

## **Theory of Operation**

Scale module including the MCU system and weight sensors, responsible for the weight weighing. Communication module including the MCU system and Bluetooth device is responsible for transferring the weight data to the iOS devices. The Bluetooth module is available in the 2.4GHz ISM band Class 2 Radio, compatible with Bluetooth Core Specification Version 3.0 + EDR. This Bluetooth module is design for MFi (The Made for iPod, Made for iPhone and Made for iPad logos) electronic accessory via Bluetooth connectivity. The Bluetooth module Uses on-board ceramic antenna and its center frequency is 2.45GHz.

Scale module gets weight data first. These data will be sent to the communication module directly, through the UART.

In communication module, the MCU system received and stored the weight data in memory, and then sent the data to the Bluetooth module. There also send control command to the Bluetooth module. These commands are used to set the operating mode of the Bluetooth. The Bluetooth module has its own MCU, memory unit, RF unit. They will send data out through the RF antenna.

Installed on the iOS device with specific software, you can receive the data via Bluetooth.