R750 Product Specification

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Contents

1. Summary

1.1 Summary

R750 is an RF communication device based on IEEE 802.15.4 ZigBee, and is a device for displaying price of goods and information on products in a retail store environment.
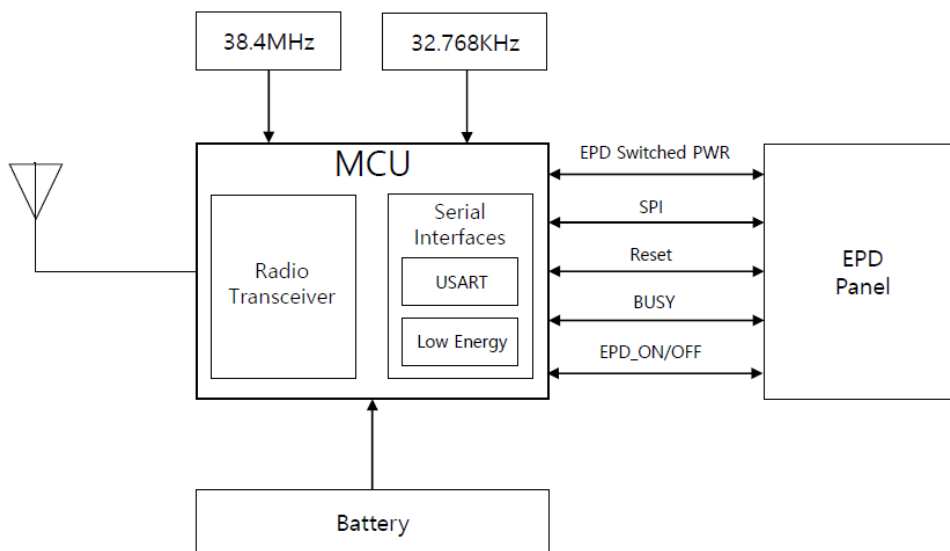
1.2 Major Configuration items

- MCU/RF : EFR32FG12P433F1024
- NFC tag IC : AS3955-AWLT-S4
- TFT EPD Panel : DEPG0750

1.3 Product Photos

2. Configuration

2.1 Block Diagram

2.2　Description

- The power is supplied with +3V through Coin type lithium Battery CR2450 3EA.
- +3V DC Power Supply ⇒ CPU wake up through RF Remote Control ⇒ Image transfer from G2000 ⇒ Image uploading to EPD Panel

3. Specification

3.1　TFT EPD Panel

Item	Details
Outline Dimension	170.2(H) x 111.2(V) x 1.18(D) , mm
Active Area	640(H) x 384(V) , mm
Pixel Pitch	0.255 x 0.255 (100dpi) , mm
Display resolution	400(H) x 300(V) , pixel
Pixel Arrangement	Rectangle
Display Colors	Black / White / Red
Weight	43.5 ± 0.3 , g
Screen Size	7.50"

3.2　General Specification

Item	Details
Outside dimensions of the instrument	47.32(H) x 39.80(V) x 13.60(D) , mm
Power Source	CR2450 Lithium Battery (3V, 3ea) 2.4 ~ 3.3Vdc (condition : In active status)
Display	EPD Panel
Display Contents	Product name, Show price & NFC function
RF Communication	IEEE 802.15.4 / 2.4GHz ISM Band
Effective distance of communication	Radius 50m (Indoor, Line of Sight)
Operating Temperature	5 ~ 30 ℃
Etc.	Rail mounting structure

3.3   Electrical Specification

Item	Details
Operating Voltage	2.5Vdc ~ 3.5Vdc
Active Current	25mA (250ms , 1cycle update)
Sleep Current	2uA (120s , 1cycle update)
Operating Temperature	5 ~ 30 ℃
Storage Temperature	-25 ~ 60 ℃

3.4   The main device

3.4.1   MCU : EFR32FG12P433F1024
- 32-bit ARM Cortex-M4 CPU platform
- Low-Energy Sensor Interface
- 1MB Flash
- 256KB RAM
- QFN48 7x7 mm package
- Excellent receiver sensitivity : -95dBm
- Programmable output power up to 19dBm
- RF frequency range 2.405 ~ 2.480 GHz

3.4.2   NFC Tag IC : AS3955-AWLT-S4
- SPI slave interface up to 1Mbps
- 512-byte EEPROM
- NFC Forum Type 4 Tag
- ISO 14443 Type A
- 10-pin MLPD 3mm x3mm x0.9mm package

3.4.3   TFT EPD Panel : DEPG0750
- Ultra-wide viewing angle Ultra low power consumption
- SPI signal master interface
- Serial peripheral interface available

FCC Warning Statement

FCC Part 15.19

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Part 15.21

Any changes or modifications (including the antennas) to this device that are not expressly approved by the manufacturer may void the user's authority to operate the equipment.

FCC Radiation Exposure Statement

This equipment complies with FCC Radiation exposure limits set forth for an uncontrolled environment. This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.

This equipment should be installed and operated with a minimum distance of 10cm between the radiator and your body.