EPD-132M,130M, EPD-132 Device

13.3" ePaper Wifi Display Module and Device

NEW

EPD-132 Device

EPD-132M, 130M

Division of Cardiology   Bed #: **1011**

Name: **David Job**   ID: **2016084**
Gender: **Male**   Birth Date: **10/08/1943**
Date of Admission: **09/11/2017**
Date of Surgery: **09/25/2017**
Physician: **Dr. Young**   Nurse: **Ms. James**

ℹ **Special instruction : high fall risk, penicillin allergy**
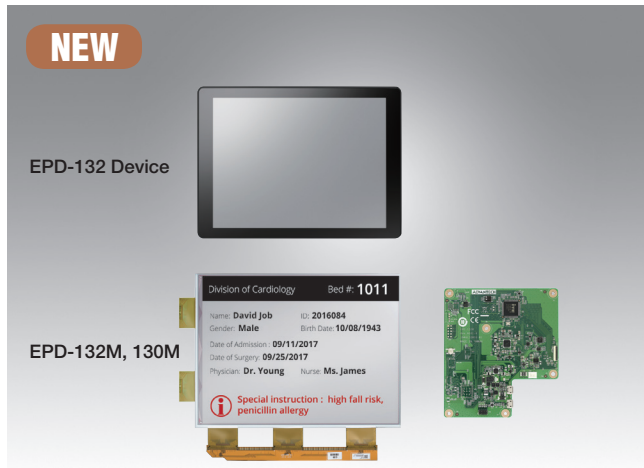
Features

- ARM Cortex-M4 Core Processor
- Supports IEEE 802.11b/g/n
- 13.3" ePaper panel display: EPD-132R for Red/Black/White ,EPD-132B for Black/White
- Multiple Control I/O : expansion pin header & I2C
- Supports operation temperatures of 0 ~ 40 °C (Red/Black/White), 0 ~ 50 °C (Black/White)
- High performance integrated system
- Supports over-the-air upgrade (OTA)
- Wide Range Temperature version in -15 to 65 °C in 1 bit color
- Solution with WISE-3610W & ePaper Manager Server

Introduction

EPD132/130 supports the ultra-low power 2.4GHz RF wireless protocol integrated with 13.3" R/B/W, B/W EPD in an ARM Cortex-M4 processor. The module can support hospital, factory, warehouse and retail applications. With optimized power consumption and device management, your applications with low data rate requirements will benefit from long battery lifetimes across hundreds of device connections.

Advantech EPD132/130 provides multiple interfaces for application control which are highly integrated with the EPD driver and offer a low power consumption system. The model supports the WIFI/BLE software stack protocol, which can easily configure and then join the network. Data can be easily acquired and transformed into a different format to communicate with the ePaper Manager Server and then for other application services. System integrators can focus on application development and system management.

EPD-132 Specifications

Computing System	MCU	ST 32-bit ARM Cortex-M4 Processor	
	Memory	RAM 256 KB	
Display	Screen Size	285.8 x 213.65 mm	
	Resolution	1600 x 1200 pixels	
Storage	Internal	ITE SPI Flash: 32Mb	
	External	BM22 SPI Flash: 128Mb	
Wireless Network	Standard	IEEE 802.11b/g/n and Bluetooth Low Energy	
	Frequency Band	2.4000~2.4840 GHz for Wi-Fi 2.4000~2.4835 GHz for BT	
	Channels	1-11 for Wi-Fi 0~78 for BT 2.1+EDR 0~39 for BLE	
	Transmit Power	Typ. 14 dBm at 802.11b CCK Mode 1M Typ. 12 dBm at 802.11g OFDM Mode 54M Typ. 12 dBm at 802.11n OFDM Mode MCS0 Typ. 5 dBm for BLE (class 1.5)	
	Receiver Sensitivity	Typ. -95dBm at 1 Mbps Typ. -75 dBm at 54 Mbps Typ. -89 dBm at MCS0 Typ. -89 dBm for BLE	
	Function	End node	
	Antenna connector	MHF	
	Antenna	PCB Antenna	
System Interface	Indicator Button	1 for Reset/ Page Change/Wake-up/Alert cancel	
I/O (on-board)	I2C	4pin Pin Header	
	FFC Connector1 (Alert)	LED/button daughter board	
	FFC Connector2 (FFC_GPIO)	10 port GPIO for system expansion	
	FFC Connector3 (CN8)	UART debug port	
	Switch	Factory mode setting	
	Micro USB (CN2)	USB to TCON (Timing Controller)	Interface for data to EPD
	EPD connector	39P for 13.3" (R/B/W or B/W) & 9.7" EPD (R/B/W)	
Power	DC 5V	Micro USB (CN2) up to 0.9A/4.5 W in USB3.0 host Micro USB (CN3) up to 2A/10 W	Data transmission mode with power supply
	Power consumption	Standby: 18mA / 90mW Application: 0.25A / 1.25W	
Environment	Operational Temperature	0 ~ 40 °C (R/B/W) , 0 ~ 50 °C (B/W) Wide Range Temperature version in -15 to 65 °C in 1 bit color	
	Non-Operational Temp.	-25 ~ 60 °C (R/B/W) , -25 ~ 70 °C (B/W)	
	Assembly Temperature	10 ~ 40 °C	
	Operating Humidity	5 ~ 85% Relative Humidity, non-condensing	
Housing Mechanical	Material Type	Metal (NCT)	
	Painting Type	SECC+ Painting	
	Dimension	240 x 322 x 60.5 mm/ 240 x 322 x 24 mm	
	Weight	1.3kg	
Physical Characteristics	Dimensions (W x H)	Panel: 285.8 x 213.65 mm PCBA: 108 x 122 x 3.9 mm	
	Weight	Panel: 0.12g PCBA: 0.17g	
Operating System		ThreadX v5.6	

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EPD-130 Specifications

| Display	Screen Size	285.8 x 213.65 mm	
	Resolution	1600 x 1200 pixels	
Storage	Internal	ITE SPI Flash: 32Mb	
	External	–	
I/O (on-board)	SPI	8pin Pin Header	
	Micro USB (CN2)	USB to TCON (Timing Controller)	Interface for data to EPD
	EPD connector	39P for 13.3" (R/B/W or B/W) & 9.7" EPD (R/B/W)	
Power	DC 5V	Micro USB (CN2) up to 0.9A/4.5 W in USB3.0 host	Data transmission mode
		Micro USB (CN3) up to 2A/10 W	with power supply
Environment	Operational Temperature	0 ~ 40 °C (R/B/W), 0 ~ 50 °C (B/W), Wide Range Temperature version in -15 to 65 °C in 1 bit color	
	Non-Operational Temp.	-25 ~ 60 °C (R/B/W) , -25 ~ 70 °C (B/W)	
	Assembly Temperature	10 ~ 40 °C	
	Operating Humidity	5 ~ 85% Relative Humidity, non-condensing	
Physical Characteristics	Dimensions (W x H)	Panel: 285.8 x 213.65 mm PCBA: 108 x 122 x 3.9 mm	
	Weight	Panel: 0.12g PCBA: 0.17g	

Board Diagram

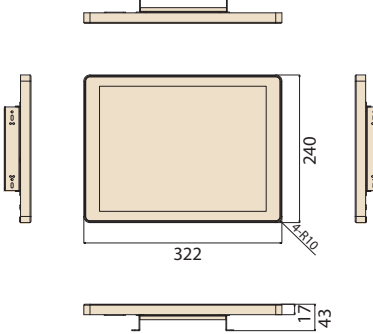**EPD-130M**
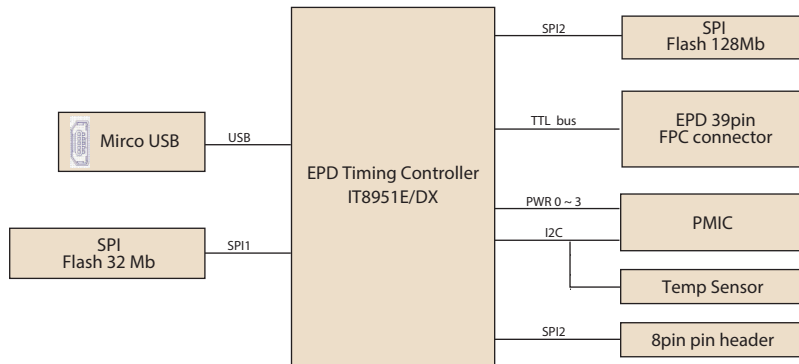
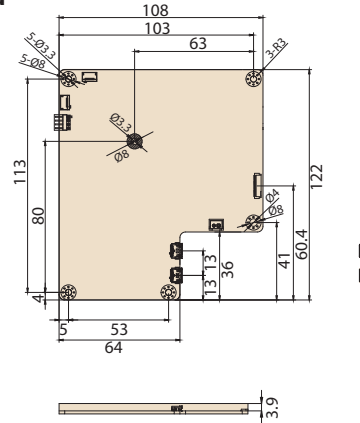**EPD-132M**
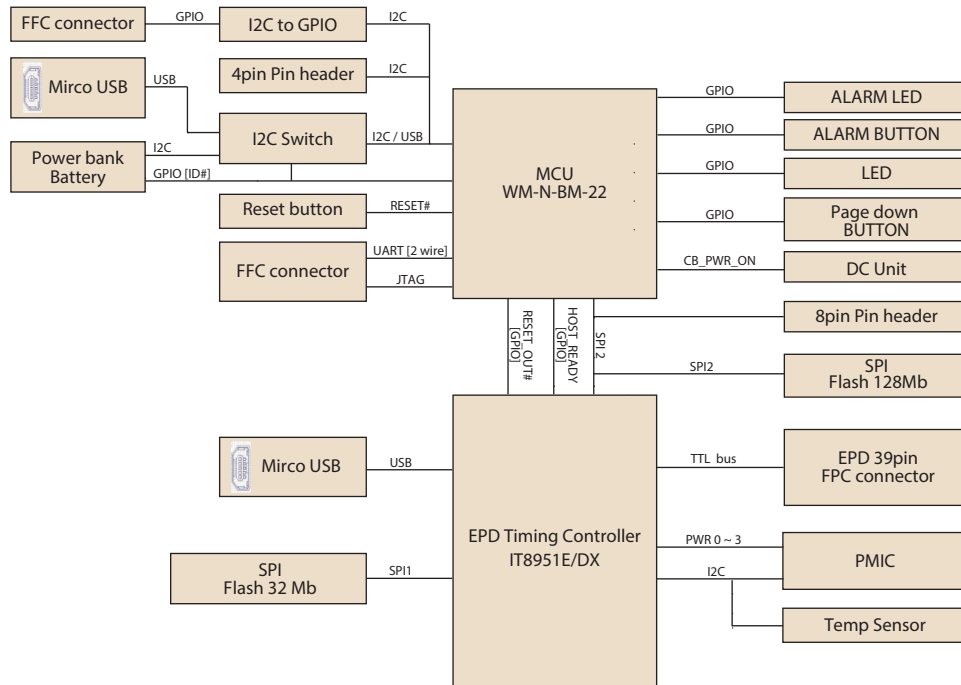
Dimensions

EPD-132M ePaper Module
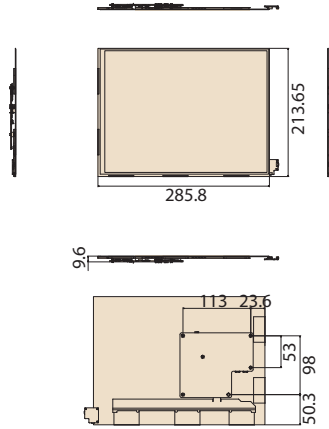
EPD-132 Device

Control Board

Ordering Information

Part No.	Description
EPD-132R1AG-NSD01	13.3" Red/Black/White ePaper Wi-Fi display module solution in 2.4G
EPD-132B1AG-NSD01	13.3" Black/White ePaper Wi-Fi display module solution in 2.4G
EPD-130B1AG-NSD01	13.3" Black/White ePaper display module
EPD-130R1AG-NSD01	13.3" Red/Black/White ePaper display module
EPD-132R1AG-NSD11	EPD-132R1AG-NSD01 for 50 pcs module solution kit
EPD-132B1AG-NSD11	EPD-132B1AG-NSD01 for 50 pcs module solution kit
EPD-132R2AG-NSD01	13.3" Red/Black/White ePaper Wi-Fi display system device in 2.4G
EPD-132B2AG-NSD01	13.3" Black/White ePaper Wi-Fi display system device in 2.4G
EPD-130B1AG-NSD02	13.3" Black/White ePaper Wi-Fi display module solution in 2.4G (wide range temperature)

Development Kit Ordering Information

	Part No.	Description
EPD device	EPD-132R2AG-NSD01	13.3" Red/Black/White ePaper Wi-Fi display system device in 2.4G
	EPD-132B2AG-NSD01	13.3" Black/White ePaper Wi-Fi display system device in 2.4G
Gateway	WISE-3610WOS-21B1E	Gateway for EU
	WISE-3610WOS-21B1J	Gateway for JP
	WISE-3610WOS-21B1N	Gateway for NA
	WISE-3610WOS-21B1T	Gateway for TW
	WISE-3610WOS-21B1C	Gateway for China
ePaper Manager Server	ARK-1123H-EP1A2 for Entry ARK-2250L-EP1A1 for Enterprise	Windows/1T HD/8G RAM and build in ePaper Manager Software with 500 device licenses

* Ordering EPD-132 device, WISE-3610W, and ARK ePaper Manager one each to try Advantech wireless EPD displayl solution

Packing List

Model Name	Part No.	Description
EPD-132M	EPD-132B1AG-NSD01	1. 13.3" Black/White ePaper 2. ePaper Control Board with Wi-Fi (2.4G) control solution
EPD-132M	EPD-132R1AG-NSD01	1. 13.3" Red/Black/White ePaper 2. ePaper Control Board with Wi-Fi (2.4G) control solution
EPD-130M	EPD-130B1AG-NSD01	1. 13.3" Black/White ePaper 2. ePaper Control Board
EPD-130M	EPD-130R1AG-NSD01	1. 13.3" Red/Black/White ePaper 2. ePaper Control Board

* 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 has been put in low temperature between 0~-25 degree C for a while, we recommend leaving it between 20 to 30 degree C for 4 days before assembly.

Optional Accessories

Part No.	Description
1700029192-01	With micro-USB connector in 5 V/ 2A
1750008001-01	Wi-Fi dipole antenna, 5dBi 2.4/5GHz
1750006043-01	RF SMA cable, L=150mm
1750008816-01	Antenna magnetic base, L=100mm
1700015038	FPC Cable 10P-0.5mm 7.9cm for DCU2.0
1700029192-01	60cm Micro USB with 5P(M) for power report
9696053RS00	EPD-053R A101-1 daughter board with Switch and LED