

## General Description

ET6208/6210/6212 is a 8\*8(ET6208), 10\*10(ET6210) or 12\*12(ET6212) lattice of the LED driver IC with audio 7 band graphic equalizer.

ET6208/6210/6212 have two kinds of working mode, audio synchronization mode and normal mode. When audio synchronization mode enable, the input audio signal is divided into 7 bands through the built-in band-pass filter, then the 7 filtered analog audio signals and one volume signal are converted to digital signal through the built-in high-precision ADC, and display. In audio synchronization mode, MCU does not need any data manipulation, only one instruction is needed to send. When normal mode enable, users can achieve 1/8(ET6208) or 1/10(ET6210) or 1/12(ET6212) duty cycle dynamic LED display. 128-step dimming circuitry with PWM configuration and built-in automatic respiratory display function with 7 time steps can help users achieve more colorful patterns.

Users also can freely set the start address, display length and cycles of display frame of built-in 256\*8bit(ET6208), 256\*10bit(ET6210) or 256\*12bit(ET6212) RAM, therefore it cannot occupy many system resources and increase in user's flexibility of programming.

## Features

- Selectable audio synchronization mode and normal mode
- When audio synchronization mode enable, MCU just need to send one instruction without any data manipulation
- -18dB~+18dB audio input gain adjustable
- 7 band graphic equalizer and a volume, total 8 channels display
- When audio synchronization mode enable, users can customize the display range of corresponding threshold
- When audio synchronization mode enable, users can customize the LED array of audio synchronization display(for ET6210, ET6212)
- 128-step dimming circuitry with PWM configuration
- Built-in 256\*8bit(ET6208), 256\*10bit(ET6210) or 256\*12bit(ET6212) RAM can freely set of both display RAM address and number of cycles
- When normal mode enable, users can achieve 10\*10(ET6210), 12\*12(ET6212) standard font of the characters display
- Automatic respiratory display function with 7 time steps
- High precision ADC
- I2C Interface
- Digital signals can be read from ADC through the I2C interface
- Package: QFN24(ET6208), QFN28(ET6210), QFN32(ET6212)

## Pin Configuration

