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INDUSTRIAL PRODUCT DATASHEET

2.9" Flexible Monochrome eInk / ePaper Display with 296x128 Pixels, SPI interface, Support XIAO/Arduino/STM32

A 2.9" flexible monochrome eInk / ePaper display with 296x128 pixels, SPI interface, ultra-low power, wide viewing angles, and support for XIAO/Arduino/STM32, ideal for reading equipment, mobile devices, electronic...

SKU	UPDATED	PRICE
104990852	2026-10-09 08:18:04	$13.96(Excl. VAT)



Overview



The 2.9" Flexible Monochrome eInk / ePaper Display with 296x128 Pixels and SPI interface supports XIAO/Arduino/STM32. It features ultra-low power consumption, greater than 170-degree viewing angles, flexibility, eye-friendly reflective readability, and a 296x128 pixel 1-bit white/black active area with high contrast and bi-stable operation.

Key Features

- **Exceptional Readability:** The display's reflective properties ensure effortless legibility of text and images in different lighting environments.
- **Ultra-Low Power Usage:** The E-paper only consumes power during updates, leading to prolonged battery life and efficient energy use.
- **Wide Viewing Angles:** Greater than 170 degrees, unaffected by light direction.
- **Flexibility and Portability:** Allowing bending and curling for versatile applications.
- **Eye-Friendly and Heat-free:** Eliminate glare, providing a comfortable viewing experience while remaining cool without generating heat.

The 2.9-inch E-paper Display is a flexible substrate-based display with a 296x128 pixel active area and 1-bit white/black full display capabilities. It features high contrast, high reflectance, ultra-wide viewing angle, ultra-low power consumption, and pure reflective mode. The display is bi-stable, operates in commercial temperature range, and has landscape and portrait modes. It is available in COG package IC thickness 280um and has an on-chip display RAM and waveform stored in On-chip OTP. The display also has a serial peripheral interface available, an on-chip oscillator, an on-chip booster, and regulator control for generating VCOM, Gate, and source driving voltage.

What is an E-Paper?

E-Paper, short for Electronic Paper, is a type of display technology that aims to mimic the appearance of traditional paper and ink. It's designed to provide high contrast and readability in various lighting conditions, including direct sunlight, without the need for a backlight. E-Paper displays use tiny microcapsules containing charged particles suspended in a liquid to produce images. When an electric field is applied, the particles move to the top or bottom of the microcapsules, resulting in different shades or colors being visible to the viewer. E-Paper is often used in e-readers, electronic shelf labels, smartwatches, and other devices where energy efficiency and readability are essential.

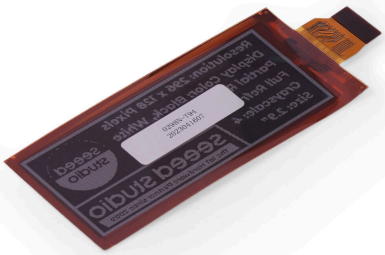
Advantages Over Traditional Displays

E-Paper displays offer advantages over traditional displays, including better readability like paper, visibility in sunlight, low energy consumption, thin design, wide viewing angles, and longer battery life. They are ideal for portable devices and environments where glare and power efficiency matter.

Product Gallery







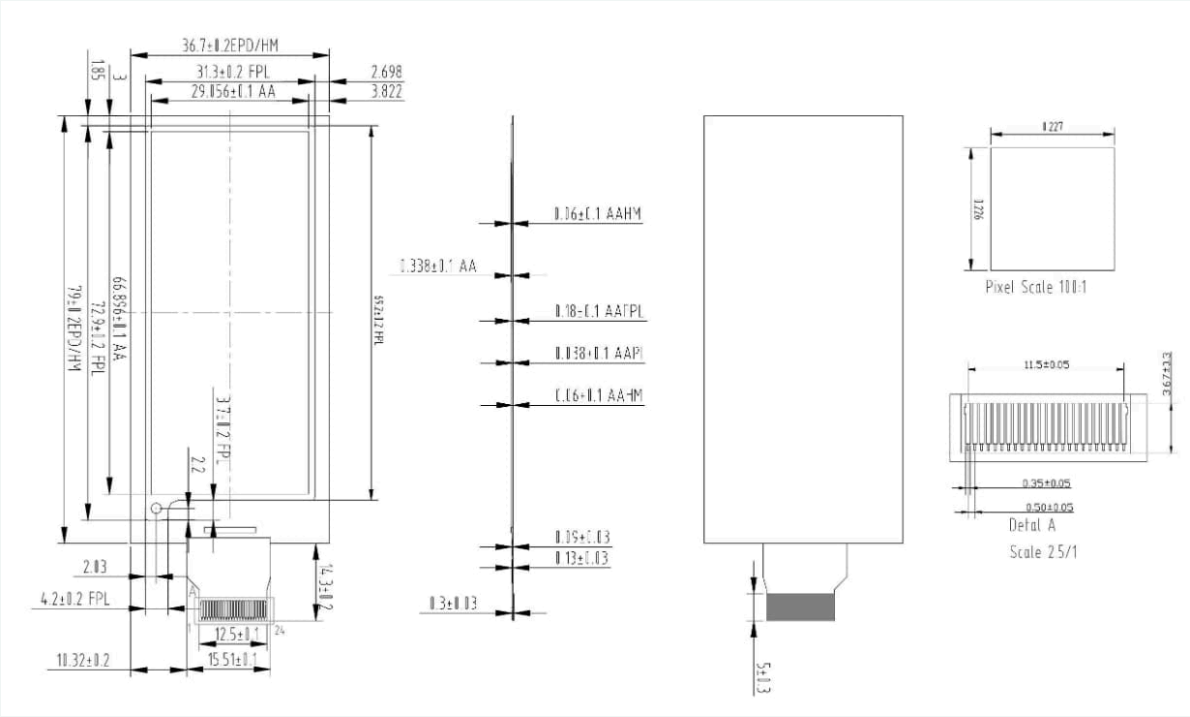


Specification

Parameter	Description
Model No.	GDEW029I6FD
Type	Dot Matrix
Size	2.9 inch
Active Area	66.9mm x 29.06mm
Resolution	296 x 128 pixels
Pixel Pitch	0.227 x 0.226mm
Display Color	Black, White
Max Grayscale	4
Partial Refresh Time	0.3s
Full Refresh Time	3s
Interface	SPI
Viewing Angle	>170°
Operating Voltage	3.3V
Operating Temperature	0-50°C

Driver Mode	Support XIAO/STM32/Arduino/Micropthon
Drawing	Support GUI Drawing
Power Consumption	26.4mW (typ.)
Standby Consumption	0.0165mW
Outline Dimension	79mm x 36.7mm x 0.34mm
Weight	3.2g

Hardware Overview



Applications

- **Reading equipment**
- **Mobile device**
- **Electronic tags and price tags**
- **Smart Wearables**
- **Electronic Shelf Labels**
- **Smart Card**

Part List

2.9 Flexible Monochrome ePaper Display	×1

Compliance & Logistics

HSCODE	8517180050
USHSCODE	8517180050
UPC	
EUHSCODE	8471707000
COO	CHINA

Resource Links

- https://www.seeedstudio.com/2-9-Flexible-Monochrome-ePaper-Display-with-296x128-Pixels-p-5780.html
- GDEW029I6FD
- GDEW029I6FD Arduino Sample Code
- GDEW029I6FD ESP32 Sample Code
- GDEW029I6FD ESP8266 Sample Code
- GDEW029I6FD STM32 Sample Code
- IC Driver UC8151D
- Slave Computer Software-Image to EPD V3.6.zip
- PCN-104990852 2.9 Flexible Monochrome ePaper Display v1.0
- Resource
- Resource

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