# iFi nano iDSD with Smart Devices (iOS7/Android) explained

***Q: There are portable DAC on the market that supports Smart Devices, what make the iFi nano iDSD so special?***

A: Only iFi nano iDSD supports full high resolution up to 384kHz and DSD 5.6/6.2M for portable Smart Devices.

| PCM Pulse Code Modulation | DSD Direct Stream Digital | DXD Digital eXtreme Definition | |
|---|---|---|---|
| 2.8MHz | 3.1MHz | 5.6MHz | 6.2MHz |
| 176.4kHz | 192kHz | 352.8kHz | 384kHz |
| 44.1kHz | 48kHz | 88.2kHz | 96kHz |

Using the all new Sony PHA-2 as an example:

| Item | Sony PHA-2 | Sony PHA-2 with CCK/OTG[1] | iFi nano iDSD with CCK/OTG[1] |
|---|---|---|---|
| **Computer** | | | |
| PCM 384kHz | ✘ | ✘ | ✓ |
| DXD 352kHz | ✘ | ✘ | ✓ |
| DSD 5.6M | ✓ | ✓ | ✓ |
| PCM 192kHz | ✓ | ✓ | ✓ |
| **Smart Devices[2]** | | | |
| PCM 352/384kHz | ✘ | ✘ | ✓ |
| DXD 352kHz | ✘ | ✘ | ✓ |
| 2.8/5.6MHz DSD | ✘ | ✓ | ✓ |
| PCM 88/96/176/192kHz | ✘ | ✓ | ✓ |
| PCM 44kHz | ✓ | ✓ | ✓ |
| **Features** | | | |
| Digital Filter Selection | ✘ | ✘ | ✓ |
| Bit-Perfect DAC | ✘ | ✘ | ✓ |
| Precision Analogue Volume Control | ✓ | ✓ | ✓ |
| Line Output | 1V | 1V | 1.8V |
| Headphone Power[3] | 165mW(8R) | 165mW(8R) | 170mW(10R) |
| Battery | 6.5hr | 6.5hr | 10hr |
| Size | 270g | 270g | 162g |
| Weight | 68 x 29 x 140mm | 68 x 29 x 140mm | 68 x 28 x 87mm |

Note:
*1 Apple: with Apple USB Camera Adapter and app (e.g. Onkyo HF Player); Android: with OTG cable and app (e.g. Audio Evolution).
*2 Smart Devices: Apple iOS7 devices (iPhone/iPad/iPod Touch), Android 3.1 or above phones/pads
*3 Measured at 10% distortion.  iFi nano at 1% distortion, >130mW (16R).

# Connection to an Apple iDevice (iPhone/iPad/iPod Touch)

## Requirements:

Any Apple device that can run iOS7

- iPhone 4/4s/5/5c/5s
- iPad Air/Mini
- iPod Touch

## Additional hardware needed:

1. Lightning to USB Camera Adapter (for Lightning connector, iPhone 5 etc.), or Apple iPad Camera Connection Kit (for 30 pin connector, iPhone 4 etc.)
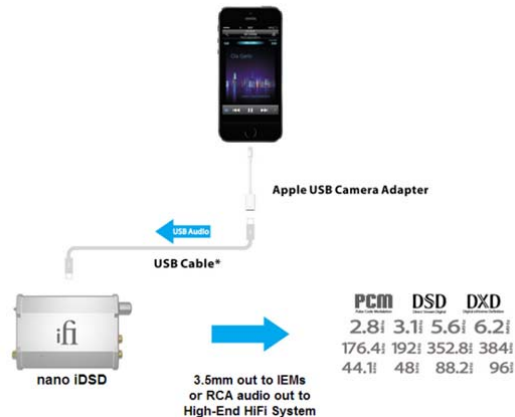
2. USB A to B adaptor or Short USB A to B cable

## Additional apps needed:

 (Need a software player that can play FLAC, DSD), e.g. Onkyo HF Player (https://itunes.apple.com/en/app/onkyo-hf-player/id704139896?mt=8)

# Connection to an Android device

## Requirements:

- Android device that can run Android 4.1 or above
- USB Host mode has been enabled by the Android manufacturer
- Android device running Android Open Accessory (AOA) protocol version 2.0
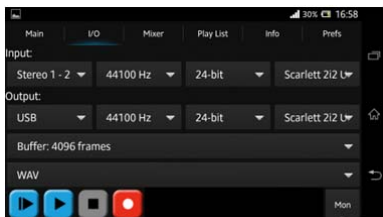
## Additional hardware needed:

1. OTG Cable



2. USB A to B adaptor or Short USB A to B cable



## Additional apps needed:

Audio Evolution (http://www.audio-evolution.com/), or

USB Audio Recorder Pro (http://www.extreamsd.com/USBAudioRecorderPRO/)



**For a list of Android devices supported:**

http://www.extreamsd.com/USBAudioRecorderPRO/

http://www.head-fi.org/t/595071/android-phones-and-usb-dacs/1140