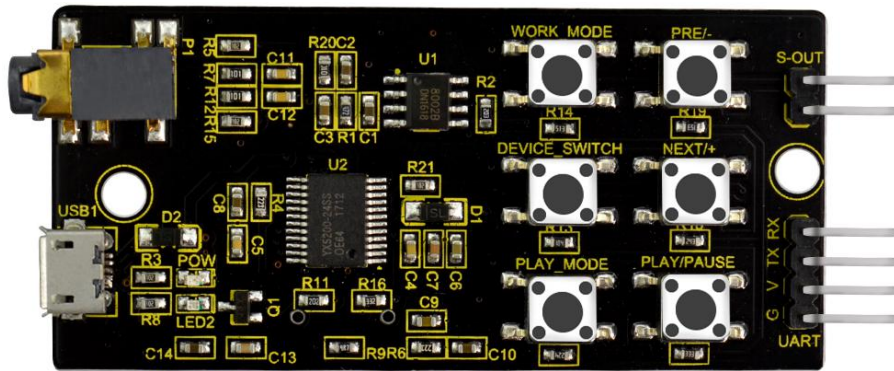# Keyestudio YX5200-24SS MP3 Module

(Black and Eco-friendly)

1. Description

Keyestudio YX5200-24SS MP3 module is specially designed for music playing. It uses YX5200-24SS as core, perfectly integrated MP3、WAV、WMA hardware interface. It supports TF card driver, easy-to-use,stable and reliable.

The main functions of this module are as follows:

1) With TF card slot, can directly read and play music in the card.

2) Comes with a serial communication interface (UART), can control the music playback through serial communication.

3) Comes with micro USB interface (USB1), to read the contents of SD card and download music.

4) Comes with a headphone jack (P1), easy to access headphones to listen to

music.

5) Integrated audio amplifier chip and built-in speaker interface (S-OUT), can directly play via connecting external speakers.

The audio magnification is 8 times.The power of the access speaker should be large enough.

The initial sound of the power-on playback defaults to the maximum.

Please turn down the sound volume before playing.

When the speaker resistance is 8 ohms, the maximum output power is 1.2W.

6) Comes with external 6 commonly used buttons, easy to control and verify the instructions.

2. Technical Parameters

● Operating voltage: DC 5V

● Operating current: maximum 1A

● Max power consumption: 5W

● Operating temperature: 10~40℃

● Audio magnification: 8 times

● Support TF card: maximum 32G

● Environmental attributes: ROHS

● Dimensions: 77mm*33mm*8mm

● Weight: 10.6g

3. Button Functions

Buttons	Short press	Long press	Notes
WORK_MODE	Work mode		INTERRUPT/NON-INTERRUPT SWITCH
PRE/-	previous	VOL-	
NEXT/+	next	VOL+	
DEVICE_SWITCH	device switch		U/TF/SPI/SLEEP
PLAY_MODE	Play mode		LOOP PLAY
PLAY/PAUSE	play/pause		

4. YX5200-24SS Instruction Set

	FUNCTION	SENDING INSTRUCTIONS	NOTES
Control Instruction	[Next]	7E FF 06 01 00 00 00 FE FA EF	
	[Previous]	7E FF 06 02 00 00 00 FE F9 EF	
	[Specify tracking]	7E FF 06 03 00 00 01 FE F7 EF	Specify track 1
		7E FF 06 03 00 00 02 FE F6 EF	Specify track 2
		7E FF 06 03 00 00 0A FE EE EF	Specify track 10
	VOL+	7E FF 06 04 00 00 00 FE F7 EF	
	VOL-	7E FF 06 05 00 00 00 FE F6 EF	

[Specify volume]	7E FF 06 06 00 00 1E FE D7 EF	30
[Specify EQ]	7E FF 06 07 00 00 01 FE F3 EF	STAY
[LOOP PLAYBACK]	7E FF 06 08 00 00 01 FE F2 EF	Loop play track 1
	7E FF 06 08 00 00 02 FE F1 EF	Loop play track 2
	7E FF 06 08 00 00 0A FE E9 EF	Loop play track 10
[Specify play device]	7E FF 06 09 00 00 01 FE F1 EF	Specify to play UDISK
	7E FF 06 09 00 00 02 FE F0 EF	Specify to play TF
	7E FF 06 09 00 00 03 FE EF EF	Specify play device-PC(download mode)
	7E FF 06 09 00 00 04 FE EE EF	Specify to play FLASH
	7E FF 06 09 00 00 05 FE ED EF	Specify play device-SLEEP
[Enter into sleep mode]	7E FF 06 0A 00 00 00 FE F1 EF	
[Waking sleep]	7E FF 06 0B 00 00 00 FE F0 EF	
[Reset]	7E FF 06 0C 00 00 00 FE EF EF	
[Play]	7E FF 06 0D 00 00 00 FE EE EF	
[Pause]	7E FF 06 0E 00 00 00 FE ED EF	
[Specify folder name]	7E FF 06 0F 00 01 01 FE EA EF	"01" folder, track "001"
	7E FF 06 0F 00 01 02 FE E9 EF	"01" folder, track "002"
Stop playing	7E FF 06 16 00 00 00 FE E5 EF	Stop the software decoding
Specify folder to loop playback	7E FF 06 17 00 00 01 FE E3 EF	Specify folder 01 to loop playback
	7E FF 06 17 00 00 02 FE E2 EF	Specify folder 02 to loop playback
Single repeat	7E FF 06 19 00 00 00 FE E2 EF	Open single repeat playback
	7E FF 06 19 00 00 01 FE E1 EF	Close single repeat playback
Play with volume	7E FF 06 22 00 1E 01 FE BA EF	Play the track 1 with volume 30
	7E FF 06 22 00 0F 01 FE C9 EF	Play the track 1 with volume 15
	7E FF 06 22 00 0F 02 FE C8 EF	Play the track 2 with volume 15
set DAC	7E FF 06 1A 00 00 00 FE E1 EF	open DAC
	7E FF 06 1A 00 00 01 FE E0 EF	close DAC[high resistance]
Combination playback	7E FF 09 21 01 02 02 03 01 04 EF	Play [1,2][2,3][1,4] The first number in parentheses is the folder name, and the last number is the song name.
	7E FF 15 21 01 02 02 03 01 04 01 03 01 04 01 05 02 08 03 04 03 01 FE 9A EF	with checkout [1,2][2,3][1,4][1,3][1,4][1,5][1,8][3,4][3,1]
	7E FF 15 21 01 02 02 03 01 04 01 03 01 04 01 05 02 08 03	[1,2][2,3][1,4][1,3][1,4][1,5][1,8][3,4][3,1]

	04 03 01 EF	
Stop playing ads	7E FF 06 15 00 00 00 FE E6 EF	Stop ads, return to play background music
Stop playing	7E FF 06 16 00 00 00 FE E5 EF	Stop software decoding
Spot ads.	7E FF 06 13 00 00 01 FE E7 EF	"ADVERT"folder, track"0001"
	7E FF 06 13 00 00 02 FE E6 EF	"ADVERT"folder, track"0002"
	7E FF 06 13 00 00 FF FD E9 EF	"ADVERT"folder, track"0255"
	7E FF 06 13 00 07 CF FE 12 EF	"ADVERT"folder, track"1999"
	7E FF 06 13 00 0B B8 FE 25 EF	"ADVERT"folder, track"3000"
Spot ads. - multiple folders	7E FF 06 25 00 01 01 FE D4 EF	"ADVERT1"folder, track"001"
	7E FF 06 25 00 01 02 FE D3 EF	"ADVERT1"folder, track"002"
	7E FF 06 25 00 02 01 FE D3 EF	"ADVERT2"folder, track"001"
Random playback	7E FF 06 18 00 00 00 FE E3 EF	Random playback of entire device

Inquiry Instructions	[Query volume]	7E FF 06 43 00 00 00 FE B8 EF	
	[Query the current EQ]	7E FF 06 44 00 00 00 FE B7 EF	Keep the function
	Query the total number of U-disk files	7E FF 06 47 00 00 00 FE B4 EF	Total files of device
	Query the total number of TF files	7E FF 06 48 00 00 00 FE B3 EF	
	Query the total number of FLASH files	7E FF 06 49 00 00 00 FE B2 EF	
	Current track of U-disk	7E FF 06 4B 00 00 00 FE B0 EF	Play the current track
	Current track of TF	7E FF 06 4C 00 00 00 FE AF EF	
	Current track of FLASH	7E FF 06 4D 00 00 00 FE AE EF	
	Query the total number of specified folder tracks	7E FF 06 4E 00 00 01 FE AC EF	
	Query the total number of device files	7E FF 06 4F 00 00 00 FE AC EF	Support TF card and U-disk、FLASH

Return Information	U-disk plug in	7E FF 06 3A 00 00 01 xx xx EF	
	TF plug in	7E FF 06 3A 00 00 02 xx xx EF	
	PC plug in	7E FF 06 3A 00 00 04 xx xx EF	
	U-disk pull out	7E FF 06 3B 00 00 01 xx xx EF	
	TF pull out	7E FF 06 3B 00 00 02 xx xx EF	
	PC pull out	7E FF 06 3B 00 00 04 xx xx EF	
	Played track 1 of U-disk	7E FF 06 3C 00 00 01 xx xx EF	Complete play track 1 of U-disk
	Played track 2 of U-disk	7E FF 06 3C 00 00 02 xx xx EF	Complete play track 2 of U-disk
	Played track 1 of TF card	7E FF 06 3D 00 00 01 xx xx EF	Complete play track 1 of TF card
	Played track 2 of TF card	7E FF 06 3D 00 00 02 xx xx EF	Complete play track 2 of TF card
	FLASH played track 1	7E FF 06 3E 00 01 01 xx xx EF	Played track 1 of FOLDER1
	FLASH played track 2	7E FF 06 3E 00 02 02 xx xx EF	Played track 2 of FOLDER2
	U-disk -- available	7E FF 06 3F 00 00 01 xx xx EF	Relative of all devices
	TF -- available	7E FF 06 3F 00 00 02 xx xx EF	
	PC -- available	7E FF 06 3F 00 00 04 xx xx EF	
	FLASH -- available	7E FF 06 3F 00 00 08 xx xx EF	
	U-disk、TF -- available	7E FF 06 3F 00 00 03 xx xx EF	
	TF card and FLASH 在线	7E FF 06 3F 00 00 0A xx xx EF	
	TF and PC online	7E FF 06 3F 00 00 06 FE B6 EF	
	U-disk、 TF card、 PC、 FLASH online	7E FF 06 3F 00 00 1F xx xx EF	
	Played track 1 of U-disk	7E FF 06 3C 00 00 01 xx xx EF	Complete play track 1 of U-disk
	Played track 2 of U-disk	7E FF 06 3C 00 00 02 xx xx EF	Complete play track 2 of U-disk
	Played track 1 of TF card	7E FF 06 3D 00 00 01 xx xx EF	Complete play track 1 of TF card
	Played track 2 of TF card	7E FF 06 3D 00 00 02 xx xx EF	Complete play track 2 of TF card
	FLASH played track 1	7E FF 06 3E 00 01 01 xx xx EF	Played track 1 of FOLDER1
	FLASH played track 2	7E FF 06 3E 00 02 02 xx xx EF	Played track 2 of FOLDER2

Error Information	Return	7E FF 06 40 00 00 01 xx xx EF	Module is initialized in the file system
	Current sleep mode	7E FF 06 40 00 00 02 xx xx EF	Only support the specified device in sleep mode
	Serial receiving error	7E FF 06 40 00 00 03 xx xx EF	The serial port has not received a frame of data
	Checkout error	7E FF 06 40 00 00 04 xx xx EF	Checksum error
	Specified file overreach	7E FF 06 40 00 00 05 xx xx EF	Specify the folder exceed the setting range
	Specify folder not found	7E FF 06 40 00 00 06 xx xx EF	Specify folder not found
	Inter cut error	7E FF 06 40 00 00 07 xx xx EF	Spots are only allowed in playing status
	TF card play error	7E FF 06 40 00 00 08 xx xx EF	TF card read failed or TF card pull out
	FLASH initialization error	7E FF 06 40 00 00 09 xx xx EF	FLASH file error
	SLEPP	7E FF 06 40 00 00 0A xx xx EF	Prompt to enter SLEPP mode

5. Schematics Diagram