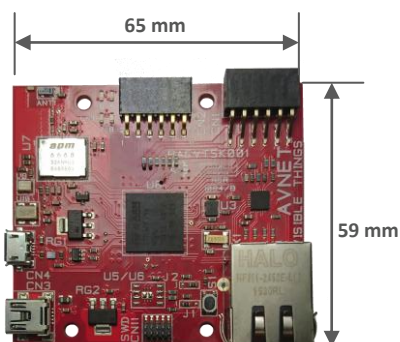# VT-SK-001 Spec Datasheet (preliminary)

Features

Gateway

- **APM APM6668 WIFI + BT/ dual mode module**
  - WIFI 802.11b/g/n
  - BT/BLE 4.1 dual mode
- **ST Microelectronics STM32F746**
  - ARM Cortex-M7F MCU
  - 1MB Flash
  - 320KB internal RAM
  - 216MHz MPU, 462 DMIPS
- **Interfaces**
  - USB Host Full-speed
  - USB Device Full-speed
  - Ethernet 10/100
  - 2x PMOD I/F UART and I²C
  - ARM SWD debug I/F
  - 1x Tactile Switch
- **Dimension**
  - 65x59x18mm
- **Power Supply**
  - Mini-USB Type A power supply
  - 5V, 500mA
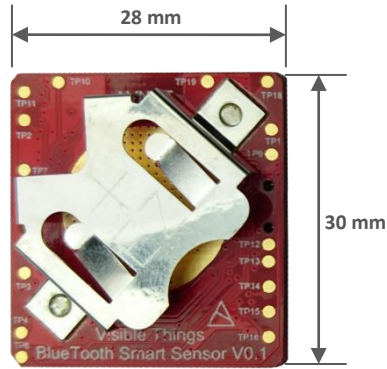- **Temperature range**
  - -40C to +85C

Smart Sensor

- **Silicon Labs Bluetooth Smart Module BGM111**
  - Bluetooth Smart Module 4.1 Compliant (Software Upgradable to Bluetooth 4.2)
  - Up to +8 dBm TX Power
  - RX sensitivity down to -93 dBm
  - 40MHz Cortex-M4 CPU Core
  - 256KB Flash
  - 32KB RAM
- **Environmental and Motion Sensors**
  - Ambient Light Sensing (100 mlx resolution)
  - IR Proximity Sensing
  - 3D-Gesture Sensing
  - Temperature Sensing (± 0.4°C max)
  - Relative Humidity Sensing (± 3%, 0-80% max)
  - 3-Axis Gyroscope
  - 3-Axis Accelerometer
  - 3-Axis Magnetometer
- **Human Machine Interface**
  - 3D-Gesture proximity
  - 2x Push-Buttons
  - 2x LEDs
  - 1x 1.28 inch 128x128 Monochrome TFT Display Module (Optional)
- **Dimension**
  - 30x28x9mm
- **Power Supply**
  - Lithium Battery CR2032
- **Voltage Range**
  - 2.0V to 3.6V
- **Temperature range**
  - -40C to +85C

- **Size**

28 mm

30 mm

TOP   BOTTOM

- **Ordering Information:**

Part Number	Description	Hard. Rev.	Soft. Version	Secure Element
VT-SK-001-A01	WIFI/BT Dual Mode Gateway STM7F746 ARM Cortex-M7 + Bluetooth Smart Sensor Silicon Labs BGM111 Based	A	01	–
VT-SK-001-A01S	WIFI/BT Dual Mode Gateway STM7F746 ARM Cortex-M7 + Bluetooth Smart Sensor Silicon Labs BGM111 Based with Secure Element	A	01	√

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