EPD-053

5.65" Wireless ePaper Display Module

NEW

Etching Process: **A5**

Task:

Person: **Miller Jones**

Status: **In Progress**

Inspection Date: **Dec. 20, 2017**

Features

- ARM Cortex-M3 Core Processor
- Support IEEE 802.15.4 / 2.4 G networks
- 5.65" ePaper panel display
- Great for Low Consumption, up to 3 years life time
- Rich I/O control with 1 button & 1 LED
- Support temperature 0 ~ 40 °C
- High Performance integrated system with RTOS
- Support over-the-air upgrade (OTA)
- Available Case kit for various applications
- Available wall mount kit for various applications

Introduction

EPD-053 is the module which support ultralow power 2.4GHz RF wireless protocol integrated with 5.65" EPD in ARM Cortex-M3 processor. The module can support hospital ,pharmacy, factory, warehouse and retail application. With optimization on the power consumption and device management, your applications with low data rate requirement can be achieved years battery lifetime and thousand devices connection.
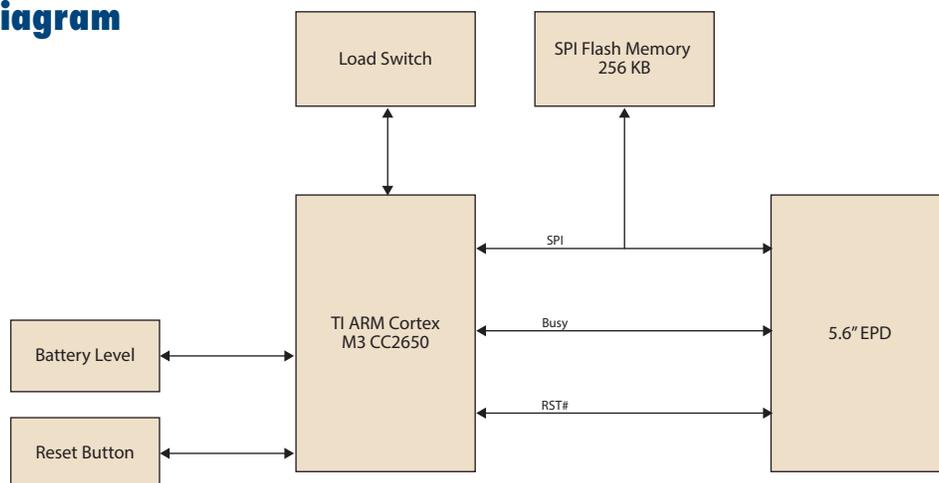
Advantech EPD-053 provide multi interface for application control which is highly integrated with EPD driver and low power consumption system. EPD-053 can auto join and binding the network group with WISE-3240 IoT Router and WISE-3610Z IoT Gateway. Data can be quickly and easily acquired and transformed into a different format to communicate with ePaper Manager Server. System integration and End system can focus on application development and system management.

Specifications

Computing System	MCU	TI 32-bit ARM Cortex-M3 Processor
	Memory	RAM 28KB
Display	Screen Size	125.4 x 99.5 mm
	Resolution	600 x 448 pixels
	Touch Type	-
Storage	Internal	Flash: 128 KB
	External	SPI Flash: 512 KB
Audio		-
Network	Standard	IEEE 802.15.4
	Frequency Band	2.4-GHz
	Channels	11~26
	Channel Separation	5MHz
	Topology	Star network /Mesh topology
	Transmit Power	-21dBm~ +5dBm
	Receiver Sensitivity	-100dBm
	RF Data Rate	250 Kbps
	Function	End node
	Antenna connector	MHF connector
	Antenna	FPC Antenna antenna
Interface		LED x1 Function Key x1
Power	Battery	CR2450 x4
Environment	Operational Temperature	0 ~ 40 °C
	Non-Operational Temp.	-25 ~ 60 °C
	Operating Humidity	5 ~ 80% Relative Humidity, non-condensing
Physical Characteristics	Dimensions (W x H)	125.4 x 99.5 mm
	Weight	TBD
Operating System		RTOS

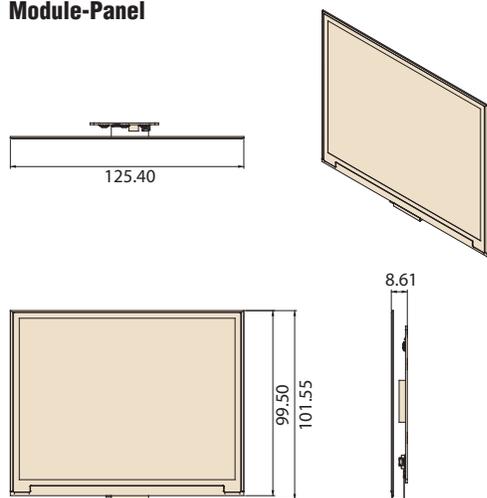* Note: The frequency support of other regions can be checked for further plan.
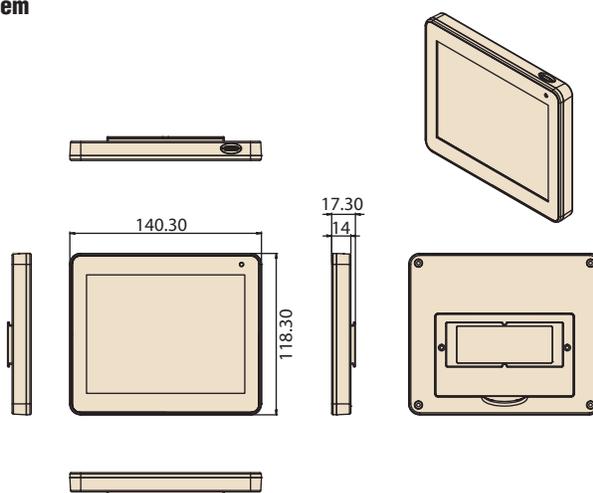
Board Diagram

Load Switch

SPI Flash Memory 256 KB

TI ARM Cortex M3 CC2650

SPI

Busy

RST#

Battery Level

Reset Button

5.6" EPD

Dimensions

Unit: mm

Module-Panel

System

125.40

8.61

99.50
101.55

140.30

17.30

14

118.30

Ordering Information

Part No.	Description
EPD-053R1AG-NTC02	5.65" Wireless ePaper display module in 2.4G
EPD-053R2AG-NTC02	5.65 " Wireless ePaper display solution in 2.4G
EPD-053R2AG-NTC12	EPD-053R2AG-NTC02 for 20 pcs solution kit
EPD-053R2AG-NTC22	EPD-053R2AG-NTC02 for 100 pcs solution kit
EPD-053R2AG-NTC32	EPD-053R2AG-NTC02 for 500 pcs solution kit
EPD-053R2AG-NTC42	EPD-053R2AG-NTC02 for 3000 pcs solution kit

Optional Accessories

Part No.	Description
1760002692-01	4 pcs CR2450 battery
9696053RS00	Switch_LED daughter board
1700015038	FPC Cable 10P-0.5mm 7.9cm for DCU2.0

Packing List

Model Name	Part No.	Description
EPD-053R	EPD-053R1AG-NTC02	1. 5.6" Red/Black/White ePaper 2. ePaper Control Board with IEEE802.15.4 (2.4G) wireless control solution
EPD-053R2	EPD-053R2AG-NTC02	5.6" Red/Black/White ePaper IEEE802.15.4 (2.4G) system solution

* All Eink Panel inspection criteria refer to Eink CAS & Inspection standard document.
* Note: E Ink Recommend condition for storage:
  Temperature: 20 +-10 degree C
  Humidity : 60% RH+-10%RH, Non-condensing
* Note: If panel module have been put in low temperature between 0~-25 degree C for a while, we recommend to leave it between 20 to 30 degree C for 4 days before assembly.