream music to the group



Since the WiiM Ultra is a Chromecast audio receiver, not a transmitter, it can't transmit the Line-in or Optical-in audio to other Chromecast audio devices such as Google Home.



## 10. AUDIO INPUT VIA LINE IN OR SPDIF IN

Unlock the full potential of the WiiM Ultra by employing it as a preamplifier and network audio transmitter via Wi-Fi or Ethernet. It has extensive EQ options and automatic room correction that can greatly improve the sound quality.

Additionally, you can seamlessly stream analog or digital audio input from devices like CD players, vinyl players, TVs, or computers to other WiiM connected devices.

To set up your WiiM Ultra with Line-IN:

1. Insert the line-in cable into the LINE IN port on the WiiM Ultra's rear.
2. Connect the other end of the cable to your record player.
3. In the WiiM Home app, navigate to 'Browse' tab > Select source on device > LINE IN, and designate LINE IN as the audio source.
4. Form a multiroom music group with your WiiM Ultra. In the WiiM Home app, go to Devices and choose the WiiM Ultra linked with your LINE-IN device. Tap the group button (depicted by a "link" icon within a box) at the upper right corner of the device box. Select the desired WiiM Ultra for audio transmission.

Upon completion, the music from the connected device will play across your multiroom music group.

You can follow the same procedure using the optical input port of the WiiM device if your source device offers a digital audio output via optical.

Additionally, you can enable the "Autosense" feature on the WiiM device, allowing it to automatically play your Line-In, Optical, or HDMI ARC source upon detection of a signal. This feature can be activated within the WiiM Home App.

The WiiM device features a built-in EQ to tailor audio input to your preferences. Moreover, you can control audio volume remotely through the app, eliminating the need to adjust the audio input directly.

It also features a Phono-IN, you can directly connect the turntables with the WiiM Ultra even the turntable doesn't have a built-in preamp.

## 11. AUDIO OUTPUT VIA LINE/SPDIF/COAX/BT OUT

The WiiU Ultra offers six distinct audio output interfaces to connect your DAC, amplifier, headphones, stereo receiver, and powered speakers. These include:

- Analog LINE Out
- Digital Optical (TOSLINK)
- Coaxial
- USB
- Headphone Out
- Sub Out

Please note that the WiiU Ultra outputs audio to only one of these interfaces at a time, aside from the optional Sub Out.

### Audio Output Selection

Selecting the correct audio output port on the WiiU Ultra is crucial to ensure you can hear sound.

For bit-perfect audio output, use the digital audio outputs and enable the fixed volume output via the device settings in the WiiU Home App. You have two ways to control your system's volume:

- **Fixed Volume Output:** Control volume from your AVR or amplifier.
- **Variable Volume Output:** Control volume directly from the WiiU Home App by disabling the fixed volume option.

### Connecting Your Audio Outputs

1. **Choose Your Output:** Connect the OPTICAL, RCA, COAX, HEADPHONE, or USB cable to the corresponding port on the WiiU Ultra.
2. **App Setup:** Open the WiiU Home App on your iOS or Android device.
3. **Play Audio:** Start playing on the connected output devices.

### Bluetooth Audio Output (BT Sourcing Mode)

To connect the WiiU Ultra to an external Bluetooth device, follow these steps:

1. **Open the App:** Launch the WiiU Home App on your iOS or Android device.
2. **Access Device Settings:** Go to the Device Tab and tap the gear icon for device settings.
3. **Select Audio Output:** Tap on Audio Output and choose Bluetooth to connect to an external Bluetooth device (such as an amplifier or speaker).
4. **Start Playing:** Begin playing music on your connected Bluetooth device.

## 12. STREAM AUDIO WITH BLUETOOTH

With Bluetooth wireless technology, you can stream tunes from various devices like smartphones, tablets, TVs, and laptops. To start streaming, first pair your device with the WiiM Ultra.

### Simple Pairing Process:

- **Manual pairing:** To pair your device manually, simply press and hold the volume knob on the WiiM Ultra for 3 seconds to initiate pairing mode.
- **App-Assisted Pairing:** If your WiiM Ultra is connected to your network, you can enable the Bluetooth pairing directly from the WiiM Home App. Just navigate to the 'Browse' tab and select the 'Bluetooth' as your input source. In this case, if there's no device connected to the WiiM Ultra, the App will initiate pairing mode for WiiM Ultra automatically.

The Bluetooth feature is compatible with A2DP and AVRCP profiles, and supports both SBC and AAC codecs.

## **13. ADVANCED FEATURES**

### **FIRMWARE UPDATES**

- WiiM Ultra updates automatically when connected to your network.
- Upgrades happen from 2:00-5:00 a.m. in your time zone. During the silent upgrade, there will be no sound and no indication. Upon opening the App, you will see the latest updates made to WiiM Ultra.

### **USE ETHERNET INSTEAD OF Wi-Fi**

When an Ethernet cable is connected, the WiiM Ultra will automatically switch off Wi-Fi to use the Ethernet network. To confirm which connection is active, open the WiiM Home App, go to the 'Browse' tab, and scroll down to the 'Select Audio Source' section at the bottom. If Ethernet is being used, it will display 'Ethernet' instead of 'Wi-Fi.'

## 14. FAQ

If you experience problems with the audio streamer, try these solutions first:

- What can I do if my WiiM Home App can't find the device?
  - Make sure your network is available and the device is powered on properly.
  - Check the LED on the device is solid white.
  - Make sure your device and WiiM Ultra are connected to the same Wi-Fi network.
  - Make sure you have the latest version of the WiiM Home App on your device.
  - Try restarting your device, WiiM Ultra, and router.
  - If still can't find, reconfigure the device to the network.
- What can I do if my device has no sound?

If you are not getting any sound from your WiiM Ultra, make sure you have checked the following things:

- The volume level on both the WiiM Home app and your receiver or device that you have connected to WiiM Ultra.
  - The input source on your receiver or device that matches the output of WiiM Ultra.
  - The right audio output from WiiM Ultra is selected on the WiiM Home App.
  - The physical connections between WiiM Ultra and your receiver or device, are plugged in correctly and securely.
- 
- Audio dropout or no sound on network streaming?

If you experience no sound with streaming, please check if the progress bar of music app or WiiM Home App is moving.

- Check network connectivity: Ensure the signal of your WiiM Ultra is strong. Move the WiiM Ultra closer to your wireless router or access point to improve the signal strength.
- Restart your network devices: Power cycling your network devices, including your router, modem, and WiiM Ultra, can often resolve connectivity issues.

- Update firmware and software: Ensure that your WiiM Ultra and all devices involved in the streaming have the latest firmware and software updates installed.
  - Reset the WiiM Ultra: As a last resort, you can try performing a factory reset on your WiiM Ultra and set it up again.
- What can I do if my device cannot power on normally?
    - Check the device LED status and ensure it's on.
    - Ensure the original power adapter is used.

## **SUPPORT**

If you are unable to resolve your issue, please send us a ticket through the App or send us an email about the issue you're experiencing.

WiiM Home App: Settings > Feedback, Settings > FAQ

Website: [faq.wiimhome.com/support/solutions](http://faq.wiimhome.com/support/solutions)

Email: [support@wiimhome.com](mailto:support@wiimhome.com)

Product User Guides: [wiimhome.com/guides](http://wiimhome.com/guides)

## **RESETTING WIIM Ultra**

Press and hold the volume knob for 10s until you will hear the voice prompts of "Restore to factory setting" and see the light flashing red and white.

Factory reset clears all source, volume, and network settings for WiiM Ultra and returns it back to the original factory settings.

## 15. IMPORTANT SAFETY INSTRUCTIONS

IMPORTANT, RETAIN FOR FUTURE REFERENCE: READ CAREFULLY

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
10. Only use attachments/accessories specified by the manufacturer.
11. Unplug this apparatus during lightning storms or when unused for long periods of time
12. Refer all servicing to qualified personnel. Servicing is required when the apparatus has been damaged in any way, such as external power supply, power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
13. To reduce the risk of fire or electrical shock, do NOT expose this product to rain, liquids or moisture.
14. Do NOT expose this product to dripping or splashing, and do not place objects filled with liquids, such as vases, on or near the product.
15. Keep the product away from fire and heat sources. Do NOT place naked flame sources, such as lighted candles, on or near the product.
16. Do NOT make unauthorized alterations to this product.
17. Do NOT use in vehicles or boats.
18. Use this product only with the power supply provided.
19. Where the mains plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.
20. Due to ventilation requirements, does not recommend placing the product in a confined space such as in a wall cavity or in an enclosed cabinet.
21. Contains small parts which may be a choking hazard. Not suitable for children under age 3.

22. This product contains magnetic material. Consult your physician on whether this might affect your implantable medical device.
23. Do not place or install the bracket or product near any heat sources, such as fireplaces, radiators, heat registers, or other apparatus (including amplifiers) that produce heat.



## 16. CE/FCC Statements

**RF Exposure Information:** To maintain compliance with FCC RF exposure requirements, use the product that maintains a 20cm separation distance between the user's body and the host.

MPE limit for RF exposure at prediction frequency and satisfy RF exposure compliance.

### **FCC 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.

**NOTE:** The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications or changes to this equipment. Such modifications or changes could void the user's authority to operate the equipment.

**NOTE:** 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.

**CE Statement:**

RF exposure information: The Maximum Permissible Exposure (MPE) level has been calculated based on a distance of  $d=20$  cm between the device and the human body. To maintain compliance with RF exposure requirement, use product that maintain a 20cm distance between the device and the human body.

Do not use the device in the environment at too high or too low temperature, never expose the device under strong sunshine or too wet environment. The suitable temperature for the product and accessories is 0°C-40°C.


**Operating frequency range and maximum transmit power**

Bluetooth: 2402MHz ~ 2480MHz, <9.11 dBm EIRP

WLAN 2.4GHz: 2412MHz ~ 2472MHz, <20 dBm EIRP

WLAN 5GHz: 5150MHz ~ 5825MHz, <20 dBm EIRP

The device for operation in the band 5150~5350 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems.

	AT	BE	BG	HR	CY	CZ	DK
	EE	FI	FR	DE	EL	HU	IE
	IT	LV	LT	LU	MT	NL	PL
	PT	RO	SK	SI	ES	SE	UK
	CH	IS	LI	NO	TR		

**This product can be used across EU member states.**

**EU Regulatory Conformance**

Hereby, Linkplay Technology Inc. Corporation declares that this device is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU.

