

# What is the LDAC audio standard? How does it work? Highlights of LDAC

The article will provide information on how it works as well as some outstanding features of the LDAC audio standard.

First launched in 2015 at CES 2015, LDAC technology is used by Sony on its wireless headsets, Bluetooth speakers and high-end phone models. With outstanding audio compression quality, up to now this audio technology has appeared on many devices of other brands. Let's find out what the LDAC audio standard is, as well as how it works and highlights through the article below!

## 1. What is LDAC?

LDAC is a Sony proprietary codec (audio codec) that allows high-quality audio transmission via bluetooth. The LDAC codec allows users to listen to Hi-Res music with quality up to 96kHz/32bit with a maximum bandwidth of 990kbps, giving an audio transfer rate 3 times faster than Qualcomm's aptX or SBC.



## 2. How does LDAC work?

First, all receivers and transmitters must support the LDAC codec to be able to use this audio standard.

According to Sony's announcement, LDAC can transmit audio at 3 levels: 330kbps, 660kbps and 990kbps, specifically as follows:

- Connection priority mode – 330kbps: Available on most equivalent codecs.

- Normal mode – 660kbps: Initialized in the settings of Sony Walkman players.

- Quality Priority mode - 990kbps: Hi-Res audio transmission over Bluetooth connection, much faster than the maximum limit of 328kbps of traditional SBC codec.

### 3. Highlights and Limitations of LDAC

Overall, the LDAC codec has its own highlights and limitations.

Outstanding:

1. Wireless audio transmission with very high speed and quality.
2. Capable of adjusting transmission bitrate to suit different usage scenarios.



LDAC enables high-speed and high-quality audio transmission

Limit:

- Requires both audio source (phone, music player) and audio device (speaker, headset) that support LDAC to be able to use.

- LDAC is not yet popular in cheap headphones. The main reason is that this is an audio technology for high transmission quality, so cheap, low-tech headphones will not be able to meet the transmission quality of LDAC and cannot make a difference between this technology and other audio standards.



LDAC requires that both the source and the audio device support this technology in order to be used

#### 4. Compare LDAC and aptX

Below is a comparison table of 2 popular bluetooth audio transmission codecs today, LDAC and aptX systems, including aptX HD, aptX, aptX Adaptive and Low Latency.

Codec	LDAC	aptX
Maximum transmission quality	990 kbps	570 kbps
Maximum transmission bitrate	24bit/48kHz	32bit/96kHz
Ability to convert bitrate	3 levels: 330kbps, 660kbps, 990kbps	276-420 kbps (aptX Adaptive)

#### 5. Which products support LDAC?

LDAC is applied on Sony product lines including phones, Hi-Res audio players and some wireless headset models , such as the upcoming Sony WH-1000XM4 headset model to be sold in the World. Mobile.

In addition to Sony products, currently a number of headset models of other brands have also applied the LDAC audio standard. To identify which headphones support this technology, you can look for the LDAC logo printed on the product's box.



Besides, as part of the open source project AOSP (Android Open Source Project), LDAC technology will be available on some Android phone models running Android 8.0 and above.



To check and enable LDAC format on your Android phone, go to Developer Options > Bluetooth Audio Codec > Click and check if LDAC is present.

Above are important information to know about the LDAC audio standard that appears on current headsets, speakers and phones. Thank you and see you in the next posts!

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