EGIGATEK eGM-A32 Brief

（ *nRF52832 BT5.0 based BLE dual mode Module*）

1. Description

eGM-A32 is a BT 5.0 stack BLE module and based on Nordic nRF52832 SoC solution, which incorporates: GPIO, SPI, UART, I2C, I2S, PWM, ADC and NFC interfaces for connecting peripherals and sensors.

2. Features

- BT5 & BT4.2 Bluetooth Specification Certified.
- Low power requirements, ultra-low peak, average & idle mode power consumption.
- Be compatible with a large installed base of mobile phones, tablets and computers.
- Fully coverage of BLE software stack.
- 32-bit ARM® Cortex™ M4F CPU
  512kB Flash Memory / 64kB RAM
- Dynamic on-air payload length up to 256 bytes.
- Flexible and configurable 32 pin GPIO
- Programmable peripheral interface - PPI
- Simple ON / OFF global power mode
- Full set of digital interface all with Easy DMA including:
  - 3 x Hardware SPI master ; 3 x Hardware SPI slave
  - 2 x two-wire master ; 2 x two-wire slave
  - 1 x UART (CTS / RTS)
  - PDM for digital microphone
  - I2S for audio
- 12-bit / 200KSPS ADC
- 128-bit AES ECB / CCM / AAR co-processor
- External crystal 32MHz ± 40ppm
- On-chip DC/DC buck converter
- Timer counter
  - 5 x 32-bit
  - 3 x 24-bit RTC
- Type 2 near field communication (NFC-A) tag with wakeup-on-field and touch-to-pair capabilities

- Dimensions: L16 mm x W10 mm x 2.2 mm(with PCB antenna)
- Working distance : up to 60 meters in open space
- Operating temperature range: -30ºC ~ +85ºC
- Certifications: FCC, IC, CE, Telec (MIC), KC, SRRC, NCC
- Manufactured in conformance with RoHS & Reach.

3. Applications

- IoT
  - Home automation
  - Sensor networks
  - Building automation
- Personal Area Networks
  - Health / fitness sensor and monitor device
  - Medical devices
  - Key-fobs and wrist watches
- Interactive entertainment devices
  - Remote control
  - Gaming controller
- Beacons
- A4WP wireless chargers and devices
- Remote control toys
- Computer peripherals and I/O devices
  - Mouse
  - Keyboard
  - Multi-touch trackpad

4. Pin Placement and Dimensions (in mm)