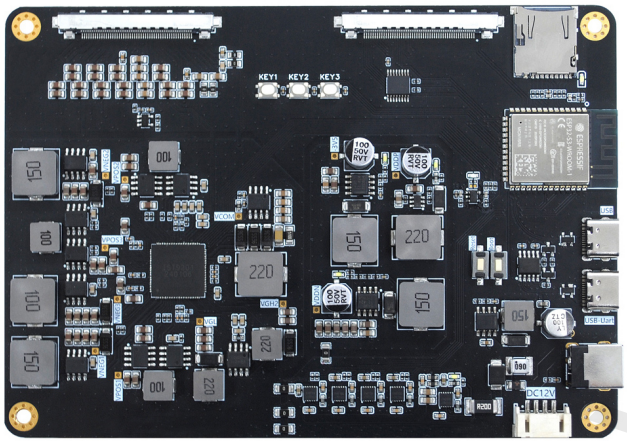
E-paper Display Driver Board

GooDisplay®

DEAM-315E1

Dalian Good Display Co., Ltd.

Product Specifications



Customer	Standard
Description	E-paper display driver board
Model Name	DEAM-315E1
Date	2025/04/01
Revision	1.0

	Design Engineering		
	Approval	Check	Design
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Contents

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1. Overview

DEAM-315E1 is a dedicated driver board for the GDEP315C01. With the specialized software, the DEAM-315E1 can directly drive the 31.5-inch electronic paper display.

Model	Applicable Temperature	Screen Model	Screen Color
DEAM-315E1	0℃~50℃	GDEP315C01	E Ink Spectra 6

2. Specifications

Model Name	DEAM-315E1
Platform Used	Arduino
Dimensions(mm)	140mm x 100mm
Supported Size	31.5-inch e-paper (E Ink Spectra 6)
Power Supply	USB (DC12/2A)
Example Programs	Available
Operating Temperature	0°C to +50°C
Features	Support full update
Main Functions	- Learn how to drive electronic paper displays - Test and evaluate electronic paper displays - Perform secondary development based on this board
Auxiliary Functions	USB communication
Model Name	Web-based Wi-Fi

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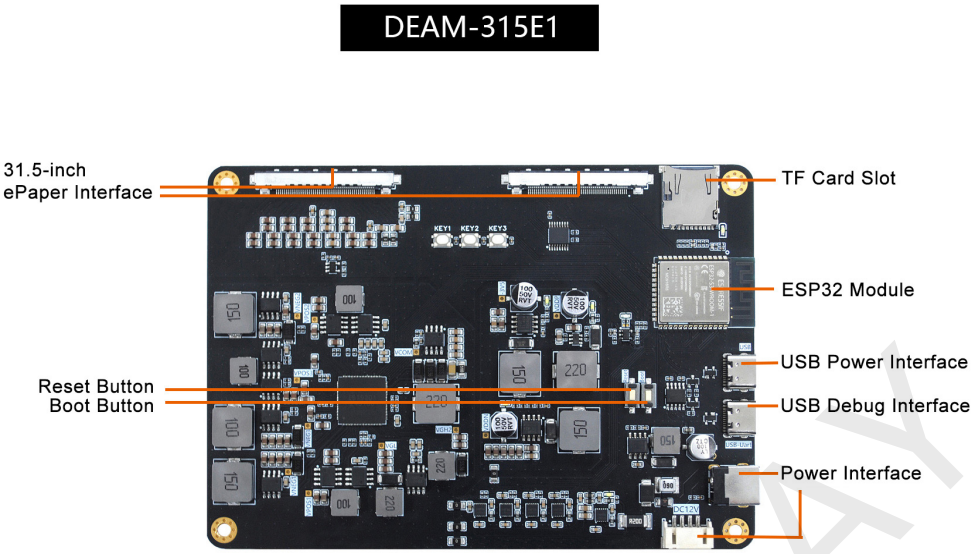
3. Main Functional



IO and Buttons

1) The DEAM-315E1 board has a Boot button and a Reset button. To manually enter firmware programming mode, press and hold the Boot button, then press the Reset button.

2) The TF interface is an internal interface and is not hot-swappable.

3) The power supply is a 12VDC interface (inner core 2.0mm), with a screen refresh peak power consumption of 2A @ 12V.

4) The debug serial port is powered independently via a Type-C connection.

4. Product Features

1) Equipped with the ESP32S3-WROOM-1-N16R8 module.

2) Supports Wi-Fi-based image uploading and updating via the web interface.

3) External TF card support for secondary development, allowing images to be loaded and displayed from the TF card.

4) Supports high-precision dithering algorithm for improved image rendering.

5) Type-C to UART debugging interface enables easy firmware flashing and debugging without manual adjustments.

6) Provides Arduino-based reference code, fully implementing screen driving and PMIC control functions.

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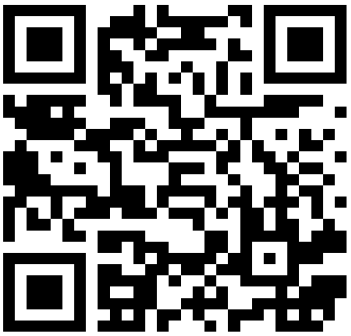
5. Instructions for Use

1. Use a mobile browser to scan the QR code below to access the "NwoFrame" web interface.



2. When powered via a USB cable, the digital frame will create a Wi-Fi network named "NeoFrame." In your phone's WLAN settings, find and connect to the "NeoFrame" network. Enter the password: "123456789" and ensure your phone stays connected to this network.
(Note: If your phone prompts that the current WLAN has no internet access and suggests switching to another available network, be sure to select "Stay connected.")

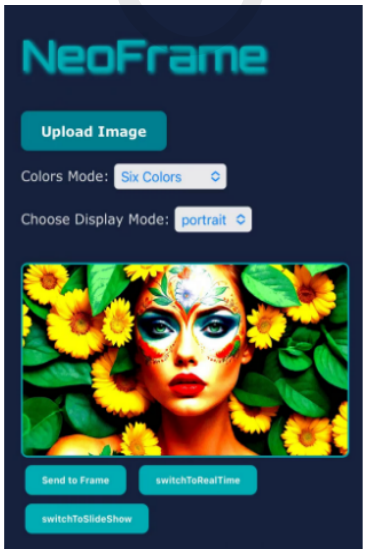
3. Uploading Images

1) Tap "Upload Image" to select a picture from your phone ' s camera or gallery.

2) Choose from two settings:

- Screen Color Mode: Six-color / Four-color / Monochrome / Three-color
  (Since this digital frame uses an E Ink Spectra 6 screen, select "Six-color.")
- Display Type: Portrait / Landscape
  (Select based on the type of image.)

3) Once the image is processed, tap "Send to Screen" to display it.



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