JQ6500 Voice Module

MP3 Module, MCU Serial Port Controlled Broadcast,

One-to-One 5-Channel Control, Music IC

https://pan.baidu.com/s/1oP6AnZpsLQea061_klECHw

This module uses SPI FLASH

1. Introduction

The JQ6500 is an MP3 chip with a serial port, featuring integrated MP3 and WMV decoding.

The software supports TF card drivers, allows direct updating of SPI flash content from a computer, and supports FAT16 and FAT32 file systems.

Simple serial port commands can be used to control the playback of specified music and other functions, eliminating the need for complex low-level operations.

2. Features

1. Supported sampling rates (kHz): 8/11.025/12/16/22.05/24/32/44.1/48

2. 24-bit DAC output, dynamic range up to 90dB, signal-to-noise ratio up to 85dB

3. Full support for FAT16 and FAT32 file systems, supports up to 32GB TF cards, 32GB USB flash drives, and 64MB NORFLASH

4. Multiple control modes: parallel port, serial port, and AD button control

5. Broadcast interrupt function, pausing currently playing background music

6. Audio data is sorted by folder, supporting up to 100 folders, with up to 1,000 songs per folder

7. 30-level volume adjustment, 10-level EQ adjustment

8. External SPI flash memory compatible, displaying SPI data when connected to a computer Flash drive letter to update content;

9. Playback of a specified music track can be controlled through the microcontroller serial port;

10. In key mode, you can select the playback mode: interruptible, non-interruptible, single track loop, and long loop. Interruptible: During playback, pressing a key interrupts the current state and starts a new one.
Non-interruptible: During playback, pressing any key will have no effect until the current track is finished.

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3. Applications

1. In-car navigation voice announcements
2. Highway transport inspections and toll booth voice prompts;
3. Railway station and bus station security inspection voice prompts;
4. Power, telecommunications, and financial business hall voice prompts;
5. Vehicle entry and exit verification voice prompts;
6. Border inspection voice prompts;
7. Multi-channel voice alarms or equipment operation guidance voice prompts;
8. Electric sightseeing vehicle safe driving voice announcements;
9. Automatic alarms for electromechanical equipment failures; 10. Fire alarm voice prompts;
11. Automatic broadcasting equipment, scheduled announcements
10. Fire alarm voice prompt;
11. Automatic broadcasting equipment, scheduled announcements

4. Basic Parameters Hardware Parameters

Name	Parameters
MP3 file format	1. Supports all bit rates 11172-3 and ISO13813-3 layer 3 audio decoding
	2. Sampling rate support (kHz): 8/11.0/25/12/16/22.0/5/24/32/44.1/48
	3. Supports sound effects such as Normal, Jazz, Classic, Pop, and Rock
UART interface	Standard serial port, TTL level, adjustable baud rate
Input voltage	Power supply range 3.2V-5V, preferably 4.2V
Rated current	20mA

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2. Module Pin Description

Pin No.	Pin Name	Function Description	Notes
1	K5	5th audio segment	Ground triggers the playback of the 5th audio segment
2	K4	4th audio segment	Ground triggers the playback of the 4th audio segment
3	K3	3rd audio segment	Ground triggers the playback of the 3rd audio segment
4	K2	2nd audio segment	Ground triggers the playback of the 2nd audio segment
5	K1	1st audio segment	Ground triggers the playback of the 1st audio segment
6	SGND	Ground	Power Ground
7	ADKEY	AD Port	
8	BUSY	Play Indicator	High when audio is outputting
9	RX	UART serial data input	
10	TX	UART serial data output	
11	GND	Ground	Power ground
12	DC-5V	Module power input	not to exceed 5.2V
13	ADC_R	Audio output right channel	Drives headphones and amplifiers
14	ADC_L	Audio output left channel	
15	SPK-	Speaker-	Directly drives speakers up to 3W/4W
16	SPK+	Speaker+