ISSI's IS31FL3732 Matrix LED driver, IS31SE5000 Gesture IR sensor and IS25CQ032 SPI Flash work together with the on-board MCU to drive Red, Green, and Blue (RGB) LEDs on the RGB LED Matrix Evaluation Board. The evaluation board can be used to generate vivid color patterns and pictures for indicator and information Displays. The Flash IC stores an array of images than can be retrieved sequentially and displayed using the gesture sensor. The brilliant color display can be further enhanced with audio modulation to provide a rhythm effect for enhanced displays.

The IS31FL3732 LED driver independently controls up to 144 LEDs with 256 steps of intensity to achieve up to 16 million colors. ISSI's onboard Gesture IR sensor, IS31SE5000, monitors movement from the user and triggers data to be accessed via the ever popular SPI interface from the IS25CQ032. The IS25CQ032 is a high performance 32Mbit Serial Flash and forms part of ISSI's family of high performance Serial Flash. ISSI currently offers 256Kbit to 128Mbit Serial Flash in 2.5/3V variants and 2Mbit to 128Mbit in 1.8V. 256Mbit Serial Flash will be offered soon in Q1/16.

These three ISSI devices work harmoniously together to enable an endless possibility of unique and colorful pictures, animations, patterns and texts.

## Applications:

- Information Displays for White Goods, Consumer Appliances, Gaming Platforms, etc…
- Logo Lighting
- Accent lighting: Automotive, Industrial, Home
- Small format displays
- RGB LED color generation and mixing
- Toys with color LED output

## FxLED Driver - IS31FL3732:

- Single Supply Voltage: 2.7V to 5.5V
- Programmable I2C Interface
- Supports 144 Dot Matrix LEDs
- Individual LED on/off and Blink Control
- Individual PWM Control (256 steps)
- Global Current Control
- Multi-Chip Synchronization
- Picture and Animation Modes
- Auto-Intensity allows Breath Control (Lifelike Animation)
- Audio-Synchronization for LED control
- Available in QFN-40 (5mm×5mm) package
- Automotive Support

## IR Gesture Sensor Driver - IS31SE5000:

- Supply voltage from 2.7V to 5.5V
- Programmable I2C interface
- Integrated signal processing with digital output
- Adjustable Detection range with Motion and Proximity Modes

## SPI NOR FLASH[1]:

- Industry Standard SPI Interfaces
  - Single, Dual/Dual IO, Quad/Quad IO, DTR SPI
- High Performance, High Throughput
  - XIP and Code Shadowing Applications
  - Equivalent Throughput of up to 664 Mbps
- Efficient Memory Architecture: 4KB/32KB/64KB support
- Program 1 to 256 Bytes per Page
- Configurable Dummy Cycles
- Selectable Drive Strength
- Advanced Memory Protection
- Robust Memory w/ 20 years Data Retention
- More than 100K Read/Write Cycles
- Industry Standard Packages and Temp
  - Automotive Support Available (AEC-Q100)

1. Please see datasheet for a complete list of supported features