IEI Integration Corp.

MODEL:

Peach-E73

7.3" BWRY ePaper Display, RoHS

User Manual

(UART Mode)

Rev. 1.00 - September 19, 2023

RoHS Lead Free

Revision

Date	Version	Changes
September 19, 2023	1.00	Initial release

Copyright

COPYRIGHT NOTICE

TRADEMARKS

Manual Conventions

WARNING

Warnings appear where overlooked details may cause damage to the equipment or result in personal injury. Warnings should be taken seriously.

CAUTION

Cautionary messages should be heeded to help reduce the chance of losing data or damaging the product.

NOTE

These messages inform the reader of essential but non-critical information. These messages should be read carefully as any directions or instructions contained therein can help avoid making mistakes.

Table of Contents

List of Figures

List of Tables

Chapter

1

Introduction

1.1 Overview

Figure 1-1: Peach-E73 ePaper Display

The Peach-E73 ePaper display is a low-power information display adopting the four-color ePaper display of black, white, red and yellow, which is made of the new generation of Electrophoretic displays (EPD) technology. With Wi-Fi and Bluetooth 5.0 capabilities, it allows you to transmit data wirelessly over long distances and with low latency.

The Peach-E73 runs on AAA batteries and has very low power consumption and long battery life, which makes it suitable for IoT applications in different environments such as factories, hospital, offices, and museum.

1.2 Features

The Peach-E73 features are listed below:

- 7.3" 4-color Electrophoretic displays (EPD)
- Sunlight readable, paper-like display
- 802.11b/g/n Wi-Fi and Bluetooth 5
- Thin and smooth appearance design for easy integration
- Rail mountable device
- Powered by commonly-used AAA batteries

1.3 Front Panel

The front panel of the Peach-E73 is a 4-color screen using Electrophoretic displays (EPD) technology (**Figure 1-2**). On the front panel, you can also find the status LED and the QR code that has the device's serial number.
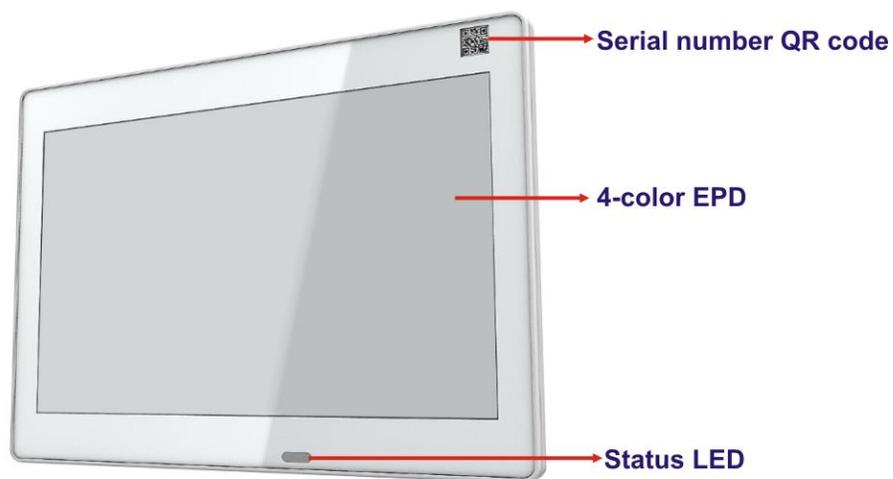
Figure 1-2: Front View

The description of the Red LED indicator is listed below.

- **Off:** deep sleep / image display (print or slideshow)
- **Solid:** Standby
- **Blinking 3 times/sec:** image or firmware transfer

![NOTE icon] **NOTE:**

1. Image display requires and depends on a host system to provide images and manage them.

2. The image will be refreshed every 24 hours automatically when the device is in deep sleep mode. It is to maintain the image quality. There will be no refresh if the image is full white.

1.4 Rear Panel

The rear panel contains a battery cover, and three buttons with different functions described below.

Buttons	Description
Power button	Short press: wake up Peach-E73 from deep sleep mode* Long press 3 sec.: stop slideshow in USB mode and go to deep sleep mode Long press 10 sec.: factory reset (**Caution!** All settings and data will revert to factory default)
Bluetooth button	Short press: switch to Wi-Fi mode
Reset button	Short press: reboot Peach-E73 from any status (all settings and data will remain unchanged after reset)

*When provided with battery/USB power and set with no slideshow, the Peach-E73 will go into deep sleep mode after pending for 15 sec.

Table 1-1: LED Indicators
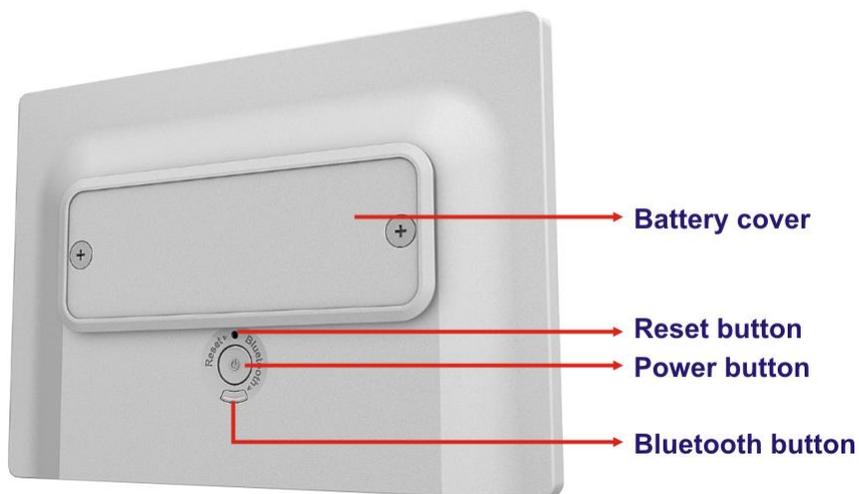
Figure 1-3: Rear View

1.5 Bottom Panel

The bottom panel of the Peach-E73 has a USB Type-C connector to connect with a power source or a PC for image display setup (**Figure 1-4**). Refer to the ditherPrint user manual for how to setup display image.
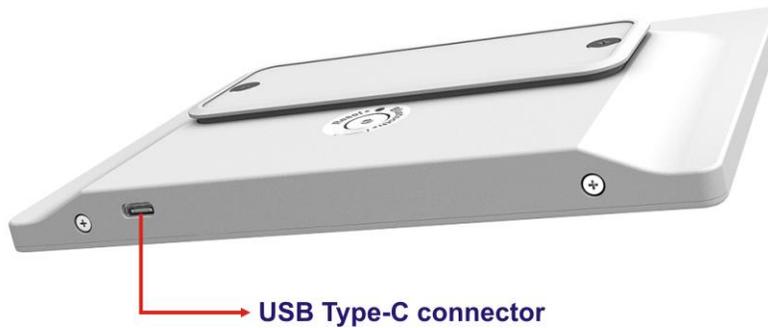
Figure 1-4: Bottom Panel

1.6 Dimensions

The physical dimensions are shown below:
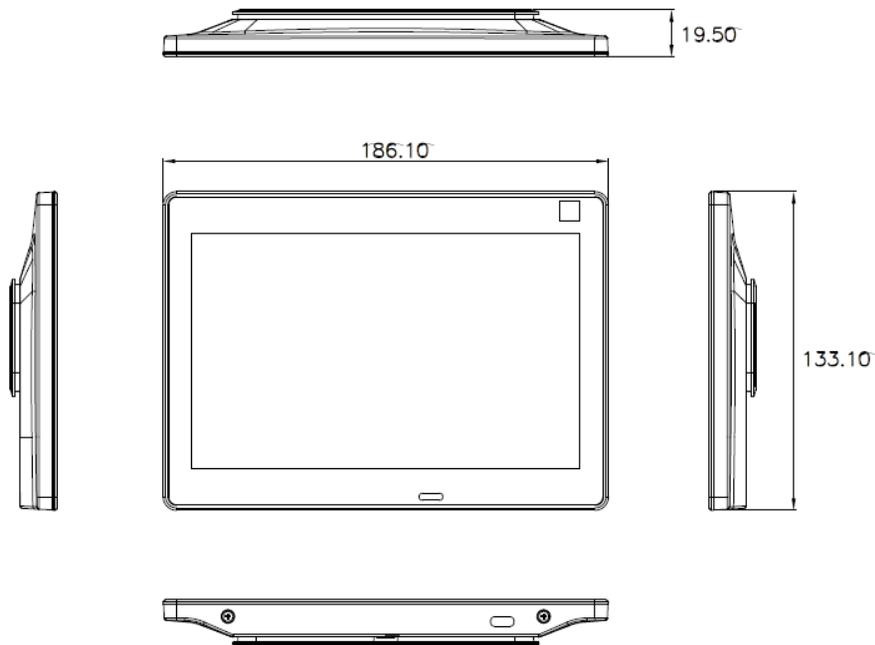
Figure 1-5: Physical Dimensions (millimeters)

1.7 Specifications

The technical specifications for the Peach-E73 are listed below.

	Peach-E73
Active Area	7.3"
Resolution	800 x 480
Display Type	Electrophoretic displays (EPD)
Dimension (mm)	186.1 (L) x 133.1 (W) x 19.5 (D)
Wireless	IEEE 802.11b/g/n (2.4GHz Wi-Fi) Bluetooth 5 (LE)
Connector	USB Type-C
LED	2 colors (blue, red)
Buttons	Power, Bluetooth, Reset
Battery	6 x AAA (not included in the product)
Display Colors	BWRY
Image Update Time	18 sec (25ºC typ.)
Best Optic Temperature Range	15ºC ~ 35ºC
Storage Temperature	-20ºC ~ 60ºC

Table 1-2: Specifications

Chapter

2

Unpacking

2.1 Unpacking

To unpack the Peach-E73, follow the steps below:

 WARNING!

The front side screen has a protective plastic cover stuck to the screen. Only remove the plastic cover after the device has been properly installed. This ensures the screen is protected during the installation process.

Step 1:   Open the external box.

Step 2:   Lift the Peach-E73 out of the box.

Step 3:   Pull the plastic cover off the Peach-E73.

Step 4:   Make sure all the components listed in the packing list are present.

2.2 Packing List

 NOTE:

If any of the components listed in the checklist below are missing, do not proceed with the installation. Contact the IEI reseller or vendor the Peach-E73 was purchased from or contact an IEI sales representative directly by sending an email to sales@ieiworld.com.

The Peach-E73 is shipped with the following components:

Quantity	Item	Image
1	Peach-E73 ePaper display	
1	USB Type-A to Type-C cable	
1	Hook and loop tape	

Chapter

3

Installation

3.1 Anti-static Precautions

WARNING:

Failure to take ESD precautions during the maintenance of the Peach-E73 may result in permanent damage to the Peach-E73 and severe injury to the user.

Electrostatic discharge (ESD) can cause serious damage to electronic components, including the Peach-E73. (Dry climates are especially susceptible to ESD.) It is therefore critical that whenever the Peach-E73 is opened and any electrical component handled, the following anti-static precautions are strictly adhered to.

- *Wear an anti-static wristband*: Wearing a simple anti-static wristband can help to prevent ESD from damaging the board.
- *Self-grounding*: Before handling the device, touch any grounded conducting material. During the time the device is handled, frequently touch any conducting materials that are connected to the ground.
- *Use an anti-static pad*: When configuring the Peach-E73, place it on an anti-static pad. This reduces the possibility of ESD damaging the Peach-E73.

3.2 Safety Precautions

Please ensure the following safety precautions are adhered to at all times.

- *Do not apply voltage levels that exceed the specified voltage range*. Doing so may cause fire and/or an electrical shock.
- **DO NOT LEAVE THIS EQUIPMENT IN AN UNCONTROLLED ENVIRONMENT WHERE THE STORAGE TEMPERATURE IS BELOW -20° C (-4°F) OR ABOVE 60° C (140° F). IT MAY DAMAGE THE EQUIPMENT.**
- **Qualified Personnel**: The Peach-E73 must be installed and operated only by trained and qualified personnel. Maintenance, upgrades, or repairs may only be carried out by qualified personnel who are familiar with the associated dangers.
- *If considerable amounts of dust, water, or fluids enter the Peach-E73*, turn off the power supply immediately, unplug the power cord, and contact the Peach-E73 vendor.

- **DO NOT**:
  - o Drop the Peach-E73 against a hard surface.
  - o Strike or exert excessive force onto the display panel.
  - o Touch any of the display panel with a sharp object
  - o In a site where the ambient temperature exceeds the rated temperature

3.3 Battery Installation

WARNING:

- Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer.
- Disposal of a battery into fire or a hot oven, or mechanically crushing or cutting of a battery, that can result in an explosion.
- Leaving a battery in an extremely high temperature surrounding environment that can result in an explosion or the leakage of flammable liquid or gas.
- A battery subjected to extremely low air pressure that may result in an explosion or the leakage of flammable liquid or gas.

The Peach-E73 can be powered by six AAA batteries. To install batteries, please follow the steps below.

Step 1: Remove the two battery cover screws.
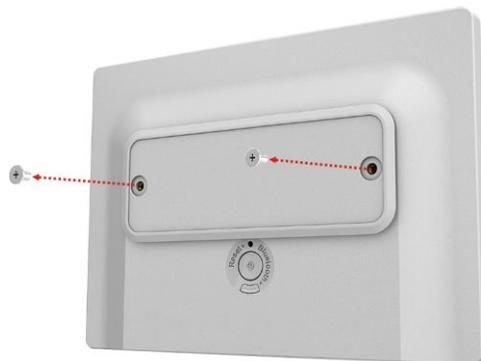
Figure 3-1: Battery Cover Screws

**Step 2:** Lift the cover from the device.

Step 3: Install six AAA batteries into the slots. **NOTE:** Batteries are not included in the package. You can purchase the batteries separately from any authorized retailer.

Figure 3-2: Battery Installation

Step 4: Re-install the cover and secure it with the screws removed previously.
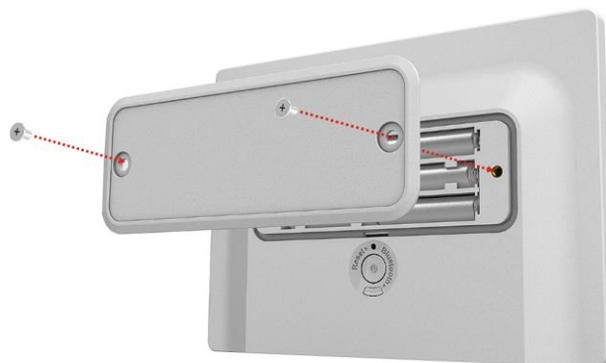
Figure 3-3: Battery Cover Reinstallation

3.4 Battery Replacing

If the battery level is low, a battery warning indicator will appear on the upper right corner of the display. It is recommended to replace the batteries. Settings and data stored on the device are still saved when the battery is replaced.

Indicators	Description
Battery low	The battery level is low. Replace the batteries as soon as possible.
Battery drained out	The battery is nearly drained and has barely any power left. The device will be locked to protect it from any harmful action.

Table 3-1: Battery Warning Indicators

3.5 Mounting the Device

3.5.1 Using Hook and Loop Tape

The Peach-E73 can be mounted on a surface by using the hook and loop tape shipped with the device.

Step 1: Ensure the surface for mounting the device is smooth, dry, and free of contamination. Make certain the rear panel of the Peach-E73 is also cleaned and free of dust.

Step 2: Install the loop tape onto the surface, and install the hook tape on the middle of the Peach-E73's battery cover (Figure 3-4).
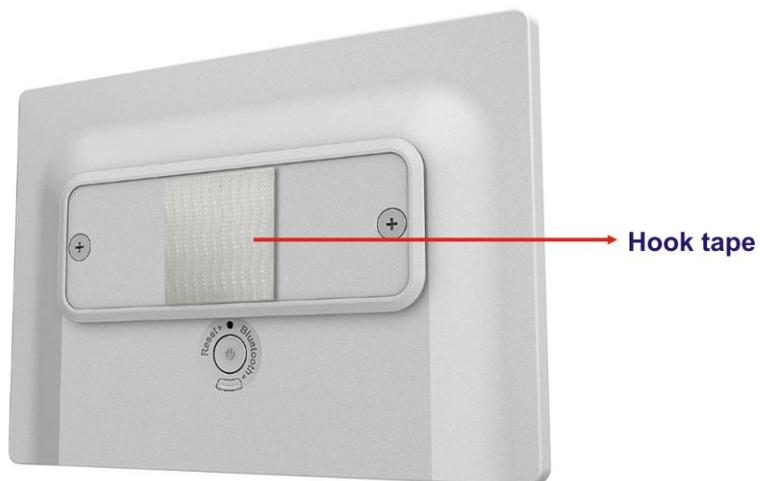
Figure 3-4: Install Hook Tape

Step 3: Align the Peach-E73 into the correct position to make contact with the hook and loop tape. Ensure 100% contact is achieved.

3.5.2 Rail Mounting

The Peach-E73 supports slide rail mount by inserting the backside of the display into a rail as shown below.

3.6 Use Peach-E73 to Display Image

To have the Peach-E73 display image, users must use the ditherPrint which is a PC application software designed to manage the content of IEI ePaper devices. With the ditherPrint, users can transfer images to IEI ePaper devices by using PC or laptop. The detailed instruction are described in the ditherPrint user manual. Please refer it for further information.

Appendix

A

Regulatory Compliance

ROHS STATEMENT

The label on the product indicates this product conforms to European (EU) Restriction of Hazardous Substances (RoHS) that set maximum concentration limits on hazardous materials used in electrical and electronic equipment.

CHINA ROHS

The label on the product indicates the estimated "Environmentally Friendly Use Period" (EFUP). This is an estimate of the number of years that these substances would "not leak out or undergo abrupt change." This product may contain replaceable sub-assemblies/components which have a shorter EFUP such as batteries and lamps. These components will be separately marked.

Appendix

B

Product Disposal

⚠️ **CAUTION:**

Risk of explosion if battery is replaced by an incorrect type. Only certified engineers should replace the on-board battery.

Dispose of used batteries according to instructions and local regulations.

- Outside the European Union - If you wish to dispose of used electrical and electronic products outside the European Union, please contact your local authority so as to comply with the correct disposal method.
- Within the European Union–The device that produces less waste and is easier to recycle is classified as electronic device in terms of the European Directive 2012/19/EU (WEEE), and must not be disposed of as domestic garbage.
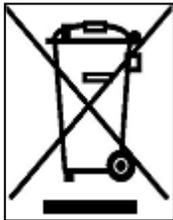
EU-wide legislation, as implemented in each Member State, requires that waste electrical and electronic products carrying the mark (left) must be disposed of separately from normal household waste. This includes monitors and electrical accessories, such as signal cables or power cords. When you need to dispose of your display products, please follow the guidance of your local authority, or ask the shop where you purchased the product. The mark on electrical and electronic products only applies to the current European Union Member States.

Please follow the national guidelines for electrical and electronic product disposal.

Appendix

C

Maintenance and Cleaning Precautions

When maintaining or cleaning the Peach-E73, please follow the guidelines below.

C.1.1 Maintenance and Cleaning

Prior to cleaning any part or component of the Peach-E73, please read the details below.

- To clean the Peach-E73, remove dirt with a lightly moistened cloth. Then wipe the external chassis with a soft dry cloth.
- Except for the front panel, never spray or squirt liquids directly onto any other components.
- The interior of the Peach-E73 does not require cleaning. Keep fluids away from the Peach-E73 interior.

C.1.2 Cleaning Tools

Some components in the Peach-E73 may only be cleaned using a product specifically designed for the purpose. In such case, the product will be explicitly mentioned in the cleaning tips. Below is a list of items to use when cleaning the Peach-E73.

- *Cloth* – Although paper towels or tissues can be used, a soft, clean piece of cloth is recommended when cleaning the Peach-E73.
- *Water/Ethanol alcohol* – A cloth moistened with water or 75% ethanol alcohol can be used to clean the Peach-E73.
- *Using solvents* – The use of solvents is not recommended when cleaning the Peach-E73 as they may damage the plastic parts.
- *Cotton swabs* - Cotton swaps moistened with water are excellent tools for wiping hard to reach areas.
- *Foam swabs* - Whenever possible, it is best to use lint free swabs such as foam swabs for cleaning.

Appendix

D

Symbol Definitions

The following symbols appear on the product, its labeling, or the product packing. Each symbol carries a special definition, as defined below:

	This side up		Fragile, handle with care
	Keep dry		This product is recyclable.
	The device is susceptible to ESD damage and should be handled with care.		
	This symbol indicates th at the waste of electronic equipment must not be disposed as unsorted municipal waste and must be collected separately. Please contact the manufacturer or other authorized disposal company to decommission your equipment.		

Appendix

E

Hazardous Materials Disclosure

The details provided in this appendix are to ensure that the product is compliant with the Peoples Republic of China (China) RoHS standards. The table below acknowledges the presences of small quantities of certain materials in the product, and is applicable to China RoHS only.

A label will be placed on each product to indicate the estimated "Environmentally Friendly Use Period" (EFUP). This is an estimate of the number of years that these substances would "not leak out or undergo abrupt change." This product may contain replaceable sub-assemblies/components which have a shorter EFUP such as batteries and lamps. These components will be separately marked.

Please refer to the following table.

Part Name	Toxic or Hazardous Substances and Elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (CR(VI))	Polybrominated Biphenyls (PBB)	Polybrominated Diphenyl Ethers (PBDE)
Housing	O	O	O	O	O	O
Display	O	O	O	O	O	O
Printed Circuit Board	O	O	O	O	O	O
Metal Fasteners	O	O	O	O	O	O
Cable Assembly	O	O	O	O	O	O
Fan Assembly	O	O	O	O	O	O
Power Supply Assemblies	O	O	O	O	O	O
Battery	O	O	O	O	O	O
O: This toxic or hazardous substance is contained in all of the homogeneous materials for the part is below the limit requirement in SJ/T11363-2006 (now replaced by GB/T 26572-2011). X: This toxic or hazardous substance is contained in at least one of the homogeneous materials for this part is above the limit requirement in SJ/T11363-2006 (now replaced by GB/T 26572-2011).						

此附件旨在确保本产品符合中国 RoHS 标准。以下表格标示此产品中某有毒物质的含量符合中国 RoHS 标准规定的限量要求。

本产品上会附有"环境友好使用期限"的标签，此期限是估算这些物质"不会有泄漏或突变"的年限。本产品可能包含有较短的环境友好使用期限的可替换元件，像是电池或灯管，这些元件将会单独标示出来。

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (CR(VI))	多溴联苯 (PBB)	多溴二苯 醚 (PBDE)
壳体	O	O	O	O	O	O
显示	O	O	O	O	O	O
印刷电路板	O	O	O	O	O	O
金属螺帽	O	O	O	O	O	O
电缆组装	O	O	O	O	O	O
风扇组装	O	O	O	O	O	O
电力供应组装	O	O	O	O	O	O
电池	O	O	O	O	O	O
O: 表示该有毒有害物质在该部件所有物质材料中的含量均在 SJ/T 11363-2006 (现由 GB/T 26572-2011 取代) 标准规定的限量要求以下。 X: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 SJ/T 11363-2006 (现由 GB/T 26572-2011 取代) 标准规定的限量要求。						