Cayin
凯音

Master Quality Digital Audio Player

Quick User Guide

N6 MK2

Thank you for choosing Cayin N6 MK2 master quality digital audio player. We have prepared this quick user guide to introduce the basic operation of the player. If you want to explore the specification, features and operation in detail, please scan the QR Code on the right or visit our website to download the instruction manual of N6 MK2.

Cayin N6MK2 is a modular design DAP, the following instruction and specification assumes A01 Audio Motherboard is in used. The feature, operation and measurements of N6MK2 might not be the same when using other Audio Motherboard. Please refer to the instruction of the Audio Motherboard as deem necessary.
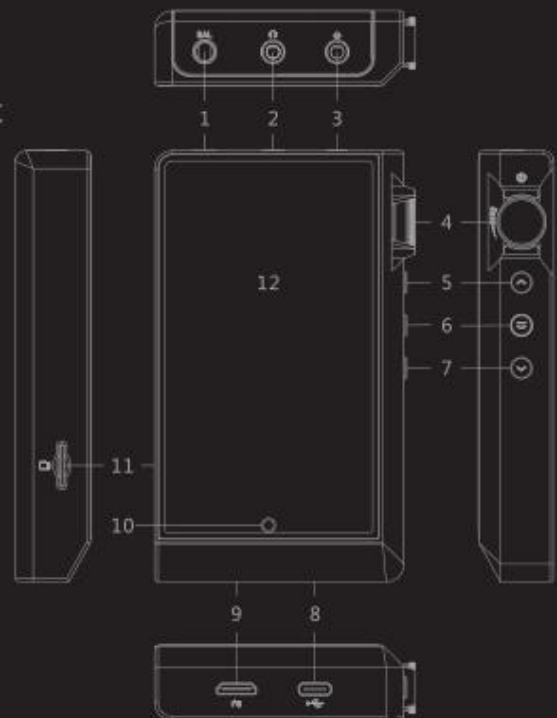
Packaging and Accessories --

Please check carefully and make sure everything is in place:
- Cayin N6 MK2 Master Quality Digital Audio Player x 1
- Quick User Guide (as attached, with Warranty Card and QA Certificate) x 1
- Tempered Glass Protective Screen x 1
- Hi-Res Audio label x 2
- Protective Case x 1
- Type-C USB Cable x 1
- 4.4mm to 2.5mm balanced adapter x1

Conectors and Control Buttons --

1. 4.4mm Balanced Line Out/Headphone Out
2. 3.5mm Single-ended Headphone Out
3. 3.5mm Single-ended Line Out
4. Multi-function Volumed Knob
5. Previous/FFwd
6. Play/Pause
7. Next/Rewind
8. Multi-purpose USB Port (Type-C)
9. I²S Output via Mini HDMI (Type C)
10. Return/HOME/Status LED
11. TF card
12. Touch Screen

Menu and Setting ---

The Pull down menu of N6 MK2 adopts a phase-in design like other modern Android device. Drag your finger from the top (preferably at the middle) of your screen downward to show the Notification Center, and then drag down again to display the Quick Setting Menu. Click at the gear icon at the bottom of the menu, you'll enter System Setup Menu.

Other than the regular Android features, the Quick Setting Menu provided the following options:

HdB ‖‖‖ Gain Setting	⌜SPDIF⌟ Digital Out	⚙ Audio Setting

1. Gain Setting: Choice of Low (LdB), Mid (MdB) and High (HdB). Gain setting in amplification circuit, The sound level and output level will changed when you toggle the gain setting (with volume remain unchanged)

2. Digital Output: Choice of S/PDIF and I²S in digital output. This player cannot output these two bit-streams at the same time.

3. Audio Setting: More audio related options such as digital filters and channel balanced. Be reminded that the setting in this menu will affect ALL applications installed in N6 Mk2.

   After you started up the Cayin Music App, you can click the rudder icon or swipe from left (preferably at the middle) of the screen to right to display the Application Menu. This will offer options such as music scanning, EQ, and album art display.

You can call out the Recent Apps list by swipe from bottom (preferably at the middle) of the screen to the middle and release your finger. You can review or switch to other active applications. To terminate an active application, you can either click the cross sign at each task window or swipe the window to left or right (out of the main display area). If you hold any task window and move it down slowly, the system will offer a "Clear All" options and you terminate all active application in one move.

Basic Operation --

1. Multi-function Knob (Volume, Power on/off, Screen on/off)
   The Multifunction Knob allows you to control the volume, turn on/off the player, and lock/unlock the main display screen. When the player is power off, press the center of the knob into the player for 1 second, the player will turn. To turn off the player, press the center of the knob into the player for 2 second, the player will display a pop-up message. If you can press the center of the knob into the player for 12 second, the player will power off in regardless of operation status.

2. File Management
   You can connect the player to a computer via the provided USB-C cable. When connected, the player will pop up a USB status system message. Tab on the message and select "Transfer file" option, you can now copy, paste

The TF card slot supports SDHC and SHXC types TF card and tested with 512GB TF cards successfully.

3. Connecting Headphones

The player supports 4.4mm balanced headphone and 3.5mm single-ended headphone. You can connect you headphone to designated phone out sockets on the top of the player and enjoy music play immediately. If you are using balanced headphone with 2.5mm TRRS connector, we have provided a 4.4mm to 2.5mm balanced adapter for that purpose.

4. Music Playback (Cayin Music App)

Cayin Music App is a music player app preinstalled by the N6 MK2 firmware. It playbacks all popular music file format and is fine tuned to optimize the circuit design and hardware capability of N6 MK2. We strongly recommend all N6 MK2 users to check out the Cayin Music App.

(1) When you arrive at the Home screen of Cayin Music App, select Folder Tab and then select desired storage location: Internal Storage, microSD card or OTG. You can now browse through folder tree and, when you find the music file you are looking for, click at the entry and N6 MK2 will start the play the file.

(2) Select "Scan for Music File" from the Application menu, when N6 MK2 finish the scanning and process, you can now browse through the music content by Album, Artist, Genre or Song

(3) When N6 MK2 starts playback, the track information and playback status will displayed at Quick Display Bar at the bottom, click anywhere in the Quick Display Bar, the player will display the Music Playback screen. You can play/pause, skip tracks, change playback mode and review play queue by clicking at the appropriate icon. In addition, you can swipe at the Album Art to review lyric and music information, drag and drop the progress bar to fast forward or rewind, or click at the T-shirt icon on the bottom left corner of album art to change playback theme.

5. Adjust Volume

   Rotate Multifunction Knob clockwise to increase or counter-clockwise to decrease volume output. N6 MK2 will display the Volume Control Screen during volume adjustment, user can slide up and down on the screen to adjust volume quickly, or click the + and – icon to fine tune volume setting.

6. Play/Pause

   Click the button to play or pause the playback.

7. Skip Tracks

   Click the Previous/Rewind button to skip to previous track, and click the Next/Fast Forward button to skip to next track.
   Hold the Previous/Rewind button to rewind from current playback, and release the button to resume playback at designated location.
   Hold the Next/Fast Forward button to fast forward from current playback, and release the button to resume playback at designated location.

8. Return/Home Button

   Click the circular Return/ Home button at any screen will bring you back one level, or hold the button to go back to Desktop directly.

Connect to other devices --

1. Connect to players as USB-DAC

   N6 MK2 can be used as a USB DAC when connect to an outboard player with USB output (example, a computer) . The bundled USB Type-C to Type A cable is applicable for this purpose. When connected, the player will pop up a USB status system message. Tab on the message and select "USB DAC in " option, USB DAC function become effect, N6 MK2 will display DAC user interface screen and stop all local playback function.

This player supports outboard players such as desktop or notebook computers and Cayin DAPs. Android device are partially supported (required correctly implemented OTG with Audio support). Windows based devices might require an appropriate USB Audio Driver before it will recognize N8 as a USB DAC. Please download and install v4.47.0 or above USB Audio driver from Cayin Website. Mac OS and Cayin DAP or Android device (if supported) does not requires a device driver.

NOTE:

When connected as USB DAC, the outboard USB player will feed USB signal and charge the N6 MK2 at the same time. the USB DAC function might fail to work if the source device cannot provide sufficient power supply for this purpose.

2. Connect to digital audio devices

N6 MK2 offers 3 digital output options: S/PDIF, I²S and USB Audio. You can select the appropriate digital output that fit you needs accordingly.

(1) USB Audio output: the USB Audio output is available for the Type-C USB connector. Please use high quality USB OTG cable to connect N6 MK2 to outboard DAC with USB Audio input. Typical desktop DAC use USB Type-B as their USB Audio input, you'll need a Type-C to Type-B USB cable for this connection. The cable is readily available in the market and is not supplied in N8 package. Be reminded that the phone output, line out and S/PDIF and I2S digital output will be suspended when USB Audio output is engaged.

(2) S/PDIF digital output: Cayin has embedded the S/PDIF signal into Type C connector. This is a proprietary digital audio transmission technology and will require a special Type-C to RCA or Type-C to 3.5mm 75Ω coaxial cable from Cayin (purchased separately) to complete the connection.

(3) I²S digital Output: N6 MK2 implements I²S digital output through the HDMI Type C (Mini HDMI) port. Please use high quality HDMI cable (purchased separately) to connect N6 MK2 to outboard DAC with I²S input.

NOTE:
- To enable (2) and (3), you have to set the digital output option from Pull down menu to SPDIF or I²S accordingly, and disconnect all 3.5mm and 4.4mm connections before the digital audio output is available.
- The I²S through HDMI Type C Connector is an proprietary implementation. The pin definition was defined in-housed and was designed to work with Cayin DAC with I²S input. It is incompatible with standard HDMI audio visual device, and we cannot guarantee compatibility with other DAC with I²S input.

3. Connect to analogue audio devices

This player is equipped with one dedicated 3.5mm singled ended line output. You can output line out signal to an amplifier by connecting the 3.5mm plug of analogue interconnect to the line out port of this player, and then connect the other end to the line input connectors of an amplifier, Please be reminded that volume control of this player is not applicable to line out signal.

Charging --

This player supports QC3.0, you can use appropriate QC ready chargers or standard 5V 2A USB charger. We recommend you to use the supplied USB Type-C cable to charge the player. A battery charging icon with battery capacity will display on the Screen during charging. The circular charging indicator will flash while charging, and lighted up continuously when charging is completed.

Bluetooth/WiFi ---

You can connect N6 MK2 to Bluetooth device and enjoy your music in wireless. Bluetooth device must be paired with N6 MK2 in advance, please refer to the electronic version User Manual for more details.
You can select the WiFi icon on the Quick Setting menu to connect N6 MK2 to WiFi/internet. N6 MK2 International version has pre-installed Google Play, you can install music or streaming applications and enjoy online and offline streaming service after connected to internet.

Firmware Upgrade --

Cayin will release new firmware as needed to improve and optimize the function of N6 MK2. Please follow the instructions of the firmware released by www.cayin.cn to complete the firmware upgrade procedure.

Product Specificati--

Product Information			
CPU	Snapdragon 425	OS	Android 8.1
Screen	4.2 inches 768x1280 True Color IPS Touch Screen	WiFi	IEEE802.11a/b/g/n
Battery	3.7V 5900mAh (21.8Wh)	Bluetooth	BT4.2 (SBC,aptX,LDAC)
Duration	~14 hours (3.5mm PO) ~13 hours (4.4mm PO)	Dimension	~121*70*21mm (excluding buttons)
Charging	~ 4.5 hours (QC3.0)	Net Weight	~ 290g (with Audio Motherboard)

Note:Battery test condition: continuous playback of CD quality (16Bit/44.1kHz) WAV file with 32ohm loading (headphone) , turn off display, WiFi and Bluetooth, mid-gain at volume at 30 with A01 Audio Motherboard.

Analogue Specification					
Phone Output	3.5 PO	Power Rating	32Ω	150Ω	300Ω
			245mW	64mW	32mW
		Dynamic Range	118dB (20Hz-20kHz, A-weighted)		
		THD+N	119dB (20Hz-20kHz, A-weighted)		
	4.4 PO	Power Ratinag	32Ω	150Ω	300Ω
			530mW	148mW	75mW
		Dynamic Range	119dB (20Hz-20kHz, A-weighted)		
		THD+N	121dB (20Hz-20kHz, A-weighted)		
Line Out	3.5 LO	Output Level	2.1V(@10kΩ,LO level at H) 1.5V(@10kΩ,LO level at M) 1.0V(@10kΩ,LO level at L)		
		Dynamic Range	118dB (20Hz-20kHz, A-weighted, LO level at H)		
		THD+N	119dB (20Hz-20kHz, A-weighted,		
	4.4 PO	Output Level	4.2V(@600Ω,LO level at H) 3.0V(@600Ω,LO level at M) 2.0V(@600Ω,LO level at L)		
		Dynamic Range	119dB (20Hz-20kHz, A-weighted, LO level at H)		
		THD+N	120dB (20Hz-20kHz, A-weighted, LO level at H)		

Note: All measurement based on A01 Audio Motherboard.

Digital Interface	
USB DAC In	PCM upto 24Bit 192kHz, DSD128 (Native, DoP) Supports Windows (driver required), Mac OS, Android (partial)
USB DAC Out	PCM upto 32Bit 384kHz, DSD256 (Native, DoP, D2P)
I²S Out	PCM upto 32Bit 384kHz, DSD256
S/PDIF Out	PCM upto 384kHz, DSD64/128 (DoP)
Bluetooth Out	Codec supported: SBC, aptX, LDAC