

No.	Pin Name	Instruction					
1	5V+	Work Voltage Positive Pole					
2	5V- Work Voltage Negative Pole						
3	TXD/IO0 IO trigger mode is input IO0;UART mode is TX.						
4	RXD/IO1 IO trigger mode is input IO1;UART mode is RX.						
5	5 IO2 IO trigger mode input IO2.						
6	IO3	IO3 IO trigger mode input IO3.					
7	IO4/ONE_LINE	IO mode input IO4;One_Line mode data receiver pin.					
8	105	IO trigger mode input IO5.					
9	IO6	IO trigger mode input IO6.					
10	107	IO trigger mode input IO7.					
11	BUSY	Output low level signal(0V) when playing and output high(3.3V) after playing.					
12	GND	Ground					

Work Mode Configuration											
Control Mode	Configuration Pin				I/O Function						
Control Wode	CON3	CON2	CON1	107	106	IO5	IO4	IO3	IO2	IO1	100
I/O Integrated Mode 0 0 0 Key combination play, can play 2^8-1(255) Songs.						igs.					
I/O Integrated Mode 1	0	0	1	Level combination play, can play 2^8-1(255) Songs.					ngs.		
I/O Independent Mode 0	0	1	0	Song8	Song7	Song6	Song5	Song4	Song3	Song2	Song1
I/O Independent Mode 1	0	1	1	Song8	Song7	Song6	Song5	Song4	Song3	Song2	Song1
UART Mode	1	0	0							RXD	TXD
One-Line Mode	1	0	0				TXD				
Standard MP3 Mode	1	0	1				RPT	EQ	P/P/MODE	PREV/V-	NEXT/V+

Note:

- 1>. "key combination play": Return to the original high level after the corresponding level from I/O0-I/O7 output, similar to the key triggered once.Similar instantaneous switch.
 - 2>. "Level combination play" :The trigger signal remains the same, similar to a self-locking switch.
- 3>.The difference between "I/O Integrated/Independent Mode 0" and "I/O Integrated/Independent Mode 1": Mode 0 will continue playing the current song to the end after release level .Mode 1 will stop playing immediately after release level.

I/O Integrated Mode 0 (Key combination playing).

Note: the song must be named for 5bit.

107	106	105	104	IO3	IO2	101	100	Song
1	1	1	1	1	1	1	0	00001.mp3
1	1	1	1	1	1	0	1	00002.mp3
1	1	1	1	1	1	0	0	00003.mp3
1	1	1	1	1	0	1	1	00004.mp3
1	1	1	1	1	0	1	0	00005.mp3
1	1	1	1	1	0	0	1	00006.mp3
1	1	1	1	1	0	0	0	00007.mp3
	*****							((*******
0	0	0	0	0	0	0	0	00255.mp3

It will stop playing current song to the end after I/O0-7 release input signal (return to high) at 'I/O Integrated Mode 0'. It will playing new song when get new input signal during playing and stop after end of song. It will play repeatedly if keep input. Busy pin will output valid signal(High) during playing. Music control as following:

	I/O Integrated Mode 1 (Level combination playing)								
107	106	IO5	104	IO3	IO2	IO1	IO0	Song	
1	1	1	1	1	1	1	0	00001.mp3	
1	1	1	1	1	1	0	1	00002.mp3	It will keep playing current song when get
1	1	1	1	1	1	0	0	00003.mp3	trigger signal.It will stop playing
1	1	1	1	1	0	1	1	00004.mp3	immediately after release level.Busy pin
1	1	1	1	1	0	1	0	00005.mp3	will output valid signal(High) during
1	1	1	1	1	0	0	1	00006.mp3	playing.
1	1	1	1	1	0	0	0	00007.mp3	
0	0	0	0	0	0	0	0	00255.mp3	
	I/O Independent Mode 0 (Key independent controlling)								endent controlling)
107	106	IO5	104	IO3	IO2	IO1	IO0	Song	1/00 1/07 :- dd
1	1	1	1	1	1	1	0	00001.mp3	I/O0-I/O7 independently controls 8 songs.It will stop playing current song to
1	1	1	1	1	1	0	1	00002.mp3	the end after I/O0-7 release input
1	1	1	1	1	0	1	1	00003.mp3	signal(return to high);It will playing new
1	1	1	1	0	1	1	1	00004.mp3	song when get new input signal during
1	1	1	0	1	1	1	1	00005.mp3	playing and stop after end of song;It will
1	1	0	1	1	1	1	1	00006.mp3	play repeatedly if keep input;Busy pin will output valid signal(High) during playing.
1	0	1	1	1	1	1	1	00007.mp3	output valid signal(High) during playing.
0	1	1	1	1	1	1	1	00008.mp3	
			I/O	SOURCE STATE OF THE PARTY OF TH	pende	nt Mo	ode 1	(Level indep	endent controlling)
IO7	106	105	IO4	IO3	IO2	IO1	IO0	Song	
1	1	1	1	1	1	1	0	00001.mp3	
1	1	1	1	1	1	0	1	00002.mp3	
1	1	1	1	1	0	1	1	00003.mp3	songs.It will keep play repeatedly specify the triggered song.It will stop playing
1	1	1	1	0	1	1	1	00004.mp3	immediately after release level.Busy pin
1	1	1	0	1	1	1	1	00005.mp3	will output valid signal(High) during
1	1	0	1	1	1	1	1	00006.mp3	playing.
1	0	1	1	1	1	1	1	00007.mp3	
0	1	1	1	1	1	1	1	00008.mp3	

		UART	Mode						
Communication Format									
Adopt full duplex serial port communication. Baud rate 9600, data bits 8, stop bit 1, check bit N.									
Start Code Command Type Data Length (n) Data 1 Data n Check Bit (SM)									
Command Code: fixed to 0xAA.									
Command Type:	used to distinguis	h the type of com	mand.						
Data Length: the	number of bytes	of data in an comi	mand.						
Data: Relevant da	ta in command, v	hen length of dat	a is 1, means the	re is only CMD a	nd no data bits.				
Check Bit: Low 8	oits of sum of all l	oytes. that is, Whe	n start code and	data are added,	take out low 8 bits				
Data format: Sent	data or comman	d, high 8-bit data	is in front, low 8-	bit is in the back	38				
		Communicat	ion Protocol						
The following is a	data definition fo	or the return and i	dentification of th	ne chip.					
A. Playing State d	efinition: the syst	em is on the stop	state when power	r on.					
00(stop) 01(play	v) 02(paus	se)						
3. Disk character	definition: it is sto	pped after the sw	itch disk.						
USB:00	SD:01	. FLASH:	02 NO_DEVI	CE: FF					
C. Volume: the vo	lume is 31grades	0-30.The default	is 20grade.						
D. Play mode: the	default is the sin	gle stop when pov	ver on.						
Cycle for all song	ys (00) : play the w	hole songs in seq	uence and play it	after the play.					
Single cycle (01)	: play the current	song all the time.							
Single stop (02) :	Only play current	song once and th	en stop.						
Random play (03) : random play.								
Directory loop (0	4) :Play in current	folder in order, th	en play by play.D	irectory don't co	ntain subdirectory				
Directory randon	n (05): random pla	y in the current fo	lder, and director	y does not conta	ain subdirectory.				
Directory order play(06):Play current folder in order & stop after play.Directory not include subdirectory.									
Sequential play (07): play the whole songs in order and stop after it is played.									
E. EQ definition: t	he default EQ is N	ORMAL(00).			100				
NORMAL	(00) POP(0)	1) ROCK(C	(2) JAZZ(0	D3) CLASS	IC(04)				
Composition pl	ay definition: com	nbination play is co	ombined by filena	me. The file req	uirements are				
stored under the	ad VIII Victoria and a second	- 1.45 P	Market Masser NV	more and the second					

Control Command Command Code Return							
			2.000				
Play		AA 02 00 AC	None				
Pause		AA 03 00 AD	None				
Stop		AA 04 00 AE	None				
Previous		AA 05 00 AF	None				
Next		AA 06 00 B0	None				
Volume +		AA 14 00 BE	None				
Volume -		AA 15 00 BF	None				
Previous file		AA 0E 00 B8	None				
Next file		AA 0F 00 B9	None				
Stop playing		AA 10 00 BA	None				
NOT INVESTIGATE AND ADDRESS OF THE SAME		ESTO DE PONTE DE STOTE DE LA CONTRACTOR					
7031000000		To record and control of control	4				
		Query Command					
Command		Query Command Command Code	Return				
Command Query play statu	ıs	The second of Power Design Accommodates	10.000.000				
	90-090	Command Code	Return AA 01 01, play status, SM AA 09 01, drive, SM				
Query play statu	drive	Command Code AA 01 00 AB	AA 01 01, play status, SM				
Query play statu Query current online	drive drive	Command Code AA 01 00 AB AA 09 00 B3	AA 01 01, play status, SM AA 09 01, drive, SM				
Query play statu Query current online Query current play	drive drive ongs	Command Code AA 01 00 AB AA 09 00 B3 AA 0A 00 B4	AA 01 01, play status, SM AA 09 01, drive, SM AA 0A 01, drive, SM				
Query play statu Query current online Query current play Query Number of s	drive drive ongs ng	Command Code AA 01 00 AB AA 09 00 B3 AA 0A 00 B4 AA 0C 00 B6	AA 01 01, play status, SM AA 09 01, drive, SM AA 0A 01, drive, SM AA 0C 02S.N.H S.N.L SM				

UART Communication Command								
Cont	rol Command		Query Command					
Command	Command Code	Retur	Command	Comm	and code	Return		
Play	AA 02 00 AC	None	Query play status	AA 0:	1 00 AB	AA 01 01, play status, SM		
Pause	AA 03 00 AD	None	Query current online drive	AA 0	9 00 B3	AA 09 01, drive, SM		
Stop	AA 04 00 AE	None	Query current play drive	AA 0	A 00 B4	AA 0A 01, drive, SM		
Previous	AA 05 00 AF	None	Query Number of songs	AA 0	C 00 B6	AA 0C 02S.N.H S.N.L SM		
Next	AA 06 00 B0	None	Query current song	AA 0	D 00 B7	AA 0D 02 S.N.H S.N.L SM		
Volume +	AA 14 00 BE	None	Query folder directory song	AA 1	1 00 BB	AA 11 02 S.N.H S.N.L SM		
Volume -	AA 15 00 BF	None	Query folder Number of song	AA 1	2 00 BC	AA 12 02 S.N.H S.N.L SM		
Previous file	AA 0E 00 B8	None						
Next file	AA 0F 00 B9	None						
Stop playing	AA 10 00 BA	None						
Setting Command								
С	ommand		Command code	Return	Remark			
Set Volume		1	AA 13 01 VOL SM	None		VOL:0x00-0xFF		
Set Loop mo	de	1	AA 18 01 Loop-mode SM	None	Lo	op-mode:0x00-0x07		
Set Cycle tim	es	1	AA 19 02 H L SM	None	H:0x	00-0xFF L:0x00-0xFF		
Set EQ		A	AA 1A 01 EQ SM	None		EQ:0x00-0x04		
Specified Sor	ng	1	AA 07 02 S.N.H S.N.LSM	None	S.N.H:0x	00-0xFF S.N.L:0x00-0xFF		
		1			Length:0x00-0xFF			
Specified Pat	h	1	AA 08 Length Drive Path SM	None	Drive:0x00-0xFF			
					Path:0x00-0xFF			
Switch Specif	fied Drive	1	AA 0B 01 Drive SM	None		Drive:0x00-0xFF		
					Drive:0x00-0xFF			
Specified son	g to be interpla	ay A	AA 16 03 Drive S.N.H S.N.L SM	None	S.N.H:0x00-0xFF			
				,		S.N.L:0x00-0xFF		
						Length:0x00-0xFF		
Specified pat	h to be interpla	y A	AA 17 Length Drive Path SM	None	Drive:0x00-0xFF			
						Path:0x00-0xFF		
Select but no	play	1	AA 1F 02 S.N.H S.N.L SM	None	S.N.H:0x	00-0xFF S.N.L:0x00-0xFF		

	One_line Single Bus Mode								
Command(HEX)	Function	Note							
0x00	No. 0								
0x01	No. 1								
0x02	No. 2								
0x03	No. 3	The number 0-9 has corresponding functions, such as selecting music, setting the volume, setting EQ,							
0x04	No. 4								
0x05	No. 5	setting cycle mode, setting channel, setting the repertoire, and sending the digital at first and then							
0x06	No. 6	send function command.							
0x07	No. 7								
0x08	No. 8								
0x09	No. 9								
0x0A	Number reset	Sent the number of Cleared							
0x0B	Confirm choosing song								
0x0C	Volume setting								
0x0D	EQ setting	Cooperate with Numbers to achieve.							
0x0E	Loop mode setting								
0x0F	Channel setting								
0x10	Interplay song setting								
0x11	Play	Note: "selection" and "interplay" are played							
0x12	Pause	according to the track name, for example, the							
0x13	Stop	track is named "00123. Mp3", and the selected							
0x14	Previous	data is "0x01", "0x02" "0x03" "0x0B", and the							
0x15	Previous directory	selection is completed.							
0x16	Next directory	>2ms >1200us >400us >1200us							
0x17	SD card selection	PAI							
0x18	SD card selection	DATA							
0x19	U disk selection	>200us							
0x1A	FLASH selection	→ High Level : Low Level = 1:3 Mean: 0							
0x1B	System sleep								
0x1C	Stop Playing	High Level : Low Level = 3 : 1 Mean: 1							

