

# EGIGATEK eGM-A31 Brief

*(CSR1021 BT4.2 based Bluetooth LE single mode Module)*

## 1. Description

eGM-A31 is latest generation Bluetooth low energy technology single-mode platform device with ultra low-power consumption. And enables customer applications of up to 60 KB to be stored on module for optimal power consumption.

The BLE technology enables ultra low-power connectivity and basic data transfer for applications previously limited by the power consumption, size constraints, and complexity of other wireless standards. The BLE platform provides everything required to create a BLE technology product with RF, baseband, MCU, qualified Bluetooth v4.2 specification stack, and customer application running on this module.

eGM-A31 supports profiles for health and fitness sensors, watches, keyboards, mice, and advanced remote controls.

## 2. Features

- Bluetooth® low energy technology single-mode SoC with G.722 audio codec
- Supported by Bluetooth® Low Energy toolset and applications
- 16-bit RISC MCU, up to 16 Mb external SPI flash from system generated 2.5 V to 3.3 V rail, 80 KB RAM, 192 KB ROM, 60 KB OTP
- 37 digital PIO, 2 analog AIO, SPI, I<sup>2</sup>C, I<sup>2</sup>S, quadrature decoders, 3D shutter/LED PWM modules, key scanner, LCD glass drive, IR encoder, 10-bit auxiliary ADC
- Ultra low-power Bluetooth low energy technology radio Bluetooth v4.2 specification compliant radio
- Dimensions: eGM-A31 : 14.0 mm x 14.0 mm x 2.0 mm
- Storage temperature range: -40°C ~ +85°C
- Operating temperature range: -30°C ~ +85°C
- Manufactured in conformance with RoHS

### 3. Applications

#### Bluetooth low energy technology:

- HID: keyboards, mice, touchpads, advanced remote controls with voice activation
- Sports and fitness sensors: heart rate, runner/cycle speed and cadence
- Health sensors: blood pressure, thermometer and glucose meters
- Mobile accessories: watches, proximity tags, alert tags and camera controls
- Smart home: heating/lighting control
- Mesh connectivity: Internet of Things control

### 4. Pin Placement and Dimensions (in mm)

