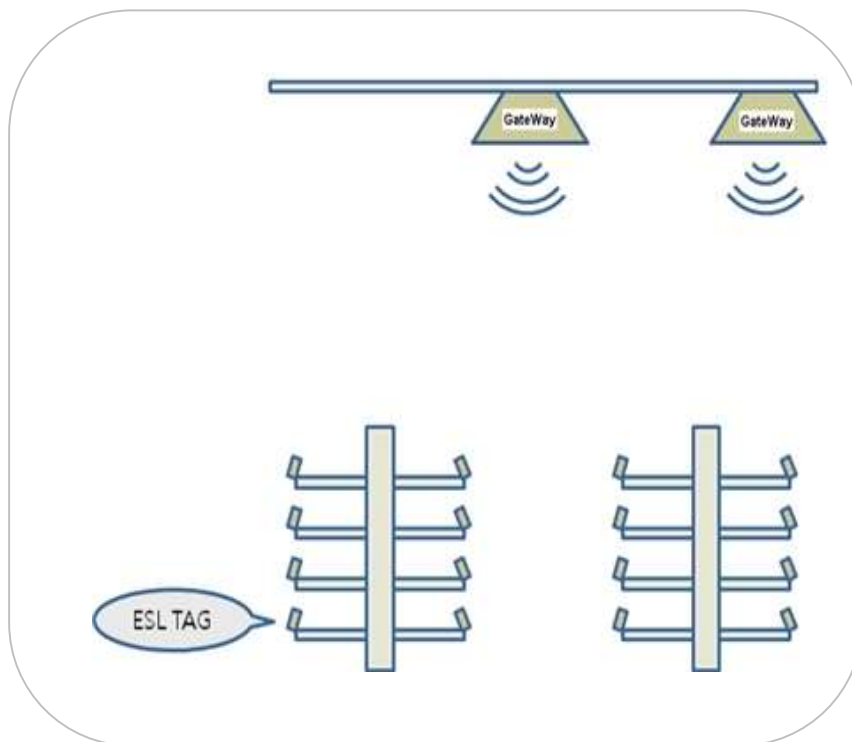# Operational Description

1. Overview

NEWTON S-Label product is part of SoluM S-Label (Electronic Shelf Label) System, also consisting of NEWTON S-Label Gateway (S-Gate), and Remote Controller (S-RC). The S-Label System electronically displays price, product, and promotion information on S-Labels, which has been traditionally printed or written on paper in places such as retail markets.

NEWTON S-Label wirelessly receives data from S-Gate and updates the display with the new information provided.

NEWTON   S-Label is based BLE for low power wireless communication applications. It consists of RF transceiver, RF circuitry and ARM Cortex MCU offering BLE based network protocol, and MAC protocol and other peripheral devices.

2. Features

- Operating Frequency: 2.401 GHz ~ 2.480 GHz

- Number of Channel : 80 Channels

- Modulation: GFSK

- Rated voltage: DC 3.0 V (CR2450 Battery 2EA)

- Operating Temperature: 0 ℃ ~ 40 ℃

- Power Tolerance: ±1.5 dB

- Antenna Type: Pattern Antenna

- RF behavior of the 2.401 ~ 2.480GHz frequency range, using the assigned channel frequencies.

- Ever have been sending and receiving RF signals, during the pairing time, the information is stored in nonvolatile memory.

- Display: E-Paper Display (EPD) Active Type

- Display Color: BW(Black, White) / BWR(Black, White, Red) / BWRY(Black, White, Red, Yellow)

- Communication: Wireless communication based on BLE

- Operating on 2.4GHz Unlicensed ISM band for BLE

- Low Power Consumption

- Working Condition: Indoor where wireless communication is available.

- RoHS compliant

- NFC (13.56MHz): NFC Forum Type 2