Applicant: FAVOR ELECTRONICS CO., LTD.
FCC ID: UET5702

Working principle

AR5701WT Function described as below and please refer to module diagram.

AR5701WT has 3 kinds of options for signal source input , ，（1）AUX-IN：(stereo audio source input)）(2) DVD-IN：(5.1ch audio source input)（3）AM/FM (radio single input),the signal sources were chosen according to the input selector IC PT2323 ,and also can be operated by Front panel and remote control , the operating information will be shown on the panel .

The AUX-IN stereo audio source signal after inputting the selector IC PT2323 will output 5.1ch single (front left，Front right，Center，Rear left，Rear right and Subwoofer),can also output 2.1ch signal (left, right, Center, stereo and one way subwoofer)

The audio source singles of DVD IN 5.1CH can output 5.1ch signal through input selector IC PT2323 .

The AM/FM radio signal after inputting selector IC PT2323 can also output 5.1ch signal.

Putting all the above mentioned 5.1ch signals into 6 channel electronical volume control IC PT2258 ,then we can output it after adjusting the signal range of these channels.

Putting the 4 ways signals of Front left, Front right, Centre and Subwoofer from 5.1ch signal directly into AMP PCB, after magnifying by AMP IC TDA2030A, TDA2050. We'll output these signals to speakers for deoxidization.

Putting the 2 ways singles Rear left，Rear right from 5.1ch signal into the 2.4G WIRELESS AUDIO MODULES of AMP, convert the audio single to digital signal by Analog/Digital ， and launch it by 2.4G Base Frequency through GFSK modulate.

There are 2.4G AMP receiver module in Rear left、Rear right Speaker. They will demodulate useful signal that received by GFSK demodulator, and transfer the digital to Analog signal (Rear left, Rear right audio signal)by D/A transfer. The signal will go through the IC TDA2030A to amplify and put it into speaker for reverting.

The description of RF transmitter as below:

EB350TP Transmitter

EB350TP is the 2.4G wireless digital audio transmitter. The pin assignment is as Table[2]. EB350TP has 16 RF channel, the channel can be changed by a key connect to the Pin 3. Each key input advance to the next channel, and cycle to the 1st channel if the 16th channel reached. The LED is used to display working status; this can be modified to customer requirements. EB350TP has 2 spare I/O ports, also can be used to add some custom function required by the customer.

The EB350TP features power management functions. If there is no audio signal input within 10s, the module will enter the standby mode with a standby current below 1mA. It will automatic exit the standby mode within 1ms if the audio signal input applied again. This is quite necessarily for the battery power-ed applications. The module also monitors the supply power voltage, and alarms by the LED if the voltage is low. This may be used to indicate the battery low condition.

No.	PIN	I/O	Description
1	GND	NA	Power ground
2	VCC	NA	2.7V ~ 3.3V DC input
3	KEY	I	Channel selection, push to next channel
4	LED	O	LED output Pin, displaying module working status.
5	IO	I/O	General purpose I/O, for custom function
6	IO	I/O	General purpose I/O, for custom function
7	L	I	Audio L channel input, 1Vrms
8	R	I	Audio R channel input, 1Vrms

Table [2]: EB350TP Pin Assignment

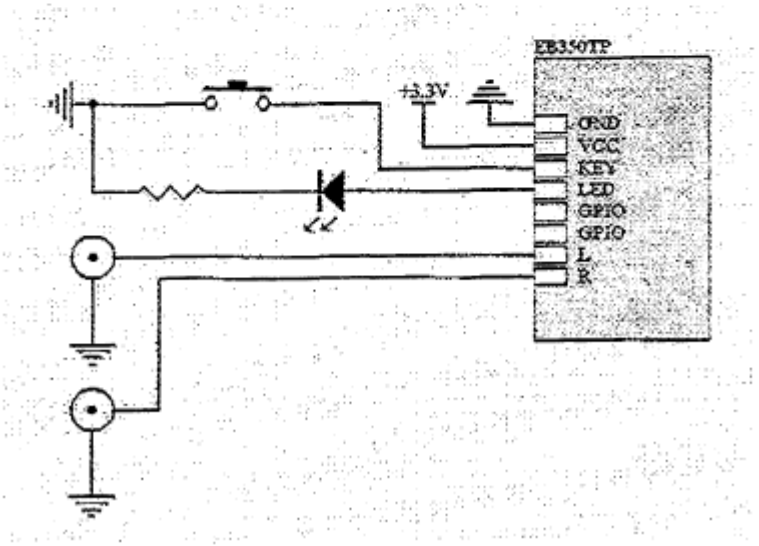

Figure [2]: EB350TP Interface

The description of RF Receiver as below:

EB350R Receiver

The EB350R is 2.4G wireless digital audio receiver. The pin assignment is as Table[3]. EB350R has 16 RF channels. EB350R has channel auto scan function. If there is no RF signal within 1s, the EB350R will enter the auto search mode to search the available RF channel. The KEY can act as a manual channel scan, push the KEY will search the next available channel even the current channel is working. The STB will output high if there is no RF input within 1s, and will output low within 1ms if the RF input applied again. The STB output can be used to control the power of external circuit. The I2C is used to interface with external MCUs. The external MCU can act as a master to control the receiver module. This is quite flexible for customer to add extra function for their special needs.

The EB350R also feature power management functions as the STB function described above.

No.	PIN	I/O	Description
1	GND	NA	Power ground
2	VCC	NA	5.0V DC input
3	KEY	I	Channel Scan, push to scan the available channel
4	LED	O	Status LED, 3V
5	STB/SDA	I/O	Standby output, output 3V in standby mode. I2C interface SDA, 3V
6	MUTE/SCL	I/O	Mute output, output 3V in mute mode. I2C interface SCL, 3V.
7	L	I	Audio L channel input, 1Vrms
8	R	I	Audio R channel input, 1Vrms

Table [3]: EB350R Pin Assignment

LPF is optional to add to the EB350R output for better S/N ratio. Volume control can also be add to the module output to adjust the output level. See the application interface Figure[3].

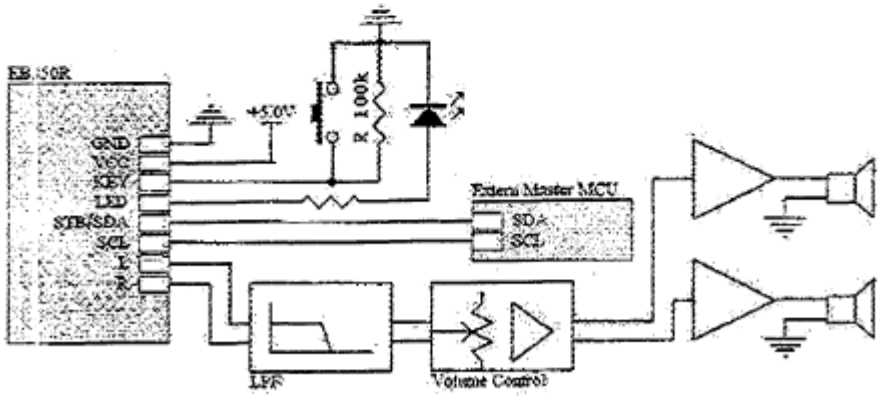

Figure [3]: EB350R Interface

Note: When an resistance is used (R 100k),the auto scan function will be shutdown after power on.